CATALOGUE

OF THE

BIRDS

IN THE

BRITISH MUSEUM.

ZOOLOGICAL GARDENS
1875
CALCUTTA

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VOLUME X.

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1885.

ZOOLOGICAL GARDENS
1875.
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CATALOGUE

OF THE

PASSERIFORMES,

OR

PERCHING BIRDS,

IN THE

COLLECTION

OF THE

BRITISH MUSEUM.

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FRINGILLIFORMES: Part I.

CONTAINING THE FAMILIES

DICÆIDÆ, HIRUNDINIDÆ, AMPELIDÆ,
MNIOTILTIDÆ, AND MOTACILLIDÆ.

BY

R. BOWDLER SHARPE.

LONDON:
PRINTED BY ORDER OF THE TRUSTEES.
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PREFACE.

The great size to which the Tenth Volume of the 'Catalogue of Birds in the British Museum' has grown has been caused, in great measure, by the pains which the author has taken in tracing and describing in detail the seasonal changes of plumage of many of the Birds—which could not be attempted without long series of examples marked with the locality and exact date of capture.

However, if with the present volume, at least as regards the South-American Avifauna, a greater degree of completeness has been attained than was possible in the preceding portions of the work, it is chiefly due to the recent transference to the British Museum of the two most important collections of South-American Birds that have been brought together in modern times.

The first is the celebrated collection of American Passeres, formed by P. L. Sclater, Esq., F.R.S., in the course of the last thirty years. It contains most of the material on which the majority of the publications of this Ornithologist were based, and is, perhaps, the first collection of its kind that was made, at least in this country, with a clear understanding of the great importance of well ascertained localities.

For the second the Trustees are indebted to the generosity of O. Salvin, Esq., F.R.S., and F. D. Godman, Esq., F.R.S. Formed with the same care as the Sclater Collection, it surpasses this latter as regards the number of specimens, illustrating more fully

the geographical range and diversity of plumage of each species. Beside the specimens obtained by the donors themselves during their travels in Central America, or by collectors who worked for them, it contains a very complete series of South-American Birds. As the arrangements for depositing this collection in the British Museum were not completed before a large portion of the volume had been printed, a considerable number of the specimens had to be enumerated at the end of the work, among the "Addenda."

Of the other donors who have contributed to the series described in this volume, I have to mention the U.S. National Museum, Capt. Stackhouse Pinwill, Col. Swinhoe, Capt. Bingham, W. Davison, Esq., Dr. Jentink, Hr. R. Collett, Edward Newton, Esq., C.M.G., Dr. Taczanowski, and Prof. Giglioli.

ALBERT GÜNTHER,
Keeper of the Department of Zoology.

British Museum (N. H.),
March 9, 1885.

INTRODUCTION.

In the present volume 448 species are described, represented by 4590 specimens. Of these the Museum contains the types of 88, and 52 species are still desiderata to the collection.

The series of Neotropical birds has been rendered wonderfully complete by the addition of the collections of Dr. Sclater and of Messrs. Salvin and Godman; whilst through the hearty co-operation of Professor Baird, on behalf of the United-States National Museum, numerous valuable North-American birds have been received during the past year.

The collection of the Old-World species of the families described in the present volume is also tolerably perfect; and many of the migratory species are represented by series of specimens illustrating their geographical distribution in a full and satisfactory manner. Much remains to be done to complete our knowledge of the changes of plumage of the Wagtails and Pipits. In my study of the latter birds I have not relied solely on the series in the British Museum, but I have likewise examined the collections of Canon Tristram, Capt. Wardlaw-Ramsay, Capt. Shelley, Mr. Seebohm, and Mr. F. Nicholson, to each of whom I return my thanks.

The Museum is also under obligation to the following gentlemen for the loan of valuable specimens:—Count Salvadori, Marquis Doria, Mr. H. K. Coale (of Chicago, U.S.A.), and Prof. Mattozo Santos (Director of the Royal Zoological Museum at Lisbon).

The affixes to the specimens are the same as in previous volumes of the Catalogue. "[P.]" means "Presented by;" "[C.]"= "Collected by;" "[E.]"="Received in exchange." Where none of these signs are used, the specimens have been acquired by purchase.

R. BOWDLER SHARPE.

British Museum (N. H.),
March 9, 1885.

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CATALOGUE

OF

BIRDS.

Acc no. 4964
dt. 12/12/06

Calcutta 700027

Order II. PASSERIFORMES

(Cat. B. vol. iii. p. 1).

Suborder I. PASSERES

(Cat. B. vol. iii. p. 1).

Section B. *FRINGILLIFORMES.*

(NINE-QUILLED PASSERES.)

Wing with *nine* primaries, the first of which is fully developed and usually very long*.

Cf. Wallace, Ibis, 1874, p. 410.

The families which Mr. Wallace has arranged in his Series B, Tanagroid Passeres, do not fall easily into a linear series. The *Motacillidæ* ally the group with the Larks (*Alaudidæ*), which will be treated of under the third Section (C) in a later volume. The *Dicæidæ* cannot be separated far from the *Nectariniidæ*, described in vol. ix., and some of the aberrant genera, such as *Rhamphocharis*, exhibit a great likeness to some of the *Meliphagidæ*. The *Mniotiltidæ*, or American Warblers, lead through the *Cœrebidæ* to the *Tanagridæ*, and thence to the *Fringillidæ*. The *Icteridæ*, which are nearly allied to the *Tanagridæ*, represent in the New World the Weaver-birds (*Ploceidæ*) of the Old World. The Chatterers (*Ampelidæ*) and the Swallows (*Hirundinidæ*) are, as Mr. Wallace has remarked, difficult to locate; but the *Ampelidæ* may be arranged somewhere near *Pardalotus*; and the nearest allies of the Swallows really seem to be the Flycatchers, which approach them closely through the genera *Hemichelidon*, *Artomyias*, and others.

* Some exceptions are seen in the family *Dicæidæ*, as, for instance, in the genus *Pardalotus* and *Prionochilus*, which, however, could not be divorced from the rest of the Flower-peckers without doing violence to the general arrangement of the family.

In the following scheme I have attempted to indicate the natural arrangement of the Nine-quilled Passeres as well as their affinities to families not belonging to this section:—



Family DICÆIDÆ.

The members of this family—if we are allowed thus to designate a group of Birds which cannot be defined in exact terms—are principally Indian and Australian, a few representatives being found on the west coast of Africa. Although resembling the Sun-birds in habits, very few have the slender, Creeper-like bill of the latter family; and they differ also in nesting-habits, their nest being a beautiful purse-like structure of felted materials.

Key to the Genera.*

a. No bastard primary.
  a'. Upper mandible nearly twice the length of the lower one ..... 1. HEMIGNATHUS, [p. 3.
  b'. Both mandibles of ordinary proportions, and of nearly the same length.
    a''. Culmen much curved, and equal to the tarsus in length.
      a'''. Bill curved, and much longer than the head ..... 2. DREPANIS, p. 5.
      b'''. Bill curved, but only about the same length as the head ..... 3. VESTIARIA, p. 6.
    b''. Culmen shorter than the tarsus.
      c'''. Bill long and Creeper-like, the culmen exceeding the length of the hind toe and claw.
        *a*⁴. Tarsus very long, more than twice the length of the outer toe and claw ..... 4. HIMATIONE, p. 8.
        *b*⁴. Tarsus shorter, not twice the length of the hind toe and claw ..... 5. DICÆUM, p. 10.
      d'''. Bill shorter and more Finch-like, the culmen not exceeding the tarsus in length.
        *c*⁴. Wing moderately long, falling considerably short of the tail, and not equalling in length the tail and tarsus combined.
          *a*⁵. Bill very stout, and like that of a Grosbeak; cutting-edge of mandible strongly decurved ..... 6. LOXIOIDES, p. 49.

* I am firmly convinced that *Neodrepanis*, from Madagascar, placed by Capt. Shelley and Dr. Gadow (Cat. B. vol. ix. p. 2) in the *Nectariniidæ*, is really a member of the family *Dicæidæ*.

b^5. Bill more slender; cutting-edge of mandible nearly straight .... 7. LOXOPS, p. 49.
d^4. Wing very long, exceeding the length of the tail and tarsus combined.
c^5. Nasal membrane exposed.
a^6. Bill stout and festooned ..... 8. PSITTIROSTRA, [p. 51.
b^6. Bill pointed and not festooned, the culmen flattened in front of the nostrils ..... 9. PINAROLOXIAS, [p. 52.
c^6. Bill stout and Tit-like, the culmen rounded for its entire length ..... 10. OREOCHARIS, [p. 53.
d^5. Nasal membrane concealed by plumes; upper and lower mandibles nearly equal ..... 11. PARDALOTUS, 12. PARMOPTILA, [p. 54. [p. 63.
b. With a distinct bastard primary.
c'. Tail short, not exceeding the tip of the wing by as much as the length of the tarsus.
c''. No wattles at gape.
e'''. Bill very stout and Finch-like, occasionally with tomial serrations, broader than high at nostrils ..... 13. PRIONOCHILUS, [p. 63.
f'''. Bill very slender, higher than broad at nostrils..... 14. PHOLIDORNIS, [p. 76.
d''. With three tiny white lobes at base of bill in life ..... 15. LOBORNIS, p. 78.
d'. Tail long, exceeding the tip of the wing by more than the length of the tarsus.
e''. Second primary subterminally notched.
g'''. Bill broader than high at nostrils; culminal ridge sharp ..... 16. UROCHARIS, p. 78.
h'''. Bill as broad as it is high at nostrils; culminal ridge rounded ..... 17. MELANOCHARIS, [p. 79.
f''. Second primary pointed, not notched. [p. 82.
i'''. Tail longer than wing ..... 18. PRISTORHAMPHUS,
k'''. Tail shorter than wing ..... 19. RHAMPHOCHARIS, [p. 83.

1. HEMIGNATHUS.

	Type.
Hemignathus, *Licht. Abhandl. K. Akad. Berlin*, 1838, p. 451	H. lucidus.
Heterorhynchus, *Lafr. Mag. de Zool., Ois.* 1839, text to pl. 10	H. olivaceus.



Bill of *Hemignathus lucidus*.

Range. Sandwich Islands.

Key to the Species.*

a. With yellow eyebrow.
  a'. Larger: throat greenish like the rest of the under surface ..... *obscurus*, p. 4.
  b'. Smaller: throat yellow like the sides of the face, contrasting with the green breast and abdomen *lucidus*, p. 5.
  c'. Throat and underparts entirely yellow ..... *olivaceus*, p. 4.
b. With a grey eyebrow, ashy below ..... *lucidus* juv., p. 5.

1. Hemignathus obscurus.

Hook-billed Green Creeper, *Lath. Gen. Syn.* i. pt. 2, p. 703, pl. 33. fig. 1 (1782).
Certhia obscura, *Gm. Syst. Nat.* i. p. 470 (1788).
L'Akaiearoa, *Aud. et Vieill. Ois. Dor.* ii. pl. 53 (1802).
Hemignathus obscurus, *Licht. Abhandl. K. Akad. Berlin*, 1838, p. 449, tab. v. fig. 1; *Reichenb. Handb. Scans.* p. 312, Taf. dxci. fig. 4009 (1853); *Licht. Nomencl. Av. Neotr.* p. 55 (1854); *Cass. U.S. Expl. Exped., Birds*, p. 178 (1858); *Dole, Proc. Bost. Soc. Nat. Hist.* xii. p. 298 (1869); *Sclater, Ibis*, 1871, p. 359; *Finsch, Ibis*, 1880, p. 80.
Drepanis (Hemignathus) ellisiana, *Gray, Cat. B. Trop. Isl. Pacific Ocean*, p. 9 (1859).
Drepanis ellisiana, *Gray, Hand-l. B.* i. p. 114, no. 1408 (1869).

Length 7 inches. Bill an inch and three quarters long, and bent quite in the shape of a semicircle; the under mandible shortest by a quarter of an inch; colour of both brownish black; the nostrils covered with a membrane; between the bill and the eye is a streak of brown; the plumage in general is olive-green, palest beneath, and somewhat inclined to yellow; quills and tail dusky; the last even at the end and edged with yellow-green; legs dusky brown; the feathers just above the knee, or garter, white; the hind toe pretty long. (*Latham.*)

Hab. Sandwich Islands.

2. Hemignathus olivaceus.

Heterorhynchus olivaceus, *Lafr. Mag. de Zool.* 1839, pl. 10; *Flor. Prev. et Des Murs, Voy. Venus, Atlas*, pl. i.; *Reichenb. Handb. Scans.* p. 313, Taf. dxci. figs. 4010–11 (1853); *Cass. U.S. Expl. Exped., Birds*, p. 179 (1858); *Dole, Proc. Bost. Soc. Nat. Hist.* xii. p. 298 (1869); *Sclater, Ibis*, 1871, p. 359.
Vestiaria heterorhynchus, *Less. Rev. Zool.* 1842, p. 209.
Drepanis lucida, *Gray, Gen. B.* i. p. 96 (1847).
Hemignathus lucidus, *Flor. Prev. et Des Murs, Voy. Venus*, texte, p. 191 (1855, *nec Licht.*).

* Having but one specimen of *Hemignathus* in the Museum collection, I have been unable to describe all the species from personal observation, and have been obliged to draw up the characters for the present "Key" from Lichtenstein's plate and the other figures published by the French naturalists.

Adult. Entirely of a dull olive, with the upper part of the head yellowish; the eyebrows, fore part of the neck, and breast lively yellow. (*Lafresnaye.*)

Hab. Sandwich Islands.

3. Hemignathus lucidus.

Hemignathus lucidus, *Licht. Abhandl. K. Akad. Berlin*, 1838, p. 451, tab. v. fig. 2; *Bp. Consp.* i. p. 404 (1850); *Reichenb. Handb. Scans.* p. 313, Taf. dxci. figs. 4012–13 (1853); *Licht. Nomencl. Av.* p. 55 (1854); *Cass. U.S. Expl. Exped., Birds*, p. 180 (1858); *Dole, Proc. Bost. Soc. Nat. Hist.* xii. p. 298 (1869); *Sclater, Ibis*, 1871, p. 359.

Drepanis lucida, *Gray, Gen. B.* i. p. 96 (1847); *id. Hand-l. B.* i. p. 113, no. 1407 (1869).

Drepanis (Hemignathus) lucida, *Gray, Cat. B. Trop. Isl. Pacific Ocean*, p. 9 (1859).

? *Young.* General colour above dull ashy olive, a little clearer olive on the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater coverts brown, edged with ashy olive and tipped with whitish, forming two narrow bars across the wing; bastard-wing and primary-coverts uniform brown; quills brown, externally edged with yellowish olive; tail-feathers light brown, externally olive; head dull ashy like the mantle, a little more olive on the sides of the crown; lores ashy; feathers round the eye yellowish white; ear-coverts olive, with dull white shaft-lines; cheeks and under surface of body yellowish white, somewhat streaked with ashy on the fore neck and chest, where the feathers have ashy centres; sides of body and flanks ashy brown washed with olive, as also the thighs; under tail-coverts yellowish white, with brown bases to the feathers; axillaries and under wing-coverts white, slightly washed with olive-yellow; quills brown, below, whitish along the inner web. Total length 5·2 inches, culmen 1, wing 2·8, tail 1·75, tarsus 0·8.*

Hab. Sandwich Islands.

a. Juv. sk. Sandwich Islands. Sir E. Belcher [P.].

2. DREPANIS.

	Type.
Drepanis, *Temm. Man. d'Orn.* i. p. lxxxvi (1820).....	D. pacifica.
Falcator, *Temm.* (1822, *teste Gray*).....	D. pacifica.

Range. Sandwich Islands.

1. Drepanis pacifica.

Great Hook-billed Creeper, *Lath. Gen. Syn.* i. pt. 2, p. 703 (1782).

Certhia pacifica, *Gm. Syst. Nat.* i. p. 470 (1788); *Lath. Ind. Orn.* i. p. 281 (1790).

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* The specimen described, having been long exposed to the light in the public gallery, has probably become faded. It appears to belong to *H. lucidus*.

Le Hoho, *Audeb. et Vieill. Ois. Dor.* pl. lxiii. (1802).
Merops jaunoir, *Levaill. Hist. Nat. Promérops et Guépiers*, iii. pl. 19 (1807).
Drepanis pacifica, *Temm. Man. d'Orn.* i. p. lxxxvi (1820); *Gray, Gen. B.* i. p. 96 (1847); *Bp. Consp.* i. p. 403 (1850); *Reichenb. Handb. Scans.* p. 253, pl. dlxi. fig. 3828 (1853); *Gray, Cat. Birds Trop. Isl. Pacific Ocean*, p. 7 (1859); *id. Hand-l. B.* i. p. 113, no. 1443 (1869); *Dole, Proc. Bost. Soc. Nat. Hist.* xii. p. 297 (1869); *Sclater, Ibis*, 1871, p. 358; *Pelz. Ibis*, 1873, p. 21.
Melitreptus pacificus, *Bonn. et Vieill. Enc. Méth.* ii. p. 602 (1823).
Vestiaria hoho, *Less.*

Length 8 inches. Bill an inch and three quarters, stout at the base, and very much hooked; colour of it brown, with a pale base; the upper parts of the body are black, except the lower part of the back, the rump, and upper tail-coverts, which are of a fine deep yellow; the underparts of the body dusky; the shoulders, inner ridge of the wing, and part of the inner wing-coverts are of the same yellow; the bastard-wing yellowish white at the end; the under wing-coverts snow-white; the sides of the vent, the vent itself, and the thighs are yellow; the tail and quills black; the legs black-brown. (*Latham.*)
Hab. Sandwich Islands.

3. VESTIARIA.

Type.
Vestiaria, *Fleming, Phil. Zool.* ii. p. 246 (1822) ..... V. coccinea.



Bill of *Vestiaria coccinea*.

Range. Sandwich Islands.

1. Vestiaria coccinea.

Hook-billed Red Creeper, *Lath. Gen. Syn.* i. pt. 2, p. 704 (1782).
Mellisuga coccinea, *Merrem, Av. Rar. Descr. et Icon.* p. 14, pl. iv. (1786).
Certhia coccinea, *Gm. Syst. Nat.* i. p. 470 (1788).
Certhia vestiaria, *Lath. Ind. Orn.* i. p. 282 (1790).
L'Héorotaire, *Audeb. et Vieill. Ois. Dor.* pl. 52 (1807).
Melitreptus vestiarius, *Vieill. Gal. Ois.* i. pl. 181 (1825–34).
Nectarinia coccinea, *Bloxam in Byron's Voy. 'Blonde,'* p. 249 (1826).
Melithreptus vestiarius, *Less. Traité*, p. 300 (1831).
Drepanis vestiaria, *Hartl. Syst. Verz. Brem.* p. 16 (1844).
Vestiaria evi, *Less.*
Drepanis coccinea, *Gray, Gen. B.* i. p. 96 (1847); *Cass. U.S. Expl. Exped.* p. 177 (1858); *Gray, Hand-l. B.* i. p. 113, no. 1405 (1869);

Dole, Proc. Bost. Soc. Nat. Hist. xii. p. 297 (1869); *Sclater, Ibis*, 1871, p. 358; *id. P. Z. S.* 1878, p. 347; *id. Report Birds 'Challenger' Exp.* p. 95 (1881).

Vestiaria coccinea, *Reichenb. Handb. Scansoriæ*, p. 254, pl. dlxii. figs. 3831–32 (1853).

Drepanis (Vestiaria) coccinea, *Gray, Cat. Birds Trop. Isl. Pacific Ocean*, p. 8 (1859).

Adult male. General colour above scarlet-vermilion, the scapulars like the back, as well as the lesser and median wing-coverts; greater coverts black, slightly margined with crimson near the tip of the outer web; bastard-wing, primary-coverts, and quills black, the innermost secondaries and greater coverts drab-brown on the inner web, and distinctly edged with crimson on the outer one, some of the inner greater coverts ashy whitish; tail-feathers black; entire head and neck all round as well as the entire under surface of the body deep scarlet-vermilion, deepening into crimson on the breast; the plumes of the throat lanceolate and with white bases; axillaries white, tinged with rosy colour; under wing-coverts greyish white, the edge of the wing washed with scarlet; quills blackish below, ashy white along the edge of the inner web; "bill and legs bright vermilion" (*Finsch*). Total length 5·2 inches, culmen 1, wing 2·9, tail 1·95, tarsus 0·9.

Adult female. Like the male (*Finsch*).

Young female. General colour above ochraceous buff, mottled with spots and bars of dusky blackish at the ends of the feathers; the mantle rather more ashy brown than the head; scapulars like the back, and barred in the same manner; wing-coverts brownish black, edged with ochraceous olive; bastard-wing, primary-coverts, and quills black, the primaries edged with ashy olive, the inner secondaries with the inner web white; tail-feathers black; sides of face and ear-coverts deep ochraceous buff, with narrow whitish shaft-lines on the latter; throat and chest ochraceous buff, more olive on the latter and deeper ochre on the throat, all the feathers tipped with the same dusky spots as the upper surface; lower abdomen and under tail-coverts ashy olive, the breast scarlet (new plumage); under wing-coverts and axillaries ashy white, the latter with a slight rosy tinge; quills dusky brown below, ashy whitish along the edge of the inner web. Total length 4·5 inches, culmen 1, wing 2·75, tail 1·8, tarsus 0·9.

Hab. Sandwich Islands.

a, b. ♂ ad. sk.	Sandwich Islands.	
c. ♂ ad.; *d.* ♂ juv. sk.	Sandwich Islands.	John Gould, Esq.
e. ♂ ad.; *f, g.* ♀ juv. sk.	Hilo, Owhyhee.	Voy. of H.M.S. 'Challenger.'

4. HIMATIONE.

Himatione, *Cab. Mus. Hein.* Th. i. p. 99 (1850) ..... Type. H. sanguinea.



Bill of *Himatione sanguinea.*

Range. Sandwich Islands.

Key to the Species.*

a. Crimson above and below ..... *sanguinea*, p. 8.
b. Olive-yellow above, brighter yellow below ..... *virens*, p. 9.

1. Himatione sanguinea.

Crimson Creeper, *Lath. Gen. Syn.* i. pt. 2, p. 739 (1782).
Certhia sanguinea, *Gm. Syst. Nat.* i. p. 479 (1788).
L'Héorotaire cramoisi, *Audeb. et Vieill. Ois. Dor.* ii. pl. 66 (1802).
Petrodroma sanguinea, *Vieill. N. Dict. d'Hist. Nat.* xxvi. p. 108 (1818).
Nectarinia byronensis, *Bloxam in Byron's Voy. 'Blonde,'* p. 249 (1826); *Gray in Griffith's Cuvier An. Kingd., Aves*, ii, p. 390 cum fig. (1829).
Nectarinia sanguinea, *Cuv. Règn. An.* i. p. 432 (1829).
Drepanis byronensis, *Gray, Zool. Misc.* p. 12 (1831).
Drepanis sanguinea, *Hartl. Syst. Verz. Brem.* p. 16 (1844); *Gray, Gen. B.* i. p. 96 (1847); *Bp. Consp.* i. p. 404 (1858); *Gray, Hand-l. B.* i. p. 113, no. 1406 (1869); *Dole, Proc. Bost. Soc. Nat. Hist.* xii. p. 207 (1869); *Sclater, Ibis*, 1871, p. 358; *id. P. Z. S.* 1878, p. 347; *id. Report Birds 'Challenger' Exped.* p. 95 (1881).
Himatione sanguinea, *Cab. Mus. Hein.* Th. i. p. 99 (1850); *Reichenb. Handb. Scansoriæ*, p. 255, Taf. dlxii. figs. 3833–34 (1853).
Drepanis (Himatione) sanguinea, *Gray, Cat. B. Trop. Isl. Pacific Ocean*, p. 8 (1859).

Adult male. General colour above dark crimson, rather richer on the head and neck; wing-coverts black, edged with crimson externally; bastard-wing, primary-coverts, and quills black, the primaries narrowly edged with ashy, the inner secondaries with crimson; tail-feathers black; sides of face and under surface of body dark crimson, somewhat mottled with ashy bases to the feathers; abdomen, thighs, and lower flanks browner; under tail-coverts white; under wing-coverts dull ashy whitish, the edge of the wing browner; axillaries white; quills dusky below, ashy whitish along the edge of

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* Drepanis falcata, *Gray, Hand-l. B.* i. p. 113, no. 1404 (1869), *ex Gm. S. N.* i. p. 470.

Is *Cinnyris lotenia.* [See Shelley, Monogr. Nectar. p. 177.]

the inner web. Total length 4·4 inches, culmen 0·6, wing 2·9, tail 1·85, tarsus 0·95.

Adult female. General colour above dull ochraceous brown, slightly mottled with dusky margins to the feathers, especially on the lower back, rump, and upper tail-coverts; sides of mantle dark crimson; scapulars like the back, and barred with dusky cross lines in the same manner; wing-coverts black, externally orange-buff; bastard-wing, primary-coverts, and quills black, the secondaries externally orange-buff; head dusky, streaked with blackish brown, the forehead tinged with ochraceous, the head being slightly washed with a dull rosy shade; lores ochraceous buff; sides of face dingy ochreous brown, washed with rose-colour, as also the throat; remainder of under surface of body dingy ochreous brown, ashy whitish on the lower abdomen and under tail-coverts; axillaries and under wing-coverts ashy. Total length 4·6 inches, wing 2·8, tail 1·9, tarsus 0·9.

Hab. Sandwich Islands.

a, b. ♂ ad. sk.	Sandwich Islands.	
c. ♂ ad. sk.	Sandwich Islands.	
d. ♂ ad. sk.	Sandwich Islands.	Lord Byron [P.]. (Type of species.)
e. ♀ ad. sk.	Hilo, Owhyhee.	Voy. of H.M.S. 'Challenger.'

2. Himatione virens.

Olive-green Creeper, *Lath. Gen. Syn.* i. pt. 2, p. 740 (1782).
Certhia virens, *Gm. Syst. Nat.* i. p. 479 (1788, *ex Lath.*).
L'Héorotaire vert olive, *Audeb. et Vieill. Ois. Dor.* pls. 67, 68 (1802).
Melitreptus virens, *Bonn. et Vieill. Enc. Méth.* ii. p. 607 (1802).
Nectarinia flava, *Bloxam in Byron's Voy.* 'Blonde,' p. 249 (1826).
Drepanis flava, *J. E. Gray, Zool. Misc.* p. 12 (1831); *Dole, Proc. Bost. Soc. Nat. Hist.* xii. p. 298 (1869); *Sclater, P. Z. S.* 1878, p. 348; *id. Report Birds 'Challenger' Exped.* p. 95 (1881).
Himatione chloris, *Cab. Mus. Hein.* Th. i. p. 99, note (1850).
Himatione maculata, *Cab. t. c.* p. 100, note (1850).
Himatione flava, *Reichenb. Handb. Seans.* p. 255 (1855).
Drepanis (Himatione) sanguinea ♀, *Gray, Cat. Birds Trop. Isl. Pacific Ocean,* p. 8 (1859).

Adult male. General colour above olive-yellow, brighter towards the rump and upper tail-coverts; wing-coverts like the back; bastard-wing, primary-coverts, and quills dusky brown, externally olive-yellow like the back, broader on the secondaries; tail-feathers dusky brown, edged with olive-yellow; crown of head like the back, brighter yellow on the forehead and over the eye; lores blackish; sides of face and ear-coverts brighter olive-yellow, dusky olive along the upper margin of the latter; under surface of body clear yellow, more olive-greenish on the sides of the body and flanks; a blackish spot at the extreme base of the chin, extending a little way along the malar line; thighs ashy externally, olive on the inner side; under tail-coverts whitish, washed with yellow; under wing-coverts and axillaries white, washed with yellow, especially along the edge of the wing; tail dusky brown below, whitish along the edge of the

inner web. Total length 4·5 inches, culmen 0·7, wing 2·45, tail moulting, tarsus 0·9.

Adult female. Duller in colour than the male and more greenish olive above and ashy olive below, being paler on the abdomen; greater wing-coverts and secondaries pale yellowish white at the tips.

Young male. Like the old female, but a little brighter olive-yellow, and having very distinct tips of pale yellow on the wing-coverts and secondaries.

Hab. Sandwich Islands.

a, *b*. Ad. sk.	Sandwich Islands.	
c, *d*. Ad. et imm. sk.	Sandwich Islands.	Capt. Lord Byron [P.]. (Type of *N. flava*.)
e. Imm. sk.	Sandwich Islands.	Capt. Lord Byron [P.].
f. ♂ ad.; *g*. ♀ ad. sk.	Sandwich Islands.	John Gould, Esq.
h. ♂; *i*, *k*. ♀ ad.; *l*. ♂ juv. sk.	Hilo, Owhyhee.	Voy. of H.M.S. 'Challenger.'

5. DICÆUM *.

	Type.
Dicæum, *Cuvier, Règne An.* i. p. 410 (1817)	D. cruentatum.
Myzanthe, *Hodgs. J. A. S. Beng.* xii. p. 983 (1843)	D. ignipectus.
Microchelidon, *Reichenb. Handb. Scansoriæ*, p. 243 (1853)	D. hirundinaceum.



Bills of *D. æneum*, *D. hirundinaceum*, and *D. cruentatum*, to show the differences in size of bill in the genus *Dicæum*.

Range. Indian peninsula and Ceylon; Southern China and Hainan; Burmese countries; Malayan peninsula; Sunda Islands; Philippines; whole of the Malayan archipelago; New Guinea and Papuan Islands to the eastward; Australia.

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* Dicæum griseum.

Grimpereau gris de la Chine, *Sonn. Voy. Ind. Orient.* ii. p. 210, pl. 61. fig. 3 (1776–82).
Certhia grisea, *Scop. Del. Flor. et Faun. Insubr.* ii. p. 91 (1786, *ex Sonn.*).
Phenacistes griseus, *Reichenb. Handb. Scans.* p. 244 (1853).
Dicæum griseum, *Gray, Hand-l. B.* i. p. 115, no. 1431 (1869).

Is certainly not a *Dicæum*, and seems to me to be intended for *Burnesia socialis* (Sykes); Sharpe, Cat. B. vii. p. 208.

Dicæum maugæi.

Dicæum maugæi, *Less. Traité*, p. 303 (1831); *Gray, Gen. B.* i. p. 100 (1847); *id. Hand-l. B.* i. p. 115, no. 1430 (1869).

Bill aurora-red; plumage grey above, white below; cheeks and throat reddish (*Lesson*).
Hab. Timor.
Not recognized by subsequent authors.

Key to the Species.

I. Bill black, or with pale base to the lower mandible.
A. Plumage more or less particoloured; generally with some scarlet on the throat or upper surface.
a. Under surface not striped; sometimes a broad mesial longitudinal band down the breast.
a'. Back scarlet like the head.
a''. Ear-coverts scarlet like the throat; breast ashy grey ..... *flammeum*, p. 14.
b''. Ear-coverts blackish or slaty grey.
a'''. No scarlet on throat; no black pectoral band.
a^4. No black on chin ..... *cruentatum*, p. 15.
b^4. Chin or upper throat black .. *nigrimentum*, p. 17.
c^4. Entire throat black, extending on to the fore neck ..... *pryeri*, p. 18.
d^4. Entire throat ashy grey or dark slate-colour ..... *sumatranum*, p. 18.
b'''. Throat scarlet, separated from the breast by a broad pectoral band of black, extending down the centre of the abdomen .. *igniferum*, p. 18.
b'. Back glossy purplish blue.
c''. No red on upper tail-coverts.
c'''. Under tail-coverts scarlet.
e^4. Flanks ashy grey ..... *hirundinaceum*, p. 19.
f^4. Flanks olive ..... *ignicolle*, p. 21.
g^4. Flanks rosy like the breast.
a^5. Flanks dark olive ..... *keiense*, p. 22.
b^5. Flanks ochreous ..... *fulgidum*, p. 22.
d'''. Under tail-coverts yellowish white.
h^4. Chin white.
c^5. Sides of breast blackish or dark slaty grey; lower flanks ashy olive ..... *celebicum*, p. 23.
d^5. No olive on sides of body, which are entirely ashy; upper surface glossy indigo-blue, not purplish as in preceding species ..... *sanghirense*, p. 24.
e^5. Sides of body entirely olive *sulaense*, p. 24.
i^4. Chin and upper throat fulvous or tawny buff ..... *sanguinolentum*, p. 25.
d''. Upper tail-coverts scarlet.
e'''. No red on the head, which is like the back.
k^4. Underparts creamy white, with a black line down the belly . *mackloti*, p. 25.
l^4. Underparts yellowish, with a black line down the belly .. *salvadorii*, p. 26.

f'''. Head scarlet.
m^4. A patch of scarlet in the centre of the chest; throat whitish.
f^5. Sides of breast grey ..... *rubro-coronatum*, p. 26.
g^5. Sides of breast yellowish olive like the flanks..... *pulchrius*, p. 27.
n^4. Throat and upper breast red.
h^5. Feathers of the head red at the tips, dusky at base .. *rubrigulare*, p. 28.
i^5. Feathers of the head and rump spotted with white between the dusky base and red tip ..... *albo-punctatum*, p. 28.
c'. Back olive or greenish, or light brown; a patch of scarlet or vermilion on the chest.
e''. Throat grey.
g'''. No scarlet on upper tail-coverts, these being olive-yellow like the back; head glossy slaty grey, contrasting with the back; flanks olive..... *schistaceiceps*, p. 28.
h'''. Upper tail-coverts scarlet; back dark ashy brown, as also the head; sides of body grey .... *vulneratum*, p. 29.
f''. Throat white or yellowish white.
i'''. No red on the head.
o^4. No red on the rump.
k^5. Head olive or greenish like the back.
a^6. No grey patch below the scarlet præpectoral spot; the breast dull olive like rest of flanks..... *pectorale*, p. 29.
b^6. Centre of breast ashy grey; flanks bright yellowish olive ..... *æneum*, p. 30.
l^5. Head slaty grey, contrasting with the back ..... *erythrothorax*, p. 31.
p^4. Rump scarlet..... *layardorum*, p. 32.
k'''. Head dull red or bright red.
q^4. Abdomen white, with a mesial broad line of ashy brown down the breast; a transverse band of bright scarlet across the fore neck; rump bright scarlet; head dull reddish..... *eximium*, p. 33.
r^4. No mesial dark line down the breast.
m^5. Crown dull red.
c^6. A broad patch of scarlet on the breast; upper tail-coverts reddish like the head ..... *maforense*, p. 33.
d^6. Scarlet patch on breast small; upper tail-coverts bright red..... *mysoriense*, p. 34.

n^5. Crown and upper tail-coverts bright scarlet; upper surface glossy green..... *geelvinkianum*, p. 34.

a Back chocolate-brown, contrasting with the upper tail-coverts and tail, which are black, the frontal feathers edged with hoary whitish; ear-coverts hoary whitish; no scarlet above or below, the under surface being white, except on the throat and fore neck, which are blackish brown washed with hoary whitish ..... *tristrami*, p. 34.

e'. Back slaty blackish or dull black, or black washed with olive.

g''. With no red in the centre of the breast.

l'''. With a red collar round the hind neck..... *retrocinctum*, p. 35.

m'''. With no red collar round the hind neck; throat white.

s^4. Entire centre of breast red, surrounded by black ..... *hæmatostictum*, p. 35.

t^4. A red patch down the centre of the breast, with no black. *rubriventer*, p. 36.

h''. No red on the underparts.

n'''. Upper surface black; below white ..... *hypoleucum*, p. 37.

o'''. Upper surface dingy olive; below ashy, white on abdomen .... *mindanense*, p. 37.

p'''. Upper surface dull slate-colour; under surface ashy, tinged with olive ..... *rubriventer*, juv., p. 36.

f'. A patch of orange in the centre of the back.

i''. Chin and throat slaty grey; lower back also orange..... *trigonostigma*, p. 38.

k''. Chin bright yellow; lower back slaty blue, with an orange-scarlet spot in the centre of the back.

q'''. Throat entirely yellow.

u^4. Rump slaty grey like the rest of the back ..... *dorsale*, p. 40.

v^4. Rump lemon-yellow, contrasting with the rest of the back *xanthopygium*, p. 40.

r'''. Lower throat ashy grey washed with yellow ..... *cinereigulare*, p. 40.

g'. Back glossy steel-green, metallic; rump olive-yellow.

l''. A scarlet patch on the throat .... *ignipectus*, p. 41.

m''. No scarlet on throat ..... *pygmæum*, p. 43.

b. Under surface thickly streaked..... *chrysorrhæum*, p. 44.

B. Plumage plain; olive above, paler olive below, or ashy underneath; no scarlet on rump or upper tail-coverts; no bright colour on breast or under surface of body.

c. Size large; wing 1·95–2 inches; bill black. *concolor*, p. 45.

d. Size smaller; wing not exceeding 1·9 inch; bill pale at base of lower mandible.
h'. Throat pale olive yellowish like the rest of the under surface ..... *inornatum*, p. 45. / *minullum*, p. 47.
i'. Throat ashy, slightly washed with olive.
n''. Abdomen olive-yellow, contrasting with throat ..... *virescens*, p. 46.
o''. Abdomen ashy like the throat, with a slight wash of olive ..... *everetti*, p. 47.

II. Bill yellowish in the skin, red in life; upper surface plain-coloured ..... *erythrorhynchum*, p. 48.

1. Dicæum flammeum.

Motacilla flammea, *Sparrm. Mus. Carls.* fasc. iv. pl. 98 (1789).
Flame-coloured Warbler, *Lath. Gen. Syn. Suppl.* ii. p. 251 (1801).
Sylvia flammea, *Lath. Ind. Orn.* p. lvi (1801).
Le Figuier rouge, *Levaill. Ois. d'Afr.* iii. pl. 136 (1802).
Dicæum rubescens, *Vieill. N. Dict. d'Hist. Nat.* ix. p. 408 (1817).
Dicæum cruentatum (*nec L.*), *Horsf. Trans. Linn. Soc.* xiii. p. 168 (1820).
Nectarinia rubrocana, *Temm. Pl. Col.* iv. pl. 108. figs. 2, 3 (1824).
Dicæum rubricosum, *Cuv. Règne Anim.* i. p. 433 (1829).
Dicæum rubrocanum, *Blyth, J. A. S. Beng.* xv. p. 44 (1845); *Bp. Consp.* i. p. 403 (1850); *Reichenb. Handb. Scans.* p. 260, Taf. dlvi. figs. 3778–79 (1853); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 748 (1856); *Bernst. J. f. O.* 1859, p. 278; *Vorderm. Nat. Tijdschr. Ned. Ind.* xlii. p. 214 (1882).
Dicæum rubescens, *Gray, Gen. B.* i. p. 100 (1847); *Reichenb. Handb. Scansoriæ*, p. 240, Taf. dlvi. figs. 3776–77 (1853).
Dicæum flammeum, *Sundev. Krit. Framst. Sparrm.* p. 14 (1857); *Gray, Hand-l. B.* i. p. 115, no. 1423 (1869); *Salvad. Ucc. Born.* p. 167 (1874); *Tweedd. Ibis*, 1877, p. 302; *Nichols. Ibis*, 1879, p. 166, 1881, p. 152; *Blasius*, iii. *JB. Ver. Naturw. Braunschw.* pp. 79–81 (1883).

Adult male. General colour above bright orange-scarlet from the base of the bill to the upper tail-coverts; the feathers with a concealed subterminal band of blue-black, only visible on the disarrangement of the plumage; scapulars and wing-coverts glossy blue-black; greater coverts, primary-coverts, bastard-wing, and quills black, with a slight gloss of blue-black; tail-feathers deep blue-black; sides of face, sides of neck, throat, and fore neck orange-scarlet; sides of upper breast and remainder of under surface of body pale ashy, with a slight wash of olive; lower abdomen and under tail-coverts white; axillaries and under wing-coverts white, dusky along the edge of the wing; quills dusky brown, ashy along the edge of the inner web. Total length 3·4 inches, culmen 0·45, wing 2·2, tail 1·1, tarsus 0·5.

Adult female. Different from the male. General colour above brown, with a reddish tinge on the head and mantle, more olive on the lower back, scapulars, and back; the rump and upper tail-coverts scarlet; tail-feathers blue-black; quills dusky brown, edged

narrowly with olive; lores and eyelid whitish; ear-coverts ashy whitish; the sides of the face and cheeks pale brown washed with fulvous, the ear-coverts with indistinct shaft-lines; throat white, separated from the cheeks by a moustachial line of dingy brown; centres of breast and abdomen dull whitish, the fore neck somewhat obscured with ashy-brown edgings; sides of body ashy brown washed with olive; vent and under tail-coverts buffy white; under wing-coverts and axillaries white; quills brown, ashy along the edge of the inner web. Total length 3·4 inches, culmen 0·45, wing 1·9, tail 1·2, tarsus 0·5.

Young male. At first like the adult female, but more orange on the rump and upper tail-coverts. The scarlet plumage is assumed by a direct moult.

Hab. Java; Madura (*Meyer*; *Mus. R. G. W. R.*); ? Borneo.

a. ♂ ad. sk.	Java.	Gould Collection.
b, c. ♂ ♀ ad. sk.	W. Java.	A. R. Wallace, Esq. [C.].
d, e, f, g. ♂ ad.; *h.* ♀ ad. sk.	W. Java (*E. C. Buxton*).	F. Nicholson, Esq. [P.].
i, k. ♂ imm. sk.	W. Java (*E. C. Buxton*).	F. Nicholson, Esq. [P.].
l, m. ♂; *n.* ♀; *o.* ♂ juv. sk.	Java (*Horsfield*).	India Museum.
p. ♂ ad. sk.	Java.	Leiden Museum [P.].

2. Dicæum cruentatum.

The Little Black, White and Red Indian Creeper, *Edwards, Nat. Hist. B.* pl. 81 (1743–51).

Certhia cruentata, *Linn. Syst. Nat.* i. p. 187 (1766); *Lath. Ind. Orn.* i. p. 296 (1790).

Le Grimpereau à dos rouge de la Chine, *Sonn. Voy. Ind. Orient.* ii. p. 209, pl. 61. fig. 1 (1776–82).

Certhia coccinea, *Scop. Del. Flor. et Faun. Insubr.* ii. p. 91 (1786).

Red-backed Creeper, *Lath. Gen. Syn. Suppl.* p. 132 (1787).

Certhia erythronotus, *Lath. Ind. Orn.* p. 290 (1790).

Le Souimanga à dos rouge, *Audeb. et Vieill. Ois. Dor.* ii. p. 57, pl. 35 (1802).

Dicæum erythronotum, *Cuv. Règne Anim.* i. p. 410 (1817); *McClell. P. Z. S.* 1839, p. 167; *Blyth, J. A. S. Beng.* xii. p. 983 (1843), xiv. p. 558 (1845).

Dicæum cruentatum, *Strickl. Ann. & Mag. Nat. Hist.* xiii. p. 38 (1844); *Blyth, Cat. B. Mus. As. Soc.* p. 226 (1849); *Bp. Consp.* i. p. 402 (1850); *Cab. Mus. Hein.* Th. i. p. 98 (1850); *Tytler, Ann. & Mag. Nat. Hist.* (2) xiii. p. 373 (1854); *Gould, B. Asia*, part vi. (1854); *Walden, P. Z. S.* 1866, p. 544; *Swinh. Ibis*, 1867, p. 405, 1868, p. 63; *Gray, Hand-l. B.* i. p. 114, no. 1415 (1869); *Swinh. Ibis*, 1870, p. 239; *id. P. Z. S.* 1871, p. 349; *Hume, Nests and Eggs Ind. B.* p. 155 (1873); *id. Str. F.* 1874, p. 473, 1875, p. 87; *Blyth & Wald. B. Burm.* p. 142 (1875); *Hume, Str. F.* 1875, p. 87; *Armstr. Str. F.* 1876, p. 315; *Walden, Ibis*, 1876, p. 349; *David & Oust. Ois. Chine*, p. 83 (1877); *Hume & Davis. Str. F.* 1878, p. 192; *Anderson, Zool. Exped. Yunnan*, p. 603 (1878); *Hume, Str. F.* 1879, pp. 56, 90; *Kelham, Ibis*, 1881, p. 505; *Müller, Vög. Insel Salanga*, p. 21 (1882); *Oates, B. Brit. Burm.* i. p. 332 (1883).

Nectarinia ignita, *Begbie, Ann. & Mag. Nat. Hist.* xvii. p. 408 (1846).

Dicæum coccineum, *Gray, Gen. B.* i. p. 100 (1847); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 747 (1856); *Jerd. B. Ind.* i. p. 373 (1862); *Blyth, Ibis*, 1866, p. 305; *Beavan, Ibis*, 1869, p. 421; *Godwin-Austen, J. A. S. Beng.* xxxix. p. 99 (1870); *Jerd. Ibis*, 1872, p. 18.

Adult male. General colour above bright scarlet, the mantle slightly mottled with black bases to the feathers; scapulars and wing-coverts glossy steel-blue; quills blackish, externally edged with glossy steel-blue, broader on the secondaries; tail-feathers blue-black; lores, feathers above the eye, ear-coverts, cheeks, sides of throat, and sides of neck black, with scarcely any steel-green gloss, and extending in a narrow line along the rami of the lower jaw and down on to the sides of the upper breast; throat and under surfaces of body creamy buff, including the thighs and under tail-coverts, the flanks and sides of body ashy grey; axillaries and under wing-coverts pure white; quills dusky below, ashy whitish along the edge of the inner web; "bill and mouth black; legs and feet black; iris dark brown; eyelids plumbeous" (*E. W. Oates*). Total length 3·3 inches, culmen 0·45, wing 1·85, tail 1, tarsus 0·45.

Adult female. General colour above yellowish olive, a little deeper on the hind neck and mantle; the head with dusky centres to the feathers, producing a slightly mottled appearance; rump and upper tail-coverts bright scarlet; scapulars and wing-coverts dull steel-green, edged with olive; quills dusky brown, with narrow olive margins; tail-feathers blue-black; ear-coverts pale brown; lores and cheeks ashy fulvous, mottled with dusky bases to the feathers; throat and under surface of body light ochraceous buff, ashy olive on the sides of the throat, sides of body, and flanks; axillaries and under wing-coverts white; quills dusky below, whitish along the edge of the inner web; "mouth flesh-coloured" (*E. W. Oates*). Total length 3·25 inches, wing 1·8, tail 0·95, tarsus 0·5.

Obs. Some of the females, apparently very old birds, have a distinct reddish shade on the upper parts.

A young female collected by Mr. Oates is lighter olive-yellow above, and has the throat and fore neck more ashy; the rump and upper tail-coverts are saffron-yellow, with some bright scarlet feathers intermixed.

Hab. South-eastern Himalayas, throughout the Burmese countries, and Southern China to Hainan, and down the Malayan peninsula to Java and Sumatra.

a, b. ♂ ♀ ad. sk.	Hainan.	R. Swinhoe, Esq. [C.].
c. ♂ ad. sk.	Cochin China.	M. E. Pierre [P.].
d. ♂ ad. sk.	Assam (*McClelland*).	India Museum.
e, f. ♂ ♀ ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
g, h. ♂; *i.* ♀ ad. sk.	Nepal (*Hodgson*).	India Museum.
k. ♂ ad. sk.	Calcutta (*Blyth*).	India Museum.
l, m. ♂ ♀ ad. sk.	Thayetmyo.	W. T. Blanford, Esq. [P.].
n, o. ♂ ♀ sk.	Pegu, Aug. and Nov.	E. W. Oates, Esq. [C.].

p. ♀ juv. sk.	12 miles north of Rangoon, Oct.	E. W. Oates, Esq. [C.].
q. ♂ ad. sk.	Salween River, Tenasserim, July 26.	Capt. C. T. Bingham [P.].
r. ♂ ad. sk.	Tenasserim.	J. C. D. Packman, Esq. [P.].
s. ♂ ad. sk.	Tavoy (*Briggs*).	Gould Collection.
t. ♂ ad. sk.	Malacca (*Griffith*).	India Museum.
u, *v*. ♀ ad. sk.	Malacca.	A. R. Wallace, Esq. [C.].
w. ♀ ad. sk.	Malacca (*Cantor*).	India Museum.
x, *y*. ♂ ad.; *z*, *a'*. ♀ juv. sk.	Penang (*Cantor*).	India Museum.
b'. ♂ ad. sk.	Sumatra.	A. R. Wallace, Esq. [C.].
c'. ♀ ad. sk.	Java.	Gould Collection.
d'. ♀ ad. sk.	Java (*Horsfield*).	India Museum.
e', *f'*. ♂ ad. sk.	Java.	Purchased.

Subsp. τ. **Dicæum nigrimentum.**

Dicæum coccineum (*non Scop.*), *Mottley & Dillw. Nat. Hist. Labuan*, p. 19 (1855).
Dicæum cruentatum (*non L.*), *Sclater, P. Z. S.* 1863, p. 219.
Dicæum nigrimentum, *Salvad. Ucc. Born.* p. 165 (1874); *Sharpe, P. Z. S.* 1879, p. 343.

Adult male. Similar to *D. coccineum*, but having more black on the chin, which, instead of being black only along the edge of the rami of the lower jaw, has the black colour extending over the chin, and in some examples on to the upper throat; "iris brown" (*Doria*). Total length 3·1 inches, culmen 0·4, wing 1·85, tail 1, tarsus 0·5.

Adult female. Very similar to the female of *D. coccineum*. Total length 3·2 inches, culmen 0·4, wing 1·95, tail 1, tarsus 0·5.

Obs. A comparison of Bornean birds with Malayan and Burmese *D. cruentatum* shows that the former have more or less black on the throat and chin; but even in Bornean examples the extent of this black is not the same in all individuals, while the form with black chin is also not strictly confined to Borneo, as the Museum possesses one from Malacca. As, therefore, the characters of *D. nigrimentum* are not absolutely constant, and it has not even a definite geographical range apart from *D. cruentatum*, I have thought it best to consider it merely a race of the last-named bird.

Hab. Malacca and Borneo.

a. ♂ ad. sk.	Malacca.	A. R. Wallace, Esq. [C.].
b. ♂ ad. sk.	Borneo.	Gould Collection.
c, *d*. ♂ ad.; *e*. ♀ juv. sk.	Labuan.	Governor Ussher [C.].
f. ♂ ad. sk.	Labuan (*Burbidge*).	Harry Veitch, Esq. [P.].
g, *h*. ♂ ♀ ad. sk.	Sarawak.	Henry Everett, Esq. [C.].
i, *k*. ♀ ad. sk.	Banjermassing (*Mottley*).	A. R. Wallace, Esq.

Subsp. β. Dicæum pryeri.

Dicæum pryeri, *Sharpe, P. Z. S.* 1881, p. 795; *id. in Gould's B. Asia*, part xxxiv. (1883).

Adult male (type of species). Similar to *D. cruentatum* and *D. nigrimentum*, but having the entire throat and jugulum black, the fore neck creamy buff, obscured by blackish edges to the feathers. Total length 2·9 inches, culmen 0·4, wing 1·85, tail 1, tarsus 0·45.

Obs. This is a race of *D. cruentatum*, in which the throat is entirely black, this colour extending on to the sides of the breast and leaving only the centre of the fore neck creamy buff. It is, however, so closely approached by some of the specimens of *D. nigrimentum*, that it can only be regarded as an extreme form, apparently peculiar to North-eastern Borneo.

Hab. Sandakan, N.E. Borneo.

a. ♂ ad. sk.	Sandakan.	W. R. Pryer, Esq. [C.]. (Type of subspecies.)

3. Dicæum sumatranum.

Dicæum sumatranum, *Cab. J. f. O.* 1878, p. 101.

Adult male. General colour above bright scarlet, the mantle slightly mottled with the blackish bases to the feathers; head like the back, as also the hind neck; base of forehead black; scapulars and wing-coverts glossy purplish blue with a steel gloss; greater coverts and quills, as well as the primary-coverts, blackish, externally edged with purplish blue; tail-feathers blue-black; lores, sides of face, ear-coverts, cheeks, and sides of neck sooty blackish; throat, breast, and sides of body lighter ashy, the flanks slightly washed with olive; centre of fore neck, and of breast, abdomen, and under tail-coverts, ochraceous buff; thighs ashy; under wing-coverts and axillaries white, the latter slightly washed with ochreous; quills dusky below, ashy whitish along the edge of the inner web. Total length 3·3 inches, culmen 0·4, wing 2·85, tail 0·85, tarsus 0·45.

Another male, apparently rather younger than the one described, has the whole of the forehead and eyebrow black. The hind neck is also dusky blackish, cutting off the scarlet crown from the mantle.

Hab. Sumatra.

a, b. ♂ ad. sk.	Sumatra (*Mus. Lugd.*).	Gould Collection.
c. ♂ jun. sk.	West coast of Sumatra.	India Museum.

4. Dicæum igniferum.

Dicæum igniferum, *Wall. P. Z. S.* 1863, p. 494; *Finsch, Neu-Guinea*, p. 163 (1865).
Dicæum ignifer, *Gray, Hand-l. B.* i. p. 114, no. 1419 (1869).

Adult male (type of species). General colour above dark scarlet,

the mantle and upper back somewhat mottled, the feathers purplish, tipped with scarlet; rump and upper tail-coverts rather brighter scarlet, with purplish bases; scapulars and wing-coverts deep purple; quills black, externally washed with deep purple; tail-feathers purplish black; base of forehead, lores, sides of face, cheeks, and sides of neck purplish black, connected with the pectoral band; chin whitish; throat and fore neck scarlet, the sides of the throat purplish black; the scarlet throat surrounded by a purplish-black band, descending along the middle of the abdomen, forming a broad mesial band; remainder of breast and under surface generally white, including the under tail-coverts, which are slightly tinged with yellow; thighs blackish; under wing-coverts and axillaries white, the edge of the wing black; quills blackish below, ashy along the edge of the inner web. Total length 3·5 inches, culmen 0·5, wing 1·95, tail 1, tarsus 0·5.

Adult female. Different from the male, and wanting the scarlet throat and black pectoral band; upper surface dingy brown, scarlet on the mantle, the feathers being tipped with this colour; head brighter scarlet, the forehead dusky; lower back ashy olive; upper tail-coverts bright scarlet; scapulars ashy olive; wing-coverts and quills black, glossed with purplish; the inner secondaries edged with olive; tail-feathers purplish black; cheeks, sides of face, and sides of neck dull ashy brown; throat and under surface of body dull white, purer on the abdomen and under tail-coverts; the chest and upper breast washed with ashy, mottled with dusky bases to the feathers, more distinct on the fore neck; under wing-coverts and axillaries white; quills dusky blackish below, white along the edge of the inner web. Total length 3·4 inches, culmen 0·4, wing 1·85, tail 0·95, tarsus 0·5.

Hab. Flores.

a, *b*. ♂ ♀ ad. sk.	Flores.	A. R. Wallace, Esq. [C.]. (Types of species.)
c, *d*. ♀ ad. sk.	Flores.	A. R. Wallace, Esq. [C.].

5. Dicæum hirundinaceum.

Motacilla hirundinacea, *Shaw & Nodder*, *Nat. Misc.* iv. pl. 114 (1792).

Swallow Warbler, *Lath. Gen. Syn. Suppl.* ii. p. 250 (1801).

Sylvia hirundinacea, *Lath. Ind. Orn. Suppl.* p. lv (1801).

Pipra desmaresti, *Leach, Zool. Misc.* i. p. 94, pl. 41 (1814); *Shaw, Gen. Zool.* x. p. 18 (1817).

Dicæum atrogaster, *Less. Traité*, p. 303 (1831).

Dicæum pardalotus, *Lafr. Mag. de Zool.* 1833, pl. 14 (*ex Cuvier, MSS.*).

Dicæum hirundinaceum, *Gray, Gen. B.* i. p. 100 (1847); *Gould, B. Austr.* fol. ii. pl. 34 (1848); *Reichenb. Vog. Neuholl.* p. 279 (1850); *Gould, Handb. B. Austr.* i. p. 581 (1865); *Gray, Hand-l. B.* i. p. 115, no. 1432 (1869); *Ramsay, Proc. Linn. Soc. N. S. W.* ii. p. 191 (1878); *Forbes, P. Z. S.* 1878, p. 125; *id. Report Birds 'Challenger' Exped.* p. 89 (1881); *Sharpe, Rep. Zool. Coll. H.M.S. 'Alert,'* p. 21 (1884).

Myzanthe hirundinacea, *Blyth*, *Cat. B. Mus. As. Soc.* p. 227 (1849); *Bp. Consp.* i. p. 402 (1850).
Microchelidon hirundinacea, *Reichenb. Handb. Scansoriæ*, p. 243, pl. dlvii. figs. 3792–95 (1853); *Sundev. Av. Meth. Tent.* p. 27 (1872).

Adult male. General colour above glossy purplish blue, the wing-coverts, like the back; bastard-wing, primary-coverts, and quills black, externally purplish blue like the back; tail-feathers blue-black, edged with purplish blue; head like the back; lores, sides of face, cheeks, ear-coverts, and sides of neck black glossed with purple; throat and fore neck scarlet, ashy whitish at the base of the chin, a narrow blackish line along the rami of the jaws; remainder of under surface yellowish white, with a broad central streak of purplish blue down the middle of the chest and breast; sides of breast and flanks ashy, with a little black on the sides of the upper breast; thighs yellowish white, with blackish bases; under tail-coverts scarlet; axillaries and under wing-coverts white, with blackish bases, the edge of the wing purplish blue; quills dusky brown below, ashy whitish along the edge of the inner web; "bill blackish brown; feet dark brown; iris dark brown" (*Gould*). Total length 3·7 inches, culmen 0·35, wing 2·5, tail 1·2, tarsus 0·5.

Adult female. Different from the male, and wanting the scarlet throat and purplish mark down the centre of the breast. General colour above ashy brown, slightly glossed with purplish blue on the scapulars and back; wing-coverts steel-black, edged with ashy brown; quills brown, edged with ashy, the secondaries glossed with steel-black; upper tail-coverts purplish blue, edged with reddish brown; tail-feathers blue-black; head like the back, with obsolete dusky centres to the feathers, washed with reddish on the forehead; over the eye a faint whitish streak; sides of face, ear-coverts, cheeks, and sides of neck ashy brown; throat white; remainder of under surface creamy white, the sides of the fore neck and breast ashy; thighs white; under tail-coverts pale scarlet; under wing-coverts and axillaries white; quills dusky below, whitish along the edge of the inner web. Total length 3·5 inches, culmen 0·4, wing 2·3, tail 1·05, tarsus 0·5.

Young male. Like the old female, but with white spots at the end of the tail-feathers.

Hab. Tasmania, and nearly the whole of Australia.

a. ♂ ad. sk.	Reed Beds, Adelaide (*S. White*).	Gould Collection.
b. ♂ ad. sk.	South Australia.	Sir George Grey [P.].
c. ♀ ad. sk.	South Australia.	Gould Collection.
d. ♀ ad. sk.	New South Wales.	Gould Collection.
e. ♀ ad. sk.	Richmond River (*Goodwin*).	R. B. Sharpe, Esq. [P.].
f, *g.* ♂; *h.* ♀ ad.; *i.* ♂ juv. sk.	Queensland (*J. T. Cockerell*).	F. D. Godman and O. Salvin, Esqrs. [P.].
k. ♂ ad. sk.	Moreton Bay.	Gould Collection.
l. ♂ ad. sk.	Cape York.	Capt. Stanley [P.].
m. ♂ ad. sk.	Cape York.	Gould Collection.

n. ♂ ad. sk.	Cape York.	Voy. of H.M.S. 'Challenger.'
o, p. ♂ ad. sk.	Thursday Island, Torres Straits (*Dr. Coppinger*).	Voy. of H.M.S. 'Alert.'
q. ♂ ad. sk.	Port Darwin (*Dr. Coppinger*).	Voy. of H.M.S. 'Alert.'
r. ♂ ad. sk.	Port Essington.	Gould Collection.
s. ♀ ad. sk.	Port Essington (*Capt. Ince*).	Mrs. Ince [P.].
t. ♀ ad. sk.	Quail Island.	Dr. J. R. Elsey [P.].
u. ♂ ad. sk.	York, Western Australia, Aug. 1843 (*J.G.*).	Gould Collection.

6. Dicæum ignicolle.

Dicæum ignicolle, *Gray, P. Z. S.* 1858, p. 173; *id. Cat. Mamm. & Birds New Guinea*, pp. 22, 55 (1859); *id. P. Z. S.* 1861, p. 434; *Rosenb. Nat. Tijdschr. Ned. Ind.* xxv. p. 237 (1863); *Finsch, New-Guinea*, p. 163 (1865); *Gray, Hand-l. B.* i. p. 114, no. 1420 (1869); *Rosenb. Malay. Arch.* p. 364 (1879); *Salvad. Ann. Mus. Civic. Genov.* xvi. p. 68 (1880); *id. Orn. Papuasia etc.* ii. p. 278 (1881).

Adult male (type of species). General colour above dark purplish blue, the wing-coverts like the back; quills black, externally purplish blue like the back; tail-feathers blue-black; lores, sides of face, ear-coverts, and cheeks purplish blue; throat, fore neck, and chest scarlet, whitish at extreme base of chin, with a black line skirting the edge of the rami of the jaws; remainder of underparts light yellow; the sides of the body and flanks yellowish olive, separated from the scarlet chest by an indistinct shade of purplish blue, which extends on the sides of the upper breast; in the centre of the breast a broad longitudinal streak of purplish blue; thighs blackish; under tail-coverts scarlet; under wing-coverts and axillaries white, with a slight tinge of yellow; quills blackish below, ashy whitish along the edge of the inner web. Total length 3·5 inches, culmen 0·35, wing 2·15, tail 1·1, tarsus 0·45.

Adult female. Differs from the male in wanting the scarlet throat and purplish breast-patch. Upper surface dingy olive, with a purplish gloss on the back and mantle; the rump and upper tail-coverts purple, with reddish edges to the feathers; wing-coverts and quills purplish black, with narrow olive margins to the former; tail-feathers purplish black; sides of face and ear-coverts dingy olive glossed with purple; under surface of body dull olive-yellowish, whiter on the throat; sides of breast and flanks darker olive; under tail-coverts pale scarlet; under wing-coverts and axillaries white with a slight yellowish tinge; quills below blackish, white along the edge of the inner web. Total length 3·5 inches, culmen 0·4, wing 1·95, tail 0·95, tarsus 0·45.

A male bird in full plumage is apparently younger than the bird described, as it has the throat lighter scarlet, the breast much more uniform dingy olive, with the pectoral patch of purplish blue smaller and less defined.

Hab. Aru Islands.

a, *b*. ♂ ♀ ad. sk.	Aru Islands.	A. R. Wallace, Esq. [C.]. (Types of species.)
c, *d*. ♂ ♀ ad. sk.	Aru Islands.	A. R. Wallace, Esq. [C.].
e. ♂ ad. sk.	Aru Islands (*Wallace*).	Gould Collection.

7. Dicæum keiense.

Dicæum sp., *Rosenb. Reis. naar Zuidoostereil.* p. 80 (1867).
Dicæum keiense, *Salvad. Ann. Mus. Civic. Genov.* vi. p. 314 (1874), xiv. p. 654 (1879), xvi. p. 68 (1880); *id. Orn. Papuasia etc.* ii. p. 279 (1881).

Adult male (Little Key; von Rosenberg). General colour above glossy purplish blue; wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills blackish, externally glossed with purplish blue; tail-feathers purplish black; lores, sides of face, ear-coverts, and cheeks black with a slight purplish gloss; throat and underparts generally scarlet, paler on the throat and richer on the fore neck and breast; sides of the upper breast purplish blue; sides of the body, flanks, and lower abdomen olivaceous; under tail-coverts pale scarlet; under wing-coverts and axillaries white, the edge of the wing purplish blue; quills dusky below, whitish along the edge of the inner web. Total length 3·2 inches, culmen 0·45, wing 2·15, tail 1·05, tarsus 0·5.

Hab. Ké or Key Islands, Moluccas.

a. ♂ ad. sk.	Little Key Island (*Von Rosenberg*).	Leiden Museum [P.].

8. Dicæum fulgidum.

Dicæum fulgidum, *Sclater, P. Z. S.* 1883, p. 56; *Gould, B. New Guinea*, part xv. (1883).

Adult male. General colour above dark purplish blue; wing-coverts like the back; quills black, externally slightly glossed with purplish blue, a little more distinct on the innermost secondaries; tail-feathers purplish blue like the back, but slightly duller; lores black; sides of face, cheeks, and ear-coverts black, with a slight gloss of purplish blue; a very narrow line of black bordering the rami of the lower jaw pale scarlet; under surface of the body pale scarlet, richer on the fore neck and breast, and extending in a rosy tinge over the sides of the body, the lower flanks and vent being of a light fawn-brown; the chin whitish and the centre of the body also mixed with white, the bases of the feathers being of this colour; in the centre of the breast a faintly indicated blackish spot; thighs black; under tail-coverts pale rose-colour; under wing-coverts and axillaries white; edge of wing and adjacent coverts black; quills blackish below, narrowly edged with white along the inner web; "bill, legs, and feet black; iris black" (*H. O. Forbes*). Total length 3·5 inches, culmen 0·4, wing 2·15, tail 1·25, tarsus 0·55.

Adult female. Different from the male. General colour above olive-brown, greyer on the head; wing-coverts black, edged with pale brown, slightly ochraceous on the greater coverts; bastard-wing and primary-coverts blue-black; quills black, narrowly edged with olive-brown, more distinctly olive on the secondaries; tail-feathers blue-black, edged with olive, the outer feathers tipped with dull white on the outer web; lores dull white; ear-coverts ashy olive; cheeks and throat dull white, becoming tinged with pale ochre on the breast; abdomen and thighs pale ochreous; under tail-coverts very pale scarlet; axillaries and under wing-coverts white, the former tinged with ochreous; quills dusky below, whitish along the edge of the inner web; "bill, legs, and feet black; iris black" (*H. O. Forbes*). Total length 3·5 inches, culmen 0·45, wing 2·1, tail 1·15, tarsus 0·55.

Hab. Tenimber Islands.

a. ♂ ad. sk.	Loetoer, Timor Laut (*H. O. Forbes*).	British Association [P.]. (Type of species.)
b, c. ♂ ♀ ad. sk.	Moloe Island, Sept. 1st.	H. O. Forbes, Esq. [C].

9. Dicæum celebicum.

Dicæum celebicum, *Müll. & Schl. Verh. Natuurl. Gesch. Land- en Volkenk.* p. 182 (1832–44); *Gray, Gen. B.* i. p. 100 (1847); *Bp. Consp.* i. p. 403 (1850); *Reichenb. Handb. Scansoriæ*, p. 240 (1853); *Gray, Hand-l. B.* i. p. 115, no. 1422 (1869); *Walden, Trans. Z. S.* viii. p. 72 (1872); *Brügg. Abhandl. nat. Ver. Bremen*, v. p. 74 (1878).

Dicæum leclancheri, *Lafr. Rev. Zool.* 1845, p. 94, 1846, p. 42; *Hartl. Rev. Zool.* 1846, pp. 4, 47, 111.

Adult male. General colour above dark purple, the wing-coverts like the back; bastard-wing, primary-coverts, and quills blackish, externally purple, the inner secondaries entirely of the latter colour; tail-feathers purplish black; head like the back; lores, sides of face, cheeks, ear-coverts, and sides of neck black glossed with purple, as also the malar line; chin white; throat and chest scarlet; remainder of under surface whitish washed with pale yellow, with a broad streak of purplish blue down the centre of the breast; sides of breast purplish blue, dingy olive on the lower flanks; thighs blackish; under tail-coverts white, washed with olive-yellow; under wing-coverts and axillaries white, the edge of the wing black; quills blackish below, ashy whitish along the edge of the inner web. Total length 3·5 inches, culmen 0·4, wing 1·8, tail 0·95, tarsus 0·5.

Adult female. Different from the male, and wanting the scarlet throat and purple breast-patch. General colour above ashy purple, washed with olive, especially on the lower back and rump; upper tail-coverts deeper purple; wing-coverts dull purple; quills blackish, externally washed with purple; tail-feathers purplish black; lores whitish; sides of face and ear-coverts dull ashy washed with purple; throat and breast ashy whitish; remainder of under surface pale yellowish, including the under tail-coverts; flanks and sides of body

yellowish, more ashy on the sides of the upper breast; under wing-coverts and axillaries white; quills dusky below, white along the edge of the inner web. Total length 3·25 inches, culmen 0·4, wing 1·85, tail 0·9, tarsus 0·45.

Hab. Celebes.

a, b. ♂ ad. sk.	Celebes.	Gould Collection.
c, d. ♂ ad. sk.	Menado.	A. R. Wallace, Esq. [C.].
e, f. ♂ ♀ ad. sk.	Menado.	A. R. Wallace, Esq. [C.].
g. ♂ ad. sk.	Macassar.	A. R. Wallace, Esq. [C.].

10. Dicæum sanghirense.

Dicæum sanghirense, *Salvad. Ann. Mus. Civic. Genov.* ix. p. 58 (1877).

Adult male. General colour glossy dark indigo-blue; the wing-coverts like the back; bastard-wing, primary-coverts, and quills black, externally edged with blue like the back; tail blue-black; head like the back; lores, sides of face, ear-coverts, and cheeks black, also slightly glossed with blue, the sides of the throat also black along the malar line; chin white; lower throat and fore neck scarlet; remainder of under surface white with a yellowish tinge; the sides of the body dark ashy grey, blacker on the sides of the upper breast; down the centre of the breast a broad longitudinal mark of black washed with blue; under tail-coverts white with longitudinal black centres; axillaries and under wing-coverts white; quills blackish below, ashy along the edge of the inner web. Total length 3·3 inches, culmen 0·4, wing 1·95, tail 1·05, tarsus 0·5. (*Mus. R. G. Wardlaw Ramsay.*)

Hab. Sanghir Islands.

11. Dicæum sulaense.

Dicæum celebicum (*nec Müll. & Schl.*), *Wallace, P. Z. S.* 1862, p. 342.
Dicæum sulaense, *Sharpe, P. Z. S.* 1883, p. 579.

Adult male. General colour above purple, the wing-coverts like the back; quills black, externally purple; lower back and rump slightly washed with olive; upper tail-coverts and tail deep purple; lores, sides of face, cheeks, and ear-coverts dusky purple; chin whitish; a narrow line along the edge of the lower jaw blackish; throat and chest fine scarlet; in the centre of the breast a broad streak of dull purplish black; abdomen and under tail-coverts yellowish white; sides of upper breast ashy washed with olive; sides of body and flanks dull yellowish olive; axillaries and under wing-coverts white with a faint tinge of yellow; quills blackish below, ashy whitish along the edge of the inner web. Total length 3·65 inches, culmen 0·4, wing 2·05, tail 1·15, tarsus 0·55.

Hab. Sula Islands.

a. Ad. sk.	Sula Islands.	A. R. Wallace, Esq. [C.]. (Type of species.)

12. Dicæum sanguinolentum.

Dicæum sanguinolentum, *Temm. Pl. Col.* iv. pl. 478. fig. 2 (1829); *Gray, Gen. B.* i. p. 100 (1847); *Bp. Consp.* i. p. 403 (1850); *Reichenb. Handb. Scans.* p. 240, pl. dlvii. fig. 3783 (1853); *Gray, Hand-l. B.* i. p. 114, no. 1418 (1869); *Nichols. Ibis*, 1881, p. 152; *Meyer, Vög. etc. Ostind. Arch.* p. 39 (1884).

Adult male (type of species). General colour above glossy purplish blue; the wing-coverts like the back; primary-coverts, bastard-wing, and quills blackish, externally washed with purplish blue; tail-feathers blackish, with a purple gloss; lores, sides of face, ear-coverts and cheeks, sides of throat, sides of neck, and sides of upper breast black; throat, fore neck, and upper breast crimson, paler towards the throat; remainder of under surface of body sandy buff, with a black streak down the centre of the lower breast and upper abdomen; thighs dusky blackish; flanks dingy blackish, with a slight wash of olive; under wing-coverts and axillaries white, blackish along the edge of the wing; quills dusky below, ashy brown along the edge of the inner web; "iris dark blue" (*H. O. Forbes*). Total length 3·3 inches, culmen 0·45, wing 1·95, tail 1, tarsus 0·5. (*Mus. Lugd.*)

Adult female. Different from the male. General colour above dusky, with a gloss of steel-blue; the upper tail-coverts scarlet; tail blue-black; wing-coverts like the back, and glossed in the same manner; quills blackish, with a light steel-blue gloss externally; ear-coverts and sides of face dusky washed with olive, with narrow pale shaft-lines and an indistinct eyebrow of pale olive; under surface of body sandy buff, slightly mottled on the fore neck and breast with obsolete ashy margins; axillaries and under wing-coverts dull white. Total length 3 inches, culmen 0·45, wing 1·8, tail 1, tarsus 0·5.

Hab. Java.

a, b. ♂ ♀ ad. sk.	W. Java.	A. R. Wallace, Esq. [C.].
c. ♂ ad. sk.	Tapos, Java (*von Hasselt*).	Gould Collection.
d. ♂ ad. sk.	Java (*Diard*).	Leiden Museum [P.].

13. Dicæum mackloti.

Dicæum mackloti, *Müll. & Schl. Verh. Natuurl. Gesch. Land- en Volkenk.* p. 162 (1839–44); *Gray, Gen. B.* i. p. 100 (1847); *Bp. Consp.* i. p. 433 (1850); *Wall. P. Z. S.* 1863, p. 486; *Finsch, Neu-Guinea*, p. 163 (1865); *Gray, Hand-l. B.* i. p. 115, no. 1433 (1869). Microchelidon mackloti, *Reichenb. Handb. Scans.* p. 244 (1853).

Adult male (type of species). General colour above dark purplish blue, the wing-coverts like the back; bastard-wing, primary-coverts, and quills blackish, externally purplish blue like the back; rump and upper tail-coverts bright scarlet, with purplish-blue bases to the feathers; tail-feathers purplish black; lores, sides of face, ear-coverts, and cheeks dark purplish blue like the face, running down the sides of the throat, and forming a broad band across the breast,

and enclosing a large scarlet patch on the throat and fore neck; chin and sides of upper throat white; remainder of under surface of body creamy white, with a broad line of black down the centre of the abdomen, continuous with the sides of the breast-band; thighs and under tail-coverts creamy white; axillaries and under wing-coverts white, with the edge of the wing black; quills black, white along the edge of the inner web. Total length 3·6 inches, culmen 0·4, wing 2·15, tail 1·25, tarsus 0·55. (*Mus. Lugd.*)

Adult female. Much duller in colour than the male, dusky brown glossed with purplish; wing-coverts like the back; quills blackish, obsoletely margined with dull olive-brown; lower rump and upper tail-coverts scarlet; tail-feathers blue-black; lores ashy, surmounted by a narrow whitish line; sides of face and cheeks ashy brown, extending down on to the sides of the breast, where it is mixed with black; fore part of cheeks whitish; entire under surface of body white, with a slight tinge of olive on the flanks; in the centre of the breast a dusky patch; axillaries and under wing-coverts white, dusky along the edge of the wing; quills dusky below, white along the edge of the inner web. Total length 3 inches, culmen 0·35, wing 2·05, tail 1·05, tarsus 0·5. (*Mus. Lugd.*)

The male from Lombock has a longer and more slender bill than the examples from Timor.

Hab. Timor; Lombock.

a, b. ♂ ad.; *c.* ♀ ad. sk.	E. Timor.	A. R. Wallace, Esq. [C.].
d. ♀ ad. sk.	Timor Delli.	A. R. Wallace, Esq. [C.].
e. ♂ ad. sk.	Lombock.	A. R. Wallace, Esq. [C.].

14. Dicæum salvadorii.

Dicæum salvadorii, *Meyer, Vög. etc. Ostind. Arch.* p. 38 (1884).

Adult male. Above shining blue-black; the upper tail-coverts, throat, and breast bright brick-red; below yellowish, with a broad median streak of blue-black on the belly; under wing-coverts white. Total length 3·4 inches, bill 0·4, wing 2·3, tail 1·3, tarsus 0·6.

Hab. Island of Babbar, Moluccas.

15. Dicæum rubro-coronatum. (Plate I. fig. 1.)

Dicæum rubrocoronatum, *Sharpe, Nature*, 1876, p. 339; *Salvad. Ann. Mus. Civic. Genov.* ix. p. 31 (1876); *Sharpe, Journ. Linn. Soc., Zool.* xiii. p. 496 (1877); *Ramsay, Proc. Linn. Soc. N. S. W.* i. p. 390 (1876), iii. p. 110 (1878), p. 276 (1879), iv. p. 98 (1879); *Salvad. Ann. Mus. Civic. Genov.* xvi. p. 68 (1880); *id. Orn. Papuasia etc.* ii. p. 276 (1881).

Adult male. General colour above deep purplish blue, the scapulars and wing-coverts like the back; quills blue-black, with slight remains of olive margins to the feathers, rather reddish on the inner secondaries and greater coverts; rump and upper tail-coverts bright scarlet; tail-feathers blue-black; crown of head bright scarlet;

nape and hind neck black, glossed with purple; lores dusky; feathers over the eye black; sides of face and cheeks dingy olive, blacker on the ear-coverts; a distinct dusky malar stripe; throat whitish, with a tinge of olive; on the fore neck a large spot of scarlet; sides of breast ashy washed with olive; breast and sides of body dull olive, a little clearer on the lower flanks; abdomen pale yellowish olive; under tail-coverts light rose-colour, with dusky olive bases; axillaries and under wing-coverts white, with a slight wash of yellow; quills dusky below, ashy along the edge of the inner web. Total length 3·2 inches, culmen 0·35, wing 2, tail 1, tarsus 0·45.

Adult female. Differs from the male in being duller coloured and in wanting the scarlet patch on the fore neck; the scarlet on the head is more subdued, as well as on the rump and upper tail-coverts; cheeks and ear-coverts more olive; throat white, with a slight tinge of yellow; centre of body pale yellowish; the flanks and sides of body pale olivaceous; under tail-coverts also yellowish, with dusky-olive bases; sides of breast ashy grey; remainder of plumage as in the male. Total length 3·2 inches, culmen 0·35, wing 1·9, tail 0·9, tarsus 0·45.

Young. Wants the scarlet breast-patch, as well as the scarlet head and rump. General coloration dingy olive, a little more yellowish olive on the rump and upper tail-coverts; wing-coverts like the back; bastard-wing and primary-coverts blue-black; quills blue-black, edged with olive, rather paler on the margins of the inner secondaries and greater wing-coverts; sides of face and under surface of body dull olive, more olivaceous yellow in the centre of the breast and abdomen; bill pale yellowish, dusky at tip and along the culmen.

Hab. South-eastern New Guinea.

a, *b* ♂ ♀ ad.; *c*. Juv. sk.	Port Moresby.	O. C. Stone, Esq. [C.]. (Types of species.)
d ♂ ad. sk.	Port Moresby.	K. Broadbent, Esq. [C.].

16. Dicæum pulchrius. (Plate I. fig. 2.)

Dicæum rubrocoronatum (*nec Sharpe*, 1876), *Sharpe, Journ. Linn. Soc., Zool.* xvi. p. 436.
Dicæum pulchrius, *Sharpe, P. Z. S.* 1883, p. 579.

Adult male. Similar to *D. rubro-coronatum*, but distinguished by the absence of grey on the sides of the breast, the entire sides of the body being yellowish olive, clearer ochraceous on the centre of the abdomen and under tail-coverts, the latter having not the slightest tinge of rose-colour; the scarlet on the head more extended, and reaching to the nape. Total length 3·2 inches, culmen 0·4, wing 2·05, tail 1, tarsus 0·4.

Hab. Astrolabe Mountains, S.E. New Guinea.

a ♂ ad. sk.	Astrolabe Mountains.	Mr. A. Goldie [C.]. (Type of species.)

17. Dicæum rubrigulare.

Dicæum rubrigulare, *D'Albert. & Salvad. Ann. Mus. Civic. Genov.* xiv. p. 74 (1879); *Salvad. op. cit.* xvi. p. 68 (1880); *id. Orn. Papuasia etc.* ii. p. 277 (1881).

Adult male. Upper surface shining black; the head, rump, and upper tail-coverts and whole of the fore neck bright red; feathers of the neck white at base; chin whitish; sides of head and of neck dusky olivaceous; breast and abdomen dull greenish olivaceous; under tail-coverts pale red; wings and tail above uniform with the back; under wing-coverts white; bill, feet, and iris black. Total length about 3·1 inches, bill 0·3, wing 2·1, tail 0·95, tarsus 0·45. (*Salvadori, l. c.*)

Adult female. Differs from the male in having the fore neck dull greyish olive; the red colour of the head and upper tail-coverts not so bright. (*Id. l. c.*)

Young. Olive, paler below; upper tail-coverts slightly rusty. (*Id. l. c.*)

Hab. Fly River, South-eastern New Guinea.

18. Dicæum albo-punctatum.

Dicæum rubrocoronatum, *D'Albert. Ann. Mus. Civic. Genov.* x. p. 20 (1877, *nec Sharpe*).

Dicæum albo-punctatum, *D'Albert. & Salvad. Ann. Mus. Civic. Genov.* xiv. p. 75 (1879), xvi. p. 68 (1880); *Salvad. Orn. Papuasia etc.* ii. p. 278 (1881).

Adult. Above shining black, with a steel-blue gloss; head, rump, upper tail-coverts, and whole of the fore neck bright red; bases of the red feathers of the neck white; chin whitish; sides of head and of neck dusky black; breast and abdomen dull greenish white; under tail-coverts pale red; wings and tail above uniform with the back; under wing-coverts white; bill, feet, and iris black. Total length 3·1 inches, bill 0·3, wing 2·1, tail 1, tarsus 0·4. (*Salvadori.*)

Hab. Kataw River, S.E. New Guinea.

19. Dicæum schistaceiceps.

Dicæum schistaceiceps, *Gray, P. Z. S.* 1860, p. 349; *Finsch, Neu-Guinea*, p. 163 (1865); *Gray, Hand-l. B.* i. p. 115, no. 1426 (1869); *Meyer, Sitz. K. Akad. Wien*, lxx. p. 121 (1874, note); *Rosenb. Malay. Arch.* p. 406 (1879); *Salvad. Ann. Mus. Civic. Genov.* xvi. p. 67 (1880); *id. Orn. Papuasia etc.* ii. p. 272 (1881).

Adult male (type of species). General colour above olive-yellow, decidedly brighter on the rump and upper tail-coverts; scapulars like the back; least wing-coverts slaty grey; remainder of wing-coverts and quills blackish, with a slight gloss of steel-green and a very narrow margin of olive; tail-feathers black; head and neck slaty grey, as also the lores, sides of face, and ear-coverts; cheeks,

sides of neck, throat, and under surface of body ashy grey, the lower abdomen yellowish white; flanks olive-yellow; on the fore neck a distinct triangular patch of scarlet; thighs ashy; under tail-coverts yellowish white, with olive-brown centres; under wing-coverts and axillaries pure white; quills dusky brown below, ashy along the edge of the inner web. Total length 3·1 inches, culmen 0·45, wing 1·95, tail 1, tarsus 0·5.

Hab. Batchian, Gilolo, and Morty Island in the Moluccas.

a. ♂ ad. sk.	Batchian.	A. R. Wallace, Esq. [C.]. (Type of species.)
b. ♂ ad. sk.	Batchian.	A. R. Wallace, Esq. [C.].
c. ♂ ad. sk.	Morty Island.	A. R. Wallace, Esq. [C.].

20. Dicæum vulneratum.

Dicæum vulneratum, *Wall. P. Z. S.* 1863, p. 32, note; *Finsch, Neu-Guinea*, p. 163 (1865); *Gray, Hand-l. B.* i. p. 115, no. 1428 (1869); *Meyer, Sitz. K. Akad. Wien*, lxx. p. 122 (1874); *Salvad. P. Z. S.* 1878, p. 82; *id. Ann. Mus. Civic. Genov.* xvi. p. 67 (1880); *id. Orn. Papuasia etc.* ii. p. 271 (1881); *id. Report Birds 'Challenger' Exped.* p. 63 (1881); *Blas. u. Nehrk. Verh. z.-b. Gesellsch. Wien*, 1882, p. 425.

Adult male. General colour above dark brown, a trifle lighter on the head; wing-coverts like the back, with a slight steely gloss on the greater series; quills blackish brown with lighter brown edges; lower rump and upper tail-coverts scarlet; tail-feathers black, with slight margins of brown; feathers round the eye, lores, sides of face, and ear-coverts ashy brown, with lighter shaft-lines on the latter; cheeks and under surface of body pale ashy, whiter on the throat; on the chest a patch of scarlet vermilion; lower abdomen and under tail-coverts whitish, the latter slightly mottled with pale ashy-brown centres to the feathers; axillaries and under wing-coverts white, ashy brown along the outer edge of the wing; quills brown below, whitish along the edge of the inner web. Total length 3·4 inches, culmen 0·4, wing 1·95, tail 1·05, tarsus 0·5.

Adult female (Amboina; Teysman). Differs from the male in the colour of the under surface. The scarlet pectoral patch is absent, the throat and centre of the body is pure white, the under tail-coverts slightly washed with olive, as well as the lower flanks, which are otherwise ashy grey like the sides of the breast. Total length 2·9 inches, wing 1·8, tail 0·85, tarsus 0·45. (*Mus. Lugd.*)

Hab. Ceram; Amboina; Manuvolka.

a. ♂ ad.; *b.* ♀ juv. sk.	Ceram.	A. R. Wallace, Esq. [C.]. (Types of species.)
c. ♀ ad. sk.	Amboina.	Voy. of H.M.S. 'Challenger.'

21. Dicæum pectorale.

Dicæum pectorale, *Müll. & Schlegel, Verh. Natuurl. Gesch. Land- en Volkenk.* p. 162, note (1839–44); *Hartl. Rev. Zool.* 1846, p. 47; *Gray, Gen. B.* i. p. 100 (1847); *Bp. Consp.* i. p. 403 (1850); *Sclater, Pr. Linn. Soc.* ii. p. 157 (1858); *Gray, P. Z. S.* 1858, p. 190; *id.*

Cat. Mamm. & B. New Guinea, pp. 22, 55 (1859); *id. P. Z. S.* 1861, p. 434; *Rosenb. Nat. Tijdschr. Ned. Ind.* xxv. p. 237 (1863); *id. J. f. O.* 1864, p. 123; *Finsch, Neu-Guinea*, p. 163 (1865); *Meyer, Sitz. K. Akad. Wien*, lxx. p. 120 (1874); *Salvad. Ann. Mus. Civic. Genov.* xvi. p. 67 (1880); *id. Orn. Papuasia etc.* ii. p. 273 (1881).

Dicæum erythrothorax, pt., *Gray, Hand-l. B.* i. p. 115, no. 1427; *Rosenb. Malay. Arch.* p. 553 (1879).

Adult male (Waigiou; Bernstein). General colour above olive-green, a little more olive-yellow on the head, which is olive like the back; rump and upper tail-coverts also a little more olive-yellow, particularly the latter; wing-coverts and quills dusky, with a steel-green gloss and narrowly edged with olive; tail-feathers blue-black; lores, sides of face, ear-coverts, and cheeks olive like the crown, the hinder cheeks washed with ashy grey like the sides of the neck; throat whitish, with a tinge of olive on the chin; fore neck and chest with a large patch of orange-scarlet; sides of breast ashy, more olive on the flanks; centre of abdomen, thighs, and under tail-coverts pale yellow, the latter with dusky bases; axillaries and under wing-coverts white, the edge of the wing dusky washed with olive; quills dusky below, white along the edge of the inner web. Total length 2·8 inches, culmen 0·45, wing 2·05, tail 1·05, tarsus 0·5.

Hab. New Guinea, Salwati, Mysol, Waigiou, and Batanta.

a. ♂ ad. sk.	Salwati.	A. R. Wallace, Esq. [C.].
b. ♂ ad. sk.	Waigiou (*Wallace*).	A. R. Wallace, Esq. [C.].
c. ♂ juv. sk.	Waigiou.	Gould Collection.
d. ♂ ad. sk.	Mysol.	A. R. Wallace, Esq. [C.].
e. ♀ juv. sk.	Kalwal (*Bernstein*).	Leiden Museum [P.].

22. Dicæum æneum.

Dicée bronzé, *Hombr. et Jacq. Voy. Pôle Sud, Atlas*, pl. 22. fig. 4 (1845).

Dicæum sp., *Gray, Gen. B.* i. p. 100 (1847).

Dicæum æneum, *Jacq. et Puch. Voy. Pôle Sud, texte, Zool.* ii. p. 97 (1853); *Hartl. J. f. O.* 1854, pp. 165, 168; *Gray, Cat. B. Trop. Isl. Pacific Ocean*, p. 10 (1859); *Sclater, P. Z. S.* 1869, p. 118; *Gray, Hand-l. B.* i. p. 115, no. 1434 (1869); *Tristr. Ibis*, 1879, p. 439; *Salvad. Ann. Mus. Civic. Genov.* xvi. p. 68 (1880); *id. Orn. Papuasia etc.* ii. p. 280 (1881); *id. op. cit.* iii. p. 540 (1882); *Ramsay, Proc. Linn. Soc. N. S. W.* vii. p. 28 (1882); *Sharpe, P. Z. S.* 1883, p. 579; *Gould, B. New Guinea*, part xvii. (1884).

Microchelidon ænea, *Reichenb. Handb. Scansoriæ*, p. 244, Taf. dlviii. fig. 3797 (c. 1853).

Dicæum erythrothorax (*non Less.*), *Ramsay, Proc. Linn. Soc. N. S. W.* iv. p. 77 (1879); *Salvad. Ibis*, 1880, p. 129.

Adult male. General colour above glossy oil-green with a bronzy gloss; head like the back; sides of rump with a slight wash of olive-yellow; upper tail-coverts oily green; lesser and median wing-coverts glossy oil-green like the back; the greater coverts, bastard-wing, primary-coverts, and quills blackish, externally

glossed with oily green; tail-feathers greenish black; lores dull ashy grey; cheeks, ear-coverts, and sides of neck clear ashy grey, descending down the sides of the fore neck and occupying the whole of the breast; throat white, the sides of it ashy grey, blacker at the base of the malar line; a large triangular patch of scarlet occupying the whole of the fore neck; sides of breast and flanks bright olive-yellow; abdomen yellowish white; thighs ashy grey, white on their inner aspect; under tail-coverts white, washed with yellow and having dusky bases; axillaries and under wing-coverts white, the edge of the wing blackish; quills blackish below, ashy white along the edge of the inner web. Total length 3·1 inches, culmen 0·45, wing 2, tail 1, tarsus 0·5.

Adult female. Differs from the male in wanting the scarlet patch on the fore neck, and in not having the patch of ashy grey on the breast; the throat and breast are yellowish white, with a few dusky margins to the lateral feathers of the breast; otherwise the under surface of the body is exactly like that of the male, the sides of the neck being ashy grey, descending on to the sides of the breast, and the rest of the sides of the body being bright olive-yellow; the upper surface resembles that of the male, being entirely oily or bronzy green, but there is a slight loral streak of white, and the base of the lower mandible is pale, characters not seen in the adult male. Total length 3·25 inches, culmen 0·45, wing 1·95, tail 0·95, tarsus 0·5. (*Mus. Austr.*)

Hab. Solomon Islands.

a. ♂ ad. sk. Solomon Islands. Mr. Cockerell [C.].

23. Dicæum erythrothorax.

Dicæum erythrothorax, *Lesson, Voy. Coquille, Zool.* p. 672, pl. 30. figs. 1, 2 (1826–28); *id. Traité*, p. 303 (1831); *Müll. & Schl. Verh. Natuurl. Gesch. Land- en Volkenk.* p. 162, note (1839–44); *Hartl. Rev. Zool.* 1846, p. 47; *Gray, Gen. B.* i. p. 100 (1847); *Bp. Consp.* i. p. 403 (1850); *Reichenb. Handb. Scans.* p. 241, Taf. dlvii. figs. 3784–85 (1853); *Gray, P. Z. S.* 1860, p. 349; *Wall. P. Z. S.* 1863, pp. 19, 32; *Finsch, Neu-Guinea*, p. 163 (1865); *Gray, Hand-l. B.* i. p. 115, no. 1427 (1869); *Meyer, Sitz. K. Akad. Wien*, lxx. p. 121, note (1874); *Salvad. Ann. Mus. Civic. Genov.* viii. p. 379 (1876), xvi. p. 67 (1880); *id. Orn. Papuasia etc.* ii. p. 272 (1881).

Adult male. General colour above olive-greenish, rather yellower on the rump and upper tail-coverts; lesser and median wing-coverts greenish grey, with a steel-green gloss; greater coverts and quills dusky blackish, edged with olive-yellowish and slightly glossed with green, the primaries rather paler yellow on their margins; bastard-wing and primary-coverts blackish; tail-feathers blackish, narrowly edged with olive; head and hind neck greenish grey, with a steel-green gloss; lores dusky; sides of face, ear-coverts, and cheeks greenish grey; throat pure white, separated from the cheeks by a malar line of dusky blackish, running along the edge of

the rami of the jaws; lower throat and breast slaty grey, with a large patch of orange-vermilion in the centre of the fore neck and chest; sides of body and flanks olive-yellowish; centre of abdomen whitish, washed with yellow; under tail-coverts white, with dusky bases, and washed with olive-yellow; axillaries and under wing-coverts pure white; edge of wing mottled with dusky bases to the feathers; quills dusky below, ashy whitish along the edge of the inner web. Total length 3 inches, culmen 0·4, wing 1·95, tail 0·95, tarsus 0·55. (*Mus. Lugd.*)

Hab. Island of Bourou, Moluccas.

a, *b*. ♂ ad. sk.	Bourou.	A. R. Wallace, Esq. [C.].

24. Dicæum layardorum.

Dicæum erythrothorax, *Ramsay*, *Proc. Linn. Soc. N. S. W.* i. pp. 369, 371 (1876).
Dicæum —— ?, *Layard*, *Ibis*, 1880, p. 308.
Dicæum layardorum, *Salvad. Ann. Mus. Civic. Genov.* xvi. p. 67 (1880); *id. Orn. Papuasia etc.* ii. p. 272 (1881).

Adult male. General colour above dark ashy brown, with a faint tinge of olive on the upper parts; rump scarlet; upper tail-coverts ashy olive with a tinge of scarlet; wing-coverts like the back; greater coverts and quills dusky brown with a steel-green gloss; tail-feathers black; head like the back, with a slight olive tinge; lores, sides of face, and ear-coverts ashy brown; cheeks as well as fore neck and breast ashy grey, with a dusky blackish streak in the centre of the breast; throat white; on the centre of the fore neck a spot of scarlet; centre of abdomen and under tail-coverts white, washed with olive-yellow; sides of body and flanks olive-yellow; thighs ashy; under wing-coverts and axillaries white; quills dusky below, white along the edge of the inner web. Total length 3·3 inches, culmen 0·35, wing 2·15, tail 0·95, tarsus 0·5.

Adult female. Distinguished from the male by the absence of the grey breast and scarlet spot on the fore neck; upper surface ashy brown, with a strong olive tinge; rump and upper tail-coverts scarlet, the latter deeper in colour; wings and tail as in the male; lores dusky, with a narrow whitish streak above them; sides of face, cheeks, and ear-coverts ashy brown, greyer on the sides of the neck and sides of the upper breast; throat, breast, and centre of body white, washed with yellow on the under tail-coverts; sides of body and flanks olive-yellow. Total length 3·1 inches, culmen 0·35, wing 1·95, tail 0·9, tarsus 0·5.

Young male. Like the old female, but having very little scarlet on the rump and upper tail-coverts; the sides of breast rather more grey than in the adult hen bird.

Hab. New Britain.

a. ♂ ad.; *b*, *c*. ♀ ad sk.	New Britain.	Mr. Kleinschmidt [C.].
d. ♂ juv. sk.	New Britain.	Mr. Kleinschmidt [C.].

25. Dicæum eximium.

Dicæum eximium, *Sclater, P. Z. S.* 1877, p. 102, pl. xiv. fig. 2; *Gould, B. New Guinea*, part vii. (1878); *Salvad. Ann. Mus. Civic. Genov.* xvi. p. 68 (1880); *id. Orn. Papuasia etc.* ii. p. 280 (1881).

Adult male (type of species). General colour above uniform dark olive-brown, with a slight tinge of reddish, much more distinct on the head, which is decidedly dull reddish; rump scarlet, the upper tail-coverts darker and more of a dull crimson; wing-coverts and quills dark brown, with a slight gloss of bronzy greenish and narrowly fringed with olive; tail-feathers dark brown, with a bronzy-green gloss; lores dusky; sides of face, ear-coverts, and cheeks ashy brown washed with reddish, the ear-coverts reddish like the crown; malar line darker brown; throat white; on the fore neck a transverse bar of scarlet, followed by a bar of paler ashy brown, like the sides of the neck and sides of upper breast; breast and abdomen white, with a broad longitudinal patch of ashy brown down the centre of the breast; flanks more reddish brown; thighs and under tail-coverts white, the longer coverts with longitudinal dusky centres; under wing-coverts and axillaries pure white; quills dusky below, white along the edge of the inner web. Total length 3·2 inches, culmen 0·4, wing 1·85, tail 1·1, tarsus 0·5. (*Mus. R. G. Wardlaw Ramsay.*)

Hab. New Ireland.

26. Dicæum maforense.

Dicæum geelvinkianum, pt., *Meyer, Sitz. K. Akad. Wien*, lxx. p. 120 (1874).

Dicæum maforense, *Salvad. Ann. Mus. Civic. Genov.* vii. p. 944 (1875), xvi. p. 67 (1880); *id. Orn. Papuasia etc.* ii. p. 275 (1881).

Adult male. General colour above olive, with a steel-blue gloss on the back; wing-coverts steel-blue; quills blackish brown, narrowly edged with olive; upper tail-coverts dull reddish; tail-feathers black; lores, sides of face, and cheeks dingy olive, with a paler line above the lores; crown of head dull scarlet, not quite reaching to the nape; throat white, with a dusky malar line; on the fore neck and chest a patch of vermilion; sides of fore neck and sides of upper breast ashy grey, enclosing the scarlet breast-patch; flanks and sides of body ashy olive; abdomen yellowish white, deeper on the under tail-coverts, with dull olive bases; under wing-coverts and axillaries white, the edge of the wing dusky; quills dusky below, whitish along the edge of the inner web. Total length 3·2 inches, culmen 0·35, wing 2, tail 1·05, tarsus 0·5.

Hab. Island of Mafoor or Méfoor, in the Bay of Geelvink, N.W. New Guinea.

a. ♂ ad. sk.	Mafoor (*Bernstein*).	Leiden Museum [P.].

27. Dicæum mysoriense.

Dicæum geelvinkianum, pt., *Meyer, Sitz. K. Akad. Wien,* lxx. p. 120 (1874).
Dicæum mysoriense, *Salvad. Ann. Mus. Civic. Genov.* vii. p. 945 (1875), xvi. p. 67 (1880); *id. Orn. Papuasia etc.* ii. p. 275 (1881).

Adult male. Similar to *D. maforense*, but with a much smaller spot of scarlet on the fore neck, and decidedly greyer on the sides of the body. Total length 3 inches, culmen 0·4, wing 2, tail 0·85, tarsus 0·5.

Hab. Island of Mysore or Misori, in the Bay of Geelvink, N.W. New Guinea.

a. Ad. sk. Misori (*Meyer*). Gould Collection.

28. Dicæum geelvinkianum.

Dicæum geelvinkianum, *Meyer, Sitz. K. Akad. Wien,* lxx. p. 120 (1874); *Gould, B. New Guinea,* part ix. (1879).
Dicæum jobiense, *Salvad. Ann. Mus. Civic. Genov.* vii. p. 945 (1875), xvi. p. 68 (1880); *id. Orn. Papuasia etc.* p. 275 (1881).

Similar to *D. mysoriense*, but distinguished by the head and upper tail-coverts being bright red of the same tint; a moderately large red spot on the breast; upper surface greenish. Measurements as in *D. mysoriense*. (*Salvadori.*)

Hab. Island of Jobi, in the Bay of Geelvink, N.W. New Guinea.

29. Dicæum tristrami.

Dicæum tristrami, *Sharpe, P. Z. S.* 1883, p. 579; *id. in Gould's B. New Guinea,* part xviii. (1884).

Adult male (type of species). General colour above chocolate-brown, the mantle slightly streaked with a few hoary whitish margins to the feathers; wing-coverts darker chocolate-brown than the back; bastard-wing, primary-coverts, and quills blackish brown, the inner secondaries chocolate-brown like the back; upper tail-coverts and tail blackish brown, contrasting strongly with the back; head brown, but mottled with blackish-brown centres to the feathers, the plumes of the forehead and vertex margined with hoary whitish; a line of feathers above the eye and ear-coverts hoary white, the latter slightly mottled with brown bases; lores, eyelid, fore part of cheeks, and base of chin blackish; hinder cheeks, throat, and fore neck hoary white, with brown bases to the feathers; sides of neck like the back; centre of breast, abdomen, and under tail-coverts pure white, the sides of the body ashy; sides of upper breast brown, with hoary whitish edges to the feathers; axillaries and under wing-coverts white; quills dusky below, ashy whitish along the edge of the inner web; bill black; "feet black; iris grey" (*Richards*).

Total length 3·5 inches, culmen 0·45, wing 2·3, tail 1·15, tarsus 0·55. (*Mus. H. B. Tristram.*)

Hab. San Cristoval, Solomon group (*Richards*).

30. Dicæum retrocinctum.

Dicæum retrocinctum, *Gould, Ann. & Mag. Nat. Hist.* (4) x. p. 114 (1872); *Wālden, Trans. Z. S.* ix. p. 200 (1875); *Gould, B. Asia*, part xxvii. (1875); *Salvad. Ann. Mus. Civic. Genov.* viii. p. 509 (1876); *Wardlaw Ramsay, Orn. Works Tweedd.* p. 658 (1881).

Adult male (type of species). General colour above black with a leaden-blue gloss, the lower back and rump more ashy; scapulars and wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills black, externally glossed with steel-blue; upper tail-coverts like the back; tail-feathers black, edged with leaden blue; head like the back, from which it is separated by a collar of scarlet; lores, sides of face, cheeks, and ear-coverts, as well as sides of neck, black glossed with leaden blue; throat, fore neck, and centre of chest dull black, with a slight leaden-blue gloss; on the upper throat a spot of scarlet; centre of breast also scarlet, forming a longitudinal patch; sides of fore neck and sides of breast white, skirting the black throat and scarlet breast till it reaches the abdomen, which is white, as well as the thighs and under tail-coverts; flanks ashy grey; under wing-coverts and axillaries pure white; quills blackish below, white along the edge of the inner web. Total length 3·5 inches, culmen 0·45, wing 2·05, tail 1, tarsus 0·5.

Hab. Island of Luzon, Philippine Archipelago.

a. ♂ ad. sk.	Manila, Luzon.	Gould Collection.	(Type of species.)
b. ♂ ad. sk.	Philippines (*H. Cuming*).	Eyton Collection.	

31. Dicæum hæmatostictum.

Dicæum hæmatostictum, *Sharpe, Nature*, Aug. 1876, p. 297; *id. Trans. Linn. Soc.* 2nd ser. *Zool.* vol. i. p. 339 (1876); *Tweedd. P. Z. S.* 1878, p. 286; *Wardlaw Ramsay, Orn. Works Tweedd.* p. 658 (1881).

Adult male. Above blue-black, lower part of the back more slate-colour; upper tail-coverts black; wing-coverts uniform with the back, the greater series, as well as the quills and tail-feathers, blackish brown, externally margined with greenish; sides of the face black; the cheeks and under surface of the body white, the flanks washed with ashy; a transverse band on the fore neck slaty black; breast and middle of abdomen bright crimson, the former spotted on both sides with slaty black; under tail-coverts and under wing-coverts white; the inner edge of the quills margined with

white below; bill and feet black. Total length 3·7 inches, culmen 0·45, wing 2·1, tail 1·2, tarsus 0·55.

Young. Differs from the adult in being slaty grey above, the wings and tail being blacker, with greyish margins to the feathers; under surface of body ashy whitish, washed with yellowish on the abdomen and with greyish on the sides of the body.

Hab. Islands of Guimaras and Negros, in the Philippine archipelago.

a. ♂ ad. sk.	Guimaras.	Prof. J. B. Steere [C.].
b, *c*. ♂ ♀ ad. sk.	Negros.	Prof. J. B. Steere [C.].
d. Juv. sk.	Negros.	Prof. J. B. Steere [C.].

32. Dicæum rubriventer.

Le Manikor de la Nouvelle Guinée, *Daubent. Pl. Enl.* v. pl. 707. fig. 2.
Le Manikor, *Buff. Hist. Nat. Ois.* iv. p. 431.
Papuan Manakin, *Lath. Gen. Syn.* iv. p. 532 (1783).
Pipra papuensis *, *Gm. Syst. Nat.* i. p. 1004 (1788).
Muscicapa papuensis, *Temm. Man. d'Orn.* i. p. lxvii (1820); *id. Pl. Col. Tabl. Méth.* p. 25 (1839).
Dicæum rubriventer, *Less. Traité*, p. 303 (1831); *Salvad. Ann. Mus. Civic. Genov.* viii. p. 511 (1876); *Tweedd. P. Z. S.* 1877, pp. 688, 763, 829, 1878, pp. 111, 950; *Wardlaw Ramsay, Orn. Works Tweedd.* p. 658 (1881).
Dicæum schistaceum, *Tweed. Ann. & Mag. Nat. Hist.* (4) xx. p. 537 (1877); *id. P. Z. S.* 1878, p. 111; *Wardlaw Ramsay, Orn. Works Tweedd.* p. 658 (1881); *Sharpe, P. Z. S.* 1883, p. 580.
Dicæum papuense, *Hartl. Rev. Zool.* 1846, p. 47; *Gray, Gen. B.* i. p. 100 (1847); *Bp. Consp.* i. p. 403 (1850); *Reichenb. Handb. Scansoriæ*, p. 240, Taf. dlvii. fig. 3782 (1853); *Gray, P. Z. S.* 1858, p. 190; *id. Cat. B. New Guinea*, p. 55 (1859); *id. P. Z. S.* 1861, p. 434; *Finsch, Neu-Guinea*, p. 163 (1865); *Gray, Hand-l. B.* i. p. 114, no. 1421 (1869).
Dicæum rubriventris, *Pucher. Rev. Zool.* 1846, p. 135, note.
Dicæum retrocinctum ♀, *Gould, Ann. & Mag. Nat. Hist.* (4) x. p. 114 (1872); *id. B. Asia*, part xxvii. (1875, lower figure); *Wald. Trans. Z. S.* ix. p. 199 (1875).

Adult male. General colour above glossy greenish slate-colour, more ashy on the sides of the back and rump; wing-coverts like the back; bastard-wing, primary-coverts, and quills blackish, edged with glossy steel-green; tail-feathers blackish, margined with dull steel-green; head like the back, and glossed in the same manner; lores, sides of face, and ear-coverts blacker; cheeks and throat white, the latter becoming ashy grey on the lower part, like the breast and flanks; the abdomen, thighs, and under tail-coverts white; a scarlet patch on the centre of the breast and abdomen; under wing-coverts and axillaries white, with a black spot near the edge of the wing; quills blackish below, white along the margin of

* Name misleading.

the inner web. Total length 3·8 inches, culmen 0·45, wing 2·05, tail 1·15, tarsus 0·55.

Adult female. Similar to the male in colour, and with a red line down the centre of the breast and abdomen, as in that sex; "bill and legs black; iris dark blood-red" (*A. Everett*). Total length 3·3 inches, culmen 0·4, wing 2, tail 0·9, tarsus 0·55. (*Mus. R. G. Wardlaw Ramsay.*)

Young male (type of *D. schistaceum*). Differs from the adult in being slaty grey above and in the absence of the red line down the abdomen, the whole under surface being pale ashy; lower mandible yellowish in skin. Total length 3·9 inches, culmen 0·4, wing 2·25, tail 1·1, tarsus 0·55. (*Mus. R. G. W. R.*)

Hab. Islands of Luzon, Zebu, Dinagat, and Mindanao, in the Philippine archipelago.

a. Ad. sk.	Philippines.	Hugh Cuming, Esq.
b, c. Juv. sk.	Manila, Luzon.	Hugh Cuming, Esq.
d. Ad. sk.	Mindanao.	Gould Collection. [S. n. *D. retrocinctum* ♀.]
e. ♀ ad. sk.	Zamboanga, Mindanao, April (*Everett*).	Capt. R. G. Wardlaw Ramsay.

33. Dicæum hypoleucum.

Dicæum hypoleucum, *Sharpe, Nature*, Aug. 1876, p. 298; *id. Trans. Linn. Soc.* 2nd ser. *Zool.* vol. i. p. 339; *Tweedd. P. Z. S.* 1879, p. 72; *Wardlaw Ramsay, Orn. Works Tweedd.* p. 658 (1881).

Adult male. Above black, with a slight gloss of green on the head; sides of face and sides of neck black; cheeks and entire under surface of body white, including the under wing-coverts and under tail-coverts; wings and tail black; "bill and feet black; iris dark brown" (*Steere*). Total length 3·6 inches, culmen 0·5, wing 2·1, tail 1·05, tarsus 0·55.

Hab. Islands of Malamaui and Basilan, in the Philippine archipelago.

a. ♂ ad. sk.	Isabella de Basilan.	Prof. J. B. Steere [C.].

34. Dicæum mindanense.

Dicæum mindanense, *Tweedd. P. Z. S.* 1877, p. 547; *id. Report Voy. 'Challenger,' Birds*, p. 20, pl. 5. fig. 1 (1881); *Wardlaw Ramsay, Orn. Works Tweedd.* pp. 471, 658 (1881).

Adult male (type of species). General colour above sooty brown washed with olive, greyer on the rump, the head washed with a little yellower olive; lesser wing-coverts like the back; remainder of wing-coverts, bastard-wing, primary-coverts, and quills dark brown, externally edged with olive; upper tail-coverts washed with light olive; tail-feathers blackish, edged with olive, with a narrow white fringe at the end of the inner web of the three outermost feathers; lores, feathers round the eye, sides of face, ear-coverts,

and cheeks sooty black; throat and under surface of body white, washed with ashy on the fore neck, breast, and flanks; under tail-coverts white, with an olive-yellow tinge; under wing-coverts and axillaries white, with a slight tinge of yellow; edge of wing sooty brown; quills dusky below, white along the edge of the inner web. Total length 3·2 inches, culmen 0·55, wing 1·9, tail 1, tarsus 0·5.

Hab. Island of Mindanao, in the Philippine archipelago.

a, ♂ ad. sk.	Pasananca, Prov. of Zamboanga, Mindanao.	Voy. of H.M.S. 'Challenger.' (Type of species.)

35. Dicæum trigonostigma.

Le Grimpereau siffleur de la Chine, *Sonn. Voy. Ind. Orient.* p. 210, pl. 61. fig. 2 (1776–82).

Certhia trigonostigma, *Scop. Del. Flor. et Faun. Insubr.* ii. p. 91 (1786).

Orange-breasted Creeper, *Lath. Gen. Syn. Suppl.* p. 132 (1787).

Certhia cantillans, *Lath. Ind. Orn.* i. p. 299 (1790).

Dicæum cantillans, *Cuv. Règne An.* i. p. 410 (1817); *Vieill. N. Dict. d'Hist. Nat.* ix. p. 409 (1817); *Temm. Pl. Col.* iv. pl. 478. fig. 3 (1829).

Dicæum croceoventre, *Vigors, Mem. Raffl.* p. 673 (1830); *Mottley & Dillw. N. H. Labuan*, p. 17 (1855).

Dicæum trigonostigma, *Gray, Gen. B.* i. p. 100 (1847); *Blyth, Cat. B. Mus. As. Soc.* p. 226 (1849); *Bp. Consp.* i. p. 403 (1850); *Cab. Mus. Hein.* Th. i. p. 98 (1850); *Reichenb. Handb. Scansoriæ*, p. 241, Taf. dlvii. figs. 3788–89 (1853); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 748 (1854); *Sclater, P. Z. S.* 1863, p. 220; *Wald. P. Z. S.* 1866, p. 545; *Beavan, Ibis*, 1869, p. 422; *Gray, Hand-l. B.* i. p. 114, no. 1416 (1869); *Godwin-Aust. J. A. S. Beng.* xxxix. p. 303 (1870); *Wald. Ibis*, 1872, p. 380; *Hume, Str. F.* 1874, p. 473; *Salvad. Ucc. Born.* p. 166 (1874); *Blyth & Wald. B. Burm.* p. 142 (1875); *Walden, Ibis*, 1876, p. 349, pl. x. fig. 2; *Sharpe, Ibis*, 1876, p. 42; *id. Trans. Linn. Soc.* 2nd ser. *Zool.* i. p. 340 (1876); *Tweedd. Ibis*, 1877, p. 302; *Hume & Davison, Str. F.* 1878, p. 194; *Sharpe, Ibis*, 1879, p. 261; *id. P. Z. S.* 1879, p. 343; *Hume, Str. F.* 1879, p. 90; *Bingham, Str. F.* 1880, p. 195; *Wardlaw Ramsay, Orn. Works Tweedd.* p. 658 (1881); *Sharpe, P. Z. S.* 1881, p. 796; *Müller, Vög. Insel Salanga*, p. 22 (1882); *Oates, B. Brit. Burm.* i. p. 336 (1883).

Adult male. Above particoloured; head and hind neck glossy leaden blue; back bright yellow, deeper and inclining to rich orange on the mantle and upper back; scapulars and wing-coverts glossy leaden blue; bastard-wing, primary-coverts, and quills blackish, with narrow slaty-blue edges; upper tail-coverts slaty blue; tail-feathers black, with a narrow edging of slaty blue; lores, sides of face, ear-coverts, and sides of neck leaden blue, more slaty grey on the cheeks; throat and fore neck pale slaty grey; remainder of under surface of body rich orange, inclining to bright yellow on the lower abdomen and under tail-coverts; thighs ashy whitish; under wing-coverts and axillaries pure white, mottled with slaty grey on the edge of the wing; quills blackish below, white along the edge

of the inner web; "bill black; legs and feet horny black; iris brown" (*Davison*). Total length 3·3 inches, culmen 0·45, wing 1·9, tail 0·9, tarsus 0·55.

Adult female in breeding-plumage (from nest). Different from the male. General colour above olive, becoming lighter and more yellow on the lower back, and deepening into orange on the rump; head and hind neck dull lead-colour, olive on the forehead; wing-coverts and quills leaden brown, narrowly edged with olive, the primaries fringed with slaty grey; upper tail-coverts dull olive; tail-feathers black, with narrow olive margins; lores and sides of face dull ashy, washed with olive; throat and chest ashy, the former washed with olive; remainder of under surface of body bright yellow, including the under tail-coverts, the centre of the breast deepening into orange; sides of body and flanks olive-greenish; axillaries and under wing-coverts white; quills dusky brown below, white along the edge of the inner web; "upper mandible from tip to nostril and tip of lower mandible blackish horny; base of upper mandible reddish brown; lower mandible, except the tip and gape, pale orange-brown to orange-vermilion; legs, feet, and claws greenish to dark plumbeous; iris grey to dark brown" (*W. Davison*). Total length 3 inches, wing 1·8, tail 0·9, tarsus 0·55.

Young male. Like the adult female, but distinguished by its yellowish-white bill, with a brown tip to both mandibles. The whole upper surface is olive-greenish, olive-yellow on the rump; underneath also the whole colour is olive-yellowish, brighter on the abdomen.

Hab. From hills of N.E. Bengal, through Burmah and Tenasserim, down the Malayan peninsula to Java, Sumatra, and Borneo. Stated by me to have occurred in Prof. Steere's collection from the island of Negros. This identification has been questioned by Lord Tweeddale, but I do not think I could have been mistaken.

a. ♀ ad. sk.	Pegu, Aug. 27.	E. W. Oates, Esq. [C.].
b. ♀ ad. sk.	Tavoy (*Briggs*).	Gould Collection.
c, *d*. ♂ ad.; *e*. ♀ ad.; *f*. Juv. sk.	Tenasserim (*Helfer*).	India Museum.
g, *h*. ♂ ad. et juv. sk.	Malacca.	A. R. Wallace, Esq. [C.].
i, *k*, *l*, *m*. ♂; *n*, *o*. ♀ ad. sk.	Malacca (*Cantor*).	India Museum.
p. ♂ juv. sk.	Malacca (*Cantor*).	India Museum.
q, *r*. ♀ ad. sk.	Penang (*Cantor*).	India Museum.
s, *t*. ♀ ad.; *u*. ♂ juv. sk.	W. Java (*E. C. Buxton*).	F. Nicholson, Esq. [P.].
v. ♂ ad. sk.	Batoe Islands, Sept. 1857 (*Mus. Lugd.*).	Gould Collection.
w. ♂ ad. sk.	Sumatra.	A. R. Wallace, Esq. [C.].
x, *y*. ♂ ad.; *z*. ♀ ad. sk.	Labuan (*Low*).	R. B. Sharpe, Esq. [P.].
a', *b'*. ♂ ♀ ad. sk.	Lawas River, N.W. Borneo (*F. W. Burbidge*).	Harry Veitch, Esq. [P.].

36. Dicæum dorsale.

Dicæum dorsale, *Sharpe, Nature*, Aug. 1876, p. 298; *id. Trans. Linn. Soc.* 2nd ser. *Zool.* i. p. 340 (1876); *Tweedd. P. Z. S.* 1877, p. 763; *Gould, B. Asia*, part xxx. (1877); *Wardlaw Ramsay, Orn. Works Tweedd.* p. 658 (1881).

Adult male. Above bright slaty grey, with the head rather clearer; a patch on the interscapular region orange-vermilion; the wing-coverts uniform with the back, the outer ones narrowly washed with olivaceous; quills blackish, externally margined with the same colour as the back; a few of the secondaries edged with olivaceous, the innermost uniform with the back; upper tail-coverts slaty grey; tail black, the feathers edged with slaty; lores black; sides of face dark slaty grey; underneath very bright orange; throat and lower abdomen yellow; under wing-coverts and axillaries pale yellow; thighs ashy internally, externally yellow; bill blackish, mandible pale towards the base; feet dark brown. Total length 3·5 inches, culmen 0·5, wing 1·9, tail 1·05, tarsus 0·55.

Female. Different from the male; above olive-green, the rump more yellowish; sides of the face uniform with the head; under surface of body bright yellowish; breast and under wing-coverts richer in colour. Total length 3·7 inches, culmen 0·5, wing 1·9, tail 0·9, tarsus 0·55.

Hab. Islands of Cebu and Panay, in the Philippine archipelago.

37. Dicæum xanthopygium.

Dicæum xanthopygium, *Tweedd. Ann. & Mag. Nat. Hist.* (4) xx. p. 96 (1877); *id. P. Z. S.* 1877, p. 698, pl. lxxiii. fig. 1; *Wardlaw Ramsay, Orn. Works Tweedd.* p. 658 (1881); *Meyer, Vög. Ostind. Arch.* p. 39 (1884).

Adult male (type of species). General colour above clear slaty blue, with a patch of orange-scarlet in the centre of the back; rump bright yellow; upper tail-coverts slaty blue like the back; wing-coverts like the back; primary-coverts and quills blackish, the primaries margined with greyish blue, the inner secondaries slaty blue like the back; tail black; lores blackish; sides of face, cheeks, and ear-coverts slaty blue, a little darker than the head; entire throat bright yellow; fore neck and breast deep orange; the flanks, vent, and under tail-coverts bright yellow; thighs yellowish white, blackish behind; under wing-coverts and axillaries white, with a slight tinge of yellow; quills blackish below, white along the edge of the inner web; "bill black; legs dark greyish brown; iris dark brown" (*A. Everett*). Total length 3·2 inches, culmen 0·45, wing 1·9, tail 0·9, tarsus 0·5. (*Mus. R. G. Wardlaw Ramsay.*)

Hab. Luzon.

38. Dicæum cinereigulare.

Dicæum cinereigulare, *Tweedd. P. Z. S.* 1877, p. 829, & 1878, p. 950; *Wardlaw Ramsay, Orn. Works Tweedd.* p. 658 (1881).

Adult male (type of species). General colour above slaty blue, deeper on the head, mantle, and scapulars; in the centre of the back a spot of orange-scarlet; on the rump a slight yellow tinge; wing-coverts like the back; bastard-wing and primary-coverts blackish, narrowly edged with slaty blue; quills blackish, externally margined with greyish blue, the inner secondaries like the back; upper tail-coverts slaty blue like the back; tail-feathers blackish, edged towards the base with slaty blue; lores blackish; sides of face, ear-coverts, cheeks, and sides of neck slaty blue like the back; throat yellow, the sides of the throat and the lower throat bluish grey, washed with yellow in the centre of the throat; remainder of under surface deep rich orange, almost scarlet on the breast, bright yellow on the flanks, vent, and under tail-coverts; axillaries and under wing-coverts white, washed with yellow; quills dusky below, white along the edge of the inner web; "bill black; legs dark grey; iris brown" (*A. Everett*). Total length 3·4 inches, culmen 0·45, wing 1·95, tail 0·95, tarsus 0·5. (*Mus. R. G. Wardlaw Ramsay.*)

Adult female. Different from the male. Above greenish grey, more olive-yellow on the rump and upper tail-coverts; wing-coverts dusky brown with a steel-green gloss, and edged narrowly with olive-yellow; bastard-wing and primary-coverts and quills blackish brown, the secondaries glossed with steel-green and edged with olive-yellow like the wing-coverts, the primaries margined with bluish grey; tail-feathers black, with bluish-grey margins; head like the back, the forehead rather greener; ear-coverts and sides of neck greenish grey; feathers below the eye and cheeks yellowish; throat brighter yellow, becoming ashy grey on the lower throat and fore neck; centre of breast and abdomen yellow, deeper on the former; sides of body greener; thighs white, washed with yellow; under tail-coverts yellow; under wing-coverts and axillaries white, washed with yellow; quills blackish below, white along the edge of the inner web; "bill dark brown, the base ochreous; legs dark leaden grey; iris brown" (*A. Everett*). Total length 3·2 inches, culmen 0·5, wing 1·9, tail 0·9, tarsus 0·5. (*Mus. R. G. Wardlaw Ramsay.*)

Hab. Island of Mindanao.

a. ♂ ad. sk.	Placer, July 1877 (*A. Everett*).	Capt. R. G. Wardlaw Ramsay.
b. ♂ ad. sk.	Zamboanga, April (*A. Everett*).	Capt. R. G. Wardlaw Ramsay.

39. Dicæum ignipectus.

Micrura ignipectus, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 36. fig. 393.

Myzanthe ignipectus, *Hodgs. J. A. S. Beng.* xii. p. 983 (1843); *Blyth, Cat. B. Mus. As. Soc.* p. 227 (1849); *Bp. Consp.* i. p. 402 (1850); *Gould, B. Asia*, ii. pl. 40 (1854); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 751 (1856); *Jerd. B. Ind.* i. p. 377 (1862); *Pelz. Ibis*, 1868, p. 307; *Godwin-Austen, J. A. S. Beng.* xxxix. p. 98 (1870); *Swinh. P. Z. S.* 1871, p. 349; *Jerd. Ibis*, 1872, p. 19; *Hume, Nests*

and Eggs Ind. B. p. 159 (1873); *Walden, in Blyth's B. Burm.* p. 143 (1875); *David & Oust. Ois. Chine*, p. 84 (1877); *Hume & Davison, Str. F.* 1878, p. 200; *Hume, Str. F.* 1879, p. 90; *Scully, t. c.* p. 26; *Oates, B. Brit. Burm.* i. p. 337 (1883).

Myzanthe (Micrura) ignipectus, *Hodgs. in Gray's Zool. Misc.* p. 82 (1844); *Gray, Cat. Mamm. etc. Nepal pres. Hodgs.* p. 60 (1846).

Dicæum ignipectus, *Gray, Gen. B.* i. p. 100 (1847); *id. Hand-l. B.* i. p. 115, no. 1435 (1869).

Microchelidon ignipectus, *Reichenb. Handb. Scansoriæ*, p. 244, Taf. dlviii. fig. 3796 (1853).

Adult male. General colour above glossy steel-green with blue reflexions; wing-coverts like the back; the greater series, bastard-wing, primary-coverts, and quills black, externally steel-green like the back; tail-feathers blue-black, with a steel-green gloss on the outer web; sides of face, ear-coverts, and cheeks glossy steel-green, like the head; the lores blacker; throat and under surface of body deep ochreous buff, with a patch of crimson or deep scarlet on the lower throat and fore neck; down the centre of the breast a longitudinal patch of black glossed with steel-green; sides of upper breast glossy steel-green; flanks olive; thighs and under tail-coverts ochraceous buff like the breast; under wing-coverts and axillaries white, slightly washed with ochraceous buff or yellowish; quills dusky below, whitish along the edge of the inner web; "bill black; irides brown or blackish brown; feet and claws dull or brownish black" (*Scully*). Total length 3·6 inches, culmen 0·4, wing 2·05, tail 1·2, tarsus 0·5.

Adult female. Different from the male, and wanting the glossy plumage of the upper surface and the red spot on the fore neck. General colour above olive-greenish, yellower and more olive on the rump and upper tail-coverts; lesser and median wing-coverts like the back; remainder of wing-coverts and quills dusky, glossed with steel-green, externally edged with olive; tail-feathers blue-black, tipped with ashy brown, more plainly developed on the outer feathers; lores ochraceous buff; sides of face and ear-coverts olive-greenish like the head; cheeks and under surface of body pale ochraceous buff, more olive on the flanks and sides of body; under wing-coverts and axillaries white; quills dusky below, whitish along the edge of the inner web; "bill black, base of lower mandible plumbeous; feet and claws blackish" (*Scully*). Total length 3 inches, culmen 0·35, wing 1·75, tail 1, tarsus 0·6.

Young male. Bill black, grey at base of lower mandible; gape orange; irides blackish; feet and claws dull slaty; the head partially glossy dark green; breast pale orange; otherwise as in the female. (*Scully.*)

Obs. The female birds from the North-west Himalayas are very much paler than those from Nepal, being more ashy olive above and not so green; the throat also is more ashy, and the remainder of the underparts paler and all over yellow.

Hab. Himalayas to the hills of North-eastern Bengal, and extending to the Karen hills in Burmah and Mooleyit in Tenasserim; also occurring in the province of Fokien, in China.

a. ♂ ad. sk.	Himalayas.	Capt. Boys [C.].
b. ♂; *c.* ♀ ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
d. ♀ ad. sk.	Near Simla.	Capt. Stackhouse Pinwill [P.].
e, f, g, h. ♂; *i.* ♀ ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.]. (Types of species.)
k, l, m. ♂; *n.* ♀ ad. sk.	Nepal (*Hodgson*).	India Museum.
o. ♂ ad. sk.	Darjiling.	Gould Collection.
p, q. ♂ ♀ ad. sk.	Bootan (*Pemberton*).	India Museum.

40. Dicæum pygmæum.

Nectarinia pygmæa, *Kittl. Mem. pres. Acad. St. Petersb.* ii. pts. 1, 2, pl. 2 (1833).

Dicæum pygmæum, *Gray, Gen. B.* i. p. 100 (1847); *Bp. Consp.* i. p. 403 (1850); *Reichenb. Handb. Scans.* p. 242, Taf. dlvi. fig. 3781 (1853); *Gray, Hand-l. B.* i. p. 115, no. 1436 (1869).

Myzanthe pygmæa, *Walden, Trans. Z. S.* ix. p. 200 (1875); *Sharpe, Trans. Linn. Soc.* 2nd ser. *Zool.* i. p. 352 (1876); *Tweedd. P. Z. S.* 1877, p. 698, 1878, pp. 343, 620; *Wardlaw Ramsay, Orn. Works Tweedd.* p. 658 (1881).

Adult male. General colour above glossy steel-green, somewhat metallic; scapulars like the back; lower back and rump olive-yellow; upper tail-coverts glossy steel-green; wing-coverts metallic steel-blue; bastard-wing, primary-coverts, and quills black, externally steel-blue, some of the greater coverts and inner secondaries narrowly edged with olive-yellow; tail-feathers black, with a steel-blue gloss; head like the back, glossy steel-green; lores, feathers round the eye, ear-coverts, and cheeks, as well as sides of neck and sides of throat, dark slaty grey; throat and fore neck whitish, washed with yellow, a little more yellowish buff on the breast; sides of body and flanks dull yellowish olive; sides of upper breast dark slaty grey; thighs dusky, with a wash of yellow; under tail-coverts pale yellowish white; under wing-coverts and axillaries white, the edge of the wing spotted with dusky bases to the feathers; quills blackish below, white along the edge of the inner web; "bill, legs, and claws black; iris dark brown" (*A. Everett*). Total length 3·2 inches, culmen 0·45, wing 1·85, tail 0·95, tarsus 0·5. (*Mus. R. G. Wardlaw Ramsay.*)

Adult female. Differs from the adult male in not being so glossy above, the upper surface being olive-yellowish, brighter on the lower back, rump, and upper tail-coverts; head more ashy than the back, and mottled with dusky blackish bases; wing-coverts, quills, and tail blackish with a steel-green gloss, the feathers all narrowly edged with olive; throat and fore neck ashy white, washed with olive; centre of breast and abdomen yellowish buff, the sides of the body pale yellowish olive; under tail-coverts pale olive-yellow. Total length 3 inches, culmen 0·45, wing 1·75, tail 0·9, tarsus 0·45. (*Mus. R. G. W. R.*)

Hab. Islands of Luzon, Leyte, Guimaras, and Palawan, in the Philippine archipelago.

a. ♀ ad. sk.	Philippine Islands.	Mr. Fortune [C.].
b. ♂ ad. sk.	Monte Alban, Luzon, Feb. (*A. Everett*).	Capt. R. G. Wardlaw Ramsay.

41. Dicæum chrysorrhœum.

Dicæum chrysorrhœum, *Temm. Pl. Col.* iv. pl. 478. fig. 1 (1829); *Strickl. P. Z. S.* 1846, p. 100; *Gray, Gen. B.* i. p. 100 (1847); *Blyth, Cat. B. Mus. As. Soc.* p. 227 (1849); *Bp. Consp.* i. p. 403 (1850); *Reichenb. Handb. Scans.* p. 241, Taf. dlvii. figs. 3790–91 (1853); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 751 (1856); *Jerd. B. Ind.* i. p. 374 (1862); *Gray, Hand-l. B.* i. p. 114, no. 1417 (1869); *Hume, Ibis*, 1870, p. 437; *Blanf. t. c.* p. 467; *Walden, Ibis*, 1872, p. 380; *Hume, Str. F.* 1874, p. 473; *Salvad. Ucc. Born.* p. 168 (1874); *Godwin-Austen, J. A. S. Beng.* xliii. pt. 2, p. 156 (1874); *Blyth & Wald. B. Burm.* p. 142 (1875); *Sharpe, Ibis*, 1877, p. 17; *Hume & Davison, Str. F.* 1878, p. 195; *Andersson, Zool. Yunnan Exped.* p. 663 (1878); *Hume, Str. F.* 1879, pp. 56, 190; *Bingham, Str. F.* 1880, p. 170; *Oates, Str. F.* 1881, p. 198; *Nichols. Ibis*, 1881, p. 151; *Kelham, t. c.* p. 505; *Müller, Vög. Insel Salanga*, p. 22 (1882); *Oates, B. Brit. Burm.* i. p. 335 (1883).
Dicæum chrysochlore, *Blyth, J. A. S. Beng.* xii. p. 1009 (1843).

Adult male (type of species). General colour above dull yellowish olive, a little more pronounced on the lower back, rump, and upper tail-coverts; wing-coverts like the back; bastard-wing, primary-coverts, quills, and tail-feathers blackish brown, edged with yellowish olive; crown of head, sides of face, and ear-coverts yellowish olive like the back, a little more dusky below the eyes and on the lores, above the latter being a small linear streak of dull white; cheeks white, separated from the throat by a moustachial line of dusky blackish, which also skirts the edges of the lower jaw; throat white; remainder of under surface of body creamy white, broadly streaked with blackish on the fore neck, breast, and sides of the body, the streaks more or less washed with olive, especially on the lower flanks, where the stripes are less distinct; under wing-coverts and axillaries white, the edge of the wing dusky; quills dull brown below, whitish along the edge of the inner web; "iris crimson" (*A. Everett*); "upper mandible and tip of lower mandible black, rest of lower mandible plumbeous; legs and feet very dark plumbeous; iris orange-red to bright crimson" (*Davison*). Total length 3·9 inches, culmen 0·45, wing 2·35, tail 1·2, tarsus 0·6. (*Mus. Lugd.*)

Adult female (Borneo). Identical in plumage with the male; "iris orange; legs leaden" (*A. Everett*). Total length 3·8 inches, wing 2·35, tail 1·1, tarsus 0·55.

Hab. From the Eastern Himalayas, through the Burmese countries, down the Malayan peninsula, to Java, Sumatra, and Borneo.

a. Ad. sk.	Nepal (*Hodgson*).	India Museum.
b. ♂ ad. sk.	Rangoon, Oct. 1874.	E. W. Oates, Esq. [C.].
c. Ad. sk.	Tenasserim (*Helfer*).	India Museum.
d. ♂ ad. sk.	Malacca.	A. R. Wallace, Esq. [C.].
e, f, g, h. Ad. sk.	Malacca (*Cantor*).	India Museum.
i. Ad. sk.	West coast of Sumatra.	Dr. Faber [C.].

42. Dicæum concolor.

Dicæum concolor, *Jerd. Madr. Journ.* xi. p. 227 (1840); *id. Ill. Ind. Orn.* pl. 39 (1847); *Gray, Gen. B.* i. p. 100 (1847); *Blyth, Cat. B. Mus. As. Soc.* p. 227 (1849); *Bp. Consp.* i. p. 403 (1850); *Reichenb. Handb. Scans.* p. 241, Taf. dlvi. fig. 3780 (1853); *Jerd. B. Ind.* i. p. 375 (1862); *Gray, Hand-l. B.* i. p. 115, no. 1424 (1869); *Hume, Nests and Eggs Ind. B.* p. 156 (1873); *Morgan, Ibis*, 1875, p. 316; *Fairb. Str. F.* 1876, pp. 256, 265, & 1877, p. 399; *Hume, Str. F.* 1879, p. 90.

Adult male. General colour above dingy olive-brown, rather more ashy olive on the mantle and upper back; wing-coverts like the back; bastard-wing and primary-coverts uniform dark brown; quills dark brown, narrowly edged with dull olive-yellowish, more distinct on the secondaries; tail-feathers dark brown, slightly margined with olive; head like the back, but mottled with dusky centres to the feathers; extreme base of forehead, lores, and eyelid whitish, as also a slight eyebrow; ear-coverts pale dingy olive, with hair-like whitish shaft-lines; cheeks and feathers below the eye, as well as the throat, whitish, faintly washed with olive; centre of breast and abdomen very pale olive-yellowish, as well as the thighs and under tail-coverts; the chest, sides of breast, and sides of body ashy olive; under wing-coverts and axillaries white with a faint yellowish tinge; quills dusky below, whitish along the edge of the inner web; "bill slate-colour; legs dark slaty brown; iris brown" (*R. G. W. R.*). Total length 3·7 inches, culmen 0·45, wing 2, tail 1·15, tarsus 0·5. (*Mus. R. G. Wardlaw Ramsay.*)

Adult female. Similar to the male, but rather darker olive-brown above. Total length 3·5 inches, culmen 0·45, wing 1·95, tail 1·05, tarsus 0·5. (*Mus. R. G. W. R.*)

Hab. Hills of Southern India.

a. Ad. sk.	Coonoor, Aug. 24, 1876 (*R. G. W. R.*).	Capt. R. G. Wardlaw Ramsay.

43. Dicæum inornatum.

Myzanthe inornata, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 37. no. 395; *id. in Gray's Zool. Misc.* p. 82 (1844); *Gray, List Mamm. & B. Nepal pres. Hodgs.* p. 60 (1846).

Dicæum olivaceum, *Walden, Ann. & Mag. Nat. Hist.* (4) xv. p. 401 (1875); *id. in Blyth, B. Burm.* p. 143 (1875); *Hume, Str. F.* 1875, p. 403, 1876, p. 498; *Tweedd. Ibis*, 1877, p. 302; *Hume & Davison, Str. F.* 1878, p. 195; *Hume, Str. F.* 1879, p. 90; *Bingham, Str. F.* 1880, p. 171; *Oates, B. Brit. Burm.* i. p. 333 (1883).

Dicæum inornatum, *Sharpe, P. Z. S.* 1883, p. 580.

Adult (type of species). General colour above dull olive, a little clearer olive on the rump and lower back; lesser and median wing-coverts like the back; bastard-wing and primary-coverts uniform blackish brown; greater coverts and quills blackish brown, edged with olive, brighter and more yellow on the primaries; tail-feathers blackish brown, edged with olive; lores, sides of face, and cheeks

pale ashy olive, as also a line of feathers over the eye; the upper part of the ear-coverts darker olive-brown; throat and under surface of body yellowish white, the chest and breast as well as the sides of the body and flanks washed with ashy olive; under tail-coverts yellowish white; under wing-coverts and axillaries white, slightly washed with olive-yellow; quills blackish brown, edged with ashy whitish along the inner web; "upper mandible and tip of lower mandible very dark brown or black; rest of lower mandible pale plumbeous; legs and feet very dark plumbeous; iris deep brown" (*Davison*). Total length 3 inches, culmen 0·4, wing 1·9, tail 0·95, tarsus 0·45.

Obs. Although the typical specimens of *D. inornatum* are in worn and abraded plumage, I do not think there is any question respecting the identity of *Dicæum olivaceum* of Walden with the Nepal bird. I have compared the types of the two species. I have also no doubt that the supposed male of *Myzanthe ignipectus*, killed by Dr. Scully in the Presidency Grounds in Nepal on the 3rd of July, which puzzled him so much as to its identity, was really a bird of the present species.

Hab. From Nepal and the Eastern Himalayas, throughout the Burmese and Tenasserim hills, and reoccurring in Sumatra.

a. Ad. sk.	India.	J. Gould, Esq. [P.].
b. Ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.]. (Type of species.)
c. Ad.; *d*. Juv. sk.	Nepal (*Hodgson*).	India Museum.
e. ♀ ad. sk.	Tonghoo hills, April 6 (*R. G. W. R.*).	Capt. R. G. Wardlaw Ramsay.

44. Dicæum virescens.

Dicæum virescens, *Hume, Str. F.* 1873, p. 482.

Adult male. General colour above olive-yellow, brighter yellow on the rump and upper tail-coverts; wing-coverts blackish, externally olive-yellow, brighter on the edge of the primaries; bastard-wing and primary-coverts uniform blackish brown; tail-feathers blackish brown; head a little more dusky olive, slightly mottled with dark-brown bases to the feathers; lores dusky ashy; eyelid and feathers over the eye yellowish white; ear-coverts ashy olive; cheeks, ear-coverts, throat, and breast ashy with a faint olive tinge; abdomen pale yellow; flanks and sides of body olive-yellow; under tail-coverts white, washed with yellow; under wing-coverts and axillaries white; quills blackish, edged with white along the inner web. Total length 3·4 inches, culmen 0·45, wing 1·9, tail 0·9, tarsus 0·5.

Adult female. Similar to the male. Total length 3·1 inches, culmen 0·5, wing 1·85, tail 0·85, tarsus 0·45. (*Mus. R. G. Wardlaw Ramsay.*)

Hab. Andaman Islands.

a. Ad. sk.	S. Andaman, Nov. 3 (*Wimberley*).	Capt. R. G. Wardlaw Ramsay.

45. Dicæum minullum.

Dicæum minullum, *Swinhoe, Ibis*, 1870, p. 240; *id. P. Z. S.* 1871, p. 349; *David & Oust. Ois. Chine*, p. 83 (1877).

Adult male. Upper parts olive-green, brownish on head, back, and scapulars, yellowish on the rump; coronal feathers with deep brown centres, giving a spotted appearance to the top of the head; wing-feathers hair-brown, edged with olive-green, broadly on the coverts and tertials, and less so on the quills; tail hair-brown, tipped with brownish white; throat and belly dusky yellowish, clearer and nearly primrose on the vent; flanks greyish olive; axillaries and carpal edge white, with just a tinge of primrose; bill deep brown, light bluish grey on lower mandible at base; irides deep brown; legs and claws leaden colour. Length about 2·75 inches; wing 1·67; tail ·867, even; tarsus ·416; bill, from forehead, ·375. (*Swinhoe.*)*

Hab. Island of Hainan.

46. Dicæum everetti.

Dicæum everetti, *Tweedd. Ann. & Mag. Nat. Hist.* (4) xx. p. 537 (1877); *id. P. Z. S.* 1878, p. 111; *Wardlaw Ramsay, Orn. Works Tweedd.* p. 658 (1881).

Dicæum modestum, *Tweedd. P. Z. S.* 1878, p. 380; *Sharpe, P. Z. S.* 1883, p. 580.

Myzanthe modestum, *Wardlaw Ramsay, Orn. Works Tweedd.* p. 658 (1881).

Adult male (type of *D. modestum*). General colour above dark olive-brown, the head uniform with the back; lesser and median wing-coverts like the back; bastard-wing and primary-coverts uniform dark brown; greater wing-coverts and quills dark brown, edged with yellowish olive, more distinct on the secondaries; upper tail-coverts brown, washed with olive; tail black; lores, sides of face, and ear-coverts dusky olive-brown, the cheeks lighter olive-ashy; throat and fore neck ashy grey, olive-yellow on the chin, a tinge of the latter colour also pervading the throat; breast and abdomen pale whitish tinged with yellow; sides of body, flanks, and under tail-coverts pale olive-greenish; under wing-coverts and axillaries white, with a faint tinge of yellow; quills dusky brown below, ashy whitish along the edge of the inner web. Total length 3·15 inches, culmen 0·45, wing 1·9, tail 0·95, tarsus 0·5. (*Mus. R. G. W. R.*)

Obs. I have compared the types of *D. modestum* and *D. everetti* in Capt. Wardlaw Ramsay's collection, and cannot find any specific difference between them.

Hab. Islands of Dinagat and Panaon in the Philippine archipelago.

* By a most unfortunate accident, the unique type specimen of this species lent to me by Mr. Seebohm was dropped in the street by the messenger and lost. I have therefore been obliged to reproduce the original description, and have not been able to state definitely whether it is identical with *D. inornatum* or not.

47. Dicæum erythrorhynchum.

Red-billed Creeper, *Lath. Gen. Syn. Suppl.* i. p. 133 (1787).
Certhia erythrorhynchos, *Lath. Ind. Orn.* i. p. 299 (1790).
Nectarinia minima, *Tickell, J. A. S. Beng.* ii. p. 577 (1833).
Dicæum tickelliæ, *Blyth, J. A. S. Beng.* xi. p. 889 (1842), xii. p. 983 (1843), xiii. p. 393 (1844), xiv. p. 558 (1845).
Dicæum minimum, *Blyth, Ann. & Mag. Nat. Hist.* xx. p. 316 (1847); *Tytler, op. cit.* (2) xiii. p. 373 (1854); *Blyth. Cat. B. Mus. As. Soc.* p. 227 (1849); *Bp. Consp.* i. p. 403 (1850); *Reichenb. Handb. Scans.* p. 241 (1853); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 750 (1854); *Jerd. B. Ind.* i. p. 374 (1862); *Beavan, Ibis*, 1865, p. 416; *Brooks, Ibis*, 1869, p. 47; *Gray, Hand-l. B.* i. p. 115, no. 1425 (1869); *Blanf. Ibis*, 1870, p. 468; *Hume, Nests and Eggs Ind. B.* p. 155 (1873); *Ball, Str. F.* 1874, p. 397; *Fairb. Str. F.* 1876, p. 256; *Walden, Ibis*, 1876, p. 349; *Ball, Str. F.* 1878, vol. ii. p. 208; *Legge, B. Ceylon*, p. 574 (1879); *Butler, Cat. B. S. Bombay Pres.* p. 30 (1880).
Dicæum erythrorhynchum, *Blyth & Wald. B. Burm.* p. 143 (1875); *Fairb. Str. F.* 1877, p. 399; *Hume & Davison, Str. F.* 1878, p. 196; *Hume, Str. F.* 1879, p. 90; *Vidal, Str. F.* 1880, p. 57; *Butler, t. c.* p. 390; *Oates, B. Brit. Burm.* i. p. 334 (1883).

Adult. General colour above ashy olive-brown, the head faintly mottled with small dusky centres to the feathers; wing-coverts and quills rather browner than the back, with a slight greenish gloss on the feathers, which have also obsolete narrow margins of olive; tail blackish brown; lores, sides of face, and ear-coverts pale ashy brown, the latter slightly streaked with whitish shaft-lines; cheeks and under surface of body pale ashy with a slight olive tinge; the centre of the body, abdomen, and under tail-coverts buffy whitish; under wing-coverts and axillaries white, ashy along the edge of the wing; quills dusky brown below, ashy whitish along the edge of the inner web; "bill pale fleshy, with a dusky tip; legs leaden brown; iris brown" (*Jerdon*); "bill dark brown above, the lower mandible fleshy; legs and feet brownish slate; iris yellowish brown or brown" (*Legge*). Total length 3·2 inches, culmen 0·4, wing 2·0, tail 0·95, tarsus 0·55.

Young. Iris darker brown than in the adult, with a slaty outer circle; upper mandible tinged with yellowish, and its margin, together with the under mandible, yellowish. Above, more olivaceous than old birds; quills and wing-coverts edged greenish; throat and fore neck duskier than in adults. (*Legge.*)

Hab. Ceylon; Lower Bengal and Central India as far as the Eastern Himalayas and Assam, extending through Arakan to Moulmein in Tenasserim.

a. ♀ ad. sk.	South Ceylon (*Legge*).	E. W. Oates, Esq.
b. Ad. sk.	Madras (*Jerdon*).	Gould Collection.
c, d. Ad. sk.	Belgaum (*Hutt*).	Gould Collection.
e, f, g. Ad. sk.	Dacca (*Tytler*).	India Museum.
h. Ad. sk.	Bengal (*As. Soc. Beng.*).	India Museum. (Type of *D. tickelliæ.*)
i. Ad.; *k.* Juv. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
l, m. Ad. sk.	Nepal (*Hodgson*).	India Museum.
n. Ad. sk.	India.	Gould Collection.

6. LOXIOIDES.

Type.
Loxioides, *Oustalet, Bull. Soc. Philom. Paris*, 1877, p. 99.. L. bailleui.



Bill of *Loxioides bailleui*.

Range. Sandwich Islands.

1. Loxioides bailleui.

Loxioides bailleui, *Oustalet, Bull. Soc. Philom. Paris*, 1877, p. 99; *Sclater, Ibis*, 1879, p. 90, pl. 2.

Adult. General colour above ashy grey, more hoary grey towards the rump and upper tail-coverts; scapulars grey like the back; lesser and median coverts olive-yellow; greater coverts, bastard-wing, primary-coverts, and quills blackish, externally olive-yellow, the inner secondaries broadly edged and tipped with ashy grey; tail-feathers blackish, externally washed with olive-yellow, internally edged with ashy; head all round olive-yellow, as well as the throat and fore neck and chest; remainder of under surface ashy whitish, greyer on the flanks and sides of the body; under wing-coverts and axillaries ashy whitish, washed with olive-yellow, especially on the edge of the wing; quills dusky below, ashy whitish along the edge of the inner web. Total length 6·8 inches, culmen 0·56, wing 3·55, tail 2·6, tarsus 1.

Hab. Sandwich Islands.

a. Ad. sk. Sandwich Islands (*M. Bailleu*). Paris Museum [P.].

7. LOXOPS.

Type.
Loxops, *Cab. Arch. f. Naturg.* 1847, p. 330 ..... L. coccinea.
Hypoloxias, *Bp. Consp.* i. p. 518 (1850) ..... L. coccinea.
Byrseus, *Reichenb. Handb. Spec. Orn.* pl. lxxv. fig. 23 (1850)..... L. coccinea.



Bill of *Loxops coccinea*.

Range. Sandwich Islands.

1. Loxops coccinea.

Scarlet Creeper, *Lath. Gen. Syn.* ii. pt. 1, p. 270 (1783).
Fringilla coccinea, *Gm. Syst. Nat.* i. p. 921 (1788); *Gray, Gen. B.* ii. p. 371 (1845).
Fringilla rufa, *Bloxam, in Byron's Voy. 'Blonde,' App.* p. 250 (1826).
Linaria? coccinea, *Gould, in Voy. 'Sulphur,' Birds*, p. 41, pl. 22 (1844).
Carduelis coccinea, *Less. Compl. Buff.* viii. p. 280 (1837).
Loxops coccinea, *Cab. Arch. f. Naturg.* 1847, p. 330; *Gray, Cat. B. Trop. Isl. Pacific Ocean*, p. 28 (1859); *id. Hand-l. B.* i. p. 114, no. 1413 (1869); *Sclater, Ibis*, 1871, p. 359.
Drepanis rufa, *Gray, Gen. B.* i. p. 96 (1847).
Hypoloxias coccinea, *Bp. Consp.* i. p. 518 (1850); *Dole, Proc. Bost. Soc. N. H.* 1879, p. 301.
Himatione rufa, *Reichenb. Handb. Scans.* p. 255 (1853).

Adult. General colour above dull orange-rufous, rather browner on the back, and clearer on the head, lower back, rump, and upper tail-coverts; wing-coverts and quills dusky brown, externally dull orange, a little brighter on the primaries; tail-feathers brown, externally edged with dull orange; lores dusky; sides of face, cheeks, ear-coverts, and under surface of body dull orange-rufous, more brilliant orange on the breast and abdomen; under tail-coverts orange, with fulvous centres; under wing-coverts and axillaries ashy whitish washed with orange; quills dusky brown below, ashy along the edge of the inner web. Total length 4·5 inches, culmen 0·4, wing 2·25, tail 1·65, tarsus 0·85.

Hab. Sandwich Islands.

a, b. Ad. sk.	Sandwich Islands.	Capt. Lord Byron [P.]. (Types of *Fringilla rufa*.)
c. Ad. sk.	Sandwich Islands.	John Gould, Esq.

2. Loxops rosea.

Drepanis rosea, *Dole, Hawaian Almanac*, 1879, p. 44.

Similar to *D. coccinea* in appearance, habits, and food; 6 inches long. Wings and tail dark brown; last secondaries white; upper and lower tail-coverts greenish yellow; general plumage bright scarlet, interspersed with masses of greenish-yellow feathers, mottled with black. Bill 1 inch, curved, white. (*Dole.*)

Hab. Sandwich Islands.

3. Loxops aurea.

Drepanis aurea, *Dole, Hawaian Almanac*, 1879, p. 45.
Hypoloxias aurea, *Finsch, Ibis*, 1880, p. 80.

Uniform orange; quills blackish brown, margined externally with the same colour, but more sordid; covers of primaries and secondaries on the outer webs broadly margined with dull orange; bill hornish blue, tip blackish; iris dark brown. Stomach containing

nests of insects (caterpillars). First and third primaries longest, first scarcely shorter. (*Finsch.*)

Young (just able to fly, and fed by the former). Upper parts dull olive-green, the outer margin of the dark-brown quills and tail-feathers more vivid, the same as the tips of the secondaries, which form a pale cross band on the wing; lower parts pale olive-yellow, chin passing into whitish; bill horn-blackish, tip darker; feet black; third and fourth primaries longest, second equal to the fifth, somewhat shorter, first a little shorter; tail twelve feathers. Tongue ordinary, bifurcated at tip. (*Finsch.*)

Hab. Sandwich Islands.

8. PSITTIROSTRA.

Type.

Psittirostra, *Temm. Man. d'Orn.* i. p. lxx (1820) ..... P. psittacea.



Bill of *Psittirostra psittacea*.

Range. Sandwich Islands.

1. Psittirostra psittacea.

Parrot-billed Grosbeak, *Lath. Gen. Syn.* iii. p. 108, pl. 42 (1783).
Loxia psittacea, *Gm. Syst. Nat.* i. p. 844 (1788); *Lath. Ind. Orn.* i. p. 371 (1790).
Psittirostra psittacea, *Temm. Man. d'Orn.* i. p. lxx (1820); *Swains. Classif. B.* ii. p. 295 (1837); *Gray, Gen. B.* ii. p. 389 (1845); *Bp. Consp.* i. p. 492 (1850); *Reichenb. Handb. Scans.* p. 101, Taf. ccccclxv. *b.* fig. 3408 (1853); *Gray, Hand-l. B.* i. p. 114, no. 1412 (1869); *Pelz. Ibis*, 1873, p. 21; *Sclater, P. Z. S.* 1878, p. 347; *id. Report Birds 'Challenger' Exped.* p. 94 (1881).
Psittirostra sandvicensis, *Steph. Gen. Zool.* xiv. p. 91 (1826).
Psittacirostra icterocephala, *Temm. Pl. Col.* iii. pl. 457 (1828).
Psittirostra icterocephala, *Gray, Cat. B. Trop. Isl. Pacific Ocean*, p. 28 (1859).

Adult male. General colour above yellowish green, duller on the mantle and upper back; wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills dusky blackish, externally yellowish green, brighter on the edge of the primaries, the inner secondaries somewhat ashy towards their ends; quills dusky brown, edged with yellowish green; head and neck all round, including sides of face and throat, bright lemon-yellow; sides of neck dull greenish; lower throat and chest pale ashy, with slightly indicated dusky centres, and washed with pale yellow; remainder of under surface whitish ash-colour, the feathers edged with pale yellow; flanks and sides of body yellowish green; thighs whitish ash; under

tail-coverts whitish, with a slight wash of yellow; axillaries pale yellow; under wing-coverts ashy whitish washed with yellow; quills dusky below, whitish along the edge of the inner web. Total length 6·5 inches, culmen 0·6, wing 3·7, tail 2·25, tarsus 0·9.

Adult female. Differs from the male in wanting the yellow on the head and throat; the greater wing-coverts tipped with white. Total length 6·7 inches, culmen 0·65, wing 3·6, tail 2·15, tarsus 0·95.

Young. Like the old female, but much more dingy olive-green, the wing-coverts tipped with white; ear-coverts also with whitish shaft-lines.

Hab. Sandwich Islands.

a, b. ♂ ♀ ad. sk.	Sandwich Islands.	J. Gould, Esq.'
c, d. ♂ ad. sk.	Hilo, Owhyhee, Sandwich Islands.	Voy. of H.M.S. 'Challenger.'
e, f. ♂ ad. et juv. sk.	Sandwich Islands.	Capt. Lord Byron [P.].

9. PINAROLOXIAS.



Bill of *Pinaroloxias inornata.*

Range. Bow or Harp Island, Low Archipelago.

1. Pinaroloxias inornata.

Cactornis inornata, *Gould, P. Z. S.* 1843, p. 104; *id. Voy.* '*Sulphur,*' *Birds*, p. 42, pl. 25 (1844); *Gray, Gen. B.* ii. p. 359 (1844); *Salvin, Trans. Z. S.* ix. p. 485 (1876).

Loxops inornata, *Gray, Cat. B. Trop. Isl. Pacific Ocean*, p. 28 (1859); *id. Hand-l. B.* i. p. 114, no. 1414 (1869).

Adult? (type of species). Upper surface mottled, the feathers dark brown, broadly edged with olive-brown, the head a little more uniform, with less distinct edges; lesser wing-coverts like the back; median and greater coverts dark brown, with broad edgings of sandy buff; bastard-wing, primary-coverts, and quills dark brown, edged with lighter brown; tail-feathers dark brown, edged with paler brown and tipped with sandy buff, more broadly on the outer feathers; lores and feathers above the eye sandy buff, as well as the plumes below the eye; ear-coverts uniform dark brown; cheeks and under surface of body sandy buff, streaked with dark-brown centres to the feathers; the flanks slightly more rufescent, and the abdomen paler and more uniform yellowish buff like the under tail-coverts; under wing-coverts and axillaries yellowish buff; quills dusky below, ashy fulvous along the edge of the inner web.

Total length 4·5 inches, culmen 0·55, wing 2·65, tail 1·75, tarsus 0·85.

Hab. Bow or Harp Island, Low Archipelago.

a. [♀] Ad. sk.	Bow Island (*Dr. Hinds*).	Zoological Society. (Type of species.)

10. OREOCHARIS.

Type.

Oreocharis, *Salvad. Ann. Mus. Civic. Genov.* vii. p. 939 (1875) O. arfaki.
Chloromyias, *Oustalet, Bull. Assoc. France,* 1880, p. 172 .. O. arfaki.



Bill and head of *Oreocharis arfaki.*

Range. New Guinea.

1. Oreocharis arfaki.

Parus? arfaki, *Meyer, Sitz. Isis Dresd.* 1875, 1st April; *id. Mitth. Zool. Mus. Dresd.* i. p. 8 (1875); *Gould, B. New Guinea,* iv. pl. 13 (1877).
Oreocharis stictoptera, *Salvad. Ann. Mus. Civic. Genov.* vii. p. 939 (1875).
Oreocharis arfaki, *Salvad. op. cit.* xii. p. 333 (1878), xvi. p. 70 (1880); *id. Orn. Papuasia etc.* ii. p. 289 (1881); *Sharpe, Journ. Linn. Soc., Zool.* xvi. p. 436 (1882); *Salvad. Orn. Papuasia,* iii. App. p. 540.
Chloromyias laglaizei, *Oust. Bull. Assoc. France,* 1880, p. 173.

Adult male. General colour above olive-green, with a slight gloss of steel-green; wing-coverts like the back, the greater series rather more yellowish green externally; bastard-wing and primary-coverts black, narrowly edged with dull green; quills black, externally edged with green, yellow on the primaries, the inner secondaries with a large spot of bright yellow at the end of the outer web; upper tail-coverts greenish grey; tail-feathers blackish, washed with greenish grey on the edges; crown of head glossy blue-black as far as the occiput, which is green as well as the nape; lores, eyelid, cheeks, and sides of neck blue-black; the lower edge of the eyelid, feathers below the eye, and ear-coverts bright golden yellow; throat and fore neck blue-black; remainder of under surface of the body from the fore neck downwards rich golden yellow, with a longitudinal patch of ruddy chestnut down the centre of the body; thighs black; axillaries bright golden yellow; under wing-coverts paler yellow, with white bases, and mottled with black bases near the edge of the wing; quills blackish below, yellow along the inner web. Total length 5 inches, culmen 0·45, wing 2·9, tail 1·95, tarsus 0·75.

Adult female. Similar to the male, but with the cheeks and fore neck grey.

Hab. New Guinea.

a. ♂ ad. sk.	Astrolabe Mountains, S.E. New Guinea.	Mr. A. Goldie [C.].

11. PARDALOTUS.

Pardalotus, *Vieill. Analyse*, p. 31 (1816)..... Type. P. ornatus.



a. Bill of *Pardalotus ornatus*. *b.* Wing of same, to show absence of bastard primary.

Range. Confined to Australia.

Key to the Species.

a. Head streaked with white on the hinder crown and occiput.
  a'. All the primaries edged with white, forming a large wing-patch; tips of primary-coverts scarlet ..... *ornatus*, p. 55.
  b'. Third and fourth primaries edged with white; tips of primary-coverts scarlet, or orange, or yellow ..... *assimilis*, p. 56.
  c'. Third primary only edged with white; tips of primary-coverts always yellow ..... *affinis*, p. 57.
b. Head black, with round spots of white.
  d'. Back mottled, the feathers edged with black with a subterminal spot; upper tail-coverts crimson; loral spot white; throat and fore neck bright yellow; under tail-coverts yellow.
    a''. Rump chestnut..... *punctatus*, p. 58.
    b''. Rump yellow ..... *xanthopygius*, p. 59.

e'. Back nearly uniform ashy brown, with faint dusky shaft-streaks; upper tail-coverts washed with yellow; loral spot scarlet; throat creamy white, with a large spot of pale yellow on the fore neck; under tail-coverts white ..... *rubricatus*, p. 60.

c. Head uniform black.

f'. Rump yellowish brown or pale earthy brown *melanocephalus*, p. 60.

g'. Rump yellow ..... *uropygialis*, p. 62.

d. Head and back olive, slightly mottled with blackish margins to the feathers; ear-coverts yellow; no alar speculum ..... *quadragintus*, p. 62.

1. Pardalotus ornatus.

Pardalotus striatus (*nec Gm.**), *Temm. Man. d'Orn.* i. p. 65 (1820).
Pardalotus ornatus, *Temm. Pl. Col.* iv. pl. 394. fig. 1 (1826).
Pardalotus striatus, *Vig. & Horsf. Trans. Linn. Soc.* xv. p. 237 (1827); *Gould, Syn. B. Austr.* part 2, pl. iii. fig. 3 (1837); *Gray, Gen. B.* i. p. 270 (1845); *Gould, B. Austr.* fol. ii. pl. 38 (1848); *Reichenb. Vög. Neuholl.* p. 163 (1850); *Bp. Consp.* i. p. 334 (1850); *Gould, Handb. B. Austr.* i. p. 161 (1865); *Gray, Hand-l. B.* i. p. 387, no. 5861 (1869); *Diggles, Orn. Austr.* pl. 30. fig. 2 (c. 1870); *Ramsay, Pr. Linn. Soc. N. S. W.* ii. p. 180 (1878).

Adult. General colour above olive-greyish, the lower b[illegible] and rump clearer and more earthy or yellowish brown, as also the upper tail-coverts, which have paler fulvescent tips with a subterminal bar of dusky brown; scapulars like the back, the lower ones washed with yellowish brown; lesser and median wing-coverts greenish black, with yellowish-brown spots at the ends; greater coverts and primary-coverts black, the latter with scarlet tips, forming an alar speculum; quills blackish brown, with a white spot at the end, the secondaries paler towards the base and margined externally with reddish brown, the inner secondaries broadly edged with white along the terminal third of the outer web; the long primaries externally white near the base, increasing in extent towards the outermost, which has a narrow line of white along the whole of the outer web; tail-feathers blackish, tipped with white on the outer web, this white spot increasing in extent towards the outermost feather, where it is very large; crown of head black, forming a cap, the occiput and nape streaked with white down the centre of the feathers; a broad white eyebrow, with a large spot of bright yellow on the fore part above the lores, which are blackish; cheeks and ear-coverts ashy white, the feathers below the eye and along the upper edge of the ear-coverts black, minutely spotted with white; centre of throat and fore neck yellow; sides of neck pale earthy brown, extending down the sides of the body and flanks, the under tail-coverts also of this colour but paler; breast and abdomen whitish, with an ashy-

* Gmelin's species *Pipra striata*, founded on Latham's "Striped-headed Manakin," is difficult to determine; but it certainly is *not* the above bird. It is probably *P. affinis* (*vide infrà*).

grey shade on the former; a broad line of pale yellow separating the breast from the sides of the body; thighs ashy brown washed with yellow; under wing-coverts and axillaries very pale earthy brown; quills dusky below, ashy whitish along the edge of the inner web; "bill at the tip and along the culmen dark brown tinged with blue, the remainder yellowish white; legs and feet greenish grey; iris brownish red" (*Gould*). Total length 4 inches, culmen 0·35, wing 2·55, tail 1·35, tarsus 0·75.

"Sexes alike in colour" (*Gould*).

Hab. From Port Denison to New South Wales, and throughout Victoria, South Australia, and West Australia.

a. ♂ ad. sk.	Murray River.	Gould Collection.
b. ♀ ad. sk.	South Australia.	Sir George Grey [P.].
c. Ad. sk.	South Australia.	Gould Collection.
d, *e*. Ad. sk.	New South Wales.	Gould Collection.
f. Ad. sk.	Victoria.	Gould Collection.
g, *h*. Ad. sk.	Australia.	Gould Collection.
i. Ad. sk.	Australia.	Sir D. Cooper [P.].
k. Ad. sk.	Australia.	Lady Hooker [P.].
l, *m*. Ad. sk.	Australia.	

Subsp. *a*. Pardalotus assimilis.

Pardalotus assimilis, *Ramsay, Proc. Linn. Soc. N. S. W.* ii. p. 180 (1878).

Gould states that the young birds of *P. striatus* assume the adult colouring from the nest, but have the tips of the primary-coverts orange instead of red. Mr. Ramsay, however, thinks that the supposed young *P. striatus* of Gould are really an intermediate species between *P. striatus* and *P. affinis*, and states that he has found them breeding; Gould, however, remarks that he has "positive evidence that some of the Australian species reproduce their kind before they have attained their adult livery."

It is certain that in *P. melanocephalus* the young are very different from the adults, and have the crimson speculum as distinct in the nestling as in the adult bird; and, by analogy, Gould's description of the young of *P. striatus* would not be correct, Mr. Ramsay's view of there being a distinct intermediate form receiving additional confirmation. I find, moreover, that all the birds for which I propose to adopt Ramsay's name of *P. assimilis* have, as a rule, the *third* and *fourth* primaries edged with white, the third for two thirds of its length, the fourth only near the base, but varying in extent and sometimes extending a good way up the edge of the feather. The colour of the speculum varies from yellow and orange to scarlet and even crimson. This question can only be settled by observers in Australia; but it seems to me by no means improbable that *P. striatus* and *P. affinis* interbreed, especially if the localities of all the specimens in the British Museum are to be relied on. The following examples appear to me to belong to this intermediate form, in which, I may also mention, the white streaks

commence further down on the crown and nearer to the black forehead. This is also a secondary character of *P. affinis*.

Hab. From Port Denison to New South Wales, and the interior of Australia.

a. Ad. sk.	Australia.	Sir T. Mitchell.
b, *c*. Ad. sk.	Australia.	Gould Collection.
d. Ad. sk.	New South Wales.	Gould Collection.
e. Ad. sk.	Burke, River Darling (*Dr. Pechey*).	Gould Collection.
f. Ad. sk.	Queensland (*Cockerell*).	F. D. Godman and O. Salvin, Esqrs. [P.].
g. Ad. sk.	Queensland.	F. Nicholson, Esq. [P.].

2. Pardalotus affinis.

? Striped-headed Manakin, *Lath. Gen. Syn.* ii. pt. 2, p. 526 (1783).
? Pipra striata, *Gm. S. N.* i. p. 1003 (1788); *Lath. Ind. Orn.* ii. p. 558 (1790); *Steph. Gen. Zool.* x. pt. 1, p. 29, pl. 4 (1817).
Pardalotus affinis, *Gould, P. Z. S.* 1837, p. 25; *id. Syn. B. Austr.* part 2, pl. iii. fig. 2 (1837); *id. B. Austr.* fol. ii. pl. 39 (1848); *Gray, Gen. B.* i. p. 270 (1845); *Reichenb. Vög. Neuholl.* p. 164 (1850); *Bp. Consp.* i. p. 334 (1850); *Gould, Handb. B. Austr.* i. p. 163 (1865); *Gray, Hand-l. B.* i. p. 387, no. 5862 (1869); *Diggles, Orn. Austr.* pl. 30. fig. 3 (c. 1870); *Ramsay, Proc. Linn. Soc. N. S. W.* ii. p. 180 (1878).

Adult. General colour above ashy olive, becoming pale earthy brown on the lower back, rump, and upper tail-coverts, the latter being edged with pale ochreous buff; lesser and median wing-coverts black, with spots of pale earthy brown at the tips; greater coverts, bastard-wing, and primary-coverts black, the latter tipped with yellow, forming an alar speculum; quills black, tipped with a white spot at the end of the outer web; the inner secondaries externally reddish brown, becoming white towards the end of the outer web; the third primary only edged with white along the outer web; tail-feathers black, all but the centre ones with a white spot at the end of the inner web, increasing in extent towards the outermost; crown of head black, uniform on the forehead and over the eye, the remainder of the crown and nape broadly streaked with white down the centre of the feathers; over the eye a broad streak of yellow, continued into an eyebrow of ashy white; lores blackish; ear-coverts mottled, blackish with mesial streaks of ashy white; cheeks ashy whitish; throat and fore neck bright yellow; breast and remainder of under surface ashy whitish with a faint yellowish tinge; sides of neck, sides of body, and flanks pale earthy brown, separated from the breast by a broad line of yellow; under tail-coverts clearer buff or pale earthy brown; under wing-coverts and axillaries pale earthy brown; quills dusky below, ashy whitish along the edge of the inner web; "bill black; feet brown; iris olive-brown" (*Gould*). Total length 4·3 inches, culmen 0·3, wing 2·65, tail 1·45, tarsus 0·75.

Hab. Tasmania, New South Wales, Victoria, and South Australia.

a. Ad. sk.	New South Wales.	Gould Collection.
b. Ad. sk.	Victoria.	Gould Collection.
c, *d*. Ad. sk.	[Queensland (*Cockerell*).]	F. D. Godman and O. Salvin, Esqrs. [P.].
e. Ad. sk.	[Queensland.]	F. Nicholson, Esq. [P.].
f, *g*. Ad. sk.	Tasmania.	Ronald Gunn, Esq. [P.].

3. Pardalotus punctatus.

Pipra punctata, *Shaw & Nodder*, *Nat. Misc.* iv. pl. 111 (1792); *Lath. Ind. Orn. Suppl.* p. lvi (1801).
Speckled Manakin, *Lath. Gen. Syn. Suppl.* ii. p. 253 (1801).
Pardalotus punctatus, *Temm. Man. d'Orn.* i. p. lxv (1820); *id. Pl. Col.* iii. pl. 78 (1823); *Gould, Syn. B. Austr.* pt. 2, pl. iii. fig. 1 (1837); *Gray, Gen. B.* i. p. 270 (1845); *Gould, B. Austr.* ii. pl. 35 (1848); *Bp. Consp.* i. p. 334 (1850); *Reichenb. Vög. Neuholl.* p. 163 (1850); *Gould, Handb. B. Austr.* i. p. 157 (1865); *Gray, Hand-l. B.* i. p. 387, no. 5859 (1869); *Ramsay, Proc. Linn. Soc. N. S. W.* ii. p. 179 (1878).

Adult. General colour above mottled, the mantle and upper back ashy brown, spotted near the end with ochraceous buff, all the feathers edged with black; rump chestnut-brown; the feathers margined with black; upper tail-coverts crimson; scapulars ochraceous buff, margined with black; wing-coverts black, with a subterminal white spot in the form of a round dot; primary-coverts entirely black; quills black with a bluish gloss, all the feathers with a rounded spot of white at the ends, larger on the inner secondaries, the first primary externally edged with white; tail-feathers black, with a distinct subterminal spot of white, increasing in extent towards the outermost, where it extends across the end of the feather; crown of head black, spotted with minute white dots; a broad white eyebrow extending from the base of the nostril to above the ear-coverts; lores dusky blackish; ear-coverts, sides of face, and cheeks ashy grey, minutely barred with black lines, more plainly on the cheeks, this ashy grey colour extending down to the sides of the fore neck and barred narrowly in the same manner; throat entirely rich golden yellow; breast and under surface of body pale drab or earthy brown; the flanks and sides of the body fawn-colour; thighs dusky; under tail-coverts golden yellow, chestnut near the vent; under wing-coverts and axillaries white, the axillaries pale fawn-colour; quills blackish, ashy-white along the edge of the inner web; "bill brownish black; feet brown; iris dark brown" (*Gould*). Total length 3·4 inches, culmen 0·3, wing 2·3, tail 1·15, tarsus 0·7.

Adult female. Duller in colour than the male and wanting the yellow throat; the markings everywhere less pronounced, and the spots on the head yellow instead of white.

Hab. The whole of Australia except the north.

a, *b*. Ad. sk.	Tasmania.	Ronald Gunn, Esq. [P.].
c. Ad. sk.	Tasmania.	Antarctic Expedition.
d. Ad. sk.	Australia.	Gould Collection.
e. Ad. sk.	Victoria.	Gould Collection.
f, *g*. ♂ ♀ ad. sk.	South Australia.	Sir George Grey.

h. Ad. sk.	New South Wales.	Gould Collection.
i. ♀ ad. sk.	Queensland.	F. Nicholson, Esq. [P.].
k, *l*. ♂; *m*, *n*. ♀ ad. sk.	Queensland (*Cockerell*).	F. D. Godman and O. Salvin, Esqrs. [P.].
o, *p*. ♂ ad. sk.	Moreton Bay (*F. Strange*).	Gould Collection.

4. Pardalotus xanthopygius.

Pardalotus xanthopygius, *M'Coy, Ann. & Mag. Nat. Hist.* (3) xix. p. 184 (1867); *Gould, B. Austr.* fol. *Suppl.* pl. 8 (1868); *Gray, Hand-l. B.* i. p. 387, no. 5863 (1869); *Ramsay, Proc. Linn. Soc. N. S. W.* ii. p. 180 (1878).

Pardalotus xanthopyge, *M'Coy, Ann. & Mag. Nat. Hist.* (3) xx. p. 178 (1867).

Adult. General colour above ashy grey, the feathers rather broadly edged with black, before which is a white spot, causing a strongly spotted appearance; scapulars ashy grey, more narrowly edged with black, and with the subterminal white spot less distinct; wing-coverts blue-black, with distinct subterminal rounded spots; bastard-wing and primary-coverts uniform blue-black; quills blue-black, with a small white spot at the end of the outer web, these spots larger on the secondaries, especially the innermost; rump bright golden yellow, the lateral feathers with blackish margins; upper tail-coverts crimson with black bases; tail-feathers black, the four centre feathers with a subterminal rounded white spot, the outermost feather barred across with a broad white spot just before the extreme tip; crown of head black, covered with rounded spots of white even to the base of the forehead; a broad white eyebrow commencing from the base of the nostril to above the ear-coverts; lores black, mottled with whitish tips to the feathers; cheeks, ear-coverts, and sides of face ashy grey, minutely rayed across with blackish bars; sides of neck similarly marked; throat and fore neck bright golden yellow; sides of fore neck and sides of breast ashy grey, narrowly barred with black; lower flanks more ashy; centre of breast and abdomen creamy white; under tail-coverts bright golden yellow; axillaries and under wing-coverts greyish white; quills dusky, white along the edge of the inner web. Total length 3·5 inches, culmen 0·3, wing 2·25, tail 1·2, tarsus 0·7.

Young. Differs from the adult in being olive-yellowish above, mottled with subterminal spots of clearer yellow; rump saffron-yellow, the upper tail-coverts washed with scarlet; wings and tail as in the adult, but with a white spot on nearly all the tail-feathers; head spotted with bright yellow instead of white; entire under surface yellowish white, washed with pale brown on the flanks and sides of body; under tail-coverts bright golden yellow.

Obs. Although so different in appearance from the adult, the fact of this plumage being indeed the livery of the young bird is proved by several specimens in the Museum which are moulting from one stage to the other.

Hab. South Australia; Victoria; West Australia.

a. Ad. sk.	River Murray.	J. Gould, Esq.
b. Ad. sk.	River Murray.	Gould Collection.
c. Ad.; *d*, *e*. Juv. sk.	South Australia.	Gould Collection.
f. Ad. sk.	South Australia (*Cockerell*).	F. D. Godman and O. Salvin, Esqrs [P.].
g, *h*. Imm. sk.	South Australia.	J. Gould, Esq.
i. Ad. sk.	Australia.	Gould Collection.

5. Pardalotus rubricatus.

Pardalotus rubricatus, *Gould*, *P. Z. S.* 1837, p. 149; *Gray*, *Gen. B.* i. p. 270 (1845); *Gould*, *B. Austr.* ii. pl. 36 (1848); *Bp. Consp.* i. p. 334 (1850); *Reichenb. Vög. Neuholl.* p. 100 (1850); *Gray*, *Hand-l. B.* i. p. 387, no. 5866 (1869); *Diggles*, *Orn. Austr.* pl. 30. fig. 1 (1870); *Ramsay*, *Proc. Linn. Soc. N. S. W.* ii. p. 180 (1878).

Adult. General colour above pale ashy brown, the feathers mesially streaked or spotted with dusky, the upper tail-coverts washed with yellow, with narrow brown shaft-lines; feathers of hind neck narrowly barred with dusky cross lines; scapulars like the back; wing-coverts ashy brown, with hoary whitish margins; greater series and bastard-wing blackish brown, margined with hoary white; primary-coverts and quills blackish, externally edged with golden yellow, the primaries edged with white towards their ends, the secondaries tipped with white, more broadly on the innermost; tail-feathers pale brown, becoming darker towards the tips, which are white; crown of head black, with distinct rounded spots of white; base of forehead pale fawn-colour; lores whitish, surmounted by a spot of pale scarlet, continued into a broad eyebrow of pale fawn-colour; ear-coverts ashy, slightly mottled with dusky margins to the feathers; cheeks, throat, and under surface of body creamy white, washed with sandy brown on the sides of the body; in the centre of the fore neck and chest a patch of pale yellow; under wing-coverts and axillaries white; quills pale brown below, whitish along the edge of the inner web: "upper mandible brown, lower mandible greyish white; legs brown" (*Gould*). Total length 4·3 inches, culmen 0·35, wing 2·4, tail 1·3, tarsus 0·8.

Two specimens, apparently younger birds, do not show the dusky spotting on the back and have the yellow chest-spot much smaller.

Hab. New South Wales and Interior province of Australia, reappearing in the Gulf of Carpentaria and at Port Darling and Port Essington.

a, *b*. Ad. sk.	South Australia.	Gould Collection.
c. Ad. sk.	Burke, River Darling (*Dr. Pechey*).	Gould Collection.
d. Ad. sk.	[Australia (*Cockerell*).]	F. D. Godman and O. Salvin, Esqrs. [P.].

6. Pardalotus melanocephalus.

Pardalotus melanocephalus, *Gould*, *P. Z. S.* 1837, p. 149; *Gray*, *Gen. B.* i. p. 270 (1845); *Gould*, *B. Austr.* fol. ii. p. 165 (1848);

Reichenb. Vög. Neuholl. p. 101 (1850); *Bp. Consp.* i. p. 334 (1850); *Gould, Handb. B. Austr.* i. p. 165 (1865); *Gray, Hand-l. B.* i. p. 387, no. 5865 (1869); *Diggles, Orn. Austr.* pl. 30. fig. 4 (c. 1870); *Ramsay, Proc. Linn. Soc. N. S. W.* ii. p. 180 (1878).

Pardalotus uropygialis (*non Gould*), *Gray, Hand-l. B.* i. p. 387, no. 5864 (1869).

Adult. General colour above ashy brown, tinged with yellowish or pale earthy brown; scapulars, lower back, rump, and upper tail-coverts pale earthy brown, the latter with pale ochreous margins; wing-coverts blue-black, the primaries tipped with crimson, forming an alar speculum; quills also blue-black, tipped with white, the primaries externally edged with white, increasing in extent towards the outermost; secondaries paler brown on the inner web, and edged with buffy white towards the end of the outer web, some of them also narrowly edged with reddish brown; tail-feathers black, tipped with pale earthy brown and having a spot of white at the end of the inner web, increasing in extent towards the outermost; entire head black as far as the nape, forming a cap; lores and ear-coverts black, joining the nape; above the lores a broad streak of bright yellow, extending into a broad white eyebrow; cheeks and lower margin of ear-coverts whitish, slightly tinged with earthy brown on the hinder part; throat and fore neck bright yellow; sides of neck ashy; centre of breast and abdomen white; sides of breast, sides of body, flanks, and under tail-coverts pale earthy or fulvous brown, with a broad line of bright yellow separating the white breast from the sides of the body; under wing-coverts and axillaries pale earthy or fulvous brown; quills dusky below, ashy whitish along the edge of the inner web: "bill black; feet brown." Total length 3·8 inches, culmen 0·3, wing 2·3, tail 1·1, tarsus 0·7.

Nestling. Differs from the adult principally in wanting the black cap, the head being rather more dingy brown than the back; the yellow loral streak feebly developed, and the cheeks and sides of face pale earthy brown; alar speculum crimson as in the adult but much smaller.

Obs. Some specimens have a few ashy-brown tips to the feathers of the hinder crown.

Hab. From Rockingham Bay to New South Wales, and Interior province of Australia. Port Essington.

a. ♀ ad. sk.	Australia.	Purchased.
b. Ad. sk.	Australia.	Purchased.
c. Ad. sk.	Australia.	Gould Collection.
d. Pull. sk.	Richmond River.	Mr. A. P. Goodwin [C.].
e. Ad.; *f*. Pull. sk.	Richmond River (*Goodwin*).	R. B. Sharpe, Esq. [P.].
g, *h*. Ad. sk.	Brisbane (*Cockerell*).	F. D. Godman and O. Salvin, Esqrs. [P.].
i. Ad. sk.	Moreton Bay.	Gould Collection.

7. Pardalotus uropygialis.

Pardalotus uropygialis, *Gould, P. Z. S.* 1839, p. 143; *Gray, Gen. B.* i. p. 270 (1845); *Gould, B. Austr.* ii. pl. 41 (1848); *Bp. Consp.* i. p. 334 (1850); *Reichenb. Vög. Neuholl.* p. 165 (1850); *Jacq. et Pucher. Voy. Pôle Sud*, iii. p. 74 (1853); *Gould, Handb. B. Austr.* i. p. 166 (1865); *Diggles, Orn. Austr.* pl. 30. fig. 5 (c. 1870); *Ramsay, Proc. Linn. Soc. N. S. W.* ii. p. 180 (1878).

Pardalote uropygiale, *Hombr. et Jacq. Voy. Pôle Sud, Atlas*, pl. ix. fig. 2 (1842–53).

Crown of the head, stripe before and behind the eye black; lores rich orange; a mark from above the eye to the occiput, chest, and centre of the abdomen white; throat and cheeks delicate crocus-yellow; rump and upper tail-coverts sulphur-yellow; back of the neck and back olive-grey; wings black, the external webs of the second and five following primaries white at the base; tips of the spurious wing scarlet; tail black, the three outer feathers tipped with white, the white spreading largely over the inner web of the outer feathers; bill black; feet lead-colour. (*Gould.*)

Sexes alike (*Gould*).

Hab. Northern Australia.

a, *b*. Ad. sk. Port Essington. Capt. Chambers [P.].

8. Pardalotus quadragintus.

Pardalotus quadragintus, *Gould, P. Z. S.* 1837, p. 148; *Gray, Gen. B.* i. p. 270 (1845); *Gould, B. Austr.* fol. ii. pl. 37 (1848); *Bp. Consp.* i. p. 334 (1850); *Reichenb. Vög. Neuholl.* p. 165 (1850); *Gould, Handb. B. Austr.* i. p. 160 (1865); *Gray, Hand-l. B.* i. p. 387, no. 5860 (1869); *Ramsay, Proc. Linn. Soc. N. S. W.* ii. p. 180 (1878).

Adult. General colour above dull olive-brown, slightly mottled with blackish edges to the feathers, those of the head having an indistinct subterminal spot of dull olive-yellow; lower back and rump a little lighter than the rest of the back; upper tail-coverts brighter yellow, with narrow blackish edges and grey bases; scapulars and lesser wing-coverts like the back; remainder of wing-coverts blue-black, with subterminal rounded white spots; bastard-wing and primary-coverts uniform black; quills blackish, narrowly margined with ashy, the first primary margined with white for its entire length, all the quills with a white spot at the end of the outer web, larger on the secondaries, especially the innermost; tail-feathers ashy, with a white bar at the tip of the inner web, increasing in size towards the outermost feather, on which it extends across the end of both webs, before this white end being a distinct subterminal shade of blackish; head like the back; lores ashy whitish, washed with yellow; feathers over the eye and ear-coverts pale yellow; sides of neck ashy; cheeks ashy whitish, washed with yellow and slightly barred with dusky; under surface of body ashy whitish, with faint dusky centres to the feathers of the fore neck and chest, the throat slightly tinged with yellow; flanks and

sides of body washed with olive-yellow; under tail-coverts brighter yellow; under wing-coverts and axillaries ashy whitish, washed with yellow and having dusky bases; quills dusky brown below, ashy along the edge of the inner web. Total length 3·5 inches, culmen 0·3, wing 2·25, tail 1·2, tarsus 0·75.

Hab. Tasmania.

a, b, c. Ad. sk.	Tasmania.	Ronald Gunn, Esq. [P.].
d. Ad. sk.	Tasmania.	Sir George Grey [P.].
e. Ad. sk.	Tasmania.	Purchased.

12. PARMOPTILA*.

Type.

Parmoptila, *Cass. Proc. Philad. Acad.* 1859, p. 40 .... P. woodhousii.

Range. West Africa.

1. Parmoptila woodhousii.

Parmoptila woodhousei, *Cass. Proc. Philad. Acad.* 1859, p. 40; *Heine, J. f. O.* 1859, p. 431.

Pardalotus woodhousei, *Gray, Hand-l. B.* i. p. 387, no. 5869 (1869).

Male. Head and throat covered with rounded scale-like feathers, which are rufous, lighter on the throat, brighter and nearly brick-red on the forehead; back, wings, and tail light umber-brown, with a tinge of greenish on the back; quills brownish black, edged internally with reddish white; entire underparts (except the throat) white, thickly spotted with brownish black; bill bluish black; legs yellowish white in skin! (*Cassin.*)

Female. Upper parts, including head, brown tinged with olive; underparts lighter, nearly white on the abdomen, with obscure traces of the black spots of the male. No rufous on the head or throat.

Total length of male about 4 inches, wing 2, tail $1\frac{1}{2}$. Female: total length $3\frac{3}{4}$ inches. (*Cassin.*)

Hab. Gaboon, West Africa.

13. PRIONOCHILUS.

Type.

Prionochilus, *Strickl. P. Z. S.* 1841, p. 29 ..... P. ignicapillus.

Pachyglossa, *Hodgs. in J. A. S. Beng.* xii. pt. 2, p. 1009 (1843) ..... P. melanoxanthus.

Piprisoma, *Blyth, J. A. S. Beng.* xiii. p. 394 (1844). P. squalidus.

Anaimos, *Reichenb. Handb. Scans.* p. 245 (1883) .. P. thoracicus.

Range. Whole of India and Ceylon, extending through the Burmese countries down the Malayan peninsula to Java, Sumatra, Borneo, the Philippine archipelago, Celebes, and Sanghir.

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* Cassin refers this West-African genus to the vicinity of *Pardalotus*. Never having seen a specimen, I have reproduced his description, and have left the genus where he placed it, until I can fix its position more definitely.



Bill and wing of *Prionochilus ignicapillus*.

Key to the Species.

a. Plumage particoloured, with bright colours either above or below.
  a'. A spot of bright scarlet or orange in the centre of the crown.
    a''. Upper surface slaty blue; a patch of scarlet on the chest.
      a'''. Rump blue-grey or slaty blue like the rest of the upper surface.
        *a*⁴. Chin and upper throat white; rest of under surface bright yellow ..... *percussus*, p. 65.
        *b*⁴. Entire throat bright yellow like the rest of the under surface..... *ignicapillus*, p. 65.
      b'''. Rump yellow; back slaty blue ..... *xanthopygius*, p. 66.
    b''. Upper surface olive-yellow; head black like the throat; a patch of scarlet on the lower throat and fore neck..... *thoracicus*, p. 67.
    c''. Upper surface entirely olive-yellow; chest with dusky olive streaks ..... *maculatus*, p. 69.
  b'. Crown of head uniform.
    d''. No white ends to the outer tail-feathers.
      c'''. Head black; centre of back scarlet .. *quadricolor*, p. 70.
      d'''. Upper surface olive-yellow; throat and breast ashy white; sides of body yellow.
        *c*⁴. Larger: flanks bright yellow ..... *aureolimbatus*, p. 70.
        *d*⁴. Smaller: flanks paler yellow ..... *sanghirensis*, p. 71.
    e''. Outer tail-feathers tipped with white.
      e'''. Larger; wing 2·55–2·85 inches: sides of neck slaty grey, descending along the sides of the breast ..... *melanoxanthus*, p. 71.
      f'''. Smaller; wing 2·1–2·35 inches: sides of breast yellow like flanks ..... *vincens*, p. 72.
b. Plumage plain; no bright colours on back or breast.
  c'. With more or less distinct streaks on the breast.

f'. Larger; wing 2·4 inches: upper surface ashy brown, washed with olive on the rump and upper tail-coverts; two outer tail-feathers tipped with white ..... *squalidus*, p. 73.
g''. Smaller; wing 2·35 inches: upper surface olive-greenish; four outer tail-feathers tipped with white ..... *modestus*, p. 74.
d'. Breast perfectly uniform, with no dusky streaks.
h''. Outer tail-feathers with a white spot on the tips ..... *obsoletus*, p. 75.
i''. No white tips to outer tail-feathers.
g'''. Upper surface of body olive-green; ear-coverts also olive-green; cheeks and sides of breast grey..... *olivaceus*, p. 75.
h'''. Upper surface brown; ear-coverts brown; cheeks and sides of breast ashy brown..... *everetti*, p. 76.

1. Prionochilus percussus.

Pardalotus percussus, *Temm. Pl. Col.* iii. pl. 394. fig. 2 (1826).
Prionochilus percussus, *Sharpe, P. Z. S.* 1883, p. 580.

Adult male (Java; type of species). Similar to *P. ignicapillus* from Borneo and Sumatra, but differing in the following points:—the bill is entirely black; the chin is white, not yellow; the spot on the crown is much smaller and deeper scarlet; the white cheek-stripe is much larger; and the scarlet patch on the breast is larger and triangular in shape, instead of being longitudinal. Total length 3·2 inches, culmen 0·4, wing 1·95, tail 0·9, tarsus 0·45. (*Mus. Lugd.*)

Hab. Java.

2. Prionochilus ignicapillus.

Dicæum ignicapillum, *Eyton, P. Z. S.* 1839, p. 105.
Prionochilus percussus (*non Temm.*), *Strickl. P. Z. S.* 1841, p. 29; *Blyth, J. A. S. Beng.* xiv. pp. 558, 559 (1845); *id. Cat. B. Mus. As. Soc.* p. 227 (1849); *Bp. Consp.* i. p. 335 (1850); *Cab. Mus. Hein.* Th. i. p. 112 (1850, pt.); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 751 (1854); *Moore, P. Z. S.* 1859, p. 463; *Hume, Str. F.* 1879, pp. 56, 90; *Kelham, Ibis*, 1881, p. 506; *Salvin, Cat. Strickl. Coll.* p. 171 (1882); *Blas. Verh. z.-b. Gesellsch. Wien*, 1883, p. 54; *Oates, B. Brit. Burm.* i. p. 339 (1883).
Dicæum percussum, *Gray, Hand-l. B.* i. p. 116, no. 1440 (1869).
Prionochilus ignicapillus, *Sharpe, P. Z. S.* 1883, p. 580.

Adult male. General colour above slaty blue; the rump and upper tail-coverts a little clearer blue; wing-coverts like the back; bastard-wing, primary-coverts, and quills dusky blackish, edged externally with slaty blue, lighter on the outer webs of the secondaries; tail-feathers blackish, washed on outer webs with slaty blue; head like the back, more dusky on the forehead and lores; in the centre of the crown a longitudinal patch of orange-scarlet; sides of face and ear-coverts slaty blue like the crown; cheeks white, tinged with yellow posteriorly, and separated from the throat

by a moustachial line of slaty grey, skirting the rami of the lower jaw; throat and under surface of body bright yellow, paler towards the abdomen; on the fore neck and chest a central patch of scarlet-vermilion; sides of upper breast slaty blue; sides of body rather greener, and washed with slaty blue; under tail-coverts white; axillaries and under wing-coverts white; quills dusky below, white along the inner web: "bill black, slaty beneath; legs dark leaden; iris reddish brown" (*Wardlaw Ramsay*). Total length 3·5 inches, culmen 0·45, wing 2·1, tail 1·2, tarsus 0·55.

Adult female. General colour above dull olive-greenish, clearer olive on the lower back, rump, and upper tail-coverts; lesser and median wing-coverts like the back; greater coverts, quills, and tail-feathers dusky brown, washed externally with a little brighter yellowish olive than the back, the primaries externally edged with greenish grey, as well as the bastard-wing and primary-coverts; head and sides of face olive-greenish, with a small patch of dull orange in the centre of the crown, the feathers obscured with olive tips; lores and eyelid ashy whitish; ear-coverts and sides of face like the crown, with a small cheek-stripe of greyish white, followed by a distinct malar stripe of dull ashy; throat pale yellow, whiter towards the chin; centre of breast and abdomen yellow, with a tinge of orange on the chest; sides of body and flanks more olive, mixed with grey where the bases show through; thighs and under tail-coverts whitish, the latter slightly washed with yellow; under wing-coverts and axillaries white; quills brown below, whitish along the edge of the inner web. Total length 3 inches, culmen 0·4, wing 2, tail 0·95, tarsus 0·55.

Young male. At first like the adult female, but afterwards gaining the full plumage by a direct moult.

Very young birds appear to have scarcely any indication of the patch on the crown, which is consequently almost obsolete.

Hab. Malacca; Sumatra; Borneo.

a, *b*. ♂ ad. sk.	Malacca.	Capt. Stackhouse Pinwill [P.].
c. ♂; *d*. ♀ ad. sk.	Malacca (*Cantor*).	India Museum.
e, *f*, *g*. ♂ juv.; *h*, *i*. ♀ juv. sk.	Malacca (*Cantor*).	India Museum.
k. ♂ ad. sk.	Penang (*Cantor*).	India Museum.
l, *m*. ♂ ad. sk.	Malacca.	A.R.Wallace, Esq.[C.].
n, *o*. ♂ ♀ ad. sk.	Malacca (*Wallace*).	Gould Collection.
p. ♂ ad. sk.	Sumatra.	A.R.Wallace, Esq.[C.].
q. ♂ ad. sk.	Padang, Sumatra (*Mus. Lugd.*).	Gould Collection.
r. ♂ ad. sk.	Borneo.	Gould Collection.

3. Prionochilus xanthopygius.

Prionochilus xanthopygius, *Salvad. Atti R. Accad. Torin.* iii. p. 416, cum fig. (1868); *Walden, Ibis*, 1872, p. 379; *Sclater, Ibis*, 1874, p. 2; *Salvad. Ucc. Born.* p. 162 (1874); *Sharpe, Ibis*, 1877, p. 17; *id. Ibis*, 1879, p. 261; *id. P. Z. S.* 1881, p. 795.

Adult male. General colour above slaty blue; least wing-coverts like the back; remainder of wing-coverts, bastard-wing, primary-coverts, and quills dusky brown edged with slaty grey, lighter and more ashy on the margin of the primaries; rump bright yellow; upper tail-coverts slaty blue; tail-feathers blackish, indistinctly barred with dusky and edged with slaty blue; crown of head slaty blue, as also the sides of face, ear-coverts, cheeks, and sides of neck; in the centre of the crown a longitudinal patch of bright scarlet; entire under surface of body bright yellow, a little ashy on the chin and deeper on the throat; the fore neck orange, deepening into scarlet; thighs and under tail-coverts white with a slight yellowish tinge; flanks washed with olive; axillaries and under wing-coverts white; quills dusky below, white along the edge of the inner web: "bill black; legs dark grey; iris warm brown" (*A. Everett*). Total length 3·5 inches, culmen 0·4, wing 2, tail 0·95, tarsus 0·5.

Adult female. Olive-green above, with a band of brighter yellow across the rump; head dull slaty blue, with a patch of dull orange on the crown; least wing-coverts dull slaty blue, the remainder dusky, edged with olive-green; tail-feathers dusky brown, washed externally with olive-green; sides of face, ear-coverts, and cheeks dull slaty blue; chin whitish; remainder of under surface of body yellow, deeper on the centre of the fore neck; sides of upper breast washed with ashy; flanks and sides of body olive-greenish; thighs and under tail-coverts white, the latter slightly tinged with yellow; under wing-coverts and axillaries white; quills dusky below, white along the edge of the inner web. Total length 3 inches, culmen 0·4, wing 1·85, tail 0·95, tarsus 0·55.

The young male is apparently grey above, duller than the adult, with remains of olive on the back and on the edges of the wing-coverts and secondaries; rump bright yellow; upper tail-coverts olive; under surface as in the old female.

Hab. Borneo.

a. ♂ ad.; *b.* ♂ juv. sk.	Sarawak.	Harold Everett, Esq. [C.].
c. ♂ ad. sk.	Tagora, Sarawak, May 1875.	Alfred Everett, Esq. [C.].
d. ♂ ad. sk.	Bintulu, W. Borneo.	Alfred Everett, Esq. [C.].
e. ♂ ad. sk.	Brunei.	Governor Ussher [C.].
f. ♀ ad. sk.	Lumbidan (*H. Low*).	R. B. Sharpe, Esq. [P.].

4. Prionochilus thoracicus.

Pardalotus thoracicus, *Temm. Pl. Col.* iii. pl. 600. figs. 1, 2 (1836).
Prionochilus thoracicus, *Strickl. P. Z. S.* 1841, p. 29; *Blyth, J. A. S. Beng.* xiv. p. 559 (1845); *id. Cat. B. Mus. As. Soc.* p. 229 (1849); *Bp. Consp.* i. p. 335 (1850); *Salvad. Atti R. Accad. Torin.* iii. p. 417 (1868); *id. Ucc. Born.* p. 163 (1874); *Sharpe, Ibis*, 1877, p. 17; *Hume & Davis. Str. F.* 1878, p. 198; *Sharpe, Ibis*, 1879, p. 261; *Hume, Str. F.* 1879, pp. 56, 90; *Sharpe, P. Z. S.* 1881, p. 795.

Dicæum thoracicum, *Gray, Gen. B.* i. p. 100 (1847); *id. Hand-l. B.* i. p. 116, no. 1444 (1869).
Anaimos thoracicus, *Reichenb. Handb. Scansoriæ*, p. 245, Taf. dlviii. figs. 3798–99 (1853).

Adult male (type of species). General colour above bright olive-yellow on the mantle and upper back; lesser wing-coverts bright yellow, forming a shoulder-patch; median and greater coverts as well as the quills deep black; lower back, rump, and upper tail-coverts bright yellow; tail-feathers deep black; entire head and hind neck, sides of neck, sides of face, and throat blue-black, with a central longitudinal patch of bright scarlet on the crown; throat and fore neck bright scarlet, forming a pectoral shield, which is surrounded by a deep circlet of blue-black, extending down from the sides of the neck and narrowing on the breast; rest of under surface of body pale yellow, extending on to the sides of the upper breast; flanks greener, with grey bases; thighs ashy; under tail-coverts bright yellow; axillaries and under wing-coverts white; a blackish spot near the edge of the wing; quills blackish below, white along the edge of the inner web: "bill black; legs dark lead-colour; iris yellow" (*A. Everett*). Total length 3·5 inches, culmen 0·4, wing 2·25, tail 1·1, tarsus 0·6.

Adult female. Different from the male. General colour above dingy yellowish olive, brighter and more golden-yellow on the rump and upper tail-coverts; wing-coverts and quills dusky brown, edged with olive-yellowish, rather brighter on the margin of the primaries; tail-feathers dusky brown, with dingy olive margins; head a little more ashy than the back and washed with olive; in the centre of the crown a patch of dull saffron-yellow; ear-coverts and sides of face dingy ashy brown, washed with olive like the head; cheeks yellow, separated from the throat, which is also pale yellow, by a dusky olive malar streak; on the fore neck and chest a shield of pale vermilion, varied with the yellow bases to the feathers; remainder of under surface of body and under tail-coverts brighter yellow; the flanks and sides of body olive, intermixed with ashy where the grey bases to the feathers show through; sides of the upper breast especially washed with ashy; axillaries and under wing-coverts white, the edge of the wing olive; quills dusky below, whitish along the edge of the inner web. Total length 3·1 inches, culmen 0·35, wing 2·05, tail 0·95, tarsus 0·5. (*Mus. Lugd.*)

Young male. At first resembling the adult female and gradually assuming the full plumage by a moult.

Hab. Malayan peninsula and Borneo.

a. ♂ ad. sk.	Malacca.	A. R. Wallace, Esq. [C.].
b. ♂ ad. sk.	Malacca.	Capt. Stackhouse Pinwill [P.].
c. ♂ ad. sk.	Sarawak.	A. R. Wallace, Esq. [C.].
d. ♂ ad. sk.	Sarawak.	Harold Everett, Esq. [C.].
e. ♂ ad. sk.	Bintulu.	Alfred Everett, Esq. [C.].
f, g. ♂ ♀ ad. sk.	Lumbidan (*H. Low.*),	R. B. Sharpe, Esq. [P.].
h, i. ♂ juv.; *k, l.* ♀ juv. sk.	Lumbidan (*H. Low*).	R. B. Sharpe, Esq. [P.].

5. Prionochilus maculatus.

Pardalotus maculatus, *Temm. Pl. Col.* iii. pl. 600. fig. 3 (1836).
Prionochilus maculatus, *Strickl. P. Z. S.* 1841, p. 29; *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 752 (1856); *Moore, P. Z. S.* 1859, p. 464; *Salvad. Atti R. Accad. Torin.* iii. p. 418 (1868); *Walden, Ibis*, 1872, p. 379; *Salvad. Ucc. Born.* p. 164 (1874); *Sharpe, Ibis*, 1876, p. 43, 1877, p. 17; *Hume & Davison, Str. F.* 1878, p. 199; *Hume, Str. F.* 1879, pp. 56, 90; *Kelham, Ibis*, 1881, p. 506; *Sharpe, P. Z. S.* 1881, p. 795; *Oates, B. Brit. Burm.* i. p. 340 (1883).
Dicæum maculatum, *Gray, Gen. B.* i. p. 100 (1847); *id. Hand-l. B.* i. p. 116, no. 1441 (1869).
Prionochilus thoracicus ♀, *Blyth, Cat. B. Mus. As. Soc.* p. 227 (1849); *Bp. Consp.* i. p. 335 (1868).

Adult (type of species). General colour above uniform olivaceous, the lesser and median wing-coverts like the back; greater coverts and quills dusky brown, edged externally with olive, a little paler in shade than the back; tail-feathers dusky brown, edged with olive; head like the back, with an orange patch in the centre of the crown, the feathers tipped with tiny olive spots; lores obscure ashy whitish; sides of face olive like the crown; cheeks dull white, washed with olive behind; a broad moustachial streak of dusky olive, continuous with the striping of the rest of the underparts; centre of the throat, breast, abdomen, and under tail-coverts yellow, paler towards the chin; flanks washed with olive, and having broad longitudinal streaks of dusky olive, very distinct on the sides of the fore neck and breast; under wing-coverts and axillaries white with a faint wash of yellow, and with a dusky patch near the edge of the wing; quills ashy brown below, white along the edge of the inner web: "legs and feet very dark plumbeous in males, dirty smalt-blue in females; upper mandible and lower mandible to angle of gonys black, rest plumbeous in males, smalt-blue in females; iris dull red" (*Davison*); "iris dragon's-blood red" (*A. Everett*). Total length 3·5 inches, culmen 0·45, wing 2·05, tail 1·1, tarsus 0·55. (*Mus. Lugd.*)

Adult female. Very similar to the male in colour, but having the patch on the crown paler and more orange, that of the male being vermilion; "iris crimson" (*A. Everett*).

The sexes measure as follows:—

	Total length. in.	Culmen. in.	Wing. in.	Tail. in.	Tarsus. in.
♂. Sarawak (*Wallace*) . .	3·6	0·45	2·05	1·1	0·55
♀. Sarawak (*Wallace*) . .	3·6	0·4	2·0	0·95	0·55

Hab. From the southern portion of Tenasserim down the Malayan peninsula to Sumatra and Borneo.

a, b, c. Ad. sk.	Malacca (*Cantor*).	India Museum.
d, e. Ad. sk.	Penang (*Cantor*).	India Museum.
f, g. ♂ ♀ ad. sk.	Sarawak.	A. R. Wallace, Esq. [C.].
h, i. ♂ ♀ ad. sk.	Tjantang, Borneo (*Mus. Lugd.*).	India Museum.
k. ♀ ad. sk.	Tjantang, Borneo (*Mus. Lugd.*).	Gould Collection.

6. Prionochilus quadricolor.

Prionochilus quadricolor, *Tweedd. P. Z. S.* 1877, p. 762, pl. lxxvii. fig. 2; *Wardlaw Ramsay, Orn. Works Tweedd.* p. 658 (1881).

Adult male (type of species). Head, neck, and mantle deep blue-black; back scarlet-vermilion, with black bases to the feathers, producing a mottled appearance; rump olive-yellow; upper tail-coverts blue-black; scapulars black; wing-coverts and quills black, edged with blue-black; tail-feathers black; lores, feathers below the eye, and ear-coverts blue-black; cheeks white; under surface of body pale ashy grey, white on the throat and centre of the abdomen; under tail-coverts white; axillaries and under wing-coverts white; quills blackish below, white along the edge of the inner web: "bill, legs, and feet glossy black; iris dark brown" (*A. Everett*). Total length 3·7 inches, culmen 0·4, wing 2·05, tail 1·05, tarsus 0·55. (*Mus. R. G. W. R.*)

Hab. Island of Panaon, in the Philippine archipelago.

7. Prionochilus aureolimbatus.

Parus?, *Wall. Ibis*, 1860, p. 141.
Prionochilus aureolimbatus, *Wall. P. Z. S.* 1865, p. 477, pl. 29. fig. 1; *Salvad. Atti R. Accad. Torino*, 1868, p. 420; *Walden, Trans. Z. S.* viii. p. 72 (1872); *Brügg. Abhandl. nat. Ver. Bremen*, v. p. 74 (1878).
Dicæum aureolimbatum, *Gray, Hand-l. B.* i. p. 116, no. 1442 (1869).

Adult male (type of species). General colour above deep olive-yellow, more dingy on the head and hinder neck; scapulars like the back; wing-coverts and quills black, with obsolete margins of olive-yellow on the lesser and median wing-coverts and inner secondaries; tail-feathers black; lores dusky blackish; above the eye a tiny and scarcely perceptible white spot; feathers below the eye and ear-coverts dusky blackish; cheeks, throat, and under surface of body white, with a slight ashy tinge on the fore neck and chest; sides of body from the fore neck downwards bright yellow; thighs white; under tail-coverts bright yellow; under wing-coverts white; axillaries bright yellow; quills dusky below, ashy whitish along the edge of the inner web: "bill black; feet black; iris light reddish brown" (*Wallace*). Total length 3·3 inches, culmen 0·4, wing 2, tail 0·95, tarsus 0·5.

Hab. Celebes.

a, ♂ ad. sk.	Tondano, N. Celebes.	A. R. Wallace, Esq. [C.]. (Type of species.)
b, *c*. Ad. sk.	Menado.	A. R. Wallace, Esq. [C.].
d. Ad. sk.	Menado (*Wallace*).	Gould Collection.
e. Ad. sk.	Menado.	Gould Collection.

8. Prionochilus sanghirensis.

Prionochilus sanghirensis, *Salvad. Ann. Mus. Civic. Genov.* ix. p. 59 (1879).

Adult male. Above olive-yellowish; wings and tail dusky, whitish underneath; throat pure white; the breast and middle of abdomen greyish; sides of breast bright yellow; the sides of the abdomen whitish grey, slightly tinged with yellow; under tail-coverts pale yellow; bill and feet dusky black. Total length 3·4 inches, bill 0·3, wing 2, tail 1·05, tarsus 0·5. (*Salvadori.*)

Young. Similar to the adult, but with a smaller yellow spot on both sides of the breast. (*Id. l. c.*)

Hab. Sanghir Islands.

9. Prionochilus melanoxanthus.

Micrura melanoxantha, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 38 (no. 488).

Pachyglossa melanoxantha, *Hodgs. J. A. S. Beng.* xii. pt. 2, p. 1009 (1843); *id. in Gray's Zool. Misc.* p. 82 (1844); *Gray, Cat. Mamm. etc. Nepal pres. Hodgs.* p. 60 (1846); *Bp. Consp.* i. p. 402 (1850) *Jerd. B. Ind.* i. p. 377 (1862); *Hume, Str. F.* 1874, p. 455 *Godwin-Aust. J. A. S. Beng.* xliii. pt. 2, p. 156 (1874): *Hume, Str. F.* 1879, p. 90.

Dicæum melanoxanthum, *Gray, Gen. B.* i. p. 100 (1847); *id. Hand-l. B.* i. p. 115, no. 1437 (1869).

Prionochilus melanoxanthus, *Sclater, Ibis*, 1874, p. 3, pl. 1. fig. 3.

Adult male. General colour above dark slaty blackish with a slight gloss; least wing-coverts like the back; median and greater coverts and quills blackish brown, slightly edged with slate-colour externally; tail-feathers black, the two outermost with a large spot of white near the end of the inner web; lores, sides of face, ear-coverts, cheeks, sides of neck, and sides of throat black, with a slaty-grey gloss, this slaty-black colour extending down the sides of the breast; throat and fore neck white, forming a longitudinal patch; chest and remainder of under surface of body yellow, including the flanks and under tail-coverts; thighs white tinged with yellow; axillaries and under wing-coverts white, mottled with black bases near the edge of the wing; quills blackish below, whitish along the edge of the inner web; "bill black: legs dark plumbeous: iris red" (*Godwin-Austen*). Total length 4·8 inches, culmen 0·4, wing 2·85, tail 1·5, tarsus 0·55.

Adult female. The entire upper surface a very dusky olive-green, slightly clearer on the rump and upper tail-coverts; wings and tail hair-brown, darkest on quills and tail; most of the larger and median coverts, secondaries, and tertiaries very narrowly and inconspicuously margined on the outer webs with yellowish olive; two outer tail-feathers on either side with a white patch on the inner webs near the tips; lores dusky; a broad irregular stripe covering the chin, middle of throat, and middle of breast dull, slightly yellowish or fulvous white; sides of throat, cheeks, ear-coverts, and

sides of head the same colour as the back, but rather lighter; sides of breast similar but greyer; sides and flanks similar, but the former yellower, the latter greener; middle of abdomen, vent, and lower tail-coverts dull pale yellow; axillaries and wing-lining white, the lining a little mottled with greyish brown; a narrow nearly white line from middle of gonys to gape; lower mandible above this and upper mandible blackish; lower mandible below this horny brown; legs and feet black (these colours are taken from the dry specimen, and may not be correct). Total length 3·5 inches, wing 2·55, tail 1·5, tarsus 0·5, bill from forehead 0·43. (*Hume.*)

Hab. Nepal and Native Sikhim.

a. ♂ ad. sk.	Nepal.	Purchased.
b. ♀ ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.]. (Type of species.)

10. Prionochilus vincens.

Prionochilus vincens, *Sclater, P. Z. S.* 1872, p. 729; *Holdsw. t. c.* p. 483; *Legge, J. A. S. (Ceylon Branch)* 1873, p. 13; *Sclater, Ibis,* 1874, p. 2, pl. 1. figs. 1, 2; *Legge, t. c.* p. 23; *Holdsw. t. c.* p. 126; *Hume, Str. F.* 1876, p. 493; *id. Str. F.* 1879, p. 90; *Gould, B. Asia,* pt. xxxi. (1879).

Pachyglossa vincens, *Legge, B. Ceylon,* p. 577, pl. 26. figs. 1, 2 (1880).

Adult male. General colour above glossy leaden black, the rump greyer; wing-coverts like the back; quills black, edged with the same glossy leaden blue as the back; upper tail-coverts black, edged with leaden grey; tail-feathers black, all but the four centre ones with a large terminal white spot, increasing in extent towards the outermost; lores, sides of face, ear-coverts, and cheeks leaden black; throat and chest white, the sides of the chest leaden black; breast and remainder of under surface yellow, the lower flanks washed with ashy olive; thighs and under tail-coverts white, slightly washed with yellow; under wing-coverts and axillaries white, mottled with black on the edge of the wing; quills black, white along the margin of the inner web: "bill black, lower mandible pale at the base; legs and feet blackish brown; iris reddish" (*Legge*). Total length 3·8 inches, culmen 0·45, wing 2·35, tail 1·15, tarsus 0·55.

Adult female. Head and hind neck bluish ashy, changing into the olivaceous brown of the back, which is overcome with dark olivaceous green on the lower back and rump; wings paler than in the male; coverts edged with olivaceous; tail brownish black, the terminal spots less deep and confined to the three outer pairs of rectrices; breast much less bright than in the male, with the flanks cinereous; bill somewhat lighter than that of the male; iris not so intense; legs and feet slightly paler. Length 3·9 to 4·1 inches, wing 2·15 to 2·3. (*Legge.*)

Young. Males of the year are very similar to adults; the breast not so yellow; iris brown or red-brown. Females have the iris in nestling plumage olive-brown, changing when older to reddish

brown; bill with the base of lower mandible yellowish fleshy; above dull greenish brown, changing to dull brown on the sides of the neck and face, the white of the chin and throat confined to the centre; sides of chest cinereous; under surface washed with yellow. (*Legge.*)

Hab. Ceylon.

a. ♂ ad. sk.	S. Ceylon, June, 1872 (*W. V. Legge*).	Gould Collection.
b. ♂ ad. sk.	Ceylon (*Thwaites*).	H. Cuming, Esq.

11. Prionochilus squalidus.

Pipra squalida, *Burton, P. Z. S.* 1836, p. 113.
Fringilla agilis, *Tickell, J. A. S. Beng.* ii. p. 578 (1838).
Parisoma? vireoides, *Jerd. Madr. Journ.* xi. p. 8 (1840).
Piprisoma agile, *Blyth, J. A. S. Beng.* xiii. p. 395 (1844); *id. Cat. B. Mus. As. Soc.* p. 228 (1849); *Bp. Consp.* i. p. 335 (1850); *Layard, Ann. & Mag. Nat. Hist.* xii. p. 262 (1853); *Jerd. B. Ind.* i. p. 376 (1862); *Beavan, Ibis,* 1865, p. 416; *Blyth, Ibis,* 1866, p. 365; *Beavan, Ibis,* 1867, p. 430, pl. x.; *Jerd. Ibis,* 1872, p. 18; *Holdsw. P. Z. S.* 1872, p. 434; *Hume, Nests and Eggs Ind. B.* p. 158 (1873); *id. Str. F.* 1873, p. 434; *Ball, Str. F.* 1874, p. 397, vol. ii. p. 209; *Legge, B. Ceylon,* p. 579 (1879); *Hume, Str. F.* 1879, p. 90; *Scully, t. c.* p. 26; *Salvin, Cat. Strickl. Coll.* p. 171 (1882); *Oates, B. Brit. Burm.* i. p. 338 (1883).
Dicæum agile, *Gray, Hand-l. B.* i. p. 116, no. 1438 (1869).

Adult male. General colour above uniform ashy brown, with a slight olive tinge on the rump and upper tail-coverts; wing-coverts uniform brown like the back; quills brown, externally edged with olive; tail-feathers dark brown, with a bar of white at the end of the two outer feathers; lores whitish; sides of face and ear-coverts ashy brown like the head; cheeks and under surface of body greyish white, with a faint tinge of yellowish; a slight indication of a dusky malar line; fore neck and breast also with indistinct dusky stripes; sides of body, flanks, and thighs washed with ashy brown; under tail-coverts white; under wing-coverts and axillaries white, the latter slightly tinged with yellow; quills dusky below, ashy whitish along the inner web: "bill plumbeous brown; lower mandible bluish; legs and feet plumbeous; iris orange, with an inner golden circle" (*Legge*). Total length 3·4 inches, culmen 0·35, wing 2·4, tail 1·25, tarsus 0·6.

Adult female. Similar to the male in colour. Total length 3·7 inches, culmen 0·35, wing 2·4, tail 1·25, tarsus 0·55.

Young male. Iris differing from that of the adult, yellowish brown, darkest near the pupil, and without the bright "thread" or circle round it; bill brownish horny, tip of upper mandible black, lower mandible paler; legs and feet dark leaden. ("*Parker in epist.*," *Legge.*)

Hab. Ceylon and the whole of India up to the Himalayas, occurring in the North-western portion of the range, and in Nepal, extending into Tenasserim.

a, *b*. [♂]; *c*. ♀ ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
d. ♀ ad. sk.	Darjiling, Jan. 15 (*W. E. Brooks*).	R. B. Sharpe, Esq. [P.].
e. ♂ ad. sk.	Maunbhoom, Mar. 1864 (*Beavan*).	Gould Collection.
f. Ad. sk.	India.	R. B. Sharpe, Esq. [P.].
g. Ad. sk.	Madras.	T. C. Jerdon, Esq. [P.].
h. ♀ ad. sk.	Jhansi, Bundelkund, Jan. 10 (*G. F. L. Marshall*).	R. B. Sharpe, Esq. [P.].
i. Ad. sk.	Bangalore (*G. F. L. Marshall*).	R. B. Sharpe, Esq. [P.].

12. Prionochilus modestus.

Prionochilus modestus, *Hume*, *Str. F.* 1875, p. 298; *id.* & *Davison*, *Str. F.* 1878, p. 200; *Hume*, *Str. F.* 1879, pp. 56, 90; *Oates*, *B. Brit. Burm.* i. p. 340 (1883).

Adult male. General colour above dull olive-greenish, clearer olive on the lower back, rump, and upper tail-coverts; wing-coverts like the back; the bastard-wing, primary-coverts, and quills dusky brown, edged with yellowish olive; tail-feathers blackish brown, edged with olive, the four outer feathers marked with white at the tip of the inner web, increasing in extent towards the outermost, where it forms a large spot; head like the back; sides of face and ear-coverts paler olive-greenish, the lores more ashy; sides of neck ashy olive; cheeks ashy white, separated from the throat by a malar line of dusky brown; throat and under surface of body white, washed with ashy on the fore neck and breast, which have broad and distinct dusky streaks of ashy brown; sides of body and flanks pale ashy brown washed with olive; under tail-coverts white, washed with pale yellow, and having dusky centres to the feathers; under wing-coverts and axillaries ashy white, washed with pale olive-yellow; quills dusky brown below, ashy along the edge of the inner web; "irides varying from pale to yellowish red and orange; the legs, feet, and claws dark plumbeous; the upper mandible varying from pale horny brown to horny black; the lower mandible varying as follows:—in some fleshy white tipped brownish, in others light plumbeous or blue, while in one or two specimens shot later in the spring the lower mandible as well as the gape was orange" (*Davison*). Total length 3·9 inches, culmen 0·4, wing 2·35, tail 1·25, tarsus 0·45.

Adult female. Similar to the male in plumage. Total length 4 inches, culmen 0·4, wing 2·35, tail 1·3, tarsus 0·5.

Hab. Tenasserim, ranging into Pegu.

a. ♂; *b*, *c*. ♀ ad. sk.	Pegu, Jan. 27.	E. W. Oates, Esq. [C.].
♂ ad. sk.	Malewoon, S. Tenasserim.	E. W. Oates, Esq. [C.].

13. Prionochilus obsoletus.

Pardalotus obsoletus, *Müll. & Schl. Verh. Nat. Gesch. Land- en Volkenk.* p. 174 (1839–44); *Wall. P. Z. S.* 1863, p. 486.
Dicæum obsoletum, *Gray, Gen. B.* i. p. 100 (1847); *id. Hand-l. B.* i. p. 116, no. 1443 (1869).
Prionochilus obsoletus, *Sharpe, P. Z. S.* 1879, p. 343, pl. xxx. fig 2.

Adult male (type of species). General colour above dull ashy brown washed with olive, the latter colour a little more distinct on the upper tail-coverts; wing-coverts and quills brown, washed externally with olive, a little lighter on the greater coverts and quills; bastard-wing and primary-coverts more dusky brown; tail-feathers dark brown, edged and tipped with olive, the outer feather with a spot of ashy white at the tip of the inner web, smaller on the penultimate feather; head and sides of face as well as the ear-coverts like the back; cheeks and under surface of body ashy whitish, purer on the abdomen and thighs; under tail-coverts washed with pale yellow; sides of upper breast ashy brown; under wing-coverts and axillaries ashy whitish; quills brown below, whitish along the edge of the inner web. Total length 3·5 inches, culmen 0·35, wing 2·3, tail 1·1, tarsus 0·55. (*Mus. Lugd.*)

Adult female. Does not differ from the male in colour. Total length 3·5 inches, wing 2·35, tail 2·25, tarsus 0·5. (*Mus. Lugd.*)

Hab. Timor and Flores. From the latter island there is a specimen in the Leyden Museum, collected by Semmelink, which seems to be precisely the same as the typical examples, allowing for a little fading of colour in the latter. The two specimens in the British Museum also seem to be identical.

a. ♂ ad. sk.	East Timor.	A. R. Wallace, Esq. [C.].
b. Ad. sk.	Flores.	A. R. Wallace, Esq. [C.].

14. Prionochilus olivaceus.

Prionochilus olivaceus, *Tweedd. Ann. & Mag. Nat. Hist.* (4) xx. p. 536 (1877); *id. P. Z. S.* 1878, p. 111, pl. viii. fig. 3; *Wardlaw Ramsay, Orn. Works Tweedd.* p. 658 (1881).

Adult female (type of species). General colour above dingy yellowish olive, the head like the back; wing-coverts like the back; bastard-wing and primary-coverts uniform blackish brown; quills blackish brown, externally yellowish olive like the back; tail-feathers blackish, yellowish olive along the outer webs; lores ashy whitish; feathers round the eye and ear-coverts yellowish olive; cheeks and sides of throat ashy grey, slightly tinged with olive; the breast and sides of the body ashy olive; centre of throat and fore neck dull white; abdomen and under tail-coverts whitish with a slight olive tinge; axillaries and under wing-coverts white, with a dusky patch near the edge of the wing; quills dusky blackish below, white along the edge of the inner web: "bill greyish black, the base of the

lower mandible yellow; legs light grey; iris sienna-brown" (*A. Everett*). Total length 3·5 inches, culmen 0·4, wing 2·15, tail 1·1, tarsus 0·55. (*Mus. R. G. Wardlaw Ramsay.*)

Adult male. Similar to the female in plumage. Total length 3·5 inches, culmen 0·4, wing 2·15, tail 1, tarsus 0·55. (*Mus. R. G. W. R.*)

Hab. Island of Dinagat in the Philippine archipelago.

15. Prionochilus everetti.

Prionochilus everetti, *Sharpe, Ibis*, 1877, p. 16; *id. P. Z. S.* 1879, p. 343, pl. xxx. fig. 1.

Adult male (type of species). General colour above uniform dark brown, with a scarcely perceptible shade of olive on the lower back and rump; wing-coverts and quills dark brown, with a narrow and almost obsolete margin of olive, more distinct on the secondaries and rather brighter on the primaries; tail-feathers blackish, narrowly margined with olive; sides of face and ear-coverts dark brown, rather more ashy on the lores and cheeks; throat and centre of body below ashy whitish; the sides of the throat, sides of body, and flanks ashy brown as well as the thighs; centre of breast with slight indications of ashy-brown streaks; under tail-coverts white with a faint tinge of yellow; under wing-coverts and axillaries ashy whitish; quills dusky brown below, ashy along the edge of the inner web: "bill dull yellow, brown at tip; legs dark grey; iris pale brown" (*A. Everett*). Total length 3·6 inches, culmen 0·35, wing 2·25, tail 1·1, tarsus 0·5.

The specimen from Labuan, collected by the late Governor Ussher, is apparently in less worn plumage than the type and has a distinct olive shade on the upper surface, particularly clear on the margins of the quills; the sides of the face are clearer ashy brown; and the under tail-coverts and under wing-coverts have dusky centres. Total length 3·7 inches, wing 2·4, tail 1·3, tarsus 0·5.

Hab. Western Borneo and the island of Labuan.

a. ♂ ad. sk.	Bintulu, W. Borneo.	Alfred Everett, Esq. [C.]. (Type of species.)
b. Ad. sk.	Labuan.	Governor Ussher [C.].

14. PHOLIDORNIS.

	Type.
Pholidornis, *Hartl. Orn. W.-Afr.* p. 54 (1857).....	P. rushiæ.



Bill of *Pholidornis rushiæ*.

Range. West Africa.

Key to the Species.

a. Smaller; wing 1·8 inch: head ashy striped with blackish brown ..... *rushiæ*, p. 77.
b. Larger; wing 2 inches: forehead bright red ..... *rubrifrons*, p. 77.

1. Pholidornis rushiæ.

Dicæum rushiæ, *Cass. Proc. Philad. Acad.* 1855, p. 55; *Gray, Hand-l. B.* i. p. 116, no. 1439 (1869).
Pholidornis rushiæ, *Hartl. Orn. W.-Afr.* p. 54 (1857); *Cass. Proc. Philad. Acad.* 1858, pl. i. fig. 1; *Hartl. J. f. O.* 1861, p. 110; *Sharpe, Ibis*, 1872, p. 70; *Ussher, Ibis*, 1874, p. 60.

Adult. Above particoloured. Mantle and upper back as well as the scapulars brown with blackish centres, the feathers edged with olive-yellowish; lower back, rump, and upper tail-coverts clearer olive-yellow; wing-coverts and quills dull brown, narrowly edged with olive-yellow; tail-feathers black, with olive-yellow margins; head ashy, with broad longitudinal centres to the feathers of blackish brown, continued on to the hind neck, which is browner, the whole having a thickly striped appearance; lores fulvescent; sides of face, sides of neck, throat, and chest ashy whitish, clearer than the head and less distinctly striped, the mesial streaks being narrower; the breast similarly streaked, but more ashy; remainder of under surface of body olive-yellow, with slight indications of dusky streaks, a little plainer on the flanks; axillaries and under wing-coverts white, washed with olive-yellow, especially near the edge of the wing; quills dusky brown below, whitish along the edge of the inner web. Total length 2·75 inches, culmen 0·35, wing 1·8, tail 0·95, tarsus 0·5.

Hab. West Africa from Gaboon to the Gold Coast.

a. Ad. sk.	Ashantee.	J. Gould, Esq.
b. Ad. sk.	Denkera (*Ussher*).	R. B. Sharpe, Esq.

2. Pholidornis rubrifrons. (Plate II. fig. 1.)

Pholidornis rubrifrons, *Sharpe & Ussher, Ibis*, 1872, p. 182.

Adult male. General colour above dusky olive-brown, the hinder part of the head and wing-coverts margined with ochraceous; the feathers of the back obsoletely margined with olivaceous; quills and tail-feathers dusky externally, edged with olivaceous; forehead bright crimson; sides of the face uniform with the crown, but distinctly spotted with fulvous; under surface of body entirely chestnut; bill black; feet yellow. Total length 4 inches, culmen 0·45, wing 2, tail 1·55, tarsus 0·65.

Adult female. Entirely different from the male; above brown, the feathers indistinctly margined with ochraceous; forehead a little tinged with rufous; underneath creamy white, everywhere spotted with brown at the tips of the feathers.

Hab. Forests in the interior of the Gold Coast, West Africa.

a, *b*. ♂ ♀ ad. sk.	Kaizaraku, Denkera, April 1871 (*Governor Ussher*).	R. B. Sharpe, Esq. (Types of species).
c. ♂ (head); *d*. Juv. sk.	Kaizaraku (*Ussher*).	R. B. Sharpe, Esq.

15. LOBORNIS.

	Type.
Lobornis, *Sharpe, Ann. & Mag. Nat. Hist.* (4) xiv. p. 63 (1874)	L. alexandri.

Range. West Africa.

1. Lobornis alexandri. (Plate II. fig. 2.)

Lobornis alexandri, *Sharpe, Ann. & Mag. Nat. Hist.* (4) xiv. p. 63 (1874).

Adult? General colour of upper surface umber-brown, the feathers of the head slightly scale-like in character; upper tail-coverts rather more rufous-brown, with which colour the wing-coverts and quills are margined; tail dull brown; entire under surface light brown, the throat and fore neck strongly tinged with rufous, as also the flanks; the breast and under tail-coverts very slightly varied with wavy cross bars of dark brown; under wing-coverts light brown, slightly varied with obscure cross bars of darker brown; bill horn-brown, yellowish at base, with three white lobes at gape in life *; feet very pale brown. Total length 3·8 inches, culmen 0·3, wing 1·65, tail 1·1, tarsus 0·6.

Hab. Old Calabar, West Africa.

a. Ad. sk.	Old Calabar.	Dr. Alexander Smith [P.]. (Type of species.)

16. UROCHARIS.

	Type.
Urocharis, *Salvad. Ann. Mus. Civic. Genov.* xvi. p. 69 (1880)	U. longicauda.



Second primary of *Urocharis longicauda*.

Range. New Guinea.

* The type specimen was presented to the Museum in spirit. In order to ascertain the coloration of the plumage, I had the specimen prepared as a skin, and I have regretted doing so ever since, as the wattles at the gape, which were quite distinct before, shrivelled up, and can now scarcely be distinguished. In the accompanying figure they are reproduced from my recollection of their appearance.

1. Urocharis longicauda.

Melanocharis longicauda, *Salvad. Ann. Mus. Civic. Genov.* vii. p. 942 (1875), x. p. 144 (1877), xii. p. 333 (1878).
Urocharis longicauda, *Salvad. Ann. Mus. Civic. Genov.* xvi. p. 69 (1880); *id. Orn. Papuasia etc.* ii. p. 286 (1881).

Adult male (type of species). General colour above glossy steel-black, the feathers with ashy-grey bases, which show rather distinctly on the rump; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills black, edged with steel-black like the back, less distinctly on the primaries; tail-feathers black, slightly glossed on the margins with steel-blue, the outer tail-feather white for three quarters of the outer web; crown of head like the back; eyelid also black; lores and sides of face dusky olive, blackish along the hinder margin of the ear-coverts; throat and chest ashy olive, clearer olive-yellowish on the breast and abdomen, the feathers in most cases margined with pale yellow; thighs dusky olive; under tail-coverts dusky olive, with pale yellowish margins; axillaries pale yellow; under wing-coverts silky white, washed with pale yellow; quills blackish below, ashy white along the edge of the inner web. Total length 4·8 inches, culmen 0·5, wing 2·5, tail 2, tarsus 0·7. (*Mus. Civic. Genov.*)

Adult female. Different from the male. General colour above olive-green, with an oily green gloss; wing-coverts like the back; bastard-wing, primary-coverts, and primaries blackish, obsoletely edged with olive-green like the back, the secondaries with broader olive-green margins like the greater wing-coverts; tail as in the male; head olive-green like the back, and with the same oily green gloss; eyelid and sides of face ashy olive, the lores and cheeks ashy grey washed with olive; under surface of body as in the male. Total length 5·1 inches, culmen 0·45, wing 2·45, tail 2·2, tarsus 0·65. (*Mus. Civic. Genov.*)

Hab. Arfak Mountains, New Guinea.

17. MELANOCHARIS.

Type.

Melanocharis, *Sclater, Proc. Linn. Soc.* ii. p. 157 (1858) .... M. nigra.



Head and bill of *M. chloroptera*.

Range. New Guinea, Aru Islands, Jobi, Miosnom, Mysol, and Waigiou.

Key to the Species.

a. Above blue-black. (*Males.*)
  a'. Underneath ashy olive.
    a''. Outer aspect of quills black ..... *nigra*, p. 80.
    b''. Outer aspect of quills olive-green ..... *chloroptera*, p. 80.
  b'. Underneath black.
    c''. Outer under tail-coverts black with white bases ..... *bicolor*, p. 81.
    d''. All under tail-coverts black ..... *unicolor*, p. 82.
b. Above olive-green. (*Females.*)
  c'. Below ashy olive ..... *chloroptera*, p. 81.
  d'. Below pale yellowish olive ..... *bicolor*, p. 82.

1. Melanocharis nigra.

Dicæum niger, *Less. Voy. Coquille, Zool.* i. p. 673 (1828); *id. Cent. Zool.* p. 83, pl. 23. figs. 1, 2 (1828); *id. Traité*, p. 304 (1831).
Hylocharis niger, *Müll. & Schl. Verh. Nat. Gesch. Land- en Volkenk.* p. 162 (1839–44); *Hartl. Rev. Zool.* 1846, p. 48.
Dicæum nigrum, *Gray, Gen. B.* i. p. 100 (1847); *Bp. Consp.* i. p. 403 (1850); *Reichenb. Handb. Spec. Orn. Scans.* p. 242, figs. 3786–87 (1853); *Rosenb. J. f. O.* 1864, p. 123; *id. Malay. Arch.* p. 553 (1879).
Melanocharis nigra, *Sclater, Proc. Linn. Soc.* ii. p. 157 (1858); *Gray, Hand-l. B.* i. p. 116, no. 1445 (1869); *Meyer, Sitz. K. Akad. Wien*, lxx. p. 127 (1874, pt.); *Salvad. Ann. Mus. Civic. Genov.* x. p. 143 (1877), xvi. p. 69 (1880); *id. Orn. Papuasia etc.* ii. p. 283 (1881).
Prionochilus niger, *Gray, P. Z. S.* 1858, p. 190 (pt.); *id. Cat. Mamm. etc. New Guinea*, p. 23 (pt.); *id. P. Z. S.* 1861, p. 434; *Finsch, Neu-Guinea*, p. 163 (1865).

Adult male. General colour above shining blue-black from the bill to the tail; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills black edged with blue-black, more narrowly on the primaries; tail-feathers black, margined externally with blue-black; lores, eyelid, and upper portion of ear-coverts shining blue-black; remainder of ear-coverts, sides of face, cheeks, and under surface of body olive with an ashy shade; the abdomen paler and more olive-yellow; thighs black; under tail-coverts ashy, with pale edges of olive-yellow; axillaries pale yellow; under wing-coverts white, with the edge of the wing black; quills black below, ashy white along the edge of the inner web. Total length 4·8 inches, culmen 0·6, wing 2·55, tail 1·75, tarsus 0·65.

Hab. New Guinea, Waigiou, and Mysol.

a. ♂ ad. sk.	Waigiou.	A. R. Wallace, Esq. [C.].
b. ♂ ad. sk.	Waigiou (*Wallace*).	Gould Collection.
c, d. ♂ ad. sk.	Mysol.	A. R. Wallace, Esq. [C.].

2. Melanocharis chloroptera.

Prionochilus niger, *Gray, P. Z. S.* 1858, pp. 173, 190; *id. Cat. Mamm. etc. New Guinea*, pp. 23, 53 (1859, pt.); *Finsch, Neu-Guinea*, p. 163 (1865, pt.).

Melanocharis chloroptera, *Salvad. Ann. Mus. Civic. Genov.* viii. p. 987 (1875), xii. p. 333 (1878); *D'Albert. & Salvad. Ann. Mus. Civic. Genov.* xiv. p. 73 (1879); *Salvad. op. cit.* xvi. p. 69 (1880); *id. Orn. Papuasia etc.* ii. p. 284 (1881).

Adult male. General colour above shining blue-black; lesser and median wing-coverts like the back; bastard-wing and primary-coverts black, edged with blue-black; greater series and quills dusky, externally yellowish olive, the inner secondaries washed with steel-green; tail-feathers black washed with steel-blue; lores, eyelid, and upper part of ear-coverts shining blue-black; ear-coverts, sides of face, and under surface of body ashy olive, greyer on the throat and fore neck; thighs ashy olive, blackish behind; under tail-coverts ashy, with broad whitish margins; axillaries white, slightly tinged with yellow; under wing-coverts white; quills dusky below, ashy white along the edge of the inner web. Total length 5 inches, culmen 0·55, wing 2·5, tail 1·9, tarsus 0·6.

Adult female. Different from the male. General colour above olive-green, with a slight wash of oily green; wing-coverts like the back; bastard-wing and primary-coverts brown, with scarcely any indication of an olive margin; quills dusky, edged with olive like the back, a little more ashy on the primaries; tail black, with a narrow fringe of white on the outer feathers near the end of the inner web; sides of face olive; cheeks and under surface of body ashy olive, paler on the abdomen; under tail-coverts ashy with whitish edges; axillaries pale yellow; under wing-coverts white, with a faint tinge of yellow; quills dusky below, ashy along the edge of the inner web. Total length 4·9 inches, culmen 0·55, wing 2·5, tail 0·75, tarsus 0·65.

Hab. Aru Islands and the region of the Fly River, S.E. New Guinea.

a, b. ♂; *c.* ♀ ad. sk.	Aru Islands.	A. R. Wallace, Esq. [C.].
d. ♂ ad. sk.	Aru Islands (*Cockerell*).	F. D. Godman and O. Salvin, Esqrs. [P.].

3. Melanocharis bicolor.

Melanocharis sp., *Ramsay, Pr. Linn. Soc. N. S. W.* iii. p. 276 (1879); *Salvad. Ibis*, 1879, p. 324.

Melanocharis bicolor, *Ramsay, Pr. Linn. Soc. N. S. W.* iii. p. 277 (1879); *Salvad. Ann. Mus. Civic. Genov.* xvi. p. 69 (1880); *id. Orn. Papuasia etc.* ii. p. 283 (1881).

Melanocharis? unicolor, *Ramsay, Pr. Linn. Soc. N.S. W.* iv. p. 98 (1879).

Adult male. General colour above glossy blue-black; scapulars and wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills black, edged with steel-black, a little broader on the secondaries; tail-feathers black, glossed on the edges with steel-black; crown of head like the back; lores, feathers round the eye, cheeks, ear-coverts, and entire under surface of body blue-black without any gloss; thighs black; under tail-coverts black, the lateral ones pale olive, black at the ends; axillaries pale olive-yellow; under wing-coverts white, faintly washed with pale olive-yellow, those near the edge of the wing black; quills black below,

ashy white along the edge of the inner web. Total length 4·5 inches, culmen 0·55, wing 2·6, tail 1·9, tarsus 0·65.

Adult female. Different from the male. General colour above olive, the lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills dusky brown, narrowly edged with olive, more broadly on the secondaries, the primaries narrowly edged with whity brown; tail-feathers blackish, broadly margined with olive, the outer ones narrowly fringed with white at the tips, the external one also edged with white near the end of the outer web; sides of face and ear-coverts olive; cheeks and under surface of body ashy olive washed with yellowish; axillaries and under wing-coverts pale olive-yellow, dusky near the edge of the wing; quills dusky below, ashy white along the edge of the inner web. Total length 4·4 inches, culmen 0·55, wing 2·5, tail 1·7, tarsus 0·65.

Hab. South-eastern New Guinea.

a, b. ♂; *c.* ♀ ad. sk.	Astrolabe Mountains, S.E. New Guinea.	Mr. A. Goldie [C.].
d. ♂ juv. sk.	Astrolabe Mountains, S.E. New Guinea.	Mr. A. Goldie [C.].

4. Melanocharis unicolor.

Melanocharis major (pt.), *Meyer, Sitz. k. Akad. Wissensch. Wien*, lxx. p. 18 (1874).
Melanocharis unicolor, *Salvad. Ann. Mus. Civic. Genov.* xii. p. 333 (1878), xvi. p. 68 (1880); *id. Orn. Papuasia etc.* ii. p. 282 (1881).

Male. Above and below intense black; under wing-coverts white. Total length 5·1 inches, culmen 0·4, wing 2·45, tail 1·9, tarsus 0·6. (*Salvadori.*)

Female (?). Above olivaceous, greyish below with a slight olive tint; under wing-coverts white. (*Salvadori.*)

Hab. Islands of Jobi and Miosnom in the Bay of Geelvink, N.W. New Guinea.

18. PRISTORHAMPHUS.

Pristorhamphus, *Finsch, P. Z. S.* 1875, p. 641 ..... Type. P. versteri.



Bill of *P. versteri*, profile and top view.

Range. N.W. New Guinea.

1. Pristorhamphus versteri.

Pristorhamphus versteri, *Finsch, P. Z. S.* 1875, p. 642; *Salvad. Ann. Mus. Civic. Genov.* vii. p. 940 (1875), xvi. p. 69 (1880); *id. Orn. Papuasia etc.* ii. p. 286 (1881).

Adult male (type of species). General colour above velvety black with a slight steel-green lustre, which is more distinct on the scapulars; lesser and median wing-coverts glossy steel-green with velvety-black bases; bastard-wing, primary-coverts, and quills ashy blackish, externally glossy steel-green; upper tail-coverts very long, glossy steel-blue; tail-feathers black, waved with dusky under certain lights, glossed externally with steel-blue; the basal half of all the feathers white, only seen when the tail is spread; head glossy steel-green; lores, feathers round the eye, cheeks, ear-coverts, and sides of face velvety black; a little spot of silky white on the upper edge of the eyelid; under surface of body pale slaty blue; thighs and under tail-coverts black, the latter washed with steel-blue; a large tuft of silky white plumes on the side of the body; axillaries and under wing-coverts white; quills blackish, white along the inner web; bill and feet black. Total length 5·8 inches, culmen 0·55, wing 2·45, tail 3, tarsus 0·95.

Adult female. General colour above dull olive-green, slightly yellower on the rump and upper tail-coverts; wing-coverts like the back; bastard-wing uniform dusky brown; primary-coverts and quills dusky brown, narrowly margined with yellowish olive, the secondaries more broadly edged with olive-green like the greater coverts; two centre tail-feathers olive-green, blackish towards the base; remainder of tail-feathers blue-black, browner at the ends, edged with olive-green, the three outer ones with a white spot about the middle of the feather; head like the back; lores, feathers round the eye, cheeks, and ear-coverts dingy olive, with pale shaft-lines on the ear-coverts; under surface of body ashy olive washed with pale yellow, with narrow edges of the latter colour to most of the feathers; thighs dull ashy; under tail-coverts dingy olive; on the flanks a tuft of milky white; axillaries pale yellow; under wing-coverts white, washed with pale yellow; quills dusky below, greyish white along the edge of the inner web. Total length 5·6 inches, culmen 0·55, wing 2·65, tail 2·6, tarsus 0·85.

Hab. Arfak Mountains, N.W. New Guinea.

a, b. ♂ ♀ ad. sk. Arfak Mountains, Java. Mr. Bruijn [C.].

19. RHAMPHOCHARIS.

Type.

Rhamphocharis, *Salvad. Ann. Mus. Civic. Genov.* vii. p. 943 (1875)..... R. crassirostris.



Bill of *Rhamphocharis crassirostris*.

Range. New Guinea.

1. Rhamphocharis crassirostris.

Rhamphocharis crassirostris, *Salvad. Ann. Mus. Civic. Genov.* vii. p. 943 (1875), xvi. p. 69 (1880); *id. Orn. Papuasia etc.* ii. p. 288 (1881).

Adult male (type of species). General colour above olive-green, glossed with oil-green; wing-coverts like the back; greater wing-coverts, bastard-wing, primary-coverts, and quills dusky brown, edged with olive-green, brighter on the quills; upper tail-coverts dusky, washed with olive-green; tail-feathers blackish, edged with olive-green; lores olive dusky; edge of eyelid white; ear-coverts and cheeks light ashy, with the upper parts of the ear-coverts dusky olive; entire under surface of body pearly grey, slightly washed with pale yellow; thighs and under tail-coverts a little darker ashy; axillaries pale yellow; wings white, with a pale yellow wash; quills dusky, ashy grey along the edge of the inner web. Total length 4·6 inches, culmen 0·6, wing 2·6, tail 1·75, tarsus 0·7. (*Mus. Civic. Genov.*)

Adult female. General colour above olive-brown, rather greener on the lower back, rump, and upper tail-coverts, the head and back being spotted with minute tips of yellowish white on the feathers; the scapulars olive-brown like the back, similarly tipped with tiny white spots; wing-coverts like the back, with white spots at the end; the greater coverts, bastard-wing, primary-coverts, and quills dusky brown, edged with olive-green, the inner greater coverts with a whitish spot at the ends, the margins of the primaries yellower; tail-feathers blackish, edged with olive-green, with a tiny white spot at the end of the inner web, increasing gradually in extent and forming a well-marked spot on the outer tail-feathers; an indistinct eyebrow of pale olive-brown; lores dusky; eyelid whity brown; ear-coverts dull olive-brown, streaked with dull white; cheeks brown, mottled with white spots; under surface of body yellowish white, mottled all over with dusky-brown centres to the feathers, smaller on the throat and nearly obsolete on the abdomen; thighs ashy tinged with yellow; under tail-coverts yellowish white with dusky centres, the feathers mottled like the breast; axillaries pale yellow; under wing-coverts white slightly washed with yellow, and mottled with dark-brown bases to the feathers; quills dusky below, greyish white along the edge of the inner web. Total length 4·9 inches, culmen 0·6, wing 2·85, tail 1·85, tarsus 0·75. (*Mus. Civic. Genov.*)

Hab. N.W. New Guinea.

Family HIRUNDINIDÆ.

The Swallows were for many years associated with the Swifts (*Cypselidæ*), to which in outward form and habits of life they much assimilate. That the resemblance is strictly external has been shown by the researches of many comparative anatomists, and the fundamental differences between the two families has been well pointed out by the late Professor Garrod (Zoologist, 1877, p. 217).

The Swallows therefore may be described as a family of Broad-billed Passeres (*Oscines latirostres* of recent authors) with nine primaries. They approach in many respects the Flycatchers (*Muscicapidæ*), of which the genera *Hemichelidon* and *Artomyias* display a definite Swallow-like appearance.

Dr. Stejneger (Pr. U. S. Nat. Mus. vi. p. 31) has endeavoured to show that radical changes in the nomenclature of Swallows are necessary; that Forster having used *Chelidon* as a generic name for *Hirundo rustica* of Linnæus, *Hirundo* for *H. urbica*, L., and *Clivicola* for *H. riparia*, L., these generic names ought to be rigidly applied. The change is too great and the risk of confusion too assured for me to venture to follow Dr. Stejneger, though I have convinced myself that he is technically correct. I trust, however, that the true Swallows will be permitted to remain in the genus *Hirundo*, as custom may here be allowed to supersede priority of nomenclature, resting as the latter does upon a nominal list of British Birds, without generic or specific descriptions.

Key to the Subfamilies.

a. With the outer margin of the first primary smooth, not serrated, in the male ..... *HIRUNDININÆ*, p. 85.

b. With the outer margin of the first primary serrated in the male ..... *PSALIDOPROCNINÆ*, [p. 201.

Subfamily HIRUNDININÆ.

(True Swallows.)

In this Subfamily are found the bulk of the *Hirundinidæ*, *i. e.* the Martins, Crag-Martins, Fork-tailed Swallows, and Square-tailed Swallows. The characters for the definition of the genera are principally founded on those of Professor Baird's 'Review,' which were adopted by me in my paper on the *Hirundinidæ* of the Ethiopian Region in 1870, and have since been employed by Dr. Coues and Messrs. Salvin and Godman. The possession of a forked tail does not seem to me to be a very strong generic character, for every gradation in this respect occurs in *Hirundo*, and the same may be said of *Tachycineta* and *Atticora*. For the same reason I have not separated *Cotile* and *Ptyonoprogne* or *Biblis*, as one of the principal grounds for their generic separation is their mode of nidification, and to the discovery of this fact their outward form lends no clue.

Key to the Genera.

a. Toes feathered ..... 1. CHELIDON, p. 86.
b. Toes bare.
a'. Nostrils with a superior membrane, the nasal aperture longitudinal or oval.
a''. With no indentation or fork on the inner web of the outer tail-feathers.
a'''. Nostrils lateral, with a distinct longitudinal membrane overhanging the nasal aperture.
a⁴. Hind toe small and weak, particularly the claw; and not equal to outer toe and claw ..... 2. COTILE, p. 95.
b⁴. Hind toe very stout and robust, far exceeding outer toe and claw in size ..... 3. TACHYCINETA, p. 112.
b'''. Nostrils oval and exposed, with very slight superior membrane .. 4. PHEDINA, p. 122.
b''. Outer feather indented on the inner web, and generally elongated to a great extent.
c'''. Nostrils lateral, with distinct superior membrane..... 5. HIRUNDO, p. 123.
d'''. Nostrils open and exposed, with scarcely any superior membrane.. 6. CHERAMŒCA, p. 171.
b'. Nostrils without any superior membrane, rounded and exposed.
c''. Tail strongly forked; upper surface for the most part uniform, the rump like the back.
c'''. Outer toe connected with middle toe as far as the basal joint; culminal ridge flattened ..... 7. PROGNE, p 172.
f''. Outer toe connected with the middle as well as with its basal joint; culminal ridge rather elevated and only slightly rounded ..... 8. ATTICORA, p. 182.
d''. Tail square or only slightly emarginate; rump differing from the back in colour ..... [p. 189. 9. PETROCHELIDON,

1. CHELIDON.

Type.
Chelidon, *Boie, Isis*, 1822, p. 550..... C. urbica.
Delichon, *Moore, P. Z. S.* 1854, p. 104 ..... C. nipalensis.



Leg of *Chelidon urbica*, to show feathered toes.

Range. Confined to the Old World. Breeding in the northern parts of Europe and Asia and wintering in India, the Burmese countries, and extending to Borneo. In Africa it reaches to South-eastern Africa and occasionally to West Africa. One species non-migratory, but resident in the Eastern Himalayas.

Key to the Species.

a. Under tail-coverts white.
  a'. With no white spot on the inner web of the outer tail-feather.
    a''. Long upper tail-coverts black; remainder white like rump.
      a'''. Chin white like rest of throat.
        *a*⁴. Below pure white: size larger; wing 4·25–4·3 inches: tail greatly forked (fig. p. 89) ..... *urbica*, p. 87.
        *b*⁴. Below sullied white, washed with smoky brown: size smaller; wing 4 inches; tail much less forked (fig. p. 91) ..... *cashmiriensis*, p. 90.
      b'''. Chin with a black spot, as well as the base of the cheeks; below smoky whitish; tail not much forked (fig. p. 92) *dasypus*, p. 91.
    b''. Long upper tail-coverts white like the remainder and the rump; no black spot on chin; tail moderately forked (fig. p. 94) *lagopus*, p. 93.
  b'. With a white spot on the outer web of the outer tail-feather ..... *albigena*, p. 94.
b. Under tail-coverts black ..... *nipalensis*, p. 95.

1. Chelidon urbica.

La petite Hirondelle ou le Martinet à cul blanc, *Briss. Orn.* ii. p. 490 (1760).

Hirundo urbica, *Linn. Syst. Nat.* i. p. 344 (1766); *Temm. Man. d'Orn.* i. p. 428 (1815); *Roux, Orn. Provenç.* pl. 144 (1825); *Werner, Atlas, Chelidones*, pls. 2, 3 (1827); *Naum. Vög. Deutschl.* vi. p. 75, Taf. 145 (1823); *Ménétr. Cat. rais. Cauc.* p. 45 (1832); *Selby, Brit. B.* p. 213, pl. 42. fig. 2 (1833); *Gould, B. Eur.* ii. pl. 57 (1838); *Schl. & Susem. Vög. Eur.* Taf. vi. I. fig. 1 (1839); *Macgill. Brit. B.* iii. p. 573 (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 200 (1840); *Hewits. Eggs Brit. B.* i. p. 216, pl. 57. fig. 3 (1846); *Thomps. Nat. Hist. Ireland*, i. p. 389 (1849); *Blyth, Cat. B. Mus. As. Soc.* p. 198 (1849, pt.); *Kjærb. Danm. Fugle*, pl. xiv. fig. 5 (1852); *Schl. Vog. Nederl.* pl. 58 (1854); *Sundev. Sv. Fogl.* pl. xvii. fig. 6 (1856–72); *Linderm. Vög. Griechenl.* p. 117 (1860); *Schl. Dier. Nederl. Vogels*, pl. 6. figs. 5, 5*a* (1861); *Keulem. N. T. B.* iii. p. 384 (1866); *Borggr. Vögelf. Norddeutschl.* p. 100 (1869); *Gray, B. W. Scotl.* p. 209 (1871); *Harting, Handb. Brit. B.* p. 35 (1872); *Godm. Ibis*, 1872, p. 171; *Keul. Onze Vogels*, ii. pl. 9 (1873); *Saxby, B. Shetl.* p. 146 (1874); *Harting, Summer Migr.* p. 184 (1875); *Fallon, Ois. Belg.* p. 124 (1875); *Seebohm, Ibis*, 1882, pp. 210, 372; *id. Brit. B.* iii. p. 178, pl. 17 (1883); *Dixon, Ibis*, 1882, p. 561; *Homeyer & Tancré, Mitth. orn. Ver. Wien*, May 1883, p. 83.

Le Petit Martinet, *Daubent. Pl. Enl.* vii. pl. 542.

L'Hirondelle au croupion blanc ou L'Hirondelle de Fenêtre, *Montb. Hist. Nat. Ois.* vi. p. 614, pl. xxv. fig. 2 (1779).

Martin, *Lath. Gen. Syn.* ii. pt. 2, p. 564 (1783).

Hirundo domestica, *Leach, Syst. Cat. Mamm. etc. Brit. Mus.* p. 19 (1816).

Chelidon urbica, *Boie, Isis*, 1822, p. 550; *Rüpp. Neue Wirb.* p. 106 (1838); *Keys. & Blas. Wirb. Eur.* p. lxi (1840); *Rüpp. Syst. Uebers.* p. 22 (1845); *Gray, Gen. B.* i. p. 60 (1845); *id. Cat. Fissir.*

Brit. Mus. p. 31 (1848); *Bp. Consp.* i. p. 343 (1850); *Cab. Mus. Hein.* Th. i. p. 51 (1850); *Bolle, J. f. O.* 1854, p. 460; *Heugl. Syst. Uebers.* p. 17 (1856); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 340 (1859); *Salv. Ibis*, 1859, p. 302; *Tristr. t. c.* p. 434; *Heugl. J. f. O.* 1861, p. 419; *Gould, B. Gt. Br.* vol. ii. pl. 6 (1862–73); *Jerd. B. Ind.* i. p. 166 (1862); *Newton in Baring-Gould's Iceland*, p. 408 (1863); *Brehm, Reis. Habesch.* p. 272 (1863); *Filippi, Viagg. Pers.* p. 346 (1865); *Bettoni, Ucc. nidif. Lomb.* tav. 67 (1865–70); *More, Ibis*, 1865, p. 139; *Baird, Ibis*, 1867, p. 281; *Degl. et Gerbe, Orn. Eur.* i. p. 592 (1867); *Loche, Expl. Sci. Algér., Ois.* ii. p. 71 (1867); *Tristr. Ibis*, 1867, p. 364; *Drake, t. c.* p. 425; *Saunders, Ibis*, 1869, p. 174; *Heugl. Orn. N.O.-Afr.* i. p. 168 (1869); *Doderl. Avif. Sicil.* p. 145 (1869); *Droste, Vogelw. Bork.* p. 87 (1869); *Wyatt, Ibis*, 1870, p. 12; *Elwes & Buckley, t. c.* p. 200; *Blanf. Geol. & Zool. Abyss.* p. 349 (1870); *Sharpe, P. Z. S.* 1870, p. 202; *Fritsch, Vög. Eur.* tab. 23. fig. 5 (c. 1870); *Salvad. Faun. Ital., Ucc.* p. 51 (1871); *Shelley, B. Egypt*, p. 125 (1872); *Alst. & Harvie Brown, Ibis*, 1873, p. 59; *Brooke, t. c.* p. 237; *Hume, Str. F.* 1873, p. 323; *Brooks, Str. F.* 1875, p. 323; *Dresser, B. Eur.* iii. p. 495, pl. 162 (1875); *Irby, B. Gibr.* p. 102 (1875); *Wharton, Ibis*, 1876, p. 19; *Walden, t. c.* p. 356; *Blanf. East. Persia*, ii. p. 216 (1876); *Hume, Str. F.* 1879, p. 84; *Bogdanoff, B. Caucas.* p. 116 (1879); *Newt. ed. Yarr. Brit. B.* ii. p. 349 (1880); *Butler, Cat. B. S. Bombay Pres.* p. 15 (1880); *Collett, Norges Fugle*, p. 286 (1881); *Giglioli, Elench. Ucc. Ital.* p. 63 (1881); *Biddulph, Ibis*, 1881, p. 47; *Scully, t. c.* p. 428; *Shelley, Ibis*, 1882, p. 259; *Biddulph, t. c.* p. 269; *Severtz. Ibis*, 1883, p. 70; *B. O. U. List Brit. B.* p. 44 (1883); *Tristr. Faun. & Flor. Palest.* p. 62 (1884); *Radde, Orn. Cauc.* p. 36 (1884).

Chelidon fenestrarum, *C. L. Brehm, Vög. Deutschl.* p. 140 (1831).
Chelidon rupestris, *C. L. Brehm, t. c.* p. 140 (1831).
Hirundo candida, *Naum. Vög. Deutschl.* vi. p. 77 (1833).
Hirundo varia, *Naum. Vög. Deutschl.* vi. p. 77 (1833).
Hirundo pallida, *Naum. Vög. Deutschl.* vi. p. 77 (1833).
Chelidon tectorum, *C. L. Brehm, Naum.* 1855, p. 271.

Adult male in breeding-plumage. General colour above deep purplish blue, with slight indications of the white bases of the feathers showing on the hind neck and mantle; wing-coverts blackish brown, the lesser series slightly glossed with purple, the median and greater coverts with a very faint steely gloss; bastard-wing, primary-coverts, and quills also blackish brown, slightly glossed with steely green; lower back and rump pure white, with narrow shaft-lines of dusky; upper tail-coverts dull steel-blue; tail-feathers blackish brown, with a slight steel-blue gloss on the centre feathers; crown of head like the back; lores and feathers round the eye black, as well as the ear-coverts; cheeks and lower ear-coverts as well as the entire surface of the body pure white; sides of body and flanks very pale smoky brown; thighs white; under tail-coverts white with a slight wash of dingy brown, the shaft-stripes dusky and tolerably distinct; under wing-coverts and axillaries smoky brown, the outer wing-coverts mottled with dusky bases to the feathers; quills dusky brown below, a little paler on the inner edge: "bill black; feet black; iris dark brown." Total length 5·5 inches, culmen 0·35, wing 4·25, tail 2·5, tarsus 0·45.



Tail of *Chelidon urbica*.

Adult female. Similar to the male in colour. Total length 5 inches, culmen 0·35, wing 4·3, tail 2·5, tarsus 0·45.

Young. Distinguished from the adults at a glance by the yellow gape and white fringes at the ends of the secondaries. The colour of the upper surface is much duller, being often of a dingy brown with a gloss of purplish or greenish steel-blue; the throat is pale smoky brown, well defined on the fore neck, and contrasting with the rest of the under surface, which is pure white. Before leaving England, the plumage becomes worn and dingy brown, but the new feathers begin to show in examples killed late in October.

Young birds in first autumn plumage often have the fore neck buff-coloured.

Hab. All over Europe in summer, breeding even in the far north. Specimens have been procured in South-eastern Africa, and its winter home is therefore probably Central Africa. It straggles also to Turkestan and North-western India; but as sufficient care has not been taken by collectors to distinguish between this species and *C. cashmiriensis*, its Indian range cannot well be determined.

a. ♂ ad. sk.	Axmouth, Devon, April 1883 (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
b. ♂ ad. st.	Axmouth, Devon, April 1883 (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
c. Juv. sk.	Devonshire.	Col. Montagu [P.].
d. Var. alb. st.	Devonshire.	Col. Montagu [P.].
e. Var. alb. st.	Devonshire.	J. Prideaux, Esq. [P.].
f. ♀ ad. sk.	Alton, Hants (*J. G.*).	Gould Collection.
g, *h*. ♀ ad. sk.	Avington, Hants, May 14.	R. B. Sharpe, Esq. [P.].
i. Var. alb. st.	Pagham, Sussex, Sept.	J. E. Harting, Esq. [C.].
k, *l*. Juv. sk.	Brighton, Oct. 1883 (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
m. Juv. sk.	Brighton, end of October (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
n. ♀ ad.; *o*. ♂ juv. sk.	Cookham, Berks, Aug.	R. B. Sharpe, Esq. [P.].

p. Juv. sk.	Kingsbury, Middlesex.	J. E. Harting, Esq. [P.].
q. ♂ juv. sk.	Romney, Kent, Sept.	R. B. Sharpe, Esq. [P.].
r, *s*. ♂ ad. sk.	Romney, July	R. B. Sharpe, Esq. [P.].
t. Ad. ; *u*–*w*. Pull. st.	Cambridgeshire.	Mr. J. Baker [C.].
x. Ad. sk.	Cambridgeshire.	Gould Collection.
y. Ad. sk.	Boston, Lincolnshire.	Gould Collection.
z. ♂ juv. sk.	Italy, Oct.	R. B. Sharpe, Esq. [P.].
a'. ♀ ad. sk.	Guiksu, Asia Minor, May 24 (*T. Robson*).	Gould Collection.
b'. Ad. sk.	Egypt, April 3.	J. H. Gurney, Esq., jun. [P.].
c'. ♂ ad. sk.	Lebanon.	Canon Tristram [C.].
d'. ♀ ad. sk.	Koomaylee, Abyssinia, Feb. 14, 1868.	W. T. Blanford, Esq. [C.].
e'. ♂ ad. ; *f'*. Pull. sk.	Shiraz, Persia.	Sir O. St. John [C.].
g'. Ad. sk.	N.W. India (*Dr. Bellew*).	India Museum.
h', *i'*. Skeletons.		Purchased.

2. Chelidon cashmiriensis.

Chelidon cashmeriensis, *Gould, P. Z. S.* 1858, p. 356; *Adams, t. c.* p. 494; *Jerd. B. Ind.* i. p. 167 (1862); *Swinh. Ibis*, 1863, p. 90; *Gray, Hand-l. B.* i. p. 74, no. 884 (1869); *Jerd. Ibis*, 1871, p. 353; *Hume, Nests and Eggs Ind. B.* p. 152 (1873); *Swinh. Ibis*, 1874, p. 152; *Dresser, B. Eur.* iii. p. 498 (1875); *Brooks, Str. F.* 1875, p. 231; *Prjev. in Rowley's Orn. Misc.* ii. p. 163 (1877)*; *David & Oust. Ois. Chine*, p. 539 (1877); *Hume, Str. F.* 1879, p. 84; *Biddulph, Ibis*, 1881, p. 47, 1882, p. 269.

Chelidon urbica (*non L.*), *Ball, Str. F.* 1878, vol. ii. p. 202; *Butler, Str. F.* 1880, p. 378†.

Hirundo cashmiriensis, *Seebohm, Hist. Brit. B.* iii. p. 179 (1883).

Adult male. General colour above deep blue-black, the hind neck and mantle varied with white bases; rump white tinged with smoky brown, and with faint dusky shaft-lines; wing-coverts brownish black, slightly washed with blue-black on the margins; quills dusky blackish, the innermost secondaries narrowly tipped with white; upper tail-coverts smoky white, with dusky shaft-lines, the long ones dull blue-black; tail-feathers blackish; crown of head like the back; lores blackish; ear-coverts and cheeks white, the upper edge of the former dusky blackish; under surface of the body dull whitish; throat, fore neck, and chest washed with smoky brown, a little darker on the flanks; thighs white; under tail-coverts white, with pale smoky-brown bases and with dusky shaft-lines; under wing-coverts and axillaries darker smoky brown, the outer small coverts edged with whitish; quills below dusky brown, inner edge of quills paler; iris brown. Total length 5 inches, culmen 0·3, wing 4, tail 2·2, tarsus 0·5.

Adult female. Like the male in colour. Total length 4·5 inches, wing 3·85, tail 1·75, tarsus 0·5.

Obs. Colonel Biddulph (Ibis, 1882, p. 269) in writing of the differences between *Chelidon urbica* and the present species, speaks of

* This reference may belong to *C. lagopus*.

† The following references also, I believe, relate to the present species and not to *C. urbica*:—

Chelidon urbica, *Jerd. B. Ind.* i. p. 166 (pt.); *Brooks, Str. F.* 1875, p. 231; *Butler, Cat. B. S. Bomb. Pres.* p. 15 (1880).



Tail of *Chelidon cashmiriensis*.

the former bird as being pure white below, whereas *C. cashmiriensis* is "dusky beneath, with dusky mesial centres to the feathers of the abdomen, flanks, and rump." I have not recently been able to re-examine Colonel Biddulph's Gilgit series of Martins; but I may state that all the birds of his collecting, now in the British Museum, are true *C. cashmiriensis*.

It is unwise to depend too much on the dusky coloration of *C. cashmiriensis* below as a specific character, as old birds of *C. urbica* in worn plumage often partake of a dingy appearance on the underparts, while the young birds always have the throat washed with smoky brown. As regards the distinctness of the shaft-lines on the rump and under tail-coverts, great variation takes place in both species: sometimes it is very distinct, at other times scarcely perceptible; and it is quite as much a character of *C. urbica* as of *C. cashmiriensis*. In fact the two birds are so closely allied that the most reliable differences between them may be taken to be the shorter and less deeply forked tail of *C. cashmiriensis*, accompanied by its smaller size.

Hab. Probably confined to the Himalayas during summer, descending to the lower valleys and the plains of India in winter. As with *C. urbica*, its exact range is not known.

a. ♀ ad. sk.	Gilgit, July 4, 1880.	Col. J. Biddulph [C.].
b. ♂ ad. sk.	Gilgit, May 13, 1879.	Col. J. Biddulph [C.].
c, *d*. Ad. sk.	Cashmere.	Gould Collection. (Types of species.)
e. ♀ ad. sk.	Korha, Bilaspur district, Central India, April 14.	W. T. Blanford, Esq. [P.].
f. Ad. et juv. sk.	India.	J. R. Reeves, Esq. [P.].

3. Chelidon dasypus.

Chelidon dasypus, *Bp. Consp.* i. p. 343 (1850, *ex. Temm. MS.*); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 384 (1854); *Gray, Hand-l. B.* i. p. 74, no. 883 (1869); *Dresser, B. Eur.* iii. p. 498 (1875).

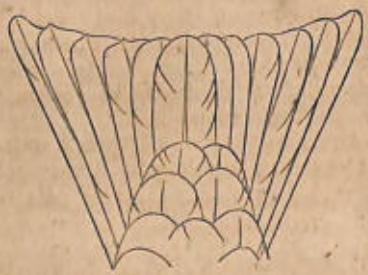
Chelidon blakistoni, *Swinh. P. Z. S.* 1862, p. 320; *id. Ibis*, 1863, p. 90; *Whitely, Ibis*, 1867, p. 196; *Gray, Hand-l. B.* i. p. 74, no. 882 (1869); *Swinh. Ibis*, 1874, p. 152, pl. vii. fig. 1; *id. Ibis*, 1875,

p. 448; *Blakist. & Pryer, Ibis*, 1878, p. 231; *iid. B. Japan*, p. 139 (1882).

Delichon (?) dasypus, *Salvad. Ucc. Born.* p. 127 (1874).

Hirundo dasypus, *Seebohm, Hist. Brit. B.* iii. p. 179 (1883).

Adult male (type of species). General colour above dull purplish blue, with white bases to the feathers; wing-coverts and quills blackish with a slight blue gloss; rump and upper tail-coverts pure white, with narrow dusky shaft-lines; the long upper tail-coverts and tail-feathers blackish with a faint blue gloss; tail very slightly forked; head like the back; lores and feathers below the eye black; ear-coverts dull purplish blue, as also the sides of the neck and sides of upper breast, the latter slightly mottled with white bases; fore part of cheeks and a spot at the base of the chin black; hinder part of cheeks and under surface of body creamy buff, washed with smoky brown on the breast and flanks, with a little purer white on the fore neck and abdomen; under tail-coverts smoky brown, broadly edged with whitish, the long coverts blacker with broad whitish edgings; axillaries and under wing-coverts dark brown, the small coverts near the edge of the wing edged with pale smoky brown; quills dull ashy brown below. Total length 4·6 inches, culmen 0·3, wing 4·1, tail 1·75, tarsus 0·5. (*Mus. Lugd.*)



Tail of *Chelidon dasypus*.

Adult female. Similar to the male in colour, but with one of the central long upper tail-coverts smoky brown, with a black shaft and a whitish margin at the tips; the under surface of the body much whiter, with a smoky buff tinge on the throat, abdomen, and sides of body; the under tail-coverts white with a blackish shaft-streak. Total length 4·7 inches, culmen 0·35, wing 4·3, tail 1·8, tarsus 0·45. (*Mus. Lugd.*)

Obs. Chelidon blakistoni from Japan is undoubtedly identical with *C. dasypus* of Borneo. Mr. Seebohm very kindly lent me the type of the Japanese species, which I compared with the types of *C. dasypus* while I was in Leiden in the autumn of 1883. The latter is rather a whiter bird underneath, especially on the under tail-coverts, which are blackish with broad white margins; but there are certain traces of smoky brown on the lower parts which prove the identity of the Bornean with the Japanese bird. The Hakodadi birds in the British Museum, which agree with the type of *C. blakistoni*, are very dark below; but I have recently been shown a specimen from Miri in South Yezo by Capt. Blakiston, which is whiter under-

neath, and quite recalls to my mind the typical examples of *C. dasypus* from Borneo.

The dark-breasted Japanese birds may be young birds of the previous year in their first full spring dress. I add a description of the pair in the British Museum:—

Male. General colour above deep blue-black, the hind neck slightly varied with white bases to the feathers which show through; wing-coverts and quills black with a slight blue gloss; lower back and rump dull white and sullied with a slight wash of brown, the shaft-streaks dusky and coarsely indicated; upper tail-coverts dull white, more or less washed subterminally with dull brown as well as at the tips, the long coverts blue-black; tail-feathers blackish with a very slight wash of blue; the tail very slightly forked; crown of head like the back; lores, feathers round the eyes, ear-coverts and sides of face, fore part of cheeks, and base of chin black; remainder of cheeks dull brownish white; throat and under surface of body smoky whitish; lower abdomen purer white; sides of body and flanks smoky brown, the sides of the upper breast darker and washed with blue-black; thighs dull white; under tail-coverts white slightly washed with smoky brown, the shafts in all dusky and distinct; the long under tail-coverts smoky brown, edged with white at the tips; under wing-coverts and axillaries glossy dark brown; quills dusky below, browner on their inner webs: "bill black; iris black" (*H. Whitely*). Total length 4·75 inches, culmen 0·3, wing 4·15, tail 1·85, tarsus 0·45.

Adult female. Similar to the male in colour. Total length 5 inches, wing 4·15, tail 2·1, tarsus 0·45.

Hab. Only known from Japan and Borneo, but doubtless occurring on migration in intervening localities.

a, b. ♂ ♀ ad. sk. Hakodadi, Japan, April 17, 1865 (*H. Whitely*). Gould Collection.

4. Chelidon lagopus.

Hirundo lagopoda, *Pall. Zoogr. Ross.-Asiat.* i. p. 532 (1811); *Severtz. Turkest. Jevotn.* p. 67 (1873); *Dresser, Ibis*, 1876, p. 188; *Seebohm, Hist. Brit. B.* iii. p. 179 (1883).

Hirundo urbica (*non L.*), *Middend. Reis. Sibir., Zool.* p. 189 (1851); *Schrenck, Amur Reise*, p. 388 (1859); *Radde, Reis. Sibir., Vög.* p. 280 (1883).

Chelidon urbica (*non L.*), *Tickell, J. A. S. Beng.* xxiv. p. 227, footnote (1855); *Blyth, B. Burm.* p. 127 (1875); *Hume & Davison, Str. F.* 1878, p. 45; *Hume, Str. F.* 1879, p. 84 (pt.).

Chelidon whitelyi, *Swinh. P. Z. S.* 1862, p. 320; *id. Ibis*, 1874, p. 152, pl. vii. fig. 2; *Dresser, B. Eur.* iii. p. 498 (1875).

Chelidon lagopoda, *Swinh. Ibis*, 1863, p. 91; *id. P. Z. S.* 1863, p. 287; *Gray, Hand-l. B.* i. p. 74, no. 881 (1869); *Swinh. P. Z. S.* 1871, p. 347; *Dybowski, J. f. O.* 1872, p. 352, 1874, p. 334, 1876, p. 192; *Tacz. Bull. Soc. Zool. France*, i. p. 134 (1876); *David & Oust. Ois. Chine*, p. 130 (1877); *Seebohm, Ibis*, 1879, p. 17; *Severtz. Ibis*, 1883, p. 80; *Oates, B. Brit. Burm.* i. p. 311 (1883).

Adult female (valley of the Yen-e-say, June 11th, 1877; H. Seebohm). General colour above glossy blue-black, the hind neck

and mantle varied with white bases to the feathers; wing-coverts and quills blackish brown, the former slightly glossed with blue-black on the margins; rump and all the upper tail-coverts white, washed with smoky brown, with dusky shaft-lines; tail-feathers blackish brown; lores black, as well as the feathers round the eye; cheeks and ear-coverts white, the upper margin of the latter blue-black; under surface of body white, the throat tinged with reddish buff; the sides of the body and flanks pale smoky brown; thighs and plumes of leg white; under tail-coverts white, with distinct shaft-lines of dusky brown; under wing-coverts and axillaries dark smoky brown, the outermost small coverts tipped with white; quills dusky brown below, paler along the inner web. Total length 4·6 inches, culmen 0·3, wing 4·1, tail 2·05, tarsus 0·45. (*Mus. H. Seebohm.*)

Obs. The type of *C. whitelyi*, Swinh., in Mr. Seebohm's collection, differs from the bird described only in having the dusky shaft-lines on the rump and upper and under tail-coverts less distinct, and in wanting the rufescent tinge on the throat.



Tail of *Chelidon lagopus*.

Hab. Siberia from the valley of the Yen-e-say eastwards, breeding throughout South-eastern Siberia and Northern China, occurring also in Turkestan. It probably winters in the Burmese countries and Southern China.

5. Chelidon albigena.

Chelidon albigena, *Heugl. J. f. O.* 1861, p. 419; *id. Orn. N.O.-Afr.* i. p. 169 (1869); *Sharpe, P. Z. S.* 1870, p. 293; *Dresser, B. Eur.* iii. p. 499 (1875).

Similar to *C. urbica*, but differs in the throat being pure pale dusky ash-colour, with a moustachial line of pure white, very distinctly indicated; sides of breast, flanks, and under tail-coverts delicately shaded with smoky grey; outer webs of under tail-coverts with conspicuous subterminal dusky spots, the shafts blackish; rump whitish, the middle feather of a dusky ash-colour and marked with some duller spots; tail emarginate, a little exceeding the wings (to the extent of 2 lines); inner web of outer tail-feathers marked near the base with a conspicuous spot of whitish; bill black; iris dusky; claws pale horn-colour. Total length 5″, wing 3″ 11‴, tail 2″ 3½‴, tarsus 5‴·8, bill from front 2‴·8. (*Heuglin.*)

Hab. Bogos Land, N.E. Africa.

6. Chelidon nipalensis.

Delichon nipalensis, *Hodgs. Icon. ined. Brit. Mus., App.* pl. xiv. (no. 963); *Moore, P. Z. S.* 1854, p. 104, pl. lxiii.; *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 384 (1854); *Swinh. Ibis*, 1863, p. 89; *Gould, B. Asia*, i. pl. 31 (1868); *Hume, Str. F.* 1879, p. 84.
Chelidon nipalensis, *Jerd. B. Ind.* i. p. 168 (1862); *Gray, Hand-l. B.* i. p. 74, no. 885 (1869); *Dresser, B. Eur.* iii. p. 499 (1875).
Hirundo nipalensis, *Seebohm, Hist. Brit. B.* iii. p. 179 (1883).

Adult. General colour above glossy blue-black, with a slight mottling on the hind neck and mantle, produced by the white bases to the feathers showing through; wing-coverts glossy blue-black like the back, the primary-coverts and quills black, washed with glossy blue-black on the edges; rump white, the lower feathers barred with black tips; upper tail-coverts glossy blue-black, the basal ones white, tipped broadly with blue-black; tail-feathers black glossed with steel-blue; lores, feathers round the eye, and chin velvety black; cheeks, ear-coverts, and throat glossy blue-black; remainder of under surface from lower throat downwards white, the feathers on the former part slightly mottled with blackish bases; flanks slightly washed with smoky brown; sides of upper breast blue-black; thighs and tarsal plumes white; under tail-coverts glossy blue-black; under wing-coverts and axillaries blackish, glossed with blue-black; quills dusky below, paler along edge of inner web. Total length 4·1 inches, culmen 0·3, wing 3·7, tail 1·75, tarsus 0·35.

Obs. Some specimens have the whole under surface white excepting the chin. These birds may represent the *adult female*. Total length 4·3 inches, culmen 0·25, wing 3·75, tail 1·75, tarsus 0·4.

A young bird in Mr. Seebohm's collection (recognizable by the yellow gape) has the black throat of the adult indicated by dusky brown plumes and equally well defined. If my identification of the sexes is correct, this would be an *immature male*; but it is unfortunate that of the large series examined by me only two should have had the sex determined by a collector.

Hab. Eastern Himalayas.

a, b. Ad. sk.	Nepal (*Hodgson*).	India Museum. (Types of species.)
c, d. Ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
e, f. Ad. sk.	Himalayas (*Jerdon*).	Gould Collection.
g. Ad. sk.	Sikhim (*Mandelli*).	R. B. Sharpe, Esq. [P.].
h. Ad.; *i.* ♀ ad. sk.	Nynee Tal, July 1st.	R. B. Sharpe, Esq. [P.].
k. ♂ ad. sk.	Nynee Tal, April 29th.	R. B. Sharpe, Esq. [P.].

2. COTILE*.

	Type.
Clivicola, *Forster, Syn. Cat. Br. B.* p. 55 (1817)	C. riparia.
Cotile, *Boie, Isis*, 1822, p. 550	C. riparia.
Biblis, *Lesson, Compl. Buff.* viii. p. 495 (1837)	C. rupestris.
Ptyonoprogne, *Reichenb. Syst. Av.* pl. lxxxvii. fig. 6 (1850)	C. rupestris.
Krimnochelidon, *Tickell, teste Walden, Ibis*, 1876, p. 376	C. concolor.

* Although accompanied by certain changes of habits and mode of nidification, I do not think that *Biblis* can be separated from *Cotile*, the only characters



Leg of *Cotile riparia*, to show tarsal tuft.



Leg of *C. rupestris*.

Range. Europe, Africa, and Northern Asia. From Egypt, through Palestine and Persia to Central Asia, the whole of India, Burmese countries; China. North America and South America to Brazil.

Key to the Species.

a. No white spots on the tail; under tail-coverts white.
  a'. With a brown collar across the fore neck, separating the white throat from the white belly.
    a''. Under wing-coverts brown: size smaller; wing 3·55–4·35 inches: a tiny tuft of feathers at back of tarsus just above the hind toe ..... *riparia*, p. 96. / *shelleyi*, p. 100.
    b''. Under wing-coverts white: size larger; wing 5 inches: no tuft at base of tarsus ..... *cincta*, p. 101.
  b'. With no pectoral collar ..... *paludicola*, p. 102. / *minor*, p. 103. / *sinensis*, p. 104. / *cowani*, p. 104.
b. With white spots on all but the centre and outer tail-feathers; under tail-coverts dark brown.
  c'. Throat and chest deep rufous, contrasting with sooty-brown abdomen.
    c''. Larger: throat clear uniform rufous .. *fuligula*, p. 106. / *rufigula*, p. 107.
    d''. Smaller: throat dull rufous streaked with brown ..... *concolor*, p. 108.
  d'. Throat and chest pale isabelline or sandy buff, fading into the slightly deeper colour of the abdomen.
    e''. Larger; wing 4·9 inches: chin minutely spotted with brown ..... *rupestris*, p. 109.
    f''. Smaller; wing 4·5–4·55 inches: chin and throat uniform ..... *obsoleta*, p. 111.

1. Cotile riparia *.

L'Hirondelle de rivage, *Briss. Orn.* ii. p. 506 (1760); *Daubent. Pl. Enl.* vii. pl. 543. fig. 2.

being apparently the presence or absence of a tiny tuft of feathers at the posterior end of the tarsus, which is absent in the Crag-Martins (*Biblis*), but present in the Sand-Martins (*Cotile*), where it seems to indicate a slight affinity to the feathered-legged Martins (*Chelidon*).

* For a complete record of American references to this species the reader is referred to Coues, B. Color. Vall. p. 435.

Hirundo riparia, *Linn. Syst. Nat.* i. p. 344 (1766); *Pall. Zoogr. Rosso-Asiat.* i. p. 535 (1811); *Wilson, Amer. Orn.* v. p. 46, pl. 38. fig. 4 (1812); *Temm. Man. d'Orn.* i. p. 429 (1815); *Roux, Orn. Provenç.* pl. 143 (1825); *Audub. B. Amer.* pl. 385 (c. 1826); *Werner, Atlas, Chelidones*, pl. 3 (1827); *Swains. & Richards. Faun. Bor.-Amer., Birds*, p. 383 (1831); *Ménétr. Cat. rais. Cauc.* p. 45 (1832); *Naum. Vög. Deutschl.* vi. p. 100, Taf. 146. figs. 3, 4 (1833); *Gould, B. Eur.* ii. pl. 58 (c. 1837); *Audub. Orn. Biogr.* iv. p. 584 (1838); *id. B. Amer.* 8vo, i. p. 187, pl. 7. fig. 3 (1840); *Macgill. Hist. Brit. B.* iii. p. 595 (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 400 (1840); *Hewits. Eggs Brit. B.* i. p. 218, pl. 57. fig. 3 (1846); *Thomps. Nat. Hist. Ireland*, i. p. 400 (1849); *Blyth, Cat. B. Mus. As. Soc.* p. 199 (1849); *Lembeye, Aves Cuba*, p. 47, pl. 7. fig. 3 (1850); *Midd. Sibir. Reis., Zool.* p. 189 (1851); *Kjærb. Danm. Fugle*, pl. 14. fig. 6 (1852); *Schl. Vog. Nederl.* pl. 59 (1854); *Sundev. Sv. Fogl.* pl. 17. fig. 7 (1856–72); *Schrenck, Reis. Amurl.* p. 389 (1859); *Linderm. Vög. Griechenl.* p. 118 (1860); *Schl. Dier. Nederl., Vogels*, pl. 6. figs. 7, 7*a* (1861); *Borggr. Vogelf. Norddeutschl.* p. 100 (1869); *R. Gray, B. W. Scotl.* p. 209 (1871); *Harting, Handb. Brit. B.* p. 35 (1872); *Maynard, B. Florida*, p. 75 (187.); *Saxby, B. Shetl.* p. 147 (1874); *Fallon, Ois. Belg.* p. 125 (1875); *Seebohm, Ibis*, 1882, p. 372; *id. Brit. B.* iii. p. 184, pl. 17 (1883).

Clivicola europea, *Forst. Syn. Cat. Br. B.* p. 58 (1817).

Sand Martin, *Lath. Gen. Syn.* ii. pt. 2, p. 568 (1783).

Hirundo cinerea, *Vieill. N. Dict. d'Hist. Nat.* xiv. p. 526 (1817).

Cotile riparia, *Boie, Isis*, 1822, p. 550; *Selby, Brit. B.* p. 125, pl. 42. fig. 3 (1833); *Gray, Hand-l. B.* i. p. 73, no. 864 (1869); *Wharton, Ibis*, 1879, p. 451; *Coues, Bull. Nutt. Orn. Club*, 1880, p. 96; *Hume, Str. F.* 1880, p. 246; *A. & E. Newt. Handb. Jamaica*, 1881, p. 107; *C. Swinh. Ibis*, 1882, p. 101; *Seebohm, t. c.* p. 210; *Dixon, t. c.* p. 561; *Coues, Check-list B.* p. 43 (1882); *Oates, B. Brit. Burm.* i. p. 310 (1883); *B. O. U. List Brit. B.* p. 44 (1883); *Seebohm, Ibis*, 1883, p. 22; *Irby, t. c.* p. 83; *Tristr. Faun. & Flor. Palest.* p. 62 (1884); *Coues, Key N.-Amer. B.* nd ed. p. 324 (1884).

Cotyle riparia, *Boie, Isis*, 1826, p. 971; *Brehm, Vög. Deutschl.* p. 143 (1831); *Bp. Comp. List B. Eur. & N. Amer.* p. 9 (1838); *Keys. u. Blas. Wirb. Eur.* p. lxi (1840); *Rüpp. Syst. Uebers.* p. 22 (1845); *Gray, Gen. B.* i. p. 60 (1845); *id. Cat. Fissir. Brit. Mus.* p. 29 (1848); *Bp. Consp.* i. p. 342 (1850); *Brewer, N.-Amer. Ool.* p. 105, pl. 4. fig. 49 (1850); *Scl. Contr. Orn.* 1852, p. 124; *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 95 (1854); *Cassin, B. Calif.* p. 247 (1850); *Heugl. Syst. Uebers.* p. 17 (1856); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 313 (1859); *Salvin, Ibis*, 1859, p. 302; *Tristr. t. c.* p. 434; *Baird, B. N. Amer.* p. 313 (1860); *Gould, B. Gt. Brit.* ii. pls. 7, 8 (1862–73); *Jerd. B. Ind.* i. p. 163 (1862); *Gray, Cat. Brit. B.* p. 34 (1863); *March, Proc. Philad. Acad.* 1863, p. 295; *Newton in Baring-Gould's Iceland*, p. 408 (1863); *Baird, Review Amer. B.* p. 319 (1864); *More, Ibis*, 1865, p. 139; *Coues, t. c.* p. 159; *Dresser, t. c.* pp. 313, 479; *Filippi, Viagg. Pers.* p. 346 (1865); *Bettoni, Ucc. Nidif. Lomb.* tav. 53 (1865–70); *Baird, Ibis*, 1867, pp. 275, 286, 289; *Tristr. t. c.* p. 363; *Drake, t. c.* p. 425; *Degl. et Gerbe, Orn. Eur.* i. p. 596 (1867); *Loche, Expl. Sci. Algér., Ois.* ii. p. 70 (1867); *Brown, Ibis*, 1868, p. 427; *Heugl.*

Orn. N.O.-Afr. i. p. 165 (1869); *Doderl. Avif. Sicil.* p. 146 (1869); *Droste, Vogelw. Bork.* p. 88 (1869); *Finsch & Hartl. Vög. Ostafr.* p. 145 (1870); *Sharpe, P. Z. S.* 1870, p. 296; *Cooper, B. Calif.* p. 110 (1870); *Fritsch, Vög. Eur.* pl. xxiv. figs. 1, 2 (1870); *Pelz, Orn. Bras.* pp. 18, 402, xxv (1871); *Salvad. Faun. Ital., Ucc.* p. 54 (1871); *Swinh. P. Z. S.* 1871, p. 346; *Saunders, Ibis*, 1871, p. 205; *Jerd. t. c.* p. 353; *Coues, Key N.-Amer. B.* p. 114 (1872); *Dybowski, J. f. O.* 1872, p. 353, 1874, p. 334; *Brooke, Ibis*, 1873, p. 237; *Severtz. Turkest. Jevotn.* p. 67 (1873); *Hume, Str. F.* 1873, p. 164; *Scl. & Salvin, Nomencl. Av. Neotr.* p. 14 (1873); *Antin. & Salvad. Viagg. Bogos*, p. 72 (1873); *Coues, B. N.-West*, p. 89 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* p. 353, pl. 16. fig. 4 (1874); *Dresser, B. Eur.* iii. p. 505, pl. 163 (1874); *Harting, Summer Migr.* p. 187 (1875); *Butler, Str. F.* 1875, p. 452; *Hume, t. c.* p. 452; *Irby, B. Gibr.* p. 104 (1875); *Blanf. East. Pers.* ii. p. 216 (1876); *C. B. Wharton, Ibis*, 1876, p. 19; *Seebohm & Harvie Brown, t. c.* pp. 220, 356; *Tacz. Bull. Soc. Zool. France*, i. p. 134 (1876); *Prjev. in Rowley's Orn. Misc.* ii. p. 162 (1877); *David & Oust. Ois. Chine*, p. 128 (1877); *Finsch, Ibis*, 1877, pp. 56, 62; *Butler, Str. F.* 1877, pp. 217, 227; *Coues, B. Color. Vall.* p. 435 (1878); *Rowley, Orn. Misc.* iii. p. 81, pl. 94 (1878); *Hume & Davison, Str. F.* 1878, pp. 44, 497; *Danf. Ibis*, 1878, p. 8; *Seebohm, Ibis*, 1879, pp. 17, 30; *Ramsay, Ibis*, 1879, p. 446; *Finsch, Reis. West-Sibirien*, p. 39 (1879); *Hume, Str. F.* 1879, p. 84; *Bingham, t. c.* p. 192; *Butler, Cat. B. Sind etc.* p. 13 (1879); *Bogdanoff, B. Cauc.* p. 117 (1879); *Newton, ed. Yarr. Brit. B.* ii. p. 355 (1880); *Collett, Norges Fugle*, p. 286 (1881); *Giglioli, Elench. Ucc. Ital.* p. 64 (1881); *Dixon, Ibis*, 1882, p. 561; *Blakist. & Pryer, B. Japan*, p. 139 (1882); *Salvin & Godm. Biol. Centr.-Amer., Aves*, p. 240 (1883); *Radde, Orn. Cauc.* p. 36 (1884); *Murray, Vertebr. Faun. Sind*, p. 103 (1884).

Cotyle fluviatilis, *Brehm, Vög. Deutschl.* p. 142 (1831).

Cotyle microrhynchos, *Brehm, t. c.* p. 143 (1831).

Clivicola riparia, *Stejn. Pr. U. S. Nat. Mus.* vi. p. 32 (1882).

Adult male. General colour above dark earthy brown, a little lighter on the lower back, rump, and upper tail-coverts, the feathers of which have more or less distinctly indicated margins of paler brown; wing-coverts darker brown than the back, with indistinct margins of lighter brown; bastard-wing, primary-coverts, and quills very dark brown, the innermost secondaries paler and more like the back; tail-feathers brown, with a narrow whitish edging towards the tip of the inner web of all but the centre feathers; lores dusky blackish, with a slight hoary shade above them, remains of hoary edges to the feathers being seen on the basal frontal feathers; feathers below the eye and ear-coverts brown; cheeks, throat, and under surface of body pure white, the throat separated from the breast by a very broad and distinct collar of dark brown; this brown colour also extending down the sides of the body, and occupying the centre of the breast in the shape of a few feathers which have the inner webs dark brown; thighs brown; axillaries and under wing-coverts dark brown, those near the edge of the wing broadly edged with whitish; quills dusky brown below, lighter along the inner webs: "bill blackish brown; legs dark brown; iris dark hazel"

(*Dresser*). Total length 4·8 inches, culmen 0·3, wing 4·25, tail 2·1, tarsus 0·45.

Sexes alike in plumage. An adult female measures:—Total length 5 inches, culmen 0·3, wing 4·35, tail 2·1, tarsus 0·4.

Young. Lighter brown than the adult, and distinguished by the sandy-rufous or ashy-whitish edgings to the feathers of the back and wings; the throat is also slightly tinged with pale rufous; the breast-band is strongly pronounced, but has pale edges to the feathers.

These light margins to the feathers seem to disappear somewhat before the young birds leave this country, specimens killed in August having the pale edgings much broader and more strongly characterized than a young bird killed at the end of September.

C. littoralis of Hemprich and Ehrenberg has been referred by Mr. Dresser, and all recent authors, as a synonym of *C. riparia*. One of the typical specimens is in Capt. Shelley's collection, and it is evident from the *style* of plumage, even though the specimen is quite immature, that it belongs to the *C.-paludicola* group of the genus *Cotile*, even if the absence of the tuft of small plumes behind the base of the tarsus were not sufficient to show that it could not be the young of *C. riparia*.

Like other Swallows, the Sand-Martin moults while in its winter quarters. Mr. Gurney has presented to the British Museum a specimen shot by Mr. T. Ayres in the Transvaal on the 28th of February. The body-plumage seems to have been completely moulted, but some of the quills and tail-feathers are not entirely renewed. From this specimen it appears that in the fresh-moulted bird the inner secondaries are distinctly edged with white, and remains of these white edges are seen in all newly arrived birds in Europe.

American birds are not to be distinguished from Old-World examples.

Hab. The whole of the northern parts of the Old World in summer, extending in winter to South-eastern Africa, North-western India, and the Burmese countries. North America, ranging as far south as Brazil in winter.

a. Old-World Specimens.

a. Ad. sk.	Scotland (*Sir W. Jardine*).	India Museum.
b. Juv. sk.	Upware, Cambridgeshire, Aug. 17, 1856 (*O. S.*).	F. D. Godman and O. Salvin, Esqrs. [P.].
c, *d*. ♂ ad. sk.	Upware, April 29, 1856 (*O. S.*).	Gould Collection.
e. Ad. sk.	Hampstead, Middlesex.	F. D. Godman and O. Salvin, Esqrs. [P.].
f. Juv. sk.	Cookham, Berks, Aug. 28 (*R. B. S.*).	R. B. Sharpe, Esq. [P.].
g, *h*. ♂ juv. sk.	Romney Marsh, Aug. 1882 (*R. B. S.*).	R. B. Sharpe, Esq. [P.].
i. Ad.; *k*. ♂ juv. sk.	Romney Marsh, Sept. 1882 (*R. B. S.*).	R. B. Sharpe, Esq. [P.].

l, *m*. ♂ ♀ juv. st.	Brighton, Sussex, Sept. 1882.	Messrs. Swaysland [C.].
n. Ad. sk.	Wiltshire.	Col. Montagu [P.].
o. ♂ ad. sk.	Avington, Hampshire, May 15, 1879.	R. B. Sharpe, Esq. [P.].
p. Ad. sk.	Belgium.	Brussels Museum [P.].
q. ♂ ad. sk.	Piedmont (*Salvadori*).	R. B. Sharpe, Esq. [P.].
r. ♂ ad. sk.	Montepulciano, Italy, May.	Prof. Giglioli.
s. Ad. sk.	Near Vienna.	R. B. Sharpe, Esq. [P.].
t. ♀ ad. sk.	Orotava, Teneriffe, April 23, 1871 (*F. D. G.*).	F. D. Godman and O. Salvin, Esqrs. [P.].
u. ♂ ad. sk.	Potchefstroom, Transvaal, Feb. 28, 1879 (*Ayres*).	J. H. Gurney, Esq. [P.].
v. Ad. sk.	Potchefstroom, Feb. 22 (*Ayres*).	R. B. Sharpe, Esq. [P.].
w. ♂ ad. sk.	Bogdaschantskaja, River Ob, July 6, 1876.	Dr. O. Finsch [C.].
x, *y*. ♂; *z*. ♀ ad. sk.	Petropaulowski, Kamtschatka, June 21, 1882 (*Dybowski*).	R. B. Sharpe, Esq. [P.].
a'. Ad. sk.	Persia.	Purchased.
b'. Ad. sk.	Afghanistan (*Griffith*).	India Museum.
c'. Ad. sk.	Pushut (*Griffith*).	India Museum.
d'. ♂ ad. sk.	Candahar, April 5, 1881.	Col. Swinhoe [C.].
e'. Ad. sk.	Madras.	T. C. Jerdon, Esq. [P.].
f', *g'*. ♀ ad. sk.	Pegu River, April 1876.	E. W. Oates, Esq. [C.].

β. American Specimens.

h'. ♀ ad. sk.	Hyde Park, Illinois, June 12 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
i'. ♂ ad. sk.	Whiting, Indiana, July 10 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
k'. ♀ juv. sk.	Washington, D.C., Aug. 18 (*H. W. Henshaw*).	U.S. Nat. Museum [P.].
l'. ♂ ad. sk.	Cambridge, Mass., May 25 (*H. W. Henshaw*).	U.S. Nat. Museum [P.].
m'. ♀ ad. sk.	Virginia (*Coues*).	Sclater Collection.
n'. Ad. sk.	Alaska, June 24.	U.S. Nat. Museum [P.].
o'. Juv. sk.	Dueñas, Guatemala (*Salvin*).	Sclater Collection.
p'. Ad. sk.	Jamaica.	Purchased.
q'. ♂ ad. sk.	Nauta, R. Amazon (*E. Bartlett*).	R. B. Sharpe, Esq. [P.].

Subsp. *a*. **Cotile shelleyi.**

Cotyle riparia, *auct. ex. Afr. Sept.-orientali* (pt.).
Cotyle riparia, *Swinh. Ibis*, 1864, p. 414; *E. C. Taylor*, *Ibis*, 1867, p. 57; *Shelley*, *B. Egypt*, p. 124.

Adult male. Similar to *C. riparia*, but paler and very much smaller. Total length 4·1 inches, culmen 0·3, wing 3·55, tail 1·65, tarsus 0·35.

Hab. Egypt.

Obs. Capt. Shelley's collection contains two examples of this

Egyptian Sand-Martin, one killed in April, the other in February: the latter has the wing 3·6 inches in length. The smallest specimen of young *C. riparia* we have examined measures 3·9 inches in the wing.

2. Cotile cincta.

Hirondelle brune à collier du Cap de Bonne Espérance, *Daubent. Pl. Enl.* vii. pl. 723.
Hirundo cincta, *Bodd. Tabl. Pl. Enl.* p. 45 (1783, *ex Daubent.*).
Brown-collared Swallow, *Lath. Gen. Syn.* ii. pt. 2, p. 577 (1783).
Hirundo torquata, *Gm. Syst. Nat.* ii. p. 577 (1788); *Lath. Ind. Orn.* ii. p. 579 (1790); *Keulem. N. Tijdschr.* iii. p. 384 (1866).
Cotyle torquata, *Rüpp. Syst. Uebers.* p. 22 (1845); *Bp. Consp.* i. p. 342 (1850); *Heugl. Syst. Uebers.* p. 17 (1856); *id. Ibis*, 1859, p. 339.
Cotyle cincta, *Gray, Gen. B.* i. p. 60 (1845); *id. Cat. Fissir. Brit. Mus.* p. 30 (1848); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 97 (1854); *Layard, B. S. Afr.* p. 58 (1867); *Gurney, Ibis*, 1868, p. 43; *Heugl. Orn. N.O.-Afr.* i. p. 164 (1869); *Finsch & Hartl. Vög. Ostafr.* p. 144 (1870); *Blanf. Geol. & Zool. Abyss.* p. 349 (1870); *Sharpe, P. Z. S.* 1870, p. 297; *id. Ibis*, 1870, p. 479; *id. Cat. Afr. B.* p. 45 (1871); *Ayres, Ibis*, 1873, p. 281, 1874, p. 106; *Ussher, Ibis*, 1874, p. 62; *Buckley, t. c.* 1874, p. 375; *Sharpe & Bouvier, Bull. Soc. Zool. France*, i. p. 38 (1876); *Ayres, Ibis*, 1876, p. 424, 1878, p. 286; *Bocage, Orn. Angola*, p. 188 (1877–81); *Sharpe, ed. Layard's B. S. Afr.* p. 358 (1883); *Shelley, Ibis*, 1882, p. 259; *Butler, Feilden, & Reid, Zool.* 1882, p. 250; *Bocage, Jorn. Lisb.* 1882, p. 22; *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 121 (1884).
Cotyle eques, *Hartl. P. Z. S.* 1866, p. 325; *Sharpe, P. Z. S.* 1870, p. 297.
Cotile cincta, *Gray, Hand-l. B.* i. p. 73, no. 875 (1869).
Cotile eques, *Gray, t. c.* p. 74, no. 879 (1869).

Adult male. General colour above brown, rather lighter on the rump and upper tail-coverts, the head somewhat darker; wing-coverts like the back, some of the outer ones near the bend of the wing with paler edges; bastard-wing, primary-coverts, and quills dark brown, a little lighter on the edges of the feathers; tail-feathers dark brown; lores blackish as well as the feathers round the eye; above the lores a broad streak of creamy white; ear-coverts dark brown; sides of neck brown like the back; cheeks and entire throat white, separated from the breast by a very broad band of chocolate-brown; rest of the body white, the flanks slightly shaded with smoky brown; in the centre of the breast a streak of dark brown in continuation of the brown pectoral band, several of the feathers being dark brown on their inner webs; thighs and adjacent feathers on the sides of the rump brown; axillaries and under wing-coverts white, slightly shaded with smoky brown; quills dusky brown below; "bill and legs black; iris dark hazel" (*Buckley*). Total length 6·1 inches, culmen 0·45, wing 5, tail 2·4, tarsus 0·5.

Adult female. Similar in plumage to the male. Total length 6·2 inches, culmen 0·4, wing 5, tail 2·4, tarsus 0·45.

Obs. The descriptions are taken from a pair of breeding birds shot by Major Butler near Newcastle on the 23rd of October, and now in Capt. Shelley's collection.

Young. Differs from the adult in being somewhat darker, and in having rusty edges to the feathers of the upper parts as well as the pectoral collar. Total length 6 inches, wing 4·7, tail 2.

Obs. I cannot discern any difference in specimens from various parts of Africa. The white spot on the outer tail-feather, which was the character by which Dr. Hartlaub separated *C. eques*, from Prince's Island, West Africa, seems to be of accidental occurrence, for it is not found in other West-African specimens, but Mr. Seebohm has a single example from the Transvaal which exhibits the character.

Hab. North-eastern Africa. West Africa from the Gold Coast to the Congo. The Cape Colony, extending to the Transvaal and to Benguela.

a. Ad. sk.	Abyssinia.	Dr. Rüppell [C.].
b. ♂ ad. sk.	Angollala, Shoa, May 1842 (*Harris*).	India Museum.
c. ♂ ad. sk.	Antalo, Tigrè, May 11, 1868.	W.T.Blanford, Esq.[C.].
d. Juv. sk.	South Africa (*Surtees*).	R. B. Sharpe, Esq.
e, f. Juv. sk.	South Africa (*Layard*).	R. B. Sharpe, Esq.
g, h. ♂ ♀ ad. sk.	South Africa, Nov. 1869 (*Layard*).	R. B. Sharpe, Esq.
i. ♀ ad. sk.	Natal, Nov. 25, 1868.	R. B. Sharpe, Esq.
k. ♂ ad. sk.	Transvaal (*Ayres*).	R. B. Sharpe, Esq.
l. Ad. sk.	Kinsembo, Angola.	Purchased.
m. Ad. sk.	Gaboon.	R. B. Sharpe, Esq.
n. Ad. sk.	River Volta (*Ussher*).	R. B. Sharpe, Esq.

3. Cotile paludicola.

Hirondelle des Marais ou la Brunette, *Levaill. Ois. d'Afr.* v. p. 158, pl. 246. fig. 2 (1806).

Hirundo paludicola, *Vieill. N. Dict. d'Hist. Nat.* xiv. p. 511 (1817); *Guérin in Ferr. et Gal. Voy. Abyss.* iii. p. 242; *Des Murs in Lefebvre Voy. Abyss.* p. 79 (1847).

Hirundo palustris, *Steph. Gen. Zool.* x. p. 101 (1817).

Cotyle paludibula, *Rüpp. Neue Wirb.* p. 106 (1835); *id. Syst. Uebers.* p. 22 (1845); *Heugl. Syst. Uebers.* p. 17 (1856).

Cotyle palustris, *Cab. Mus. Hein.* Th. i. p. 49 (1850); *Bp. Consp.* i. p. 34 (1850); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 11 (1853); *Layard, B. S. Afr.* p. 58 (1867); *Gurney, Ibis*, 1868, p. 464; *Ayres, Ibis*, 1876, p. 424.

Cotyle albiventris, *Licht. Nomencl. Av.* p. 61 (1854).

Cotyle paludicola, *Sundev. Krit. Framst., Levaill.* p. 52 (1857); *Grill, Zool. Anteckn.* p. 36 (1858); *Heugl. Ibis*, 1859, p. 339 (pt.); *Kirk, Ibis*, 1864, p. 326; *Gurney, t. c.* p. 347; *Heugl. Orn. N.O.-Afr.* i. p. 167 (1869, pt.); *Sharpe, P. Z. S.* 1870, p. 302; *id. Cat. Afr. B.* p. 45 (1871); *Ayres, Ibis*, 1874, p. 102; *Buckley, t. c.* p. 375; *Shelley, Ibis*, 1875, p. 68; *Butler, Feilden, & Reid, Zool.* 1882, p. 251; *Sharpe, ed. Layard's B. S. Afr.* p. 300 (1883).

Cotile paludicola, *Gray, Hand-l. B.* i. p. 74, no. 877 (1869); *Ayres, Ibis*, 1880, p. 260.

Adult. General colour above uniform brown, rather paler towards the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater coverts dark brown with lighter brown edges, the innermost greater coverts lighter and more ashy towards the tips; bastard-wing, primary-coverts, and quills dark brown, the inner secondaries edged with lighter brown; tail-feathers dark brown; lores dusky brown; cheeks, throat, and breast brown, with a slight hoary shade on the throat; sides of the body brown like the breast; centre of abdomen, lower flanks, and under tail-coverts white; thighs brown; axillaries and under wing-coverts brown, the coverts near the edge of the wing edged with whitish; quills dusky below: "bill and feet black; iris dark hazel" (*Buckley*). Total length 4·8 inches, culmen 0·3, wing 4·15, tail 2·3, tarsus 0·45.

Obs. In Capt. Shelley's collection is a specimen, killed by himself in the Cape Colony, which has the whole under surface brown, including the under tail-coverts. A similar specimen, but rather darker on the lower parts, was obtained by Major Butler near Newcastle in June, and Canon Tristram has another bird from the Transvaal. I have been unable to account for these variations in plumage, and am uncertain whether they are simply the very old birds, or constitute a melanistic variety. The Natal birds have more white on the abdomen than those from the Cape; and one from the Zambesi has the white on the lower parts still more extended, leading on towards *C. minor* of North-eastern Africa.

Young. Differs from the adult in having sandy-rufous edges to the feathers of the upper parts and in having the under surface likewise washed with rufous.

Hab. South Africa, from the Cape Colony to Natal and the Transvaal, extending to the Zambesi region. Of doubtful occurrence in N.E. Africa, where it has probably been confounded with *C. minor*.

a. Ad. sk.	Shupanga, Zambesi, April 1882.	Sir J. Kirk [C.].
b. Ad. sk.	Natal.	R. B. Sharpe, Esq.
c. Ad.; *d*, *e*. Juv. sk.	South Africa (*Layard*).	R. B. Sharpe, Esq.

Subsp. *a*. **Cotile minor.**

Cotyle minor, *Cab. Mus. Hein.* Th. i. p. 49 (1850); *Heugl. Orn. N.O.-Afr.* i. p. 166 (1869); *Blanf. Geol. & Zool. Abyss.* p. 350 (1870); *Sharpe, P. Z. S.* 1870, p. 303; *Shelley, B. Egypt*, p. 124 (1872); *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 122 (1884).
Cotyle littoralis, *Hempr. & Ehr. MSS.*; *Licht. Nomencl.* p. 61 (1854).
Cotile minor, *Gray, Hand-l. B.* i. p. 74, no. 878 (1869).
? Cotyle palustris, pt., *Heugl. Orn. N.O.-Afr.* i. p. 167 (1869).

Adult. Similar to *C. paludicola*, but smaller; the brown of the throat extending on to the breast and having a mark of silvery grey down the centre; remainder of abdomen and under tail-coverts white. Total length 4·5 inches, culmen 0·25, wing 3·9, tail 1·7, tarsus 0·3.

Young (one of the types of *C. littoralis*, H. & E.). Very pale

brown washed with sandy rufous, the feathers broadly edged with this colour, the rump and upper tail-coverts nearly uniform rufous; wing-coverts and quills darker brown, edged with sandy rufous; ear-coverts and sides of face pale brown, the lores and feathers of the head washed with rufous; throat and chest white, washed with pale rufous; sides of breast brown; centre of breast, abdomen, and under tail-coverts white; flanks brown washed with sandy rufous. (*Mus. G. E. Shelley.*)

Hab. North-eastern Africa.

a. ♀ ad. sk.	Lake Ashangi, Abyssinia, May 4, 1868.	W. T. Blanford, Esq. [C.].
b. ♂ ad. sk.	Angollala, Shoa, May 1842 (*Harris*).	India Museum.

Subsp. β. Cotile cowani.

Cotile cowani, *Sharpe, Journ. Linn. Soc., Zool.* xvi. p. 322 (1882).

Adult female. General colour above dark sooty brown, slightly paler on the lower back and rump; wing-coverts like the back, the inner greater coverts and inner secondaries rather lighter and with slightly paler margins; primary-coverts and quills very dark brown; tail-feathers very dark brown, with narrow paler edgings, the outermost feathers very narrowly fringed with white; lores blackish; ear-coverts and sides of face dark sooty brown, the cheeks and throat ashy brown; remainder of under surface of body dark ashy brown, including the thighs; lower abdomen whitish; under tail-coverts pure white; axillaries and under wing-coverts dark ashy brown like the breast, the edge of the wing with paler ashy margins to the feathers; quills dark brown below, rather more ashy along the inner web. Total length 4·8 inches, culmen 0·25, wing 3·65, tail 1·9, tarsus 0·4.

There is no difference in colouring in the sexes. The male measures—total length 4·7 inches, wing 3·65, tail 1·9, tarsus 0·4.

The young bird differs from the adult in having rufous margins to the feathers of the upper surface, wing-coverts, and secondaries, while the throat and breast are also suffused with rufous.

Hab. Ankáfana Forest, Betsileo, S.E. Madagascar.

a, b. ♂ ♀ ad. sk.	Ankáfana Forest, March 1881.	Rev. W. Deans Cowan [C.]. (Types of species.)
c. ♂; *d, e.* ♀ ad.; *f, g.* ♀ juv. sk.	Ankáfana Forest, March 1881.	Rev. W. Deans Cowan [C.].

Subsp. γ. Cotile sinensis.

Hirundo chinensis, *J. E. Gray in Hardw. Illustr. Ind. Zool.* i. pl. 35. fig. 3 (1830–32).

Hirundo brevicaudata, *McClell. P. Z. S.* 1839, p. 156; *Gray, Gen. B.* i. p. 58 (1845).

Hirundo sinensis, *Jerd. Madr. Journ.* xi. p. 238 (1840); *Blyth, J. A. S. Beng.* xvi. p. 119 (1847); *id. Cat. B. Mus. As. Soc.* p. 199 (1849).

Cotyle brevicaudata, *Boie, Isis*, 1844, p. 170.

Hirundo minuta, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 9. fig. 2 (no. 333); *id. in Gray's Zool. Misc.* p. 82 (1844).
Hirundo subsoccata, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 9. fig. 1 (no. 332); *id. in Gray's Zool. Misc.* p. 82 (1844).
Cotyle sinensis, *Gray, Cat. Fissir. Brit. Mus.* p. 30 (1848); *Bp. Consp.* i. p. 342 (1850); *Cass. Cat. Hirund. Philad. Mus.* p. 12 (1853); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 96 (1854); *Jerd. B. Ind.* i. p. 164 (1862), iii. p. 875 (1864); *Swinh. Ibis*, 1863, p. 259, 1866, p. 134; *Blyth, t. c.* p. 338; *Beavan, Ibis*, 1869, p. 404; *Godwin-Austen, J. A. S. Beng.* xxxix. p. 266 (1870); *Swinh. P. Z. S.* 1871, p. 347; *Adam, Str. F.* 1873, p. 370; *Hume, Str. F.* 1874, p. 469, 1875, p. 452; *Blyth & Wald. B. Burm.* p. 127 (1875); *Fairb. Str. F.* 1876, p. 254; *Butler, Str. F.* 1877, p. 227; *David & Oust. Ois. Chine*, p. 128 (1877); *Anders. Rep. Zool. Exped. Yun-nan, Birds*, p. 651 (1878); *Hume & Davison, Str. F.* 1878, p. 45; *Davids. & Wend. Str. F.* 1878, vol. ii. p. 76; *Ball, t. c.* p. 202; *Cripps, t. c.* p. 257; *Hume, Str. F.* 1879, p. 84; *Scully, t. c.* p. 234; *Doig, t. c.* p. 370; *Butler, Cat. B. Sind etc.* p. 13 (1879); *id. Cat. B. S. Bomb. Pres.* p. 14 (1880); *Murray, Vertebr. Faun. Sind*, p. 103 (1884).
Cotyle subsoccata, *Adams, P. Z. S.* 1858, p. 495, 1859, p. 176; *Jerd. B. Ind.* i. p. 163 (1862); *Blyth, Ibis*, 1866, p. 338; *Jerd. Ibis*, 1871, p. 353.
Cotyle riparia (*nec L.*), *Swinh. Ibis*, 1861, p. 328, 1863, p. 89.
Cotile sinensis, *Gray, Hand-l. B.* i. p. 73, no. 865 (1869); *Hume, Nests and Eggs Ind. B.* p. 82; *id. Str. F.* 1873, p. 164; *Oates, B. Brit. Burm.* i. p. 309 (1883).
Cotile subsoccata, *Hume, Nests and Eggs Ind. B.* p. 82 (1873).
Cotile obscurior, *Hume, Str. F.* 1875, p. 43.
? Cotyle obsoleta, *Legge, B. Ceylon*, p. 599 (1879).

Adult male. General colour above glossy brown, rather paler towards the rump and upper tail-coverts; wings a little darker brown than the back, with edgings of slightly paler brown, as well as on the inner secondaries; bastard-wing, primary-coverts, and quills dark brown; tail-feathers dark brown; lores, feathers round the eye, and ear-coverts brown; throat and breast ashy brown; lower breast, abdomen, and under tail-coverts white; flanks slightly washed with brown; thighs brown; axillaries and under wing-coverts brown like the breast but a little darker; quills dusky below, rather browner along the inner webs: "bill black; gape pale fleshy; iris dark brown; feet dusky brownish, claws dusky" (*Scully*). Total length 3·9 inches, culmen 0·25, wing 3·45, tail 1·6, tarsus 0·4.

Adult female. Like the male in plumage. Total length 4 inches, culmen 0·25, wing 3·3, tail 1·55, tarsus 0·35.

Young. Much lighter brown than the adults, and shaded with sandy rufous, all the feathers broadly edged with the latter colour, producing a nearly uniform rufous appearance on the lower back and rump; underneath, the portions of the throat and breast which are brown in the adult are pale sandy rufous.

Hab. From Scinde throughout the greater part of India, probably extending to Ceylon; eastwards ranging through Assam, the Burmese countries, and Southern China. Philippines.

a, *b*. Ad. sk.	India.	Gould Collection.
c. Juv. sk.	India.	Purchased.
d. Juv. sk.	Bengal.	India Museum.
e. Ad. sk.	Scinde (*Dr. Gould*).	India Museum.
f. Ad. sk.	Punjab.	India Museum.
g. ♂ ad. sk.	N.W. India.	Capt. Stackhouse Pinwill [P.].
h, *i*. Ad. sk.	Nepal.	B. H. Hodgson, Esq. [P]. (Types of *H. subsoccata*.)
k, *l*. Ad.	Nepal.	B. H. Hodgson, Esq. [P.]. (Types of *H. minuta*.)
m, *n*. Ad.; *o*. Juv. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
p. Juv. sk.	Nepal (*Hodgson*).	India Museum.
q, *r*. Ad. sk.	Assam (*McClelland*).	India Museum. (Type of *H. brevicaudata*.)
s. ♀ ad. sk.	Wau, Pegu, June 26, 1875.	E. W. Oates, Esq. [C.].
t. ♂ ad. sk.	Second defile of Irawady River, March 6, 1875.	Dr. J. Anderson [C.].
u. Ad. sk.	Takow, Formosa, Jan. (*Swinhoe*).	R. B. Sharpe, Esq. [P.].
v. Ad. sk.	Philippine Islands.	H. Cuming, Esq. [C.].

4. Cotile fuligula.

L'Hirondelle fauve, *Levaill. Ois. d'Afr.* v. p. 156, pl. 246; *Sundev. Krit. Framst., Levaill.* p. 52 (1857).
Hirundo fuligula, *Licht. in Forst. Descr. Anim.* p. 55 (1844); *Grill, Zool. Anteckn.* p. 36 (1858).
Hirundo hyemalis, *Forster, Descr. Anim.* p. 55 (1844).
Cotyle fuligula, *Gray, Gen. B.* i. p. 60 (1845); *id. Cat. Fissir. Brit. Mus.* p. 29 (1848); *Bp. Consp.* i. p. 342 (1850); *Cab. Mus. Hein.* Th. i. p. 164 (1850); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 12 (1853); *Hartl. Orn. Westafr.* p. 28 (1857); *id. J. f. O.* 1861, p. 103; *Gurney, Ibis*, 1865, p. 264; *Layard, B. S. Afr.* p. 57 (1867); *Bocage, Jorn. Lisb.* 1868, p. 40; *Sharpe, P. Z. S.* 1870, p. 299 (pt.); *id. Cat. Afr. B.* p. 45 (1871); *Gurney in Anderss. B. Dam. Ld.* p. 52 (1872); *Shelley, Ibis*, 1875, p. 68; *Ayres, Ibis*, 1876, p. 424, 1878, p. 407, 1879, p. 291; *Bocage, Orn. Angola*, p. 187 (1881); *Salvin, Cat. Strickl. Coll.* p. 153 (1882); *Butler, Feilden, & Reid, Zool.* 1882, p. 250; *Sharpe, ed. Layard's B. S. Afr.* p. 360 (1883).
Cotile fuligula, *Gray, Hand-l. B.* i. p. 73, no. 874.

Adult male. General colour above dark sooty brown, the head slightly more dusky than the back; wing-coverts and quills darker brown than the back, the inner greater coverts and scapulars of the same sooty brown as the back; tail-feathers dark brown, all but the two centre feathers and the outermost with a large round white spot on the inner web; lores blackish; ear-coverts and sides of neck dark sooty brown like the back; throat and breast tawny rufous, extending over the abdomen; sides of breast, flanks, abdomen, and under tail-coverts dark sooty brown; axillaries and under wing-coverts rufous, with sooty-brown bases, causing a mottled appearance near the edge of the wing; quills sooty brown below, paler along the inner web: "bill black; legs brown; iris brown" (*T. L.*

Ayres). Total length 5 inches, culmen 0·4, wing 5·05, tail 2·1, tarsus 0·45. (*Mus. G. E. Shelley.*)

Adult female. Similar to the male in colour. Total length 5·4 inches, culmen 0·4, wing 5, tail 2·15, tarsus 0·45. (*Mus. G. E. Shelley.*)

Young. Only differs from the adult in having rufous edgings to the feathers of the upper parts, lower abdomen, and under tail-coverts.

Obs. As with *C. paludicola*, *C. minor*, and *C. sinensis*, there seem to be three races of sooty-brown Crag-Martins with rufous throats, represented by forms occupying nearly the same areas of distribution as the three birds above alluded to. Writing in 1870, I ventured to differ from Dr. Finsch's determination of Mr. Jesse's Abyssinian specimens as *C. fuligula*, and believed that they belonged to a small race of *C. rupestris*. A larger experience of this group of Crag-Martins has induced me to modify this opinion, and I consider now that Dr. Finsch was more in the right than I was. The Abyssinian specimens certainly belong to *C. rufigula*, a Martin of the *C.-fuligula* group, but smaller in size, deeper sooty brown in colour, and with much less extent of rufous underneath. The spotting on the throat in one of the Abyssinian specimens mentioned by me in 1870 is, I find on reexamination of the individual bird, due to abrasion of the plumage, and is too faintly pronounced to be compared with the distinct spotting on the chin seen in every specimen of true *C. rupestris*. The spots are scarcely visible in the examples collected by Harris in Shoa.

Hab. South Africa, from the Cape Colony to the Transvaal on the east, and to Angola on the west coast.

a, *b*. Ad. sk.	Cape Town (*Layard*).	R. B. Sharpe, Esq.
c. Ad. sk.	Table Mountain.	R. B. Sharpe, Esq. [P.].
d. Ad. sk.	Kingwilliamstown.	Capt. H. Trevelyan [P.].
e. ♀ juv. sk.	Pinetown, Natal, April 29 (*T. L. Ayres*).	R. B. Sharpe, Esq. [P.].
f. ♀ ad. sk.	Daviep, Damara Land, Oct. 27, 1860 (*C. J. Andersson*).	R. B. Sharpe, Esq.

Subsp. *a*. Cotile rufigula.

Cotyle fuligula (*nec Licht.*), *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 96 (1854); *Heugl. Orn. N.O.-Afr.* i. p. 164 (1869); *Blanf. Geol. & Zool. Abyss.* p. 350 (1870); *Finsch, Trans. Z. S.* vii. p. 219 (1870); *Sharpe, P. Z. S.* 1870, p. 299 (pt.).
Cotile rufigula, *Fischer & Reichenow, J. f. O.* 1884, p. 53.
Cotyle rufigula, *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 122 (1884).

Adult. Similar to *C. fuligula*, but conspicuously smaller and darker, and having the throat much lighter rufous. Total length 5 inches, culmen 0·35, wing 4·65, tail 2·05, tarsus 0·4.

The other specimens collected by Sir W. C. Harris measure 4·6 inches in the wing.

Hab. N.E. Africa.

a. Ad. sk.	Abyssinia (*Jesse*).	R. B. Sharpe, Esq.
b, *c*, *d*. Ad. sk.	Shoa (*Harris*).	India Museum.
e. ♂ ad. sk.	Angollala, Shoa, May 1842 (*Harris*).	India Museum.

Subsp. β. Cotile concolor.

Hirundo concolor, *Sykes, P. Z. S.* 1832, p. 83; *Jerd. Madr. Journ.* xi. p. 238 (1840); *Gray, Gen. B.* i. p. 58 (1845); *Blyth, J. A. S. Beng.* xvi. p. 119 (1847); *id. Cat. B. Mus. As. Soc.* p. 199 (1849).
Biblis concolor, *Less. Compl. Buff.* viii. p. 495 (1837).
Cotyle concolor, *Boie, Isis*, 1844, p. 170; *Bp. Consp.* i. p. 342 (1850); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 12 (1853); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 97 (1854); *Jerd. B. Ind.* i. p. 165 (1862); *Blanf. Ibis*, 1867, p. 463; *Butler, Str. F.* 1877, p. 277.
Cotile concolor, *Gray, Hand-l. B.* i. p. 73, no. 873 (1869); *Hume, Nests and Eggs Ind. B.* p. 83 (1873); *Aitken, Str. F.* 1875, p. 214; *Butler, t. c.* p. 453; *Hume, t. c.* p. 453; *id. Str. F.* 1876, p. 35.
Ptyonoprogne concolor, *Adam, Str. F.* 1873, p. 370; *Fairb. Str. F.* 1876, p. 254; *Davids. & Wenden, Str. F.* 1878, vol. ii. p. 77; *Hume, Str. F.* 1879, p. 84; *Butler, Cat. B. Sind etc.* p. 13 (1879); *id. Cat. B. S. Bomb. Pres.* p. 14 (1880).

Adult male. General colour above uniform dark sooty brown; wing-coverts like the back; the bastard-wing, primary-coverts, and quills dark brown, externally washed with the same brown as the back; tail-feathers dark brown, with a white spot on the inner web of all but the two centre feathers and the outer one on each side; head like the back; lores, sides of face, ear-coverts, and cheeks uniform dark brown, with a few fulvous streaks only on the cheeks; throat and chest dull rufescent, streaked with dusky brown, the feathers being mesially centred with this colour; breast, abdomen, flanks, and under tail-coverts uniform dark sooty brown, with a few of the feathers of the abdomen paler-edged; axillaries and under wing-coverts dark brown with rufous edges; quills dusky brown below. Total length 4·8 inches, culmen 0·35, wing 4·05, tail 1·85, tarsus 0·35.

Obs. The specimens from the North-western Himalayas appear to me to belong to a lighter form than typical *C. concolor* from Southern India, and to have the rufescent shade extended more over the breast. In the Museum series also there are specimens which show a faint trace of a spot on the outer tail-feather as well as on the centre ones.

Young. Differs from the adult in having pale rufous edges to the feathers of the lower back, rump, and upper tail-coverts.

Hab. Southern India and the greater part of the Peninsula except Lower Bengal, extending into Cutch and Kattiawar and occurring on Mount Aboo.

a, b, c, d. Ad. sk.	Deccan (*Sykes*).	India Museum. (Types of species.)
e. Ad. sk.	Madras.	T. C. Jerdon, Esq. [P.].
f. ♂ ad. sk.	Rajkote, Kattiawar, Nov. 4, 1871.	Major J. Hayes Lloyd [P.].
g, h, i, k. Ad.; *l, m.* Juv. sk.	N. Bengal.	Capt. Stackhouse Pinwill [P.].
n. Ad. sk.	Behar.	B. H. Hodgson, Esq. [P.].

o. Ad. sk.	Bundelkund, Dec. 14 (*G. F. L. Marshall*).	R. B. Sharpe, Esq. [P.].
p. ♀ ad. sk.	Mhow, Nov. 13.	Col. C. Swinhoe [P.].
q. ♂ juv. sk.	Mhow, Oct.	Col. C. Swinhoe [P.].

5. Cotile rupestris.

Hirundo rupestris, *Scop. Ann.* i. p. 167 (1769); *Temm. Man. d'Orn.* i. p. 431 (1815); *Werner, Atlas, Chelidones*, pl. 4 (1827); *Ménétr. Cat. rais. Cauc.* p. 45 (1832); *Naum. Vög. Deutschl.* vi. p. 91, pl. 146. figs. 1 & 2 (1833); *Gould, B. Eur.* ii. pl. 56 (1837); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 199 (1840); *Blyth, J. A. S. Beng.* xvi. p. 119 (1847); *id. Cat. B. Mus. As. Soc.* p. 198 (1849); *Linderm. Vög. Griechenl.* p. 118 (1860); *Dubois, Ois. d'Eur.* pl. 33 (c. 1862); *Bree, B. Eur.* ii. pl. 184 (1864); *Borggr. Vogelf. Norddeutschl.* p. 100 (1869).

Hirondelle grise des rochers, *Montb. Hist. Nat. Ois.* vi. p. 641 (1779).

Rock Swallow, *Lath. Gen. Syn.* ii. pt. 2, p. 569 (1783).

Crag Swallow, *Lath. tom. cit.* p. 570 (1783).

Hirundo montana, *Gm. Syst. Nat.* i. p. 1020 (1788); *Roux, Orn. Prov.* pl. 142 (1825).

Chelidon rupestris, *Boie, Isis*, 1822, p. 550.

Cotyle rupestris, *Boie, Isis*, 1826, p. 971; *Keys. u. Blas. Wirb. Eur.* p. lxi (1840); *Gray, Gen. B.* i. p. 60 (1845); *id. Cat. Mamm. etc. Nepal pres. Hodgs.* p. 55 (1846); *id. Cat. Fissir. Brit. Mus.* p. 29 (1848); *Bp. Consp.* i. p. 341 (1850); *Cab. Mus. Hein.* Th. i. p. 50 (1850); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 12 (1853); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 95 (1854); *Jaub. et Barth.-Lapomm. Rich. Orn.* 1859, p. 313 (1859); *Tristr. Ibis*, 1859, p. 434; *Jerd. B. Ind.* i. p. 166 (1862); *Tristr. Ibis*, 1863, p. 366; *Giglioli, t. c.* p. 474; *id. Ibis*, 1865, p. 51; *Filippi, Viagg. Pers.* p. 346 (1865); *Wright, Ibis*, 1865, p. 464; *Chambers, Ibis*, 1867, p. 103; *Tristr. t. c.* p. 363; *Drake, t. c.* p. 425; *Saunders, Ibis*, 1869, p. 392; *Heugl. Orn. N.O.-Afr.* i. p. 163 (1869); *Wyatt, Ibis*, 1870, p. 12; *Elwes & Buckley, t. c.* p. 200; *Blanf. Geol. & Zool. Abyss.* p. 350 (1870); *Sharpe, P. Z. S.* 1870, p. 300; *Fritsch, Vög. Eur.* tab. xxiv. fig. 6 (c. 1870); *Salvad. Faun. Ital., Ucc.* p. 53 (1871); *Jerd. Ibis*, 1871, p. 353; *Shelley, B. Egypt*, p. 122 (1872); *Brooke, Ibis*, 1873, p. 237; *Hume & Henders. Lahore to Yark.* p. 84 (1873); *Severtz. Turkest. Jevotn.* p. 67 (1873); *Dresser, B. Eur.* iii. p. 513, pl. 164 (1874); *Irby, B. Gibr.* p. 104 (1875); *Lilford, Ibis*, 1875, p. 17; *Dresser, Ibis*, 1876, p. 189; *Finsch, Ibis*, 1877, p. 51; *Prjev. in Rowley's Orn. Misc.* ii. p. 162 (1877); *Butler, Str. F.* 1877, p. 227; *Danf. Ibis*, 1878, p. 8; *Scully, Str. F.* 1879, p. 234; *Irby, Ibis*, 1879, p. 344; *Finsch, Reis. West-Sibir.* p. 40 (1879); *Bogdanoff, B. Cauc.* p. 117 (1879); *Wardlaw Ramsay, Ibis*, 1880, p. 48; *Radde, Orn. Cauc.* p. 36 (1884).

Hirundo rupicola, *Hodgs. J. A. S. Beng.* v. p. 781 (1836).

Biblis rupestris, *Less. Compl. Buff.* viii. p. 495 (1837); *Degl. et Gerbe, Orn. Eur.* i. p. 597 (1867); *Doderl. Avif. Sicil.* p. 147 (1869).

Hirundo inornata, *Jerd. Madr. Journ.* xiii. p. 173 (1844).

Ptyonoprogne rupestris, *Reichenb. Syst. Av.* pl. lxxxvii. fig. 6 (1850); *Loche, Expl. Sci. Algér., Ois.* ii. p. 68 (1867); *Swinh. P. Z. S.* 1871, p. 347; *Hume, Nests and Eggs Ind. B.* p. 84 (1873); *id. Str. F.* 1873, p. 2; *Scully, Str. F.* 1876, p. 131; *Fairb. t. c.*

p. 254; *David & Oust. Ois. Chine*, p. 129 (1877); *Butler, Cat. B. Sind etc.* p. 13 (1879); *id. Cat. B. S. Bomb. Pres.* p. 14 (1880).
Cotile rupestris, *Gray, Hand-l. B.* i. p. 73, no. 872 (1869); *Butler, Str. F.* 1875, p. 453; *Hume, l. c.*; *Wardlaw Ramsay, Ibis*, 1880, p. 48; *Biddulph, Ibis*, 1881, p. 47; *Giglioli, t. c.* p. 192; *Scully, t. c.* p. 427; *Dixon, Str. F.* 1882, p. 561; *Seebohm, Ibis*, 1883, p. 22; *Severtz. t. c.* pp. 70, 81; *Irby, t. c.* p. 183; *Tristr. Faun. & Flor. Palest.* p. 62 (1884).
Cotyle (Ptyonoprogne) rupestris, *Blanf. East. Persia*, ii. p. 216 (1876).

Adult. General colour above light ashy brown, a little darker on the head, the rump and upper tail-coverts decidedly lighter; wing-coverts and quills dark brown, the inner greater coverts and inner secondaries paler and more like the back; tail-feathers dark brown, all but the two centre ones and the outermost on each side unspotted, the remainder with a large oval white spot on the inner web; lores, cheeks, and ear-coverts dull brown; under surface of body creamy buff, becoming deep sandy buff on the lower breast and abdomen; the chin and upper throat spotted with dusky; flanks, vent, and under tail-coverts dull smoky brown, the latter slightly edged with rufous; axillaries and under wing-coverts dull smoky brown with faint rufous margins, more distinct on the small coverts near the edge of the wing; quills dusky brown below, more ashy along the inner web: "bill black; legs and feet fleshy, claws dusky; iris dark brown" (*Scully*). Total length 4·8 inches, culmen 0·4, wing 4·9, tail 2·05, tarsus 0·4.

The sexes are alike in plumage.

Young. Differs from the adult bird in being rather darker on the upper parts; the feathers on the back and scapulars edged with dull rufous; secondaries distinctly edged with white; upper tail-coverts margined with dull white; underparts rather duller than in the adult bird. (*Dresser.*)

Hab. Southern Europe and countries bordering the Mediterranean. Mountains of N.E. Africa and Palestine, ranging to the Caucasus and Central Asia, the Himalayas and Nilghiris; occurring also on the mountains of Mongolia and Northern China.

a. Ad. sk.	Berne, Switzerland.	R. B. Sharpe, Esq. [P.].
b. Ad. st.	Italy.	Purchased.
c. ♀ ad. sk.	Piedmont, May 7 (*Salvadori*).	R. B. Sharpe, Esq. [P.].
d. Ad. sk.	Corsica.	J. Whitehead, Esq. [P.].
e. ♂ ad. sk.	Salonica.	Gould Collection.
f,g. Ad. juv. sk.	Spain.	R. B. Sharpe, Esq. [P.].
h. Ad. sk.	"Soto Ababil."	Gould Collection.
i. Ad. sk.	Tangiers.	Gould Collection.
k. Ad. st.	Tangiers.	Purchased.
l. Ad. sk.	Tangiers.	R. B. Sharpe, Esq. [P.].
m. ♂ ad. sk.	Near Senafé, Abyssinia, Feb. 22, 1868.	W. T. Blanford, Esq. [C.].
n. ♂ ad. sk.	Gennesareth, March 5, 1884 (*Tristram*).	F. D. Godman and O. Salvin, Esqrs. [P.].
o. ♀ ad. sk.	Ain Fijeh, Palestine (*Tristram*).	F. D. Godman and O. Salvin, Esqrs. [P.].
p,q. ♂ ♀ ad. sk.	Jericho.	Canon Tristram [C.].

r. ♂ ad. sk.	Lepsa, Ala Tau, May 14.	Dr. O. Finsch [C.].
s. ♀ ad. sk.	Karij Valley, Elburz Mountains, Aug. 14, 1872.	W. T. Blanford, Esq. [C.].
t. Ad. sk.	Ladakh.	Purchased.
u. ♀ ad. sk.	Gilgit, March 24, 1879.	Col. J. Biddulph [C.].
v. Ad. sk.	Cashmere (*Bellew*).	India Museum.
w, *x*, *y*. Ad. sk.	N.W. India.	Capt. Stackhouse Pinwill [P.].
z. Ad. sk.	Madras.	T. C. Jerdon, Esq. [P.]. (Type of *H. inornata*.)
a', *b'*. Ad. sk.	Nilghiri Hills.	W. Davison, Esq. [P.].
c', *d'*. Ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.]. (Types of *H. rupicola*.)
e', *f'*. Ad. sk.	Nepal (*Hodgson*).	India Museum.
g'. Ad. sk.	Bootan (*Pemberton*).	India Museum.

6. Cotile obsoleta.

Cotyle rupestris (*non Scop.*), *Rüpp. Syst. Uebers.* p. 22 (1845); *Vierth. Naum.* 1855, p. 471; *Heugl. Syst. Uebers.* p. 17; *E. C. Taylor, Ibis*, 1859, p. 47; *Adams, Ibis*, 1864, p. 14; *Hartm. J. f. O.* 1864, p. 387; *E. C. Taylor, Ibis*, 1867, p. 57.

Cotyle obsoleta, *Cab. Mus. Hein.* Th. i. p. 50 (1850); *Heugl. Orn. N.O.-Afr.* i. p. 163 (1869); *Sharpe, P. Z. S.* 1870, p. 301; *Shelley, Ibis*, 1871, p. 136; *id. B. Egypt*, p. 125 (1872); *Blanf. Ibis*, 1875, p. 214; *Dresser, B. Eur.* iii. p. 521, pl. 165 (1875); *Antin. Mem. Soc. Geogr. Ital.* i. p. 183 (1878); *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 249 (1884); *Murray, Vertebr. Faun. Sind*, p. 104 (1884).

Cotyle cahirica, *A. E. Brehm, J. f. O.* 1853, p. 452, *et Extrah.* p. 96; *Blasius, Ibis*, 1861, p. 295.

Cotyle cachirica, *C. L. Brehm, Naum.* 1855, p. 271.

Cotyle palustris (*nec Steph.*), *Tristr. Ibis*, 1867, p. 363; *Wyatt, Ibis*, 1870, pp. 2, 9, 12.

Cotyle paludicola (*nec V.*), *Tristr. Ibis*, 1869, p. 436.

Cotile obsoleta, *Gray, Hand-l. B.* i. p. 74, no. 876 (1869); *Hume, Str. F.* 1876, p. 40; *Tristr. Faun. & Flor. Palest.* p. 62 (1884).

Ptionoprogne pallida, *Hume, Str. F.* 1873, pp. 1, 417; *Blanf. Ibis*, 1873, p. 214.

Cotyle (Ptyonoprogne) obsoleta, *Blanf. East. Pers.* ii. p. 217 (1876).

Ptyonoprogne obsoleta, *Hume, Str. F.* 1879, p. 84; *Butler, Cat. B. Sind etc.* p. 13 (1879).

Adult. Above very pale greyish brown, dark on the head and nape; wing-coverts and quills darker brown, with light edgings to the feathers; rump and upper tail-coverts very pale greyish brown: tail-feathers light greyish brown, with a white spot on the inner web of all the feathers except the two middle and the outer ones; chin whitish, unspotted; throat and breast white, with a very faint fulvous tinge; under tail-coverts darker greyish brown, with faint edgings of pale brown; axillaries pale brown; under wing-coverts a little darker brown, with rufescent margins; bill dark brown; feet light brown. Total length 5 inches, culmen 0·35, wing 4·5, tail 2·1, tarsus 0·4.

The sexes are alike in colouring, and a pair from Palestine measure as follows :—

	Total length.	Wing.	Tail.	Tarsus.
	in.	in.	in.	in.
a. ♂ ad. Mt. Quarantania (*H. B. T.*)	4·8	4·55	2·0	0·35
b. ♀ ad. Engedi (*H. B. T.*)	4·9	4·55	2·15	0·4

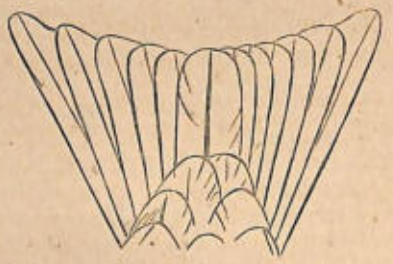
Specimens from Baluchistan appear to be identical, and measure 4·5 to 4·6 inches in the wing.

Hab. From S. Arabia to Egypt and Nubia, Palestine, to Baluchistan and Sind.

a. Ad. sk.	Fifth Cataract of the Nile.	F. Galton, Esq. [P.].
b, c. Ad. sk.	Egypt.	Sir S. Baker [P.].
d. Ad. sk.	Egypt.	Gould Collection.
e. Ad. st.	Egypt.	W. B. Turnbull, Esq. [P.].
f. ♀ ad. sk.	Engedi, Palestine.	Canon Tristram [C.].
g. ♂ ad. sk.	Mt. Quarantania.	Canon Tristram [C.].
h. ♂ ad. sk.	Aden, March 10.	Major Yerbury [P.].
i. Ad. sk.	Near Gwadar, Baluchistan, Jan. 23, 1872.	W. T. Blanford, Esq. [C.].
k. ♂ ad. sk.	Jalk, Baluchistan, March 17, 1872.	W. T. Blanford, Esq. [C.].

3. TACHYCINETA *.

	Type.
Tachycineta, *Cab. Mus. Hein.* Th. i. p. 48 (1850)	T. thalassinus.
Iridoprocne, *Coues, B. Color. Vall.* p. 412 (1878)	T. bicolor.



Tail of *Tachycineta thalassinus*, showing absence of indentation on outer feather.

Range. The whole of the New World.

Key to the Species.

a. With a white rump.
a'. With the greater wing-coverts and secondary quills broadly edged with white ..... *albiventris*, p. 113.

* The following species has been by many authors referred to the present genus, but I am unable to identify it :—

TACHYCINETA MACULATUS.

Hirondelle à ventre tacheté de Cayenne, *Daub. Pl. Enl.* 546. fig. 2.
Hirundo maculata, *Bodd. Tabl. Pl. Enl.* p. 32 (1783); *Gray, Gen. B.* i. p. 58; *id. Hand-l. B.* i. p. 71, no. 846.

b'. Greater wing-coverts never edged with white; inner secondaries sometimes narrowly margined (young or winter plumage).
a''. Upper surface steel-blue or greenish blue; no black spot on fore part of cheeks.
a'''. Larger; wing 4·45 inches: supraloral streak of white broad and distinct and extending across the base of the forehead ..... *leucorrhous*, p. 114.
b'''. Smaller; wing 3·9 inches: supraloral streak smaller and not extending across the base of the forehead .... *albilinea*, p. 115.
b''. Upper surface purplish blue; a black spot on the fore part of the cheeks..... *meyeni*, p. 116.
b. Rump never white; throat pure white, like rest of under surface.
c'. Upper surface uniform glossy green; upper tail-coverts like the back ..... *bicolor*, p. 117.
d'. Upper tail-coverts bluish green or purplish, contrasting with the back, which is oily or bronzy green.
c''. Smaller: with a large white patch on each side of the rump; tail nearly square; a white spot above and behind the eye ..... *thalassinus*, p. 119.
d''. Larger: no white patch on side of rump; tail very much forked ..... *cyaneoviridis*, p. 121.

1. Tachycineta albiventris.

Hirondelle à ventre blanc de Cayenne, *Daubent. Pl. Enl.* vii. pl. 546. fig. 1.
White-winged Swallow, *Lath. Gen. Syn.* ii. pt. 2, p. 577 (1783).
Hirundo albiventer, *Bodd. Tabl. Pl. Enl.* p. 32 (1783, *ex Daubent.*); *Gray, Gen. B.* i. p. 58 (1845); *id. Hand-l. B.* i. p. 71, no. 843 (1869).
Hirundo leucoptera, *Gm. Syst. Nat.* i. p. 1022 (1788); *D'Orb. & Lafr. Syn. Av.* p. 69 (1837); *Cab. in Schomb. Reis. Guian.* iii. p. 672 (1848); *Tschudi, Faun. Peruan.* p. 132 (1855).
Herse leucoptera, *Bp. Consp.* i. p. 341 (1850).
Petrochelidon leucoptera, *Cab. Mus. Hein.* Th. i. p. 49 (1850).
Petrochelidon albiventer, *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 5 (1853).
Cotyle leucoptera, *Burm. Th. Bras.* iii. p. 143 (1856).
Petrochelidon albiventris, *Sclater, Cat. Amer. B.* p. 41 (1862); *id. & Salv. P. Z. S.* 1866, p. 178; *Pelz. Orn. Bras.* pp. 17, 402 (1871); *id. Ibis*, 1873, p. 108.
Hirundo albiventris, *Baird, Review Amer. B.* p. 302 (1865); *Scl. & Salv. P. Z. S.* 1867, p. 569; *Wyatt, Ibis*, 1871, p. 323; *Layard, Ibis*, 1873, p. 378; *Scl. & Salv. Nomencl. Av. Neotr.* p. 14 (1873); *iid. P. Z. S.* 1873, p. 258; *iid. P. Z. S.* 1879, p. 595; *Tacz. P. Z. S.* 1882, p. 8; *id. Orn. Pérou*, i. p. 239 (1884).
? Hirundo leucorrhoa, *Forbes, Ibis*, 1881, pp. 315, 329.

Adult male. General colour above glossy steel-blue, rather greener on the back, the hind neck and mantle mottled with white

bases to the feathers; wing-coverts like the back; inner greater coverts and secondaries blue-black, broadly and conspicuously edged with white on the outer webs and round the tip; the bastard-wing, primary-coverts, and primaries black, glossed with dull steel-blue externally; lower back, rump, and upper tail-coverts white, with blackish shaft-lines; longer upper tail-coverts steel-blue; tail-feathers blackish glossed with steel-blue, with white bases to the inner web; lores and feathers below the eye velvety black; ear-coverts and sides of neck glossy steel-blue like the head; cheeks and entire under surface of body pure white, including the thighs and under tail-coverts, under wing-coverts and axillaries; quills dusky below: "legs greyish brown; iris greyish brown" (*Neuwied*). Total length 4·8 inches, culmen 0·4, wing 4, tail 1·9, tarsus 0·45.

Adult female. Similar to the male in colour. Total length 4·8 inches, culmen 0·35, wing 4, tail 1·85, tarsus 0·4. (*Mus. Salvin and Godman.*)

Obs. There does not seem to be much variation in plumage in this species beyond that the shade of colour on the back varies between green and blue, and the shaft-lines on the breast are more distinct in some than in others; they apparently become obscured in winter, as is the case with other Swallows of this group. Sometimes the streaks on the rump and upper tail-coverts are very broad.

Hab. South America, from Southern Brazil, throughout Amazonia, Peru, Columbia, Ecuador, and Guiana.

a. Ad. st.	South America.	Lieut. Maw [P.].
b, c. Ad.; *d.* Juv. sk.	South America.	Sclater Collection.
e. ♂ ad. sk.	Bartica Grove, British Guiana, May 8 (*H. Whitely*).	R. B. Sharpe, Esq. [P.].
f, g. ♀ ad. sk.	Camacusa, British Guiana, May 22 (*H. Whitely*).	R. B. Sharpe, Esq. [P.].
h. Ad. sk.	Demerara.	Purchased.
i. Ad. sk.	R. Oyapock, Cayenne (*Jelski*).	Sclater Collection.
k. Ad. sk.	Brazil.	Gould Collection.
l. Ad. sk.	Brazil.	R. B. Sharpe, Esq. [P.].
m. Ad. sk.	Para, Lower Amazons.	R. Graham, Esq. [P.].
n, o. Ad. sk.	Upper Amazons.	H. W. Bates, Esq. [C.].
p, q. Ad. sk.	Pebas, E. Peru (*Hauxwell*).	Sclater Collection.
r. Ad. sk.	R. Amazon.	R. B. Sharpe, Esq. [P.].

2. Tachycineta leucorrhous.

Golondrina rabadilla blanca, *Azara, Apunt.* ii. p. 509 (1802); *Hartl. Ind. Azara*, p. 19 (1847).

Hirundo leucorrhoa, *Vieill. N. Dict. d'Hist. Nat.* xiv. p. 519 (1817); *Gray, Gen. B.* i. p. 58 (1845); *Burm. Th. Bras.* iii. p. 144 (1856); *Baird, Rev. Amer. B.* p. 301 (1865); *Scl. & Salv. P. Z. S.* 1868, p. 139, 1869, p. 597; *Gray, Hand-l. B.* i. p. 72, no. 847 (1869).

Hudson, *P. Z. S.* 1872, pp. 606, 845, 846; *Scl. & Salv. Nomencl. Av. Neotr.* p. 14 (1873); *iid. P. Z. S.* 1873, p. 185; *Durnf. Ibis*, 1876, p. 158, 1877, pp. 32, 169, 1878, p. 392; *Gibson, Ibis*, 1880, p. 14; *White, P. Z. S.* 1882, p. 596; *Tacz. Orn. Pérou*, i. p. 241 (1884).

Hirundo frontalis (*nec Q. & G.*), *Gould in Darw. Voy. 'Beagle,' Birds*, p. 40 (1841).

Herse leucorrhoa, *Bp. Consp.* i. p. 341 (1850).

Petrochelidon leucorrhoa, *Cab. Mus. Hein.* Th. i. p. 48 (1850).

Hirundo gouldii, *Cass. Proc. Acad. Philad.* 1850, p. 69.

Petrochelidon leucorrhoa, *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 5 (1853); *Pelz. Orn. Bras.* pp. 17, 402.

Hirundo leucopyga, *Licht. Nomencl. Av.* p. 61 (1854).

Adult (?) *female*. General colour above glossy steel-green; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills blackish, externally washed with green, the inner secondaries margined with white towards the tip of the outer web and at the end; rump white, slightly washed with smoky brown, some of the feathers tipped with dusky brown; upper tail-coverts dull steel-green; tail-feathers blackish with a slight greenish gloss; crown of head like the back; lores velvety black; base of forehead white, extending a little backwards above the lores; ear-coverts blackish glossed with steel-green; cheeks and entire under surface of body white, including the thighs and under tail-coverts; flanks and sides of body washed with smoky brown; axillaries and under wing-coverts pale smoky brown, the external coverts slightly mottled with blackish bases; quills dusky below; "bill, legs, and iris black" (*A. Peel*). Total length 5·5 inches, culmen 0·35, wing 4·45, tail 2, tarsus 0·5.

Hab. Southern Brazil, Paraguay, and Patagonia; Peru.

a. ♀ imm. sk.	Uruguay, Aug. 1877.	Alan Peel, Esq. [C.].
b. Ad. sk.	La Plata (*Hudson*).	Sclater Collection.
c. Ad. sk.	Brazil (*Mus. Hafn.*).	Sclater Collection.
d. ♀ ad. sk.	Cosnipata, Peru, Oct. 1 (*H. Whitely*).	Sclater Collection.

3. Tachycineta albilinea.

Petrochelidon leucoptera (*nec Gm.*), *Lawr. Ann. Lyc. N. Y.* vii. p. 317 (1861).

Petrochelidon albilinea, *Lawr. Ann. Lyc. N. Y.* viii. p. 2 (1863); *Salvin, Ibis*, 1866, p. 192.

Petrochelidon littorea, *Salvin, P. Z. S.* 1863, p. 189; *Scl. & Salv. P. Z. S.* 1864, p. 347.

Hirundo albilinea, *Baird, Review Amer. B.* p. 300 (1865); *Scl. & Salv. Nomencl. Av. Neotr.* p. 14 (1873); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. pl. xv. fig. 1 (1883).

Tachycineta albilinea, *Lawr. Mem. Bost. Soc. N. H.* ii. p. 271 (1874); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 235 (1883).

Hirundo albilineata, *Gray, Hand-l. B.* i. p. 71, no. 845 (1869).

Hirundo leucopygia, *Tacz. P. Z. S.* 1880, p. 192; *id. Orn. Pérou*, i. p. 240 (1884).

Adult male. General colour above glossy steel-blue, more or less inclining to steel-green, the bases to the feathers of the mantle ashy white; rump white, with hair-like blackish shaft-lines;

scapulars like the back; wing-coverts blackish, externally edged with steel-blue; greater coverts, bastard-wing, primary-coverts, and quills blackish, with a slight gloss of dull blue or steel-green on their outer webs; upper tail-coverts steel-blue; tail-feathers black with a steel-blue gloss; head like the back; lores and feathers below the eye velvety black, with a narrow supraloral streak of white; upper half of ear-coverts and sides of neck glossy steel-green; lower half of ear-coverts, cheeks, throat, and under surface of body pure white; the long under tail-coverts with remains of blackish longitudinal streaks near their ends; the fore neck, breast, and sides of body rather more ashy than the rest of the under surface and having narrow dusky shaft-lines; on the sides of the upper breast a small patch of steel-green; axillaries and under wing-coverts ashy whitish, with hair-like shaft-lines of dusky brown; quills below dusky, lighter along the inner webs. Total length 4·8 inches, culmen 0·4, wing 3·9, tail 1·9, tarsus 0·4. (*Mus. Salvin and Godman.*)

Obs. The white margins to the inner secondaries, from which this species derives its name, are either signs of immaturity or winter plumage. In most Swallows these white edgings are indications of youth; but all the specimens as yet examined by me which possessed this character have been also in winter plumage, which in this species is not difficult to tell, as the under surface is much whiter than in the summer plumage, there being much less of the ashy-brown shade on the breast and sides, while the dusky shaft-lines are almost entirely obscured.

The winter plumage is more steel-green than the summer dress, the wearing of the feathers being accompanied by a steel-blue lustre in the place of the green.

H. albilinea appears to be a small representative of *H. leucorrhoa*. The following characters distinguish it from that species:—1st, its smaller size; 2nd, its greener style of plumage; 3rd, the less extended white rump-band, which has always a dusky shaft-streak; 4th, the breast always more or less distinctly streaked with dusky; 5th, the white line over the eye not continued across the base of the forehead.

The young birds of *H. albilinea* never show the obscure brown tips to the rump-feathers which are always a sign of immaturity in *H. leucorrhoa*.

Hab. Central America, from Mexico to Panama, and extending to Peru.

a. Ad. sk.	Guatemala (*Salvin*).	Sclater Collection.
b. Ad. sk.	Panama (*McLeannan*).	Osbert Salvin, Esq.
c. Ad. sk.	Panama (*McLeannan*).	Sclater Collection.
d. Juv. sk.	Chepen, Peru (*Stolzmann*).	Sclater Collection.

4. Tachycineta meyeni.

Hirundo leucopyga (*nec Licht.*), *Meyen, Nova Acta Acad. L.-C. Nat. Cur.* 1834, *Suppl.* p. 73, pl. 10.

Petrochelidon meyeni, *Bp. Consp.* i. p. 48 (1850); *Cass. Cat. Hirund.*

Mus. Philad. Acad. p. 5 (1853); *Sclater, Cat. Amer. B.* p. 40 (1862).

Hirundo meyeni, *Baird, Review Amer. B.* p. 302 (1865); *Sclater, P. Z. S.* 1867, pp. 321, 337; *id. & Salv. Ibis*, 1868, p. 185; *Gray, Hand-l. B.* i. p. 72, no. 848 (1869); *Scl. & Salv. P. Z. S.* 1870, p. 499, & 1878, p. 432; *iid. Report Voy. 'Challenger,'* ii. *Birds*, p. 100 (1881).

Adult. General colour above glossy purplish blue, with a broad white band across the rump; lesser and median wing-coverts like the back; greater coverts blackish, washed with blue externally; bastard-wing, primary-coverts, and quills blackish, with a dull bluish gloss; upper tail-coverts purplish blue; tail-feathers blackish washed with steel-blue; lores and feathers below the eye velvety black, with a very narrow supraloral white line; head, ear-coverts, and sides of neck purplish blue like the back; cheeks and under surface of body white, with a dusky spot at the base of the cheeks; on the chest a slight shade of smoky brown; sides of upper breast brown with a wash of purplish blue; sides of body also washed with pale smoky brown; axillaries and under wing-coverts smoky brown; quills dusky brown below, lighter on the inner webs. Total length 5·5 inches, culmen 0·35, wing 4·2, tail 2·1, tarsus 0·45.

Young. Differs from the adult in being duller in colour and much browner on the head and wings, with narrow ashy-whitish edges to the inner secondaries; supraloral white streak more distinct; throat tinged with sandy buff; fore neck and chest mottled with brown bases, and the centre of the chest with a distinct brown streak caused by the brown inner webs of some of the feathers; gape yellow. (*Mus. Salvin and Godman.*)

Hab. From Chili and Southern Patagonia to Bolivia.

a. Ad. sk.	Chili.	Sclater Collection.
b, c. Ad.; *d.* Juv. sk.	Chili.	E. C. Reed, Esq. [C.].
e, f. ♂ ad.; *g.* ♂ imm. sk.	Chili (*Reed*).	R. B. Sharpe, Esq. [P.].
h. Ad. sk.	Prov. Colchagua (*Reed*).	R. B. Sharpe, Esq. [P.].
i. ♀ ad.; *k, l.* ♂ ♀ juv. sk.	Sandy Point, Straits of Magellan.	Voy. H.M.S. 'Challenger'
m. Ad. sk.	Bolivia (*Brydges*).	Sclater Collection.

5. Tachycineta bicolor.

Hirundo bicolor, *Vieill. Ois. Amér. Sept.* i. p. 61, pl. 31 (1807) *Audub. B. Amer.* pl. xcviii. (c. 1826); *Swains. and Richards. Faun Bor.-Amer., Birds*, p. 328 (1831); *Audub. Orn. Biogr.* i. p. 49 (1831); *id. B. Amer.* 8vo, i. p. 175, pl. 46 (1840); *Gray, Gen. B.* i. p. 58 (1845); *Lembeye, Av. Cuba*, p. 46 (1850); *Wolley, Zool.* 1853 p. 3806; *Cass. Ill. B. Calif.* p. 244 (1856); *Brewer, N. Amer. Ool* p. 100, pl. 4 (1837); *Newton, P. Z. S.* 1860, p. 131; *Baird, Cass., & Lawr. B. N. Amer.* p. 310 (1860); *Blakist. Ibis*, 1862, p. 4, 1863 p. 64; *Gray, Cat. Brit. B.* p. 33 (1863); *Baird, Review Amer. B* p. 297 (1865); *id. Ibis*, 1867, pp. 273, 275, 289; *Brown, Ibis*, 1868 p. 420; *Dall & Bann. Trans. Chicago Acad.* i. p. 279 (1869)

Cooper, B. Calif. p. 106 (1870); *Harting, Handb. Brit. B.* p. 125 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 14 (1873); *Maynard, B. Florida*, p. 72 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* p. 344, pl. 16. fig. 8 (1874); *B. O. U. List Brit. B.* p. 43 (1883)

Hirundo viridis, *Wils. Amer. Orn.* v. p. 44, pl. 38. fig. 3 (1812).

Hirundo leucogaster, *Steph. Gen. Zool.* x. p. 106 (1817).

Chelidon viridis, *Boie, Isis*, 1826, p. 971, 1828, p. 316.

Hirundo prasina, *Licht. Preis-Verz. mex. Vög.* 1830, p. 2; *Cab. J. f. O.* 1863, p. 58.

Chelidon bicolor, *Less. Compl. Buff.* viii. p. 494 (1837); *Bp. Comp. List B. Eur. & N. Amer.* p. 8 (1838).

Chelidon leucogastra, *Boie, Isis*, 1844, p. 171.

Herse bicolor, *Bp. Consp.* i. p. 341 (1850).

Tachycineta bicolor, *Cab. Mus. Hein.* Th. i. p. 48 (1850); *Gundl. J. f. O.* 1861, p. 339; *Allen, Bull. Mus. C. Zool.* ii. p. 269 (1871); *Coues, Key N. Amer. B.* p. 113 (1872); *id. B. N.-West*, p. 86 (1874); *id. B. Colorado Vall.* p. 413 (1878); *Cory, B. Bahama Isl.* p. 80 (1880); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 235 (1883).

Petrochelidon bicolor, *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 4 (1853); *Scl. P. Z. S.* 1857, p. 201, 1859, p. 364; *id. & Salv. Ibis*, 1859, p. 13; *Scl. Cat. Amer. B.* p. 40 (1862).

Iridoprocne bicolor, *Coues, Check-list*, p. 42 (1882); *id. Key N. Amer. B.* p. 322 (1884).

Hirundo bicolor, var. vespertina, *Cooper, Amer. Nat.* x. p. 91 (1876); *id. Proc. U. S. Nat. Mus.* ii. p. 246 (1880); *Ridgw. Pr. U.S. Nat. Mus.* iii. p. 234 (1880).

Adult male. General colour above glossy steel-blue, greener on the head, the scapulars like the back; lesser and median wing-coverts steel-blue; greater coverts, bastard-wing, primary-coverts, and quills blackish, the former edged and the latter glossed externally with steel-blue, duller on the primary-coverts and quills; tail-feathers blackish with a steel-blue gloss; lores and feathers below the eye velvety black; upper edge of the ear-coverts and sides of the neck steel-green like the head; cheeks, remainder of ear-coverts, and entire under surface of body white, with a patch of brown glossed with steel-green on the sides of the upper breast; axillaries and under wing-coverts smoky brown, those near the edge of the wing dull whitish; quills below dusky brown: "feet flesh-coloured" (*Audubon*). Total length 5·3 inches, culmen 0·35, wing 4·55, tail 2·25, tarsus 0·45.

Adult female. Similar to the male.

Adult in winter plumage. Exactly like the summer plumage, but much greener above. In breeding-dress the green appears to get worn off and exchanged for steel-blue, and the green gloss disappears almost entirely from the sides of the upper breast, which becomes brown.

Young. Very different from the adults and without metallic gloss. General colour above sooty or mouse-brown; the wing-coverts and quills like the back; lores blackish; ear-coverts like the head; cheeks, throat, and under surface of body white; fore neck and chest pale mouse-brown, darker on the sides of the chest and flanks; gape yellow.

Hab. The whole of North America from Alaska southwards, ranging throughout Central America in winter to Guatemala. Cuba.

a. Ad. sk.	N.W. America.	Capt. Collinson [P.].
b. Ad. sk.	Fort Norman.	Sir John Richardson [P.].
c. Ad. sk.	Fort Simpson.	B. R. Ross, Esq. [P.].
d. ♂ juv. sk.	Lake of Woods (*G. Dawson*).	N. A. Boundary Commission [P.].
e. Ad. sk.	Niagara Falls.	Gould Collection.
f. ♂ ad. sk.	S. Juan Island.	Dr. Lyall [P.].
g, *h*. Ad. sk.	Sumass Prairie, Brit. Columbia (*J. K. Lord*).	N. A. Boundary Commission [P.].
i, *k*. ♂ ♀ ad. sk.	West side of Rocky Mountains.	J. K. Lord, Esq. [P.].
l. Juv. sk.	Oyster Bay, Long Island, N. Y., Aug. 26 (*Roosevelt*).	U.S. Nat. Museum [P.].
m. ♂ ad. sk.	Berry Lake, N. Indiana, July 4 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
n. Ad. sk.	California.	J. Gould, Esq.
o. ♂ ad. sk.	Northern California, June 11 (*C. H. Townsend*).	U.S. Nat. Museum [P.].
p. Ad. st.	North America.	
q. Ad. sk.	North America (*Bell*).	Sclater Collection.
r. Ad. st.	Mexico.	Purchased.
s. Juv. sk.	Mexico.	Purchased.
t, *u*. ♂ ♀ ad. sk.	Mexico.	R. B. Sharpe, Esq. [P.].
v. Ad. sk.	Mirador, Mexico, June (*Dr. C. Sartorius*).	U.S. Nat. Museum [P.].
w. Ad. sk.	Guatemala.	Gould Collection.

6. Tachycineta thalassinus.

Hirundo thalassina, *Swains. Phil. Mag.* new ser. i. p. 366 (1827); *Audub. B. Amer.* pl. 385; *id. Orn. Biogr.* iv. p. 597 (1838); *Bp. Comp. List B. Eur. & N. Amer.* p. 9 (1838); *Audub. B. Amer.* i. p. 186, pl. 49 (1840); *Gray, Gen. B.* i. p. 58 (1845); *Denny, P. Z. S.* 1847, p. 38; *Cass, Ill. B. Calif.* p. 245 (1856); *Brewer, N. Amer. Ool.* i. p. 102 (1857); *Baird, Cass., & Lawr. B. N. Amer.* p. 311 (1860); *Baird, Review Amer. B.* p. 299 (1865); *Brewer, Amer. Nat.* i. p. 122 (1867); *Brown, Ibis*, 1868, p. 421; *Gray, Hand-l. B.* i. p. 71, no. 841 (1869); *Cooper, B. Calif.* p. 107 (1870); *Sel. & Salv. Nomencl. Av. Neotr.* p. 14 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* p. 347, pl. 16, fig. 11 (1874).

Cecropis thalassinus, *Less. Compl. Buff.* viii. p. 499 (1837).

Chelidon thalassina, *Boie, Isis*, 1844, p. 171.

Herse thalassina, *Bp. Consp.* i. p. 341; *Coues, Ibis*, 1865, pp. 159, 163.

Tachycineta thalassina, *Cab. Mus. Hein.* Th. i. p. 48 (1850); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 547 (1869); *Coues, Key N. Amer. B.* p. 113 (1872); *id. B. N.-West*, p. 86; *Ridgw. Rep. Surv. 40th Par.* iv. p. 443 (1877); *Coues, B. Color. Vall.* p. 419 (1878); *id. Check-list N. Amer. B.* p. 42 (1882); *id. Key N. Amer. B.* 2nd ed. p. 323 (1884).

Petrochelidon thalassina, *Cass. Cat. Hirund. Philad. Mus.* p. 5 (1853); *Sel. & Salv. Ibis*, 1859, p. 13; *id. & Salv. P. Z. S.* 1864, p. 173.

Tachycineta thalassinus, *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 233 (1883).

Adult male. General colour above dark green with a slight

bronzy shade, becoming rather more bluish green on the rump and mixed with purple on the upper tail-coverts; on each side of the rump a white patch; scapulars green like the back; wing-coverts black, the lesser and median series tipped with bluish green; greater coverts, bastard-wing, primary-coverts, and quills black, externally glossed with deep indigo; tail-feathers also black with a bluish gloss; crown of head bronzy green; occiput and nape purple, with a concealed narrow collar of ashy round the hind neck, caused simply by the grey bases of the feathers; lores dusky; feathers over the eye extending down behind the latter, ear-coverts, cheeks, sides of face, and entire under surface of body silky white; under wing-coverts and axillaries smoky brown with whitish edgings, the coverts near the edge of the wing and the lower greater coverts darker; quills dusky brown below, rather more ashy on their inner edge; "bill black; feet brownish black; iris brown; mouth pale yellow" (*Coues*). Total length 4·5 inches, culmen 0·3, wing 4·3, tail 1·65, tarsus 0·45.

After breeding the plumage gets much worn and the colours consequently duller, the throat and breast being particularly abraded and more ashy. As the purplish lustre disappears from the back, the latter becomes greener and the head more oily green, the last remains of purple being on the nape and hind neck.

Adult female. Distinguished from the male by the colour of the ear-coverts, which, with the spot behind the eye, are dusky brown with a purplish gloss; the entire head is likewise bronzy brown with a purplish gloss, without the oil-green lustre seen in the adult male; the cheeks, throat, and fore neck are also washed with dingy brown. Total length 4·3 inches, culmen 0·3, wing 4·25, tail 0·6, tarsus 0·4.

Adult male in winter plumage (Dueñas; O. Salvin). Differs from the breeding-plumage in being entirely bronzy or oil-brown washed with purple. This purple shade is much more strongly pronounced than in summer, and the remains of it are noticeable in the description of the breeding-dress, where the purple occiput and hind neck are alluded to as contrasting with the crown. The green and purple shades on the rump and upper tail-coverts are the same in both seasons, and the under surface and facial markings do not differ.

Young birds are easily recognizable by the broad white tips to the inner secondaries, and by the general oily-green colour of the upper parts, with only a slight purplish gloss; the blue and purple lustre on the rump and upper tail-coverts is also less developed. The white on the underparts is somewhat more dingy than in the adults.

The young male resembles the old female at first as regards the facial markings, and the white eye-spot and ear-coverts are gradually assumed. The white tips to the inner secondaries are gradually worn off, and by March of the succeeding year have nearly disappeared.

Hab. Middle and Western North America, wintering in Central America as far as Guatemala.

a, b. ♂ ad.; *c, d.* Juv. sk.	West side of Rocky Mountains.	J. K. Lord, Esq. [P.].

e, f. ♂ ♀ ad. sk.	Vancouver Island, May 10 (*A. Forrer*).	R. B. Sharpe, Esq. [P.].
g. ♀ ad. sk.	Colorado (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
h. ♀ ad. sk.	Fort Garland, Colorado, June 5 (*H. W. Henshaw*).	U.S. Nat. Museum [P.].
i. ♂ ad. sk.	Colorado Springs, Colorado, May 31 (*H. W. Henshaw*).	U.S. Nat. Museum [P.].
k. ♂ ad. sk.	Big Trees, California, Aug. (*L. Belding*).	U.S. Nat. Museum [P.].
l. Ad. sk.	California.	Hugh Cuming, Esq.
m. Ad. sk.	California.	J. Gould, Esq.
n. Pull. sk.	Fort Defiance, New Mexico, July (*R. Ridgway*).	U.S. Nat. Museum [P.].
o, p. ♂ ♀ ad. sk.	Presidio, near Mazatlan, March 4 (*A. Forrer*).	R. B. Sharpe, Esq. [P.].
q. ♂ ad. sk.	Puebla, Mexico, March (*A. Boucard*).	Gould Collection.
r, s. Ad. st.	Mexico.	Purchased.
t. Ad. sk.	Mexico (*De Saussure*).	Sclater Collection.

7. Tachycineta cyaneoviridis.

Hirundo cyaneoviridis, *Bryant, Proc. Bost. Soc. Nat. Hist.* vii. p. 111 (1859); *Baird, Review Amer. B.* p. 303 (1865); *Gray, Hand-l. B.* i. p. 72, no. 850 (1869); *Salvin, Ibis*, 1874, p. 307; *Cory, B. Bahama Isl.* p. 79 (1880).

Callichelidon cyaneoviridis, *Baird, Review Amer. B.* p. 297 (1865).

Hirundo (Callichelidon) cyaneoviridis, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 337, note (1874).

Adult male (Nassau, Bahamas, June 16, 1879; C. B. Cory). General colour above oil-green with a steel-blue gloss, the latter more pronounced on the lower rump and upper tail-coverts; wing-coverts blackish, externally steel-blue or bluish green, the least series greener and more like the back; bastard-wing, primary-coverts, and quills blackish, externally glossed with steel-blue, the secondaries rather brighter steel-blue, and green on their edges; tail much forked, the feathers black glossed with steel-blue; head and neck like the back, as also the sides of the crown and upper margin of the ear-coverts; lores blackish, as also the feathers immediately below the eye; cheeks, ear-coverts, and entire under surface of body white, including the under wing-coverts and axillaries; sides of upper breast like the back; quills dusky below: "bill and feet black" (*Cory*). Total length 5·9 inches, culmen 0·35, wing 4·6, tail 3, tarsus 0·45.

Differs from *T. thalassinus* by its strongly forked tail and larger size, in the absence of the white spot above the eye, and in the totally different colour of the upper parts, in which there is an absolute absence of any purplish shade.

Young (Nassau; C. B. Cory). Brown above with a strong lustre of oily green, a little more pronounced on the back and wing-coverts; head and upper tail-coverts more sooty brown, as also the upper margin of the ear-coverts; cheeks, ear-coverts, and under

surface of body white, with a patch of sooty brown on the sides of the upper breast. Total length 5·5 inches, culmen 0·4, wing 3·95, tail 2·2, tarsus 0·45. (*Mus. Salvin and Godman.*)

Hab. Bahama Islands.

a. Ad. sk.	Nassau, Bahamas (*C. B. Cory*).	Sclater Collection.

4. PHEDINA.

Type.
Phedina, *Bp. Rivist. Contemp., Torino*, 1857, p. 4..... P. borbonica.



Head of *Phedina borbonica*, to show the nostrils.

Range. Mauritius; Réunion; Madagascar.

1. Phedina borbonica.

Hirondelle de l'isle de Bourbon, *Daubent. Pl. Enl.* vii. pl. 544. fig. 2.
Wheat Swallow, *Lath. Gen. Syn.* ii. pt. 2, p. 581 (1783, *ex Daubent.*).
Hirundo borbonica, *Gm. Syst. Nat.* i. p. 1017 (1788, *ex Daubent.*); *Lath. Ind. Orn.* ii. p. 580 (1790); *Gray, Gen. B.* i. p. 58 (1845); *Schl. & Poll. Faune Madag., Ois.* p. 68 (1868); *Gray, Hand-l. B.* i. p. 71, no. 834 (1869).
Cotyle borbonica, *Bp. Consp.* i. p. 342 (1850).
Phedina borbonica, *Bp. Rivist. Contemp., Torino*, 1857, p. 4; *E. Newton, Ibis*, 1861, p. 271; *Maill. Notes Réunion*, p. 162 (1862); *E. Newt. Ibis*, 1862, p. 270, 1863, p. 340; *Coquerel, Alb. Réun.* 1865, pp. 19, 20, fig. 2; *Sharpe, P. Z. S.* 1870, p. 295; *id. Cat. Afr. B.* p. 45 (1871); *A. & E. Newt. Ibis*, 1876, p. 284; *Hartl. Vög. Madag.* p. 63 (1877).

Adult. Above dark greyish brown, the centres of the feathers marked down the shaft with a narrow streak of black, very distinct on the rump; wing-coverts dark blackish brown; quills black above, greyish underneath; tail blackish brown above, dark brown beneath, paler on the inner web; lores black; cheeks, sides of the neck and of the breast greyish brown, with darker shaft-stripes; rest of the under surface of the body white, longitudinally striped with dark brown, the upper part of the breast and flanks somewhat greyish; bill black; feet brown. Total length 5·4 inches, wing 4·65, tail 2.

Hab. Islands of Mauritius and Réunion.

a. ♂ ad. sk.	Mauritius, June 18 (*E. Newton*).	Sharpe Collection.
b. Ad. sk.	Mauritius.	Sharpe Collection.
c, d. ♂ ♀ ad. sk.	Réunion.	Purchased.

2. Phedina madagascariensis.

Progne borbonica (*nec Gm.*), *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 10 (1853).

Phedina madagascariensis, *Hartl. Faun. Madag.* p. 27 (1861); *Sharpe, P. Z. S.* 1870, p. 295; *id. Cat. Afr. B.* p. 46 (1871); *id. P. Z. S.* 1875, p. 78; *Hartl. Vög. Madag.* p. 65 (1877).

Phedina sp., *Roch & E. Newt. Ibis*, 1862, p. 270; *E. Newt. Ibis*, 1863, p. 340.

Phedina borbonica, var. madagascariensis, *Grandid. in Milne-Edwards & Grandid. H. N. Madag., Ois.* pls. 150, 151.

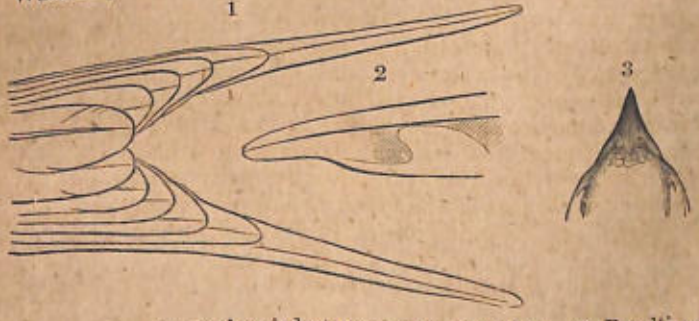
Adult. Above rather pale brownish grey, the shafts of all the feathers being distinctly marked; wing-coverts and quills blackish brown, the latter paler underneath; tail dark brown, somewhat lighter on the inner webs; lores black; cheeks, sides of the neck, and breast greyish brown with darker shaft-stripes; rest of the under surface of the body white, with thin longitudinal stripes; the lower part of the abdomen and under tail-coverts pure white, the shafts of the feathers only indicated by a narrow line of brown; sides of the breast and flanks greyish brown; bill black; feet dark brown. Total length 5·5 inches, wing 4·7, tail 2.

Hab. Madagascar.

a. Ad. sk.	Noce Vola, Madagascar (*A. Crossley*).	Sharpe Collection.
b. Ad. sk.	N. Madagascar.	Mr. A. Crossley [C.].
c. Ad. sk.	Madagascar.	Mr. A. Crossley [C.].

5. HIRUNDO.

	Type.
Hirundo, *Linn. Syst. Nat.* i. p. 343 (1766)	H. rustica.
Chelidon, *Forster, Syn. Cat. Br. B.* p. 55 (1817)	H. rustica.
Cecropis, *Boie, Isis*, 1826, p. 971	H. capensis.
Uromitrus, *Bp. Rivist. Contemp., Torino*, 1857, p. 4	H. filifera.
Hemicecrops, *Bp. tom. cit.* p. 4	H. dimidiata.
Lillia, *Boie, J. f. O.* 1858, p. 364	H. rufula.
Waldenia, *Sharpe, P. Z. S.* 1869, p. 461	H. nigrita.



1. Tail of *H. rustica*, to show indentations on outer feathers. 2. Penultimate tail-feather. 3. Head of *H. rustica*, to show nostrils.

Range. Cosmopolitan.

Key to the Species.

a. Lower back and rump blue.
a'. Head blue; forehead rufous.
a''. Throat intense rufous.
a'''. Larger; wing 4·5–4·8 inches: tail long in full-grown birds, and reaching beyond the tip of the wings; under tail-coverts rufous or tinged with rufous ..... *rustica* and allies, [pp. 126, 127.
a. With a complete band of blue-black across the fore neck, never broken through with the rufous of the throat.
a'. Underneath light rufous, or whitish tinged with rufous ..... *rustica*, p. 128.
β'. Underneath deep chestnut ..... *savignii*, p. 133.
β. With no complete band across the fore neck, the rufous of the throat descending and separating the blue-black colour into a half-crescent on each side.
γ'. Under surface white or slightly tinged with rufous ..... *gutturalis*, p. 134.
δ'. Under surface fawn-colour or cinnamon-rufous; the throat darker chestnut .. *erythrogastra*, [p. 137.
ε'. Under surface deep rufous, almost as dark as the throat ..... *tytleri*, p. 140.
b'''. Smaller; wing 4·15–4·2 inches: wing extending beyond the tips of tail; no band on the fore neck.
*a*⁴. No white spots on the tail-feathers..... *tahitica*, p. 141.
*b*⁴. Tail-feathers with white marks on the inner web.
*a*⁵. Under tail-coverts smoky brown.
*a*⁶. Spots on tail-feathers small and transverse ..... *javanica*, p. 142. / *neoxena*, p. 144.
*b*⁶. Spots on tail-feathers very large and occupying nearly half of the inner web ..... *angolensis*, p. 145.
*b*⁵. Under tail-coverts white ..... *lucida*, p. 145.
b''. Throat white or pale buff (young).
c'''. Larger; wing 4·9 inches: with a distinct black præpectoral collar ..... *albigularis*, p. 146.
d'''. Smaller; with the præpectoral collar interrupted in the centre ..... *æthiopica*, p. 146.
b'. Entire head blue.
c''. Belly white.
e'''. Secondaries externally white ..... *leucosoma*, p. 147.
f'''. Secondaries like the primaries ..... *dimidiata*, p. 148.
d''. Belly blue like the back.
g'''. Smaller; wing 4·3 inches: a white patch on the throat ..... *nigrita*, p. 148.
h'''. Larger; wing 4·5 inches: throat blue like the rest of the under surface ..... *atrocærulea*, p. 149.
e''. Entire under surface chestnut; under tail-coverts purplish blue ..... *nigrorufa*, p. 150.
c'. Head rufous, forming a cap ..... *smithii*, p. 150.
b. Rump dusky; head also dusky..... *griseopyga*, p. 152.

c. Rump rufous.
d'. Head rufous.
f''. Larger; wing 5·1 inches: under surface narrowly streaked ..... *cucullata*, p. 152.
g''. Smaller; wing 4·2 inches: under surface broadly streaked ..... *puella*, p. 154.
e'. Head blue like the back.
h''. With black shaft-streaks to the feathers of the under surface; these streaks sometimes nearly obsolete and hair-like, at other times coarse stripes.
i'''. Ground-colour of under surface fulvescent or whitish.
*c*⁴. Rump cinnamon-rufous, fading off into creamy-buff colour, which forms a contrasting cross band.
α. Larger; wing 4·7–5 inches ..... *rufula*, p. 156.
β. Smaller; wing 4·5 inches ..... *scullii*, p. 158.
*d*⁴. Rump uniform rufous, not shading off into paler creamy buff. ..... *daurica* and allies, [pp. 158, 159.
α. Striations on underparts emphasized and always distinguishable on breast as well as throat.
α'. Striations on underparts very distinct and often coarse, extending over the whole of the lower parts.
α''. Stripes on rump nearly obsolete .. *daurica*, p. 159. / *nipalensis*, p. 160.
β''. Stripes on rump very distinct.... *japonica*, p. 162. / *striolata*, p. 161.
β'. Striations on underparts very fine and scarcely distinguishable below the breast ..... *erythropygia*, [p. 164.
β. Striations on underparts scarcely perceptible and only seen on the throat and chest.
γ'. Larger; wing 4·7 inches: below fulvescent or pale rufous-buff; under wing-coverts the same .... *melanocrissa*, [p. 165.
δ'. Smaller; wing 4·4 inches: below silky white; under wing-coverts the same *domicella*, p. 165.
k'''. Ground-colour of under surface of body deep chestnut.
α. Larger; wing 4·95 inches: deep chestnut underneath, black shaft-streaks obsolete . *badia*, p. 166.
β. Smaller; wing 4·55 inches: black shaft-streaks on under surface distinct ..... *hyperythra*, p. 167.
i''. Under surface of body plain, without any shaft-streaks.
l'''. Smaller; wing less than 5·25 inches: throat rufous.
α. Larger: darker rufous below, the under tail-coverts paler rufous or buff..... *semirufa*, p. 167.
β. Smaller: lighter rufous below; under tail-coverts like abdomen ..... *gordoni*, p. 168.
m'''. Larger; wing 5·7 inches: throat whitish. [p. 168.
*e*⁴. No white spots on the tail-feathers..... *senegalensis*,
*f*⁴. Distinct white spots on the tail-feathers.. *monteiri*, p. 169.
d. Rump metallic green like the rest of the upper surface; below white ..... *euchrysea*, p. 170. / *sclateri*, p. 171.

Hirundo rustica and its allies.

The races of Chimney-Swallows are by no means easy to decipher, and they have been the subject of much discussion in ornithological works. I recognize five; and as the series in the British Museum is very large, illustrating the ranges of the Chimney-Swallows in a very complete manner, but few additional remarks will here be necessary.

Mr. Dresser, in the 'Birds of Europe,' does not distinguish the Eastern Chimney-Swallow (*H. gutturalis*) from *H. rustica*, and says that the latter merges gradually into *H. erythrogastra* as it proceeds eastwards. I think that he cannot have examined a sufficiently large series of full-plumaged birds from China and Japan (the breeding-quarters of *H. gutturalis*), or I believe he would have recognized what a distinct race it really is.

I say nothing about the probability of hybridization taking place between the various forms of *H. rustica*, for at present we have no positive evidence of such being the case; but I would draw attention to the fact that although, in my opinion, *H. savignii* does not occur in Palestine, the examples of *H. rustica* from that country are permanently more rufous than those from any part of Europe, and this may be due to a strain of *H. savignii* from adjoining localities. They are, however, always to be distinguished even from young *H. savignii*, and are to be matched by specimens from different parts of Europe.

The same difficulties attend the determination of the Swallows which winter in Burmah, where many specimens occur which are puzzling to the naturalist. They may be hybrids between the various races of *H. rustica*; and nothing but continued study by field-naturalists can solve these points in question. It seems to me that a case of hybridization between *H. rustica* and *H. tytleri* would result in offspring very difficult to distinguish from *H. erythrogastra*.

More recently, in his 'History of British Birds,' Mr. Seebohm has reviewed the question and recognizes five races. *H. rustica*, according to this author, has a wide summer range in Europe, extending to the Valley of the Yenesay, but it is said to winter in Africa and in "Scinde and West India." My experience is that it shares to a great extent the winter-quarters of the Eastern Chimney-Swallow, called by Mr. Seebohm *H. rustica* var. *gutturalis*, and it is quite possible that it accompanies the latter occasionally back to its summer home. It will be seen from the specimens enumerated below that there are many places where both races occur together in winter; and the Burmese countries appear to be the winter residence of at least four of the Chimney-Swallows—*H. rustica*, *H. gutturalis*, *H. erythrogastra*, and *H. tytleri*.

Unmistakable specimens of *H. rustica* occur in collections made still further to the eastward than Burmah; and I have seen examples with a complete breast-band from China and the Molucca Islands, localities where one would expect the *H.-gutturalis* form to reign

supreme. A curious fact is that there is never any difficulty in recognizing the birds from Japan as unmistakable *H. gutturalis* with the breast-band completely divided; and I have never seen an intermediate or doubtful specimen from the Japanese islands. A parallel case is known in the Blue Rock-Thrushes: the most typical specimens of *Monticola solitaria* occur in Japan; and it is not until China is reached that intermediate forms between it and *M. cyanea* are met with, the winter specimens from Burmah and the Moluccas being so thoroughly intermediate as to be accounted for only by the theory of hybridization of the two forms (*cf.* Seebohm, Cat. B. v. p. 318). A similar intermingling of the two races of Chimney-Swallow probably takes place likewise in the East; but I do not suppose that the examples of true *H. rustica* killed in Europe in the spring of the year, when the breast-band is often mixed with rufous, show a strain of *H. gutturalis*, but that the admixture of rufous in the breast-band constitutes a sign of an older bird, at least one of the third year. Some European examples are quite as white on the breast as typical *H. gutturalis*, but can always be distinguished by the perfect breast-band.

Speaking of *H. rustica* var. *horreorum*, Mr. Seebohm says that it winters in Burmah, "where it has been re-named *H. tytleri*." This is not strictly correct, for although specimens from Lake Baikal are identical with the North-American bird, and undoubted examples are in the British Museum from Burmah, yet they cannot be said to be identical with *H. tytleri*, which is a distinct race, leading on to *H. savignii* of Egypt, which it resembles in its deep chestnut under surface, while it retains the broken breast-band of the *H.-gutturalis* and *H.-horreorum* type. This dark form, *H. tytleri*, is represented by full-plumaged males from Irkutsk in the British Museum, as well as from Kamtschatka, while in the Salvin-and-Godman collection are unmistakable examples from Guatemala and Peru. Thus the range of *H. tytleri* is extended far to the north and west of its originally recorded habitat.

Mr. Seebohm next alludes to the Egyptian Swallow as *H. rustica*, var. *cahirica*, of which he gives the habitat as Egypt and Palestine, and says that it is "probably only subspecifically distinct, as intermediate forms frequently occur in Europe." I myself have never recognized them, although I have examined not only the large series in the British Museum, but those in the collections of Mr. Seebohm himself, Canon Tristram, Mr. Dresser, Capt. Wardlaw Ramsay, and Capt. Shelley. *H. savignii*, as it should be called, is a permanently chestnut-breasted form with a complete breast-band, and is, in my opinion, confined strictly to Egypt and Nubia. All the supposed examples of this species collected by Canon Tristram in Palestine are adult *H. rustica*, and I have examined many of them. They can be matched by birds killed in England.

When Mr. Seebohm speaks of *H. rustica*, var. *frontalis*, he means *H. neoxena* of Gould, the true *H. frontalis* of Quoy and Gaimard being from New Guinea and the same as *H. javanica* of Sparrman, as has been pointed out by Count Salvadori (Orn. Papuasia, etc. ii. p. 4).

1. Hirundo rustica.

L'Hirondelle de Cheminée, *Briss. Orn.* ii. p. 486 (1760); *Daubent. Pl. Enl.* vii. pl. 543. fig. 1; *Montb. Hist. Nat. Ois.* vi. p. 591, pl. 25. fig. 1 (1779).

Hirundo rustica, *Linn. Syst. Nat.* i. p. 343 (1766); *Temm. Man. d'Orn.* i. p. 427 (1820); *Roux, Orn. Provenç.* pl. 141 (1825); *Werner, Atlas, Chelidones*, pl. 1 (1827); *Ménétr. Cat. rais. Cauc.* p. 45 (1832); *Naum. Vög. Deutschl.* vi. pl. 145. fig. 1 (1833); *Gould, B. Eur.* ii. pl. 54 (1837); *Schl. & Susem. Vög. Eur.* vi. Taf. 2. fig. 1 (1839); *Macgill. Brit. B.* iii. p. 558 (1840); *Keys. u. Blas. Wirb. Eur.* p. 196 (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 201 (1840); *Yarrell, Brit. B.* ii. p. 213 (1843); *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 8 (no. 331); *id. in Gray's Zool. Misc.* p. 82 (1844); *Gray, Gen. B.* i. p. 57 (1845); *id. Cat. Fissir. Brit. Mus.* p. 22 (1848); *Blyth, Cat. B. Mus. As. Soc.* p. 197 (1849, pt.); *Thompson, N. H. Irel.* p. 374 (1849); *Bp. Consp.* i. p. 338 (1850); *Cab. Mus. Hein.* Th. i. p. 46 (1850); *Kjærb. Danm. Fugle*, pl. 14. fig. 4 (1852); *Schl. Vog. Nederl.* pl. 57 (1854); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 91 (1854, pt.); *Hewits. Eggs Brit. B.* i. p. 257, pl. 65. figs. 3, 4 (1856); *Sundev. Sv. Fogl.* pl. 17. fig. 5 (c. 1856); *Grill, Zool. Anteckn.* p. 35 (1858); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 307 (1859); *Salv. Ibis*, 1859, p. 334; *Linderm. Vög. Griechenl.* p. 117 (1860); *Naum. Vög. Deutschl.*, Anhang, xiii. Taf. 383. fig. 2 (1860); *Schl. Dier. Nederl. Vog.* pl. 6. fig. 4 (1861); *Hartl. J. f. O.* 1861, p. 103; *Jerd. B. Ind.* i. p. 157 (1862); *Gray, Cat. Brit. B.* p. 33 (1863); *Filippi, Viagg. Pers.* p. 346 (1865); *Bettoni, Ucc. Nidif. Lomb.* ii. tav. 30 (1865–70); *Degl. et Gerbe, Orn. Eur.* i. p. 587 (1867); *Loche, Expl. Sci. Algér., Ois.* ii. p. 64 (1867); *Borggr. Vogelf. Norddeutschl.* p. 100 (1869); *Doderl. Avif. Sicil.* p. 143 (1869); *Gray, Hand-l. B.* i. p. 68, no. 786 (1869); *Keul. Onze Vogels*, pl. 10 (1869); *Heugl. Orn. N.O.-Afr.* i. p. 150 (1869); *Godman, Azores*, p. 341 (1870); *Godw.-Aust. J. A. S. Beng.* xxxix. p. 94 (1870); *Fritsch, Vög. Eur.* Taf. 2. fig. 4 (1870); *Sharpe, P. Z. S.* 1870, p. 305; *id. & Dresser, t. c.* p. 244; *Gillett, Ibis*, 1870, p. 306; *Blanf. Geol. & Zool. Abyss.* p. 347 (1870); *Finsch & Hartl. Vög. Ostafr.* p. 134 (1870); *R. Gray, B. W. Scotl.* p. 205 (1871); *Jerd. Ibis*, 1871, p. 351; *Salvad. Faun. Ital., Ucc.* p. 51 (1871); *Sharpe, Cat. Afr. B.* p. 45 (1871); *Harting, Handb. Br. B.* p. 35 (1872); *Holdsw. P. Z. S.* 1872, p. 418; *Gurney, in Anderss. B. Dam. Ld.* p. 50 (1872); *Shelley, B. Egypt*, 1872, p. 120; *Godm. Ibis*, 1872, p. 61; *Antin. & Salvad. Viagg. Bogos*, p. 72 (1873); *Heugl. Orn. N.O.-Afr.* iv. *App.* p. lv (1873); *Hume & Henders. Lahore to Yark.* p. 176 (1873); *Severtz. Turkest. Jevotn.* p. 67 (1873); *Gould, B. Gt. Br.* ii. pl. 5 (1873); *Hume, Nests and Eggs Ind. B.* p. 72 (1873); *id. Str. F.* 1873, p. 164; *Adam, t. c.* p. 370; *Hume, Str. F.* 1874, p. 155; *Saxby, B. Shetl.* p. 147 (1874); *Bouvier, Cat. Ois. Marche*, p. 9 (1875); *Reichen. J. f. O.* 1875, p. 21; *Shelley, Ibis*, 1875, p. 67; *Newton, t. c.* p. 272; *Dresser, B. Eur.* iii. p. 477, pl. 160. fig. 1 (1875); *Blyth & Wald. B. Burm.* p. 126 (1875); *Harting, Summer Migr.* p. 170 (1875); *Irby, B. Gibr.* p. 103 (1875); *Fallon, Ois. Belg.* p. 123 (1875); *Hume, Str. F.* 1875, p. 451 (pt.); *Butler, t. c.*; *Brooks, t. c.* p. 230; *Brooks, Str. F.* 1876, p. 254; *Sharpe & Bouv. Bull. Soc. Zool. France*, i. p. 37 (1876); *Ayres, Ibis*, 1876, p. 424; *Barratt, t. c.* p. 202; *Blanf. East. Pers.* ii. p. 215 (1876); *Finsch, Ibis*, 1877, pp. 50, 57; *Davidson & Wend. Str. F.* 1878, vol. ii. p. 76; *Ball, t. c.* p. 202; *Legge, B. Ceylon*, p. 587 (1879); *Fischer*

& Reichen. J. f. O. 1879, p. 344; *Seebohm, Ibis*, 1879, p. 16; *Hume, Str. F.* 1879, p. 84; *Bogd. B. Cauc.* p. 115 (1879); *Butler, Cat. B. Sind &c.* p. 12 (1879); *id. Cat. B. Bomb. Pres.* p. 13 (1880); *Wardlaw Ramsay, Ibis*, 1880, p. 48; *Vidal, Str. F.* 1880, p. 43; *Newton, ed. Yarr. Brit. B.* ii. p. 340 (1880); *Collett, Norges Fugle*, p. 286 (1881); *Shelley, P. Z. S.* 1881, p. 565; *Giglioli, Elench. Ucc. Ital.* p. 64 (1881); *Biddulph, Ibis*, 1881, p. 47; *Scully, t. c.* p. 427; *Feilden, in Markham's Polar Reconn.* p. 338 (1881); *Reid, Str. F.* 1881, p. 16; *Davidson, Str. F.* 1882, p. 292; *Butler, Feilden, & Reid, Zool.* 1882, p. 251; *B.O.U. List Br. B.* p. 42 (1883); *Oates, B. Br. Burm.* i. p. 302 (1883, pt.); *Davison, Str. F.* 1883, p. 346; *Seebohm, Hist. Brit. B.* ii. p. 171, pl. 17 (1883); *Sharpe, ed. Layard's B. S. Afr.* p. 362 (1884); *Tristr. Faun. & Flor. Palest.* p. 61 (1884); *Radde, Orn. Cauc.* p. 36 (1884); *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 120 (1884); *Murray, Vertebr. Faun. Sind*, p. 102 (1884).

Chimney Swallow, *Lath. Gen. Syn.* ii. pt. 2, p. 561 (1783).

Hirundo domestica, *Pall. Zoogr. Rosso-Asiat.* i. p. 528 (pt., 1811); *Swinh. Ibis*, 1864, pp. 414, 420; *Wyatt, Ibis*, 1870, p. 10; *Severtz. Turkest. Jevotn.* p. 67 (1873).

Chelidon progne, *Forst. Syn. Cat. Brit. B.* p. 55 (1817).

Cecropis rustica, *Boie, Isis*, 1826, p. 971, et 1844, p. 174; *Less. Compl. Buff.* viii. p. 498 (1837).

Cecropis pagorum, *C. L. Brehm, Vög. Deutschl.* p. 138 (1831); *id. Naum.* 1855, p. 271.

Cecropis stabulorum, *Brehm, Naum.* 1855, p. 271.

Hirundo cahirica (*non Licht.*), *Hartl. Orn. W.-Afr.* p. 26 (1857); *Cass. Proc. Acad. N. Sci. Philad.* 1859, p. 32; *Blas. Naum.* 1859, p. 254; *Hartl. J. f. O.* 1861, p. 103; *Tristr. Ibis*, 1862, p. 278; *Gurney, Ibis*, 1866, p. 423; *Tristr. Ibis*, 1867, p. 361; *Loche, Expl. Sci. Algér., Ois.* ii. p. 67 (1867); *Saunders, Ibis*, 1869, p. 396; *Salvad. Ibis*, 1870, p. 153; *Saunders, t. c.* p. 299; *Elwes & Buckley, t. c.* p. 200.

Hirundo boissoneauti (*nec Temm.*), *Linderm. Vög. Griechenl.* p. 119 (1860); *Krüper, J. f. O.* 1860, p. 281.

Hirundo savignii (*nec Aud.*), *Tristr. Ibis*, 1864, p. 230.

Hirundo rustica orientalis (*nec Schl.*), *Wright, Ibis*, 1864, p. 57.

Hirundo riocouri (*nec Aud.*), *Gurney, jun., Ibis*, 1866, p. 423.

Chelidon rustica, *Stejn. Pr. U.S. Nat. Mus.* vi. p. 31 (1882).

Adult male in breeding-plumage. General colour above glossy purplish blue, the mantle slightly varied with white bases to the feathers; on the sides of the lower back a tuft of silky white plumes, some of which are edged with black; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills black, externally glossed with purplish blue, with somewhat of a steel-green appearance on some of the feathers; tail-feathers blackish, washed with steel-green, all but the centre feathers with a large rounded spot of creamy white on the inner web, becoming nger and more oblique on the outer feathers; head like the back, the pe varied with white bases to the feathers; forehead deep rufous; ores deep black; ear-coverts and feathers below the eye purplish blue; cheeks and throat deep rufous, separated from the breast by a broad collar of glossy purplish blue, slightly interspersed with a few rufous bars on the centre of the collar; fore neck and remainder of under surface pale rufous-buff, a little deeper on the vent and

under tail-coverts, the longest of the latter with a terminal spot of black, represented on some of the others by a blackish shaft-line; axillaries and under wing-coverts like the breast, the former a little deeper in colour; quills blackish below; bill black; feet black; iris dark brown. Total length 7·3 inches, culmen 0·35, wing 5·05, tail 4, tarsus 0·5.

Adult female. Very similar to the male in colour, and having, when old, the same rufescent tint on the breast, but generally rather paler below and having a somewhat shorter tail. Total length 6·6 inches, culmen 0·35, wing 4·65, tail 3·3, tarsus 0·5.

The black spot on the under tail-coverts is often shot away; it seems to narrow with age so as to become only a broad centre streak. It is only a spot in the younger birds.

Old birds are apparently much more rarely shot than young ones in their winter home, and are seldom seen in collections. Canon Tristram has a female from Natal, shot before the moult, with the long outer feathers of the adult bird; the upper plumage has worn to a bronzy shade, in the midst of which the new blue plumage is appearing. The forehead and throat do not bleach so perceptibly as in young birds.

Obs. Everything seems to prove that only the very old birds have the rufescent breast in spring, for I have before me several males killed in spring-time, which are very pale underneath and have perfectly defined black collars on their throats, whereas in the rufous-breasted specimens the centre of the black collar has rufous bars which break the continuity of the black collar, which is always more perfect in the birds with a white breast.

It is somewhat curious that the nestling birds approach the very old birds in their coloration, being not only of a pronounced rufescent colour underneath, but having also the black collar edged with rufous on some of its feathers.

On leaving the nest the young Swallows, especially the birds of the first brood, lose this rufescent tint rather quickly and become bleached, the forehead turning to white with exposure, and the throat fading to a pale tawny buff or white. The upper surface of the body becomes gradually browner and loses the blue altogether.

The change of plumage generally takes place after the birds have left England; but I have seen one specimen, killed at the end of August, which had begun to assume its new plumage on the throat, putting on the bright rufous throat of the second season. The forehead is bleached to white. These changes generally take place during the Swallow's sojourn in its winter home, in the months of January and February, and it is very rare to see a commencement of the change in England.

Nestling. More dusky than the adults, and not so glossy or purple; rufous frontal mark very small; cheeks and throat da rufous; remainder of under surface clear rufescent, separated from the throat by a broad black band washed with rufous.

In the full-grown young bird the outer tail-feathers have greyish-white edges to the outer webs, and there are light rufescent margins to the feathers of the lower rump and upper tail-coverts.

Hab. In summer all over Europe, extending as far east as the valley of the Yen-e-say, and even to Mantchuria and China. In winter it visits India, China, the Burmese countries, and the Malayan peninsula, and extends all over Africa.

a. Juv. sk.	British Islands.	Gould Collection.
b–f. Juv. st.	Leicestershire.	Theodore Walker, Esq. [P.].
g. ♂ ad. sk.	Oxfordshire (*P. L. Sclater*).	Gould Collection.
h. Ad. sk.	Hampstead, Middlesex (*O. S.*).	F. D. Godman and O. Salvin, Esqrs. [P.].
i. ♂ ad. sk.	Near London, end of April.	Gould Collection.
k. ♂ juv. sk.	Kingsbury, Middlesex, Sept. (*E. Bartlett*).	R. B. Sharpe, Esq. [P.].
l. ♀ juv. sk.	Cookham, Berks, Aug.	R. B. Sharpe, Esq. [P.].
m. Ad. sk.	Plumstead, Kent, April 10 (*H. Whitely*).	R. B. Sharpe, Esq. [P.].
n. ♀ juv. sk.	Plumstead, Kent, Sept. (*H. Whitely*).	R. B. Sharpe, Esq. [P.].
o. Var., sk.	Westerham, Kent, May 22 (*H. Whitely*).	R. B. Sharpe, Esq. [P.].
p. ♂ ad. sk.	Romney Marsh, Aug. 31.	R. B. Sharpe, Esq. [P.].
q, *r*. ♂ ♀ juv. sk.	Romney Marsh, Sept. 11.	R. B. Sharpe, Esq. [P.].
s, *t*, *u*. Pull. sk.	Hassock's Gate, Sussex, June (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
v, *w*. ♂ ; *x*. ♀ ad. sk.	Lancing, Sussex, April (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
y, *z*. ♂ ad. sk.	Lancing, Sussex, May (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
a', *b'*, *c'*. Imm. sk.	Brighton, Sussex, Oct. 10.	R. B. Sharpe, Esq. [P.].
d'. ♂ ad. sk.	Pagham, Sussex, Sept. 3.	R. B. Sharpe, Esq. [P.].
e'. Var., alb. st.	Pagham, Sussex, Sept.	J. E. Harting, Esq. [C.].
f', *g'*, *h'*. Ad. sk.	Surrey, spring.	Gould Collection.
i'. Var., alb. st.	Hayling Island.	A. Miller, Esq. [P.].
k', *l'*. ♂ ad. sk.	At sea, North Atlantic, April 28, 1876.	Voy. H.M.S. 'Challenger.'
m'. Ad. sk.	Nice, May 29.	R. B. Sharpe, Esq. [P.].
n'. Juv. sk.	Vienna.	R. B. Sharpe, Esq. [P.].
o'. ♀ ad. sk.	Florence, Italy, May 1.	Prof. Giglioli [P.].
p', *q'*. Juv. sk.	Florence, June.	Prof. Giglioli [P.].
r'. ♀ ad. sk.	Piedmont, April 1.	Count Salvadori [P.].
s'. ♂ ad. sk.	Porto S. Giorgio, Marche, April 15.	Count Salvadori [P.].
t'. ♀ ad. sk.	Teneriffe, March 26, 1871 (*F. D. G.*).	F. D. Godman and O. Salvin, Esqrs. [P.].
u'. ♀ ad. sk.	Teneriffe, April 3 (*F. D. G.*).	F. D. Godman and O. Salvin, Esqrs. [P.].
v', *w'*. ♂ ad. ; *x'*. ♀ ad. sk.	Tiberias, Palestine.	Canon Tristram [C.].
y'. ♂ ad. sk.	Erzeroum (*Dickson and Ross*).	Gould Collection.
z'. ♂ ad. sk.	Jalk, Baluchistan, March 1872.	W. T. Blanford, Esq. [C.].
a, *β*, *γ*. ♂ ad. sk.	Candahar, Feb. 3, 1881.	Col. Swinhoe [P.].

δ. Ad. sk.	Afghanistan (*Griffith*).	India Museum.
ε. Ad. sk.	Cabul (*Griffith*).	India Museum.
ζ. ♀ ad. sk.	Sehwan, Scinde, Jan. 31 (*A. O. Hume*).	E. W. Oates, Esq.
η, θ. Ad. sk.	Scinde (*Dr. H. Gould*).	India Museum.
ι, κ. ♂ ad. sk.	Gilgit, March 29.	Major J. Biddulph [C.].
λ. ♂ ad. sk.	Gilgit, May 24.	Major J. Biddulph [C.].
μ. ♂ ad. sk.	Boonji, Gilgit, May 27.	Major J. Biddulph [C.].
ν. ♂ ad. sk.	Cashmere, April 30.	Major J. Biddulph [C.].
ξ, ο. Ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [C.].
π. Ad.; ρ. Juv. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
σ. Ad. sk.	Nepal (*Hodgson*).	India Museum.
τ. Ad. sk.	Darjiling.	Gould Collection.
υ. ♀ ad. sk.	Behar.	B. H. Hodgson, Esq. [P.].
φ. Ad.; χ. Juv. sk.	Deccan (*Sykes*).	India Museum.
ψ. ♀ imm. sk.	Quilon, Travancore, Feb. 28.	F. W. Bourdillon, Esq. [C.].
ω. Imm. sk.	Nicobar Islands.	R. B. Sharpe, Esq. [P.].
α′, β′. Ad. sk.	Assam (*McClelland*).	India Museum.
γ′. ♂ ad. sk.	Pegu, July 31, 1879.	E. W. Oates, Esq. [C.].
δ′. Ad. sk.	Tenasserim.	J. C. D. Packman, Esq. [P.].
ε′. ♂ ad. sk.	Thoungyeen Valley, Tenasserim, Oct. 14.	Capt. C. T. Bingham [P.].
ζ′. Ad. sk.	Malacca (*Cantor*).	India Museum.
η′. Ad. sk.	Batchian.	A. R. Wallace, Esq. [C.].
θ′. Ad. sk.	Philippines.	Hugh Cuming, Esq. [C.].
ι′. Imm. sk.	Dumalon, Mindanao.	Prof. Steere [C.].
κ′. Ad. sk.	Amoy, March 14 (*Swinhoe*).	Gould Collection.
λ′, μ′. Imm. sk.	Amoy (*Swinhoe*).	R. B. Sharpe, Esq. [P.].
ν′. ♂ ad. sk.	Gulf of Abrek, lat. 43° N. (*Doerries*).	R. B. Sharpe, Esq. [P.].
ξ′, ο′. Ad. sk.	Vladiovstock, Mantchuria (*Dybowski*).	R. B. Sharpe, Esq. [P.].
π′. Imm. sk.	Cape Verde, Senegambia.	M. L. Laglaize [C.].
ρ′. Ad. sk.	Wasa, Gold Coast.	Capts. Burton and Cameron [P.].
σ′, τ′. Imm. sk.	Connor's Hill, Cape Coast (*Ussher*).	Sharpe Collection.
υ′. Ad. sk.	Accra (*Smith*).	Sharpe Collection.
φ′. Ad. sk.	Landana, Congo, Aug. (*Petit*).	Sharpe Collection.
χ′–α″. Ad. sk.	Cape Town (*Layard*).	Sharpe Collection.
β″–ζ″. Juv. sk.	Cape Town (*Layard*).	Sharpe Collection.
η″. ♂ ad. sk.	Knysna, Jan. 2 (*Andersson*).	Sharpe Collection.
θ″. Ad. sk.	Natal.	Sharpe Collection.
ι″–λ″. Imm. sk.	Pinetown, Natal, March (*T. L. Ayres*).	R. B. Sharpe, Esq. [P.].
μ″. Ad.; ν″. Juv. sk.	Potchefstroom, Transvaal.	F. A. Barratt, Esq. [P.].
ξ″, ο″. Imm. sk.	Delagoa Bay (*Mrs. Monteiro*).	R. B. Sharpe, Esq. [P.].
π″, ρ″, σ″. ♂ ad. sk.	Tati, Matabele, Oct. 17, 1874 (*F. Oates*).	W. E. and C. G. Oates, Esqrs. [P.].

τ''. Juv. sk.	Walwisch Bay, Damara Land, Dec. 23, 1863 (*C. J. Andersson*).	Sharpe Collection.
υ''. ♂ ad. sk.	Zoulla, Abyssinia, June 12, 1868.	W. T. Blanford, Esq. [C.].
ϕ''. ♀ ad. sk.	Anseba Valley, Aug. 6, 1876.	W. T. Blanford, Esq. [C.].
χ''. ♀ juv. sk.	Mashallut Pass, Bogos, July 13, 1868.	W. T. Blanford, Esq. [C.].
ψ''. ♀ ad. sk.	Red Sea, Oct. 13, 1873.	Howard Saunders, Esq. [P.].

Subsp. α. Hirundo savignii.

Hirundo savignii, *Steph. Gen. Zool.* x. p. 90 (1817); *Dubois, Ois. Eur.* pl. 34 (c. 1862); *Dresser, B. Eur.* iii. p. 473, pl. 160. fig. 2 (1875); *B. O. U. List Br. B.* p. 42 (1883).

Hirundo cahirica, *Licht. Verz. Doubl.* p. 58 (1823); *Gray, Gen. B.* i. p. 57 (1845); *Bp. Consp.* i. p. 328 (1850); *Cass. Cat. Hirund. Mus. Phil. Acad.* p. 2 (1852); *Bp. Rivist. Contemp., Torino*, 1857, p. 4; *Blasius in Naum. Vög. Deutschl., Nachtrag*, p. 307, Taf. 383. fig. 1 (1860); *Antin. Cat. descr. Ucc.* p. 26 (1864); *Allen, Ibis*, 1864, p. 237; *Blyth, Ibis*, 1866, pp. 237, 336; *Taylor, Ibis*, 1867, p. 56; *Degl. et Gerbe, Orn. Eur.* i. p. 589 (1867); *Gray, Hand-l. B.* i. p. 68, no. 789 (1869); *Heugl. Orn. N.O.-Afr.* i. p. 152 (1869); *Fritsch, Vög. Eur.* Taf. 23. fig. 1 (1870); *Heugl. Orn. N.O.-Afr.* iv. App. p. lvi (1873).

Hirundo riocouri, *Audouin, Descr. de l'Egypte*, p. 270, pl. 4. fig. 4 (1825); *Cab. Mus. Hein.* Th. i. p. 46 (1850); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 2 (1853); *Sharpe & Dresser, P. Z. S.* 1870, p. 247; *Sharpe, t. c.* p. 305; *Wyatt, Ibis*, 1870, p. 12; *Shelley, B. Egypt*, p. 519 (1875); *Gurney, Ibis*, 1875, p. 519.

Cecropis savignii, *Boie, Isis*, 1828, p. 316.

Hirundo castanea, *Less. Traité d'Orn.* p. 268 (1831).

Hirundo boissoneauti; *Temm., Schl. & Susem. Vög. Eur.* vi. Taf. 2. fig. 2 (1839); *Temm. Man. d'Orn.* iv. p. 652 (1840); *Linderm. Vög. Griechenl.* p. 119 (1860).

Hirundo rustica, var. orientalis, *Schl. Rev. Crit.* p. xviii (1844); *Adams, Ibis*, 1864, p. 14.

Cecropis riocouri, *Rüpp. Syst. Uebers.* p. 22 (1845); *Heugl. Syst. Uebers.* p. 16 (1856).

Cecropis boissoneauti, *E. Brehm, J. f. O.* 1853, p. 452.

Cecropis cahirica, *C. L. Brehm, Naum.* 1855, p. 271.

Hirundo rustica orientalis, *Temm. & Schl. Faun. Jap., Aves*, p. 32 (1850); *Læith Adams, Ibis*, 1864, p. 14.

Hirundo rufa (*nec Gm.*), *Swinh. Ibis*, 1864, p. 414.

Hirundo boissoneauti latirostris, *A. E. Brehm, Verz. Samml. C. L. Brehm*, p. 3 (1866).

Hirundo boissoneauti microrhynchos, *A. E. Brehm, t. c.* p. 3 (1866).

Hirundo boissoneauti minor, *A. E. Brehm, t. c.* p. 3 (1866).

Hirundo rustica, var. cahirica, *Doderl. Avif. Sicil.* 1869, p. 144.

Hirundo rustica, var. savignii, *Bree, B. Eur.* iv. p. 85 (1875).

Chelidon savignii, *Stejn. Pr. U.S. Nat. Mus.* vi. p. 31 (1882).

Adult male (Egypt, March 13, 1868). General colour above deep purplish blue, the hind neck and mantle slightly varied with the rufous-white bases to the feathers; wing-coverts like the back; quills

blackish, externally washed with dull steel-blue; tail-feathers blackish glossed with dull steel-green, with a large ovate spot of rufous or rufous-white on the inner web, more elongated in shape on the long outer feather; crown of the head like the back, with a frontal band of dark chestnut; lores and feathers below the eye black; ear-coverts blue-black; entire under surface of body deep chestnut, the throat richer in colour and separated from the breast by a broad band of deep purplish blue across the fore neck; under tail-coverts, under wing-coverts, and axillaries like the breast; quills dusky below. Total length 6·4 inches, culmen 0·35, wing 4·5, tail 3·6, tarsus 0·4.

The specimen from Girgeh, killed in March, is of a more intense chestnut than any other I have seen; the rufous bases to the dorsal feathers are strongly pronounced, and form a very conspicuous feature in the species.

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Subsp. β. **Hirundo gutturalis.**

L'Hirondelle d'Antigue, *Sonn. Voy. Nouv. Guin.* p. 118, pl. lxxvi. (1776).

L'Hirondelle d'Antigue à gorge couleur de rouille, *Montb. Hist. Nat. Ois.* vi. p. 607 (1779).

Panayan Swallow, *Lath. Gen. Syn.* ii. pt. 2, p. 565 (1783).

Hirundo gutturalis, *Scop. Del. Flor. et Faun. Insubr.* ii. p. 96 (1786); *Temm. Man. d'Orn.* i. p. 427 (1820); *Gray, Gen. B.* i. p. 57 (1845); *Blyth, J. A. S. Beng.* xvi. p. 117 (1847); *Gray, Cat. Fissir. Brit. Mus.* p. 22 (1848); *Cab. Mus. Hein.* Th. i. p. 46 (1850); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 1 (1853); *Gray, P. Z. S.* 1860, p. 365; *Swinh. Ibis*, 1860, pp. 48, 429, & 1861, p. 30; *Jerd. B. Ind.* i. p. 157 (1862, pt.); *Swinh. Ibis*, 1863, p. 255, 1867, p. 411, & 1870, pp. 90, 240; *Jerd. Ibis*, 1871, p. 351; *Wald. Tr. Z. S.* viii. p. 65 (1872); *Dybowski, J. f. O.* 1872, p. 361; *Salvad. Ucc. Born.* p. 125 (1874); *Swinh. Ibis*, 1874, p. 151; *Salvad. Ann. Mus. Civic. Genov.* ix. pp. 55, 64 (1876); *Tacz. Bull. Soc. Zool. France*, ii. p. 133 (pt., 1876); *Blakist. Ibis*, 1876, p. 331; *Hume, Ibis*, 1876, p. 286, & 1877, p. 17; *Tweedd. P. Z. S.* 1877, pp. 545, 694; *Wald. Tr. Z. S.* ix. p. 184 (1877); *Prjev. in Dawson Rowley's Orn. Misc.* ii. p. 160 (1877); *David & Oust. Ois. Chine*, p. 124 (1877, pt.); *Hume & Davis. Str. F.* 1878, p. 41; *Cripps, Str. F.* 1878, vol. ii. p. 256; *Salvad. Ann. Mus. Civic. Genov.* xiv. p. 49 (1879); *Meyer, Ibis*, 1879, p. 128; *Hume, Str. F.* 1879, pp. 47, 84; *Sharpe, P. Z. S.* 1879, p. 344; *Bingham, Str. F.* 1880, p. 48; *Hume, t. c.* p. 245; *Tweedd. Report Voy. 'Challenger,'* ii. p. 48 (1881); *Sclater, t. c.* p. 116 (1881); *Kelham, Ibis*, 1881, p. 372; *Salvad. Orn. Papuasia etc.* ii. p. 1 (1881); *Blakist. & Pryer, B. Japan*, p. 139 (1882).

Hirundo panayana, *Gm. Syst. Nat.* i. p. 1018 (1788); *Moore, P. Z. S.* 1854, p. 264; *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 91 (1854).
Hirundo jewan, *Sykes, P. Z. S.* 1832, p. 83; *Jerd. Madr. Journ.* xi. p. 237 (1840).
Hirundo rustica (*non L.*), *Meyen, Nova Acta Acad. Cæs. Leop.-Car. Nat. Cur. Suppl.* Taf. 10. fig. 1 (1834); *Blyth, Cat. B. Mus. As. Soc.* p. 197 (1849, pt.); *Temm. & Schl. Faun. Japon., Aves*, p. 31 (1850); *Swinh. Ibis*, 1861, pp. 254, 328, & 1863, p. 89; *Scl. P. Z. S.* 1863, p. 217; *Gray, Hand-l. B.* i. p. 68, no. 786 (1869, pt.); *Holdsw. P. Z. S.* 1872, p. 418; *Sharpe, Trans. Linn. Soc.* 2nd ser. *Zool.* i. p. 328 (1876); *Anderson, Zool. Yun-nan Exped., Birds*, p. 649 (1878); *Blakist. & Pryer, Ibis*, 1878, p. 320; *Oates, B. Brit. Burm.* i. p. 302 (1883).
Cecropis payana, *Less. Compl. Buff.* viii. p. 498 (1837).
Cecropis jewan, *Less. t. c.* p. 499 (1837); *Boie, Isis*, 1844, p. 174.
Cecropis rusticoides, *Boie, Isis*, 1844, p. 174 (*ex Kuhl, MS.*).
Cecropis panayana, *Boie, t. c.*
Hirundo javanica (*non Sparrm.*), *Bp. Consp.* i. p. 338 (1850); *Bernst. J. f. O.* 1859, p. 267; *Blakist. Ibis*, 1862, pp. 315, 316; *Whitely, Ibis*, 1867, p. 196; *Hayes Lloyd, Ibis*, 1873, p. 405.
Hirundo fretensis, *Gould, Handb. B. Austr.* i. p. 110 (1865); *Gray, H[illegible]l. B.* i. p. 70, no. 815 (1869); *Diggles, Orn. Austr.* text to (c. 1870).
Hi[illegible]ndo frenata (*lapsu cal.*), *Blyth, Ibis*, 1866, p. 336; *Gray, Hand-l. B.* i. p. 70, no. 816 (1869).
Hirundo andamanensis, *Tytler & Beav. Ibis*, 1867, p. 316; *Gray, Hand-l. B.* i. p. 68, no. 791 (1869); *Ball, Str. F.* 1873, p. 55; *Hume, Str. F.* 1874, p. 155, & 1876, p. 286.
Hirundo rustica, var. gutturalis, *Seebohm, Hist. Brit. B.* ii. p. 171 (1883).

Adult male. General colour above glossy purplish blue, streaked with the white bases to the feathers of the mantle; wing-coverts like the back; bastard-wing, primary-coverts, and quills blackish, washed externally with glossy blue; tail-feathers blackish washed with blue, all but the centre ones with a large oval spot of white on the inner web, becoming an oblique patch on the outermost feather; forehead dark chestnut; lores blackish; ear-coverts purplish blue; cheeks and entire throat chestnut; the sides of the fore neck purplish blue, the collar not complete, but slightly broken with a few blue spots on the feathers; remainder of under surface from the chest downwards white, including the thighs and under tail-coverts, the flanks with a very faint tinge of smoky brown; axillaries and under wing-coverts pale smoky brown, the outer edge of the wings mottled with dusky bases to the feathers; quills dusky below: "bill black; feet brown; iris black" (*David*). Total length 6·7 inches, culmen 0·35, wing 4·6, tail 3·4, tarsus 0·5.

Adult female. Similar in colour to the male. Total length 6·2 inches, culmen 0·4, wing 4·7, tail 3, tarsus 0·45.

Obs. If one accepts the broken pectoral collar as the best sign of distinction between *H. gutturalis* and *H. rustica*, it will be found to be so only in the majority of specimens, and by no means invariably; in fact there is as much variation with *H. gutturalis* in the direction

blackish, externally washed with dull steel-blue; tail-feathers blackish glossed with dull steel-green, with a large ovate spot of rufous or rufous-white on the inner web, more elongated in shape on the long outer feather; crown of the head like the back, with a frontal band of dark chestnut; lores and feathers below the eye black; ear-coverts blue-black; entire under surface of body deep chestnut, the throat richer in colour and separated from the breast by a broad band of deep purplish blue across the fore neck; under tail-coverts, under wing-coverts, and axillaries like the breast; quills dusky below. Total length 6·4 inches, culmen 0·35, wing 4·5, tail 3·6, tarsus 0·4.

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L'Hirondelle d'Antigue à gorge couleur de rouille, *Montb. Hist. Nat. Ois.* vi. p. 607 (1779).

Panayan Swallow, *Lath. Gen. Syn.* ii. pt. 2, p. 565 (1783).

Hirundo gutturalis, *Scop. Del. Flor. et Faun. Insubr.* ii. p. 96 (1786); *Temm. Man. d'Orn.* i. p. 427 (1820); *Gray, Gen. B.* i. p. 57 (1845); *Blyth, J. A. S. Beng.* xvi. p. 117 (1847); *Gray, Cat. Fissir. Brit. Mus.* p. 22 (1848); *Cab. Mus. Hein.* Th. i. p. 46 (1850); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 1 (1853); *Gray, P. Z. S.* 1860, p. 365; *Swinh. Ibis*, 1860, pp. 48, 429, & 1861, p. 30; *Jerd. B. Ind.* i. p. 157 (1862, pt.); *Swinh. Ibis*, 1863, p. 255, 1867, p. 411, & 1870, pp. 90, 240; *Jerd. Ibis*, 1871, p. 351; *Wald. Tr. Z. S.* viii. p. 65 (1872); *Dybowski, J. f. O.* 1872, p. 361; *Salvad. Ucc. Born.* p. 125 (1874); *Swinh. Ibis*, 1874, p. 151; *Salvad. Ann. Mus. Civic. Genov.* ix. pp. 55, 64 (1876); *Tacz. Bull. Soc. Zool. France*, ii. p. 133 (pt., 1876); *Blakist. Ibis*, 1876, p. 331; *Hume, Ibis*, 1876, p. 286, & 1877, p. 17; *Tweedd. P. Z. S.* 1877, pp. 545, 694; *Wald. Tr. Z. S.* ix. p. 184 (1877); *Prjev. in Dawson Rowley's Orn. Misc.* ii. p. 160 (1877); *David & Oust. Ois. Chine*, p. 124 (1877, pt.); *Hume & Davis. Str. F.* 1878, p. 41; *Cripps, Str. F.* 1878, vol. ii. p. 256; *Salvad. Ann. Mus. Civic. Genov.* xiv. p. 49 (1879); *Meyer, Ibis*, 1879, p. 128; *Hume, Str. F.* 1879, pp. 47, 84; *Sharpe, P. Z. S.* 1879, p. 344; *Bingham, Str. F.* 1880, p. 48; *Hume, t. c.* p. 245; *Tweedd. Report Voy. 'Challenger,'* ii. p. 48 (1881); *Sclater, t. c.* p. 116 (1881); *Kelham, Ibis*, 1881, p. 372; *Salvad. Orn. Papuasia etc.* ii. p. 1 (1881); *Blakist. & Pryer, B. Japan*, p. 139 (1882).

Hirundo panayana, *Gm. Syst. Nat.* i. p. 1018 (1788); *Moore, P. Z. S.* 1854, p. 264; *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 91 (1854).
Hirundo jewan, *Sykes, P. Z. S.* 1832, p. 83; *Jerd. Madr. Journ.* xi. p. 237 (1840).
Hirundo rustica (*non L.*), *Meyen, Nova Acta Acad. Cæs. Leop.-Car. Nat. Cur. Suppl.* Taf. 10. fig. 1 (1834); *Blyth, Cat. B. Mus. As. Soc.* p. 197 (1849, pt.); *Temm. & Schl. Faun. Japon., Aves*, p. 31 (1850); *Swinh. Ibis*, 1861, pp. 254, 328, & 1863, p. 89; *Scl. P. Z. S.* 1863, p. 217; *Gray, Hand-l. B.* i. p. 68, no. 786 (1869, pt.); *Holdsw. P. Z. S.* 1872, p. 418; *Sharpe, Trans. Linn. Soc.* 2nd ser. *Zool.* i. p. 328 (1876); *Anderson, Zool. Yun-nan Exped., Birds*, p. 649 (1878); *Blakist. & Pryer, Ibis*, 1878, p. 320; *Oates, B. Brit. Burm.* i. p. 302 (1883).
Cecropis payana, *Less. Compl. Buff.* viii. p. 498 (1837).
Cecropis jewan, *Less. t. c.* p. 499 (1837); *Boie, Isis*, 1844, p. 174.
Cecropis rusticoides, *Boie, Isis*, 1844, p. 174 (*ex Kuhl, MS.*).
Cecropis panayana, *Boie, t. c.*
Hirundo javanica (*non Sparrm.*), *Bp. Consp.* i. p. 338 (1850); *Bernst. J. f. O.* 1859, p. 267; *Blakist. Ibis*, 1862, pp. 315, 316; *Whitely, Ibis*, 1867, p. 196; *Hayes Lloyd, Ibis*, 1873, p. 405.
Hirundo fretensis, *Gould, Handb. B. Austr.* i. p. 110 (1865); *Gray, Hand-l. B.* i. p. 70, no. 815 (1869); *Diggles, Orn. Austr.* text to pl. 22 (c. 1870).
Hirundo frenata (*lapsu cal.*), *Blyth, Ibis*, 1866, p. 336; *Gray, Hand-l. B.* i. p. 70, no. 816 (1869).
Hirundo andamanensis, *Tytler & Beav. Ibis*, 1867, p. 316; *Gray, Hand-l. B.* i. p. 68, no. 791 (1869); *Ball, Str. F.* 1873, p. 55; *Hume, Str. F.* 1874, p. 155, & 1876, p. 286.
Hirundo rustica, var. gutturalis, *Seebohm, Hist. Brit. B.* ii. p. 171 (1883).

Adult male. General colour above glossy purplish blue, streaked with the white bases to the feathers of the mantle; wing-coverts like the back; bastard-wing, primary-coverts, and quills blackish, washed externally with glossy blue; tail-feathers blackish washed with blue, all but the centre ones with a large oval spot of white on the inner web, becoming an oblique patch on the outermost feather; forehead dark chestnut; lores blackish; ear-coverts purplish blue; cheeks and entire throat chestnut; the sides of the fore neck purplish blue, the collar not complete, but slightly broken with a few blue spots on the feathers; remainder of under surface from the chest downwards white, including the thighs and under tail-coverts, the flanks with a very faint tinge of smoky brown; axillaries and under wing-coverts pale smoky brown, the outer edge of the wings mottled with dusky bases to the feathers; quills dusky below: "bill black; feet brown; iris black" (*David*). Total length 6·7 inches, culmen 0·35, wing 4·6, tail 3·4, tarsus 0·5.

Adult female. Similar in colour to the male. Total length 6·2 inches, culmen 0·4, wing 4·7, tail 3, tarsus 0·45.

Obs. If one accepts the broken pectoral collar as the best sign of distinction between *H. gutturalis* and *H. rustica*, it will be found to be so only in the majority of specimens, and by no means invariably; in fact there is as much variation with *H. gutturalis* in the direction

of a complete collar on the fore neck as there is in *H. rustica* in that of a broken collar.

Again, although the majority of *H. gutturalis* have a white under surface, still this is not an unfailing character of the Eastern race; for many undoubted examples are rufescent below, although there is never such a decided tint of rufous as in full-plumaged *H. rustica*.

Young birds from Amoy are not to be distinguished from the young of *H. rustica* from England; and one in Mr. Seebohm's collection has quite as broad a collar as any English specimen.

Mr. Seebohm's specimens from Krasnoyarsk belong:—a male, killed in June, to true *H. rustica*; a second, killed in May, more to *H. gutturalis*, but having an almost complete bar across the fore neck; the young bird killed in August partakes more of the *H. gutturalis* type, as does also another young male killed in July.

Hab. Breeds in North-eastern Asia, ranging south in winter to South China, the Burmese countries, and Malayan peninsula, straying more rarely into India; occurs also in winter throughout the Indo-Malayan and Austro-Malayan subregions, and occasionally reaches the north coast of Australia.

a, b. ♂ ♀ ad. sk.	Yokohama.	Prof. Milne [C.].
c. Juv.; *d.* Ad. sk.	Japan.	R. B. Sharpe, Esq. [P.].
e, f, g. Ad. sk.	"At sea, south of Yokohama, April 7, 1875."	Voy. H.M.S. 'Challenger.'
h. Ad. sk.	Amoy, June 1866 (*R. Swinhoe*).	R. B. Sharpe, Esq. [P.].
i, k. Ad.; *l, m, n.* Juv. sk.	Amoy.	R. B. Sharpe, Esq. [P.].
o. Ad. sk.	Amoy, China, April 1861 (*R. Swinhoe*).	Gould Collection.
p. Ad. sk.	Formosa (*R. Swinhoe*).	Gould Collection.
q. Juv. sk.	Formosa (*R. Swinhoe*).	R. B. Sharpe, Esq. [P.].
r. Ad. sk.	N.W. India.	Capt. Stackhouse Pinwill [P.].
s. Imm. sk.	N. India.	India Museum.
t. Ad. sk.	Rajkote, Kattiawar, Nov. 13, 1871.	Major J. Hayes Lloyd [P.].
u. Ad. sk.	Kamptee, C. India.	Dr. B. Hinde [P.].
v. ♀ ad. sk.	Mhow, Oct. 15.	Col. Swinhoe [P.].
w, x. Juv. sk.	Java (*Horsfield*).	India Museum.
y. Ad. sk.	Deccan (*Sykes*).	India Museum. (Type of *H. jewan.*)
z. Ad. sk.	Madras.	Gould Collection.
a'. Ad. sk.	Assam (*McClelland*).	India Museum.
b'. Ad. sk.	Bootan (*Pemberton*).	India Museum.
c'. Ad. sk.	Bhamo, Native Burmah, Feb. 2, 1868.	Dr. J. Anderson [C.].
d'. ♂ imm. sk.	Pegu, Feb. 19, 1881.	E. W. Oates, Esq. [C.].
e'. ♂ ad. sk.	Payagale, Pegu, Feb. 23, 1878.	E. W. Oates, Esq. [C.].
f'. Juv. sk.	Pegu, July 31, 1879.	E. W. Oates, Esq. [C.].
g'. Ad. sk.	Tenasserim (*Helfer*).	India Museum.
h'. ♂ ad.; *i', k'.* Juv. sk.	Thoungyeen Valley, Tenasserim.	Capt. C. T. Bingham [P.].

l'. ♂ ad. sk.	Malacca.	A. R. Wallace, Esq. [C.].
m',*n'*. Ad.; *o'*. Juv. sk.	Malacca (*Cantor*).	India Museum.
p'. Ad. sk.	Penang (*Cantor*).	India Museum.
q'. Ad. sk.	Java.	Gould Collection.
r'. Ad. sk.	Java.	R. B. Sharpe, Esq. [P.].
s'. Ad. sk.	Sumatra.	
t'. Ad. sk.	Labuan.	Hugh Low, Esq. [C.].
u'. Imm. sk.	Borneo.	Zoological Society.
v'. Imm. sk.	"Between the Moluccas and the Philippines, Oct. 21, 1874."	Voy. H.M.S. 'Challenger.'
w'. Ad. sk.	Celebes.	Gould Collection.
x', *y'*. ♂ ♀ ad. sk.	Batchian.	A. R. Wallace, Esq. [C.].
z'. ♂ imm. sk.	Gilolo.	A. R. Wallace, Esq. [C.].
α, *β*, *γ*. ♂; *δ*. ♀ ad. sk.	Bourou, Dec. 7, 1882.	H. O. Forbes, Esq. [P.].
ε. ♀ ad. sk.	Amboina, May 18, 1882.	H. O. Forbes, Esq. [P.].
ζ. Juv. sk.	Pelew Islands.	Mr. Cohen [C.].
η. ♂ imm. sk.	N. coast of Australia, Oct. 18, 1860 (*Dr. F. M. Rayner*).	Gould Collection. (Type of *H. fretensis*.)

Subsp. *γ*. **Hirundo erythrogastra.**

Hirondelle à ventre roux de Cayenne, *Daubent. Pl. Enl.* vii. pl. 724; *Montb. Hist. Nat. Ois.* vi. p. 607 (1779).

Rufous-bellied Swallow, *Lath. Gen. Syn.* ii. part 2, p. 566 (1783).

Hirundo erythrogaster, *Bodd. Tabl. Pl. Enl.* p. 45 (1783); *Sclater, Cat. Amer. B.* p. 39 (1862); *Baird, Review Amer. B.* p. 295 (1864).

Chimney Swallow, *Penn. Arctic Zool.* ii. p. 429 (1785).

Hirundo rufa, *Gm. Syst. Nat.* i. p. 1018 (1788); *Vieill. Ois. Amér. Sept.* p. 60, pl. 30 (1807); *Bp. Comp. List B. Eur. & N. Amer.* p. 9 (1838); *Gray, Gen. B.* i. p. 57 (1845); *Bp. Consp.* i. p. 339 (1850); *Cab. Mus. Hein.* Th. i. p. 46 (1850); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 2 (1853); *Reinh. J. f. O.* 1854, p. 438; *Burm. Th. Bras.* iii. p. 148 (1856); *Cass. B. Calif.* p. 243 (1856); *Brewer, N. Amer. Ool.* p. 91, pl. 5. figs. 63–67 (1857); *Reinh. Ibis*, 1861, p. 5; *Léot. Ois. Trinidad*, p. 88 (1866).

Hirundo horreorum, *Bartr. Fragm. Nat. Hist.* p. 17 (1799); *Baird, B. N. Amer.* p. 308 (1858); *Scl. & Salv. Ibis*, 1859, p. 13; *A. & E. Newt. t. c.* p. 67; *Lawr. Ann. Lyc. N. Y.* vii. p. 317 (1861); *Scl. Cat. Amer. B.* p. 38 (1862); *Blakist. Ibis*, 1863, p. 63; *Scl. P. Z. S.* 1864, p. 173; *Scl. & Salv. t. c.* p. 347; *Lawr. Ann. Lyc. N. Y.* viii. p. 97 (1864); *Baird, Review Amer. B.* p. 294 (1864); *Coues, Ibis*, 1865, pp. 159, 537; *Baird, Ibis*, 1867, pp. 273, 275, 283, 289; *Brown, Ibis*, 1868, p. 420; *Dall & Bann. Trans. Chicago Acad.* i. p. 279 (1869); *Gray, Hand-l. B.* i. p. 68, no. 788 (1869); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 547 (1869); *Cooper, B. Calif.* p. 103 (1870); *Salv. P. Z. S.* 1870, p. 184; *Allen, Bull. Mus. Comp. Zool.* iii. p. 176 (1872); *Gundl. J. f. O.* 1872, p. 431; *Coues, Key N. Amer. B.* p. 113 (1872); *id. B. N.-West*, p. 85 (1874); *Maynard, B. Florida*, p. 73 (1873); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 271 (1874); *id. Bull. U.S. Nat. Mus.* no. 4, p. 17 (1876); *id. Proc. U.S. Nat. Mus.* i. p. 455 (1878); *Baird, Brewer,*

& Ridgw. Hist. N. Amer. B. p. 339, pl. 16. fig. 9 (1874); *Hume & Davison, Str. F.* 1878, p. 43; *Cory, B. Bahamas*, p. 78 (1880); *Zeledon, Cat. Av. Costa Rica*, p. 5 (1882); *Oates, B. Brit. Burm.* i. p. 303 (1883).

Hirundo americana (*non Gm.*), *Wils. Amer. Orn.* v. p. 34, pl. 38. figs. 1, 2 (1812); *Swains. & Richards. Faun. Bor.-Amer., Birds*, p. 329 (1831); *Bp. Consp.* i. p. 339 (1850); *Lembeye, Aves Cuba*, p. 44, pl. 7. fig. 1 (1850); *Leith Adams, Ibis*, 1878, p. 423; *Blakist. t. c.* p. 385.

Hirundo cyanopyrrha, *Vieill. N. Dict. d'Hist. Nat.* xiv. p. 510 (1817).

Hirundo rustica (*non L.*), *Audub. B. Amer.* fol. pl. 173 (c. 1826); *id. Orn. Biogr.* ii. p. 413 (1834); *id. B. Amer.* 8vo, i. p. 181, pl. 48 (1840); *Jones, Nat. Berm.* p. 34 (1859).

Hirundo fumaria, *Licht. Preis-Verz. mex. Vög.* no. 58 (1830); *Cab. J. f. O.* 1863, p. 58.

Cecropis americana, *Less. Compl. Buff.* viii. p. 498 (1837).

Cecropis rufa, *Less. Compl. Buff.* viii. p. 498 (1837); *Boie, Isis*, 1844, p. 175.

Cecropis americana, *Boie, t. c.* p. 174.

Cecropis cyanopyrrha, *Boie, t. c.* p. 175.

Hirundo erythrogastra, *Gray, Gen. B.* i. p. 57 (1845); *Scl. Cat. Amer. B.* p. 39 (1862); *Scl. & Salv. P. Z. S.* 1867, p. 569; *Pelz. Orn. Bras.* pp. 18, 402 (1871); *Layard, Ibis*, 1873, p. 378; *Scl. & Salv. Nomencl. Av. Neotr.* p. 14 (1873); *iid. P. Z. S.* 1873, p. 185; *Tacz. P. Z. S.* 1874, p. 510; *Coues, B. Color. Vall.* p. 407 (1878); *A. & E. Newt. Handb. Jamaica*, 1881, p. 107; *Salvin & Godman, Biol. Cent.-Amer., Aves*, i. p. 232 (1883).

Hirundo rustica, var. rufa, *Midd. Sibir. Reis.* p. 188 (1853); *Dybowski, J. f. O.* 1868, p. 336.

Hirundo erythrogastra, *β.* horreorum, *Ridgw. Rep. 40th Parallel*, iv. p. 441 (1877).

Hirundo erythrogastra horreorum, *Coues, Check-list*, p. 42 (1882).

Chelidon erythrogastra, *Stejn. Pr. U. S. Nat. Mus.* vi. p. 31 (1882).

Hirundo rustica, var. horreorum, *Seebohm, Hist. Brit. B.* ii. p. 171 (1883).

Adult male. General colour above glossy purplish blue, varied with white on the mantle and back, where the white bases to the feathers show through; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills blackish, with a purplish-blue gloss on the outer web, inclining more to steel-green on the outer webs of the bastard-wing and primary-coverts; the innermost greater coverts ashy on their inner webs, with a strong rufous tinge; tail-feathers blackish with a steel-green gloss, all but the centre ones with a large rounded white spot increasing in size towards the outermost, where it is a large oblique mark; forehead deep bay or chestnut, extending slightly backwards over the eye; lores black; ear-coverts purplish blue like the head; cheeks and entire throat deep bay, of a different colour from the rest of the under surface, but not separated from the chest by a complete band; the sides of the neck glossy purplish blue like the back, this colour impinging on to the sides of the fore neck in a half-crescent shape, but not forming a band across; under surface from the chest downwards, including the under wing-coverts and axillaries, clear rufous,

deepening into chestnut in the region of the vent; the under tail-coverts with blackish shaft-lines; some of the lesser wing-coverts near the edge of the wing mottled with ashy-brown bases; quills ashy brown below. Total length 6·8 inches, culmen 0·35, wing 4·55, tail 3·45, tarsus 0·45.

Adult female. Similar to the male in colour. Total length 6·7 inches, culmen 0·35, wing 4·5, tail 3·25, tarsus 0·4.

Young birds are much duller in colour than the adults, being dusky brown above with a blue gloss; on the rump remains of narrow rufous margins; quills with narrow whitish edges at the tips; frontal band very small and pale rufous; throat also pale rufous; the rest of the under surface very light rufescent buff, deeper on the under tail-coverts; on the lower throat some remains of blackish mottlings, but not forming a cross band.

The young bird described is from Guatemala, and shows that, as in *H. rustica*, the plumage of the young bird gets completely bleached before it puts on the full spring dress in which it returns to its summer home. The remains of blackish markings on the lower throat indicate an approach to a complete band.

There would appear to be some considerable difference in the depth of the rufous colouring of the under surface, some specimens being so richly coloured that they can scarcely be distinguished from *H. tytleri*. The specimen recorded below from Tonghoo is a typical *H. erythrogastra*, and agrees with North-American examples.

Hab. The whole of North America, reaching to Alaska and Greenland, extending across to Lake Baikal and wintering in Burmah; also ranging through the whole of Central America and the Antilles, reaching in winter as far as Southern Brazil.

a. Ad. juv. sk.	North America.	R. B. Sharpe, Esq. [P.].
b, *c*. Ad. st.	North America.	Purchased.
d. Ad. sk.	49th parallel, June 30 (*G. Dawson*).	N. A. Bound. Commission [P.].
e. Ad. sk.	S. Juan Island.	Dr. Lyall [P.].
f. Ad. sk.	Sumass, Brit. Columbia.	J. K. Lord, Esq. [C.].
g, *h*. ♂ ♀ ad. sk.	West side of Rocky Mountains.	J. K. Lord, Esq. [P.].
i. Juv. sk.	Niagara Falls (*J. G.*).	Gould Collection.
k, *l*. ♂; *m*, *n*. ♀ ad. sk.	Locust Grove, New York, May.	Dr. Hart Merriam [P.].
o. ♂ ad. sk.	Hyde Park, Illinois, May 17 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
p. Juv. sk.	Yollestone, Indiana, July 4 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
q. Juv. sk.	Guatemala.	Gould Collection.
r. Ad.; *s*. Juv. sk.	Dueñas, Guatemala (*Salvin*).	Sclater Collection.
t, *u*. Juv. sk.	Veragua (*Arcé*).	R. B. Sharpe, Esq. [P.].
v. Imm. sk.	S. Nevis, W. I.	W. Cottle, Esq. [P.].
w. Juv. sk.	South America.	Sclater Collection.
x. Ad. sk.	Tonghoo, Burmah.	E. W. Oates, Esq. [C.].
y. Ad. sk.	Pegu.	E. W. Oates, Esq. [C.].
z, *a'*. Ad. sk.	Cochin China.	M. E. Pierre [P.].

Subsp. ?. Hirundo tytleri.

Hirundo tytleri, *Jerd. B. Ind.* iii. App. p. 870 (1864); *Blyth, Ibis*, 1866, p. 336; *Gray, Hand-l. B.* i. p. 68, no. 790 (1869); *Hume, Str. F.* 1875, p. 41; *Wald. in Blyth B. Burm.* p. 127 (1875); *Wardlaw Ramsay, Ibis*, 1877, p. 466; *Hume & Davison, Str. F.* 1878, p. 41; *Hume, Str. F.* 1879, p. 84; *Simson, Ibis*, 1882, p. 84; *Godwin-Aust. t. c.* p. 345; *Oates, B. Brit. Burm.* i. p. 304 (1883); *Seebohm, Hist. Brit. B.* ii. p. 171 (1883).

Hirundo cahirica (*nec Licht.*), *Godwin-Aust. J. A. S. B.* 1874, p. 152.

Hirundo americana, *Blakist. Ibis*, 1876, p. 331.

Hirundo saturata, *Ridgway, Proc. U.S. Nat. Mus.* 1883, p. 95 (*ex Stejneger, MSS.*).

Adult male (Irkutsk, May 31st). General colour above glossy purplish blue, the mantle and scapulars streaked with reddish white where the bases of the feathers show through; lesser and median wing-coverts like the back; greater coverts and secondaries blackish edged with the same purplish blue as the back; innermost greater coverts ashy on their inner web, tinged with rufous; bastard-wing, primary-coverts, and quills blackish, externally glossed with steel-green; tail-feathers blackish, glossed with steel-green, all but the centre feathers with a spot of pale rufous on the inner web, getting larger towards the outermost, where it is in the form of a large oblique mark; frontal band deep chestnut; lores black; ear-coverts and sides of neck glossy purplish blue; cheeks and throat deep chestnut, with a half-collar of glossy purplish blue coming down on the sides of the fore neck but not forming a band across; remainder of under surface of body bright chestnut, not so deep as the throat; the under tail-coverts equally bright chestnut like the breast, and having slightly indicated spots of purplish blue at the ends of the feathers; axillaries and under wing-coverts exactly like the breast, the coverts near the edge of the wing slightly mottled with ashy bases to the feathers; quills dusky below. Total length 7·8 inches, culmen 0·4, wing 4·8, tail 4·8, tarsus 0·4.

The bird described from Irkutsk is in full breeding-plumage, and there can be no doubt that *H. tytleri* is only the same bird in its winter home. There is no complete collar on the neck, but there are in several specimens indications of black markings in the centre of the fore neck which would go far towards forming an indistinct collar, and would bring the species nearer to *H. savignii*. Some specimens of *H. tytleri* approach so closely the North-American *H. horreorum* that they can scarcely be distinguished, and indeed the two species seem to run one into the other.

Hab. E. Siberia and Kamtschatka in summer, wintering in Burmah.

a. ♀ ad. sk.	Petropaulowski, Kamtschatka, Aug. 23.	Dr. L. Stejneger [P.].
b, c. ♂ ad. sk.	Petropaulowski, Kamtschatka, June 1883 (*Dybowski*).	R. B. Sharpe, Esq. [P.].
d. ♂ ad. sk.	Irkutsk, May 31.	Purchased.
e, f, g. Ad. sk.	Khasia Hills (*Jerdon*).	Gould Collection.
h. Ad. sk.	Myitkyo, Pegu, Feb. 1875.	E. W. Oates, Esq. [C.].
i. ♂ ad. sk.	Wau, Pegu, March 20, 1874.	E. W. Oates, Esq. [C.].
k. Ad. sk.	Tenasserim (*Helfer*).	India Museum.
l. Ad. sk.	Brazil.	Sclater Collection.
m. Juv. sk.	Pará.	R. Graham, Esq. [P.].

2. Hirundo tahitica.

Otaheité Swallow, *Lath. Gen. Syn.* ii. pt. 2, p. 563, pl. frontisp. (1783).
Hirundo tahitica, *Gm. Syst. Nat.* i. p. 1016 (1788); *Gray, Gen. B.* i. p. 58 (1845); *id. B. Trop. Isl. Pacific Ocean*, p. 4 (1859); *Finsch & Hartl. Faun. Centralpolyn.* p. 51 (1867); *Gray, Hand-l. B.* i. p. 70, no. 811 (1869); *E. L. Layard, Ibis*, 1876, p. 391; *Finsch, P. Z. S.* 1877, pp. 730, 738; *E. L. & L. C. Layard, Ibis*, 1878, pp. 270, 280; *Tristr. Ibis*, 1879, p. 192; *Salvad. Ibis*, 1880, p. 130; *Tristr. t. c.* p. 246; *L. C. Layard, t. c.* p. 298; *Finsch, Ibis*, 1881, p. 536; *id. Report Voy. 'Challenger,' ii. Birds*, pp. 43, 53 (1881); *Salvad. Orn. Papuasia etc.* ii. p. 5 (1881); *Tristr. Ibis*, 1882, p. 142; *Layard, t. c.* pp. 502, 543.
Hirundo taitensis, *Less. Voy. 'Coquille,'* i. p. 648 (1826).
Herse taitensis, *Less. Compl. Buff.* viii. p. 443 (1837).
Hirundo porphyrolæma, *Forster, Icon. ined.* 167; *id. Descr. Anim.* p. 241 (1844).
Cecropis taitensis, *Boie, Isis*, 1844, p. 175.
Herse tahitica, *Bp. Consp.* i. p. 340 (1850).
Petrochelidon pacifica, *Cass. Cat. Hirund. Philad. Mus.* p. 5 (1853).
Chelidon tahitica, *Licht. Nomencl. Av.* p. 61 (1854).
Hirundo subfusca, *Gould, P. Z. S.* 1856, p. 137; *Gray, Cat. B. Trop. Isl. Pacific Ocean*, p. 4 (1859).
Petrochelidon tahitica, *Cass. Cat. Hirund. Philad. Mus.* p. 5 (1853); *Bp. Rivist. Contemp., Torino*, p. 5 (1857).
Phedina subfusca, *Bp., teste Salvad.*
Hirundo (Herse) tahitica, *Pelz. Reis. 'Novara,' Vög.* p. 41 (1865).

Adult male. General colour above dull steel-blue or blue-black, with ashy bases to the feathers; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills blackish, slightly glossed with steel-blue on the outer web; tail-feathers uniform blackish, with a slight steel-blue gloss on the outer webs; forehead deep chestnut; lores blackish; ear-coverts dull steel-blue like the head; cheeks, throat, and fore neck deep chestnut, with a half-crescent of steel-blue descending on the sides of the latter; remainder of under surface of body uniform smoky brown, with a few mottled feathers in the centre of the breast, some of the feathers being washed with steel-blue near their ends; under tail-coverts smoky brown, edged with rufous, with a distinct subterminal spot of steel-blue; under wing-coverts and axillaries dark smoky brown; quills dusky below, rather lighter brown on the inner webs: "bill and legs black; iris dark brown" (*Layard*). Total length 5 inches, culmen 0·35, wing 4·15, tail 2, tarsus 0·3.

Adult female. Similar to the male in plumage. Total length 5 inches, culmen 0·45, wing 4·2, tail 2, tarsus 0·4.

Obs. Some specimens exhibit ashy-whitish edgings to the feathers of the abdomen rather more distinctly than others.

Hab. Friendly Islands, Fiji Islands, New Hebrides; Solomon Islands; New Britain. ?New Caledonia. (*Cf.* Layard, Ibis, 1882, pp. 502, 543.)

a. ♀ ad. sk.	Moala, Fiji Islands, Sept. 8, 1854 (*J. Macgillivray*).	J. Gould, Esq. (Type of *H. subfusca*.)
b, c. ♂ ♀ ad. sk.	Matuka, Fiji.	Voy. H.M.S. 'Challenger.'
d. ♀ ad. sk.	Kandavu, Fiji.	Voy. H.M.S. 'Challenger.'
e. ♀ ad. sk.	Api, New Hebrides.	Voy. H.M.S. 'Challenger.'
f. Ad. sk.	Aneiteum, New Hebrides.	J. Macgillivray, Esq. [C.].
g. Ad. sk.	New Britain.	Herr Kleinschmidt [C.].

3. Hirundo javanica.

Hirundo javanica, *Sparrm. Mus. Carls.* ii. pl. 100 (1789); *Vieill. N. Dict. d'Hist. Nat.* xiv. p. 523 (1817); *Temm. Pl. Col.* iv. pl. 83. fig. 2 (1823); *Gray, Gen. B.* i. p. 57 (1845); *Temm. & Schl. Faun. Jap., Aves*, p. 32 (1850); *Cab. Mus. Hein.* Th. i. p. 46 (1850); *Wall. Ibis*, 1860, p. 147; *id. P. Z. S.* 1863, p. 485; *Gray, Hand-l. B.* i. p. 70, no. 813 (1869); *Finsch & Hartl. Vög. Ostafr.* p. 137, note (1870); *Walden, Tr. Z. S.* viii. p. 66 (1872); *Swinh. Ibis*, 1873, p. 231; *Morgan, Ibis*, 1875, p. 313; *Salvad. Ucc. Born.* p. 126 (1874); *id. Ann. Mus. Civic. Genov.* viii. p. 767 (1875), ix. p. 23 (1876), x. p. 130 (1877); *Sharpe, Ibis*, 1876, p. 43; *Bourd. Str. F.* 1876, p. 374; *Fairb. Str. F.* 1877, p. 392; *Sharpe, Journ. Linn. Soc., Zool.* xiii. p. 498 (1877); *Tweedd. Ibis*, 1877, p. 316; *id. P. Z. S.* 1877, p. 760, & 1878, pp. 109, 342, 615, 709; *Salvad. Ann. Mus. Civic. Genov.* xiv. pp. 492, 647 (1877); *id. P. Z. S.* 1878, p. 95; *Hume & Davison, Str. F.* 1878, p. 43; *Ramsay, Proc. Linn. Soc. N. S. W.* iii. p. 275 (1879), iv. p. 98 (1879); *Meyer, Ibis*, 1879, p. 128; *Hume, Str. F.* 1879, pp. 47, 84; *Sharpe, P. Z. S.* 1879, p. 344; *Legge, B. Ceylon*, p. 597; *Hume, Str. F.* 1880, p. 120; *Salvad. Report Voy. 'Challenger,'* ii. *Birds*, p. 78 (1881); *Davison, Str. F.* 1883, p. 345.

Javan Swallow, *Lath. Gen. Syn. Suppl.* ii. p. 259 (1801).

Hirundo frontalis, *Quoy et Gaim. Voy. de l'Astrol. Zool.* i. p. 204, pl. 12. fig. 1 (1830); *Gray, Gen. B.* i. p. 57 (1845); *Scl. Journ. Linn. Soc., Zool.* ii. p. 155 (1858); *Gray, P. Z. S.* 1858, p. 189, 1859, p. 154; *id. Cat. Mamm. etc. N. Guin.* pp. 18, 54 (1859); *id. P. Z. S.* 1861, p. 433; *Finsch, Neu-Guinea*, p. 162 (1865, pt.); *Gray, Hand-l. B.* i. p. 70, no. 812 (1869, pt.); *Ramsay, Proc. Linn. Soc. N. S. W.* ii. p. 179 (1878).

Herse frontalis, *Less. Compl. Buff.* viii. p. 497 (1837).

Herse javanica, *Less. t. c.* p. 497 (1837).

Cecropis javanica, *Boie, Isis*, 1844, p. 174.

Cecropis frontalis, *Boie, Isis*, 1844, p. 174.

Hirundo domicola, *Jerd. Madr. Journ.* xiii. p. 173 (1844); *Blyth, Cat. B. Mus. As. Soc.* p. 198 (1849); *Kelaart, Prodr. Cat.* p. 118 (1852); *Layard, Ann. & Mag. Nat. Hist.* xii. p. 170 (1853); *Moore, P. Z. S.* 1854, p. 204; *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 384 (1854); *Jerd. B. Ind.* i. p. 158 (1862); *Scl. P. Z. S.* 1863, p. 217; *Blyth, Ibis*, 1866, p. 336; *Bulger, P. Z. S.* 1866, p. 568; *Gray, Hand-l. B.* i. p. 70, no. 814 (1869); *Holdsw. P. Z. S.* 1872, p. 418; *Elwes, Ibis*, 1870, p. 527; *Jerd. Ibis*, 1871, p. 351.

Hirundo pacifica, *Motl. & Dillw. N. H. Labuan*, p. 10 (1855).

Hirundo neoxena (*non Gould*), *Gray, P. Z. S.* 1858, p. 189, 1861, p. 433; *Rosenb. N. T. D. Nederl. Ind.* xxv. p. 234 (1863).

Hypurolepis domicola, *Gould, B. Asia*, i. pl. 32 (1868); *Hume, Nests and Eggs Ind. B.* p. 73 (1873); *id. Str. F.* 1874, p. 155.

Hypurolepis javanica, *Oates, B. Br. Burm.* i. p. 308 (1883).

Hirundo fretensis, *Ramsay, Proc. Linn. Soc. N. S. W.* ii. p. 179 (1878, *nec Gould*).

Adult female. General colour above dull steel-blue, mottled with white bases to the plumes of the hind neck; wing-coverts black, edged with dull steel-blue; primary-coverts and quills black; upper tail-coverts like the back; tail-feathers black, slightly glossed with steel-blue, all but the two centre feathers with an ovate spot of white on the inner web; crown of the head dull steel-blue like

the back; a broad frontal band of brick-red; lores black, as also the feathers round the eye; ear-coverts brick-red like the sides of the face, but blue along the upper edge; cheeks, throat, and fore neck brick-red; sides of the neck dull steel-blue; breast dull ashy brownish, with dusky shaft-streaks, the sides of the upper breast with a dull blue patch like the sides of the neck; abdomen a little paler ashy; sides of the body and flanks dull smoky brown; thighs smoky brown, tipped with ashy; under tail-coverts smoky brown, margined conspicuously with rufous, before which is a bluish-black shade, broader on the longer tail-feathers and producing there a strongly marked appearance; under wing-coverts and axillaries smoky brown with slight tips of rufous; quills below dusky brown, inner edges rather more smoky brown. Total length 5·1 inches, culmen 0·4, wing 4·15, tail 2·15, tarsus 0·35.

Obs. Specimens from Travancore are much duller underneath than any other birds yet examined, and those from South-eastern New Guinea and Torres Straits are the palest below, being white on the centre of the abdomen. At first sight they would appear to be a different race, but light-bellied examples are found in Borneo and other localities, though they are never so white on the belly as specimens from the Astrolabe Mountains or Torres Straits.

Hab. Southern India and Ceylon; Malayan peninsula, Java, Sumatra, Borneo, Southern Philippine Islands, Moluccas; New Guinea and adjacent islands, as well as the islands in Torres Straits. Replaced by *H. taitensis* in the Solomon Islands and New Britain.

a. Ad.; *b.* Juv. sk.	Ceylon.	Hugh Cuming, Esq.
c. Ad. sk.	Ceylon, Nov. 23 (*Legge*).	R. B. Sharpe, Esq. [P.].
d. Ad. sk.	India (*Jerdon*).	Gould Collection.
e, f. ♂ ♀ ad. sk.	Mynall, Travancore, Oct. 19.	F. W. Bourdillon, Esq. [C.].
g. ♂ ad. sk.	Ootacamund, Nilghiris, Feb. 1.	W. Davison, Esq. [P.].
h. Ad. sk.	Coonoor, Nilghiris, April 2.	W. Davison, Esq. [P.].
i. Ad. sk.	Malacca.	Capt. Stackhouse Pinwill [P.].
k, l. Imm. sk.	Malacca (*Cantor*).	India Museum.
m, n, o. Ad. sk.	Penang (*Cantor*).	India Museum.
p. Ad. sk.	Penang.	E. W. Oates, Esq.
q. Ad. sk.	Pulo Penang.	M. Verreaux.
r. Ad. sk.	Sumatra.	A. R. Wallace, Esq. [C.].
s. ♀ ad. sk.	West Java.	A. R. Wallace, Esq. [C.].
t. Ad. sk.	Java.	Leiden Museum [P.].
u. Ad. sk.	Labuan.	Hugh Low, Esq. [C.].
v. Imm. sk.	Labuan.	Governor Ussher [C.].
w. Ad. sk.	Lawas River (*Burbidge*).	Harry Veitch, Esq. [P.].
x. Ad. sk.	Sarawak (*Everett*).	Gould Collection.
y. ♂ ad. sk.	Sarawak.	A. R. Wallace, Esq. [C.].
z. ♂ ad. sk.	Lombock.	A. R. Wallace, Esq. [C.].
a'. ♂ ad. sk.	Lombock (*Wallace*).	Gould Collection.
b'. Ad. sk.	E. Timor.	A. R. Wallace, Esq. [C.].
c'. Ad. sk.	Batchian.	Gould Collection.
d'. Ad. sk.	Celebes.	R. B. Sharpe, Esq. [P.].

e'. Ad. sk.	Sula Islands.	A. R. Wallace, Esq. [C.].
f'. ♀ ad. sk.	Bourou.	A. R. Wallace, Esq. [C.].
g'. ♀ ad. sk.	Dobbo, Aru Islands.	Voy. H.M.S. 'Challenger.'
h'. ♂ ad. sk.	Dorey, New Guinea.	A. R. Wallace, Esq. [C.].
i'. Ad. sk.	Port Moresby (*Stone*).	R. B. Sharpe, Esq. [P.].
k'. Ad. sk.	Astrolabe Mountains, S.E. New Guinea.	Mr. A. Goldie [C.].
l'. ♂ ad. sk.	Redscar Islands, off S.E. coast of New Guinea.	J. Macgillivray, Esq. [C.].
m'–p'. Ad. sk.	Torres Straits (*Cockerell*).	F. D. Godman, and O. Salvin, Esqrs. [P.].

4. Hirundo neoxena.

Hirundo javanica (*nec Sparrm.*), *Vig. & Horsf. Trans. Linn. Soc.* xv. p. 191 (1827); *J. E. Gray in Griffith's An. Kingd.* ii. p. 95 (1829).
Hirundo pacifica (*nec Lath.*), *J. E. Gray in Griffith's An. Kingd.* ii. pl. to p. 96 (1829).
Hirundo neoxena, *Gould, P. Z. S.* 1842, p. 131; *id. B. Austr.* fol. ii. pl. 13 (1848); *Blyth, Cat. B. Mus. As. Soc.* p. 198 (1849); *Bp. Consp.* i. p. 338 (1850); *Cab. Mus. Hein.* Th. i. p. 46 (1850); *Diggles, Orn. Austr.* pl. 22. fig. 1 (1870).
Hirundo frontalis (*nec Q. & G.*), *Gray, Cat. Fissir. Brit. Mus.* p. 22 (1848); *Cass. Cat. Hirund. Philad. Mus.* p. 2 (1853); *Gould, Handb. B. Austr.* i. p. 107 (1865); *Ramsay, Ibis*, 1868, p. 275; *Gray, Hand-l. B.* i. p. 70, no. 812 (1869, pt.); *Ramsay, Pr. Linn. Soc. N. S. W.* ii. p. 179 (1878).
Hirundo rustica, var. frontalis, *Seebohm, Hist. Brit. B.* ii. p. 172 (1883).

Adult male. General colour above glossy blue, the mantle slightly varied with greyish-white bases to the feathers; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills blackish brown, externally washed with steel-blue, more distinct on the inner secondaries; tail-feathers blackish, slightly glossed with green, the two centre feathers and the outermost on each side without any spots, the others with a small rounded spot of white on the inner web; frontal band deep brick-red, extending from above each eye; lores dusky blackish; ear-coverts glossy blue like the back; cheeks and throat brick-red; remainder of under surface of body mouse-brown from the fore neck downwards; the lower abdomen inclining slightly to ashy whitish; under tail-coverts pale smoky brown with dull whitish edgings and tips, with a heart-shaped subterminal spot of black; under wing-coverts and axillaries pale smoky brown, all edged with pale rufous; quills dusky brown below: "bill and legs black; iris dark brown" (*Gould*). Total length 5·8 inches, culmen 0·3, wing 4·25, tail 2·75, tarsus 0·35.

Obs. The description is taken from a specimen of Strange's in the Gould Collection. It agrees with two skins in Mr. Seebohm's cabinet from New South Wales, with the exception that the latter have an oblique mark of white on the outer tail-feathers, very indistinct and ill-defined in one example and very strongly marked in the other.

Hab. Nearly the whole of Australia. Tasmania.

a. ♂ ad. sk.	Australia (*Strange*).	Gould Collection.
b, *c*. Ad. st.	South Australia.	Sir George Grey [P.].
d, *e*. Ad. sk.	Australia.	R. B. Sharpe, Esq. [P.].
f. Juv. sk.	Tasmania.	Ronald Gunn, Esq. [P.].

5. Hirundo angolensis.

Hirundo angolensis, *Bocage, Jorn. Lisb.* 1868, p. 47; *Sharpe, P. Z. S.* 1869, p. 567, pl. xliii.; *Bocage, Jorn. Lisb.* 1869, p. 339; *Sharpe, P. Z. S.* 1870, p. 307; *id. Cat. Afr. B.* p. 46 (1871); *Bocage, Orn. Angola*, p. 180 (1881); *Sharpe, ed. Layard's B. S. Afr.* p. 564 (1883).

Adult. Forehead, throat, and upper part of the breast deep brick-red, entire upper surface rich steel-blue, having a greenish lustre in some lights; tail gradually forked, the two middle feathers steel-blue, the whole of the inner web white, except a black border at the tip; a narrow interrupted band across the breast, below the red throat, steel-blue; rest of the breast and under tail-coverts ash-coloured, a little paler in the centre of the breast; the under tail-coverts washed with rufous, each feather margined with pale grey, and having a little heart-shaped blue mark before the end of the feather, the black shaft being also strongly defined; under wing-coverts dark ashy grey, washed on the edge of the wing with steel-blue; beak and legs black. Total length 5·7 inches, culmen 0·35, wing 4·7, tail 2·4, tarsus 0·45.

Hab. Angola.

a. ♂ ad. sk.	Pungo-Andongo, Nov. 1869 (*Anchieta*).	Sharpe Collection.
b. Ad. sk.	Ambriz, March 5, 1869 (*J. J. Monteiro*).	Sharpe Collection.
c. Ad. sk.	Ambriz.	J. J. Monteiro, Esq. [C.].

6. Hirundo lucida.

Hirundo lucida, *J. Verr. J. f. O.* 1858, p. 42; *Hartl. J. f. O.* 1861, p. 103; *Gray, Hand-l. B.* i. p. 68, no. 792 (1869); *Sharpe, P. Z. S.* 1869, p. 567; *id. P. Z. S.* 1870, p. 308; *id. Cat. Afr. B.* p. 46 (1871); *Bouv. Cat. Ois. etc. Marche*, p. 9 (1875).

Adult. Above most brilliant steel-blue, inclining to indigo; wing-coverts dark blackish brown, glossed with steel-blue above, the innermost cubital feathers with a white spot on the inner web; tail deep steel-blue, all the feathers except the two middle ones for the most part pure white on the inner web, so that the tips and the part immediately edging the graduated extremity of the feather are black; a distinct though narrow frontlet and the entire throat deep brick-red; a band across the breast, below the red throat, bright steel-blue, broad at the sides and narrow in the centre of the breast; rest of the under surface of the body pure white, with a few dusky feathers on the flanks, and marked with narrow blue lines, more

distinct in some specimens than in others; bill and feet black. Total length 6 inches, culmen 0·35, wing 4·25, tail 2·9, tarsus 0·4.

Hab. Senegambia.

a, *b*, *c*. Ad.; *d*. Juv. sk.	River Gambia.	Sharpe Collection.

7. Hirundo albigularis.

Hirundo rufifrons (*non Vieill.*), *Less. Traité d'Orn.* p. 268 (1831); *Grill, Zool. Anteckn.* p. 34 (1858).

Hirundo albigularis, *Strickl. Contr. Orn.* 1849, p. 17, pl. 15; *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 2 (1853); *Sharpe, P. Z. S.* 1870, p. 308; *id. Cat. Afr. B.* p. 46 (1871); *Ayres, Ibis*, 1873, p. 281; *Fischer & Reichenow, J. f. O.* 1879, p. 344; *Bocage, Orn. Angola*, p. 185 (1881); *Butler, Feilden, & Reid, Zool.* 1882, p. 251; *Salvin, Cat. Strickl. Coll.* p. 150 (1882); *Sharpe, ed. Layard's B. S. Afr.* p. 364 (1882).

Hirundo albigula, *Bp. Consp.* i. p. 338 (1850); *Gurney, Ibis*, 1865, p. 264; *Layard, B. S. Afr.* p. 55 (1867); *Gray, Hand-l. B.* i. p. 68, no. 787 (1869); *Ayres, Ibis*, 1876, p. 424, 1878, p. 235, 1880, p. 260.

Adult. Above deep purplish blue; quills blackish brown, with a faint gloss on the upper surface; the innermost cubital feathers marked on the interior web with a greyish-white spot; tail blackish brown, the two centre feathers unspotted, but all the others marked on the inner web with a large patch of white; forehead deep chestnut; space between the bill and the eye and ear-coverts dusky black; throat, cheeks, and sides of the neck white; below the throat a broad band of purplish-blue feathers, broad at the sides and narrow in the centre of the breast; the rest of the under surface of the body dull white, greyish on the flanks; bill black; feet dark brown. Total length 5·8 inches, culmen 0·45, wing 4·9, tail 1·65, tarsus 0·45.

Hab. South Africa, from the Cape Colony to Natal and the Transvaal. A young specimen is said to have been obtained by Dr. Fischer in Eastern Africa; and it has been sent from Angola to the Lisbon Museum.

a. Ad. sk.	South Africa (*Layard*).	Sharpe Collection.
b. ♀ ad. sk.	Knysna, Jan. 24 (*Andersson*).	Sharpe Collection.
c. ♂ ad. sk.	Natal (*T. Ayres*).	J. H. Gurney, Esq.
d. Ad. sk.	Natal.	Sharpe Collection.
e. ♂ ad. sk.	Transvaal (*T. Ayres*).	Sharpe Collection.

8. Hirundo æthiopica.

Hirundo rufifrons (*non V.*), *Des Murs in Lefebvr. Voy. Abyss., Zool.* p. 78 (1845); *Heugl. J. f. O.* 1861, p. 420, 1863, p. 168; *Hartm. J. f. O.* 1864, p. 152.

Cecropis rufifrons (*non V.*), *Vierth. Naum.* 1853, p. 20; *Brehm J. f. O.* 1853, p. 453, *Extrah.* p. 96; *Heugl. Syst. Uebers.* p. 16; *Vierth. Naum.* 1857, p. 110; *Brehm, Reis. Habesch*, p. 209 (1863).

Hirundo albigularis (*nec Strickl.*), *Heugl. Orn. N.O.-Afr.* i. p. 153 (1869).

Hirundo æthiopica, *Blanf. Ann. & Mag. Nat. Hist.* iv. p. 329 (1869); *Gray, Hand-l. B.* i. p. 401, no. 794*a* (1869); *Blanf. Geol. & Zool. Abyss.* p. 347, pl. 2 (1870); *Sharpe, P. Z. S.* 1870, p. 309; *id. Cat. Afr. B.* p. 46, no. 432 (1871); *Antin. & Salvad. Viagg. Bogos*, p. 72 (1873); *Cab. J. f. O.* 1878, p. 223; *Fischer & Reichen. t. c.* p. 257; *iid. op. cit.* 1879, p. 344; *Shelley, Ibis*, 1883, p. 547.

Adult. Above purplish blue; forehead deep chestnut; lores sooty black; cheeks dull black, slightly glossed with purplish blue; quills brownish black, paler on the under surface, the upper surface glossed with dark greenish steel-blue; the inner cubital feathers marked with a whitish spot on the inner web; tail blackish brown above, glossed with dark greenish steel-blue, all but the two central feathers having an oblong white spot on the inner web; under surface pearly white, with a crescent-shaped mark of purplish-blue feathers on each side of the upper part of the breast, not forming a complete band; under tail-coverts white, some of the shafts conspicuously indicated, and a small black spot on the outer web of some of the longest; bill black; feet dark brown. Total length 5 inches, wing 4·1, tail 2·5.

Hab. N.E. Africa, extending down the east coast as far as Mombas, re-occurring on the west coast between Senegambia and the Niger.

a. ♀ ad. sk.	Barakit, Tigré, May 1868.	W. T. Blanford, Esq. [C.]. (Type of species.)
b. Ad. sk.	Bogos Land (*Esler*).	Sharpe Collection.
c. Ad. sk.	White Nile (*Brun-Rollet*).	Sharpe Collection.
d. Ad. sk.	Khartoom (*Von Müller*).	Sharpe Collection.
e, *f*. ♂ ad. sk.	Mombasa Island.	Mr. J. M. Hildebrandt [C.].
g. Ad. sk.	Lokoja, R. Niger.	W. A. Forbes, Esq. [P.].
h. ♂ ad. sk.	Shonga, R. Niger.	W. A. Forbes, Esq. [P.].
i. Juv. sk.	Abeokuta (*Robin*).	F. Nicholson, Esq. [P.].
k. Ad. sk.	River Gambia (*Layard*).	Sharpe Collection.

9. Hirundo leucosoma.

Hirundo leucosoma, *Swains. B. W. Afr.* ii. p. 74 (1837); *Fraser, P. Z. S.* 1843, p. 51; *Gray, Gen. B.* i. p. 58 (1845); *id. Cat. Fissir. Brit. Mus.* p. 24 (1848); *Bp. Consp.* i. p. 339 (1850); *Hartl. J. f. O.* 1853, p. 398; *id. Orn. W.-Afr.* p. 27; *id. J. f. O.* 1861, p. 103; *Sharpe, Ibis*, 1869, p. 188; *Gray, Hand-l. B.* i. p. 70, no. 827 (1869); *Sharpe, P. Z. S.* 1870, p. 309; *id. Cat. Afr. B.* p. 46 (1871); *Shelley & Buckley, Ibis*, 1872, p. 288; *Ussher, Ibis*, 1874, p. 62.

Chelidon leucosoma, *Boie, Isis*, 1844, p. 171.

Hemicecrops leucosoma, *Bp. Rivist. Contemp., Torino*, 1857, p. 4.

Adult. Above dark glossy blue; a white longitudinal bar on the wing, which is produced by the inner secondaries being for the most part broadly edged externally with pure white; tail graduated, dark blue above, dusky beneath, all the feathers except the two middle ones marked with white on the inner web, the exterior feathers having a large oval spot, which gradually gets smaller on the feathers

as they approach the centre of the tail, until in the two next to the central feathers it is reduced to a small oval spot; entire under surface with the under wing- and tail-coverts pure white; bill and feet black. Total length 4·8 inches; of bill from front 0·3, from gape 0·45; wing 4, tail 1·8, tarsus 0·3, middle toe 0·4, hind toe 0·2, lateral toe 0·2.

Hab. West Africa.

a. Ad. sk.	West Africa.	J. Gould, Esq. [P.].
b. Ad. sk.	Fantee.	Sharpe Collection.
c. Ad. sk.	Fantee (*Ussher*).	Sharpe Collection.
d. Ad. sk.	Accra.	Sharpe Collection.

10. Hirundo dimidiata.

Hirundo dimidiata, *Sundev. Œfv. K. Vet.-Akad. Förh.* 1850, p. 107; *Hartl. Ibis*, 1862, p. 144; *Layard, B. S. Afr.* p. 56 (1867); *id. Ibis*, 1869, p. 72; *Gray, Hand-l. B.* i. p. 71, no. 832 (1869); *Sharpe, P. Z. S.* 1870, p. 310; *id. Cat. Afr. B.* p. 46, no. 434 (1871); *Gurney in Anderss. B. Dam. Ld.* p. 52 (1872); *Ayres, Ibis*, 1878, p. 285, 1879, p. 291; *Shelley, Ibis*, 1882, p. 259; *Sharpe, ed. Layard's B. S. Afr.* p. 366 (1883); *Ayres, Ibis*, 1884, p. 227.
Hirundo scapularis, *Cass. Proc. Philad. Acad.* pl. 12 (1850); *id. Cat. Hirund. Mus. Philad. Acad.* p. 2 (1853).
Hemicecrops dimidiata, *Bp. Rivist. Contemp., Torino*, 1857, p. 4.
Hemicecrops scapularis, *Bp. t. c.* p. 4.
Hirundo leucosoma (*nec Sw.*), *Grill, Zool. Anteckn.* p. 36 (1858).

Adult. Above purplish blue; quills brownish black, grey on the inner web, the innermost of the greater wing-coverts white, forming a white spot, which, however, is generally concealed by the scapularies; occasionally in very old birds a small white spot also appears on the innermost secondaries; tail brownish black, without any spots, glossed on the upper surface with dark blue, with a faint greenish lustre; entire under surface silky white, having in some specimens a certain woolly appearance, greyish in certain lights; on each side of the upper part of the breast a patch of dark-blue feathers: "bill and feet black; iris dark brown" (*Andersson*). Total length 5·5 inches, wing 4·2, tail 2·6, tarsus 0·4.

Young. Not nearly so bright above, and more distinctly tinged with greenish; the white spot on the greater wing-coverts either absent altogether, or, when present, of a dull greyish colour and very little developed.

Hab. South Africa.

a. ♀ ad. sk.	South Africa (*Andersson*).	Sharpe Collection.
b. Ad.; *c*. Juv. sk.	South Africa (*Surtees*).	Sharpe Collection.
d. Ad. sk.	Near Grahamstown (*Layard*).	Sharpe Collection.

11. Hirundo nigrita.

Hirundo nigrita, *Gray, Gen. B.* i. pl. 40 (1845); *id. Cat. Fissir. Brit. Mus.* p. 27 (1848); *Allen & Thoms. Exped. Niger*, ii. p. 498 (1848); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 3 (1853); *Hartl. J. f. O.* 1855, p. 360; *Cass. Proc. Philad. Acad.* 1859, p. 33; *Du*

Chaillu, Equat. Afr. p. 472 (1862); *Gray, Hand-l. B.* i. p. 71, no. 829 (1869).
Atticora nigrita, *Bp. Consp.* i. p. 337 (1853); *Hartl. Orn. W.-Afr.* p. 25 (1857).
Waldenia nigrita, *Sharpe, Ibis*, 1869, p. 461; *id. P. Z. S.* 1870, p. 304; *id. Cat. Afr. B.* p. 45 (1871); *Reichen. J. f. O.* 1875, p. 21; *Sharpe & Bouvier, Bull. Soc. Zool. France*, i. p. 38 (1876); *Bocage, Orn. Angola*, p. 188 (1877); *Oust. Nouv. Arch. Mus.* (2) ii. p. 96 (1879).
Ptyoprogne nigrita, *Oust. Bull. Soc. Philom.* (7) i. p. 106 (1877).
Atticora fasciata, *Forbes, Ibis*, 1883, p. 503.

Adult. Above glossy purplish blue, with a concealed patch of silky white on the sides of the lower back; chin dusky; throat white; rest of under surface of body purplish blue, but a little duller than the back; tail-feathers distinctly washed with dark blue above, brownish black below, with the greater part of the inner web white: "bill and feet black; iris dark brown" (*Reichenow*). Total length 4·5 inches, culmen 0·35, wing 4·3, tail 1·6, tarsus 0·35, middle toe 0·4, hind toe 0·2.

Young. Dusky purplish blue, the white throat-spot not quite so large; tail square or only slightly forked, and the white spots on the inner web small and oval.

Hab. West Africa, from the Upper Gold Coast to Gaboon.

a, b, c. Ad. sk.	Ancobra River, Wasa Province, Gold Coast.	Capt. Burton and Capt. Cameron [P.].
d. Ad. sk.	River Prah.	Godfrey Lagden, Esq. [P.].
e. Ad. sk.	Axim (*Swanzy*).	R. B. Sharpe, Esq. [P.].
f. Ad. sk.	River Niger.	Capt. Allen [P.]. (Type of species.)
g. Imm. sk.	Gaboon (*Walker*).	Sharpe Collection.
h. Ad. sk.	Gaboon.	M. Du Chaillu [C.].
i. Ad. sk.	River Danger, Gaboon.	Henry Ansell, Esq. [P.].

12. Hirundo atrocærulea.

Hirundo atrocærulea, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1850, p. 107; *Gurney, Ibis*, 1863, p. 152; *Layard, B. S. Afr.* p. 55 (1867); *Gurney, Ibis*, 1868, p. 152; *Gray, Hand-l. B.* i. p. 70, no. 822 (1869); *Sharpe, P. Z. S.* 1870, p. 312; *id. Cat. Afr. B.* p. 46 (1871); *id. ed. Layard's B. S. Afr.* p. 367, pl. 9. fig. 1 (1883).

Adult. Entirely glossy blue-black, a little more dusky underneath; the shafts of the primaries and tail-feathers white and very plain on the underside; bill black; feet dark brown. Total length 7·2 inches; of bill from front 0·3, from gape 0·5; wing 4·5, tail 4·6, tarsus 0·35, middle toe 0·4, hind toe 0·2.

Hab. South-eastern Africa.

a. ♂ ad. sk.	Natal (*T. Ayres*).	J. H. Gurney, Esq. [P.].
b. ♂ ad. sk.	Umvuli River, Natal (*Wahlberg*).	Sharpe Collection.

13. Hirundo nigrorufa.

Hirundo nigrorufa, *Bocage, Jorn. Lisb.* 1877, p. 158, 1878, p. 269, 1880, p. 236; *id. Orn. Angola*, p. 546 (1881); *Sharpe, ed. Layard's B. S. Afr.* p. 840 (1884).

Adult male. General colour above glossy purplish blue, with a concealed rufous undershade, only seen when the feathers are disturbed; wing-coverts like the back, with a smoky-brown patch on the inner web of the innermost greater coverts; quills black, glossed with purplish blue externally, the secondaries entirely of the latter colour, resembling the back; tail-feathers black glossed with blue, the three outer feathers with a fringe of white towards the end of the inner web, not pronounced enough to form a spot; head like the back; lores velvety black; ear-coverts like the crown; cheeks and under surface of body chestnut, with a patch of purplish blue on each side of the upper breast; thighs chestnut; under tail-coverts glossy purplish blue; under wing-coverts and axillaries chestnut like the breast; quills sooty black below: "iris chestnut" (*Anchieta*). Total length 5·3 inches, culmen 0·3, wing 4·35, tail 2·6, tarsus 0·4.

Hab. Benguela.

a. ♂ ad. sk. Caconda, Benguela (*Anchieta*). Lisbon Museum [P.].

14. Hirundo smithii.

Hirundo smithii, *Leach, App. to Tuckey's Voy. Congo*, p. 407 (1818); *Hartl. Orn. W.-Afr.* p. 26 (1857); *id. J. f. O.* 1861, p. 103.
Wire-tailed Swallow, *Lath. Gen. Hist.* vii. p. 309, pl. cxiii. (1823).
Hirundo filifera, *Steph. Gen. Zool.* xiii. p. 78 (1826); *Gray, Gen. B.* i. p. 58 (1845); *id. Cat. Fissir. Brit. Mus.* p. 25 (1848); *Blyth, Cat. B. Mus. As. Soc.* p. 197 (1849); *Bp. Consp.* i. p. 338 (1850); *Cab. Mus. Hein.* Th. i. p. 46 (1850); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 93 (1854); *Jerd. B. Ind.* i. p. 159 (1862); *Kirk, Ibis*, 1864, p. 320; *Blyth, Ibis*, 1866, p. 337; *Tytler, Ibis*, 1868, p. 196; *Pelz. t. c.* p. 307; *Beavan, Ibis*, 1869, p. 403; *Heugl. Orn. N.O.-Afr.* i. p. 155 (1869); *Gray, Hand-l. B.* i. p. 70, no. 820 (1869); *Sharpe, P. Z. S.* 1870, p. 312; *Finsch & Hartl. Vög. Ostafr.* p. 142 (1870); *Jerd. Ibis*, 1871, p. 352; *Hume, Str. F.* 1873, p. 164; *Adam, t. c.* p. 370; *Vipan, t. c.* p. 495; *Hume, Str. F.* 1874, p. 469; *Aitken, Str. F.* 1875, p. 212; *Butler, t. c.* p. 451; *Hume, t. c.* p. 451; *Fairb. Str. F.* 1876, p. 254; *Wardlaw Ramsay, Ibis*, 1877, p. 466; *Anders. Rep. Exped. Yun-nan, Birds*, p. 650 (1878); *Hume & Davis. Str. F.* 1878, p. 43; *Davids. & Wend. Str. F.* 1878, vol. ii. p. 76; *Butler, t. c.* p. 181; *Ball, t. c.* p. 202; *Hume, Str. F.* 1879, p. 84; *Bingham, t. c.* p. 192; *Doig, t. c.* p. 370; *Butler, Cat. B. Sind etc.* p. 12 (1879); *id. Cat. B. S. Bomb. Pres.* p. 14 (1880); *Vidal, Str. F.* 1880, p. 43; *Wardlaw Ramsay, Ibis*, 1880, p. 48; *Bingham, t. c.* p. 48; *Reid, Str. F.* 1881, p. 18; *Bocage, Orn. Angola*, p. 187 (1881); *Davidson, Str. F.* 1882, p. 292; *C. Swinh. Ibis*, 1882, p. 101; *Sharpe, ed. Layard's B. S. Afr.* p. 368 (1883); *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 120 (1884); *Murray, Vertebr. Faun. Sind*, p. 102 (1884).
Hirundo filicaudata, *Frankl. P. Z. S.* 1831, p. 115.

Hirundo ruficeps, *Licht. Verz. Doubl.* p. 68 (1823); *Ferr. et Gal. Voy. Abyss.* iii. p. 242 (1847); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 3 (1853); *Brooks, Ibis*, 1869, p. 46; *Blanf. Geol. & Zool. Abyss.* p. 348 (1870); *Hayes Lloyd, Ibis*, 1873, p. 406.
Hirundo filicaudata, *Frankl. P. Z. S.* 1831, p. 115.
Cecropis filifera, *Less. Compl. Buff.* viii. p. 499 (1837).
Cecropis ruficeps, *Boie, Isis*, 1844, p. 171.
Cecropis smithii, *Boie, Isis*, 1844, p. 174.
Cecropis filicaudata, *Rüpp. Syst. Uebers.* p. 22 (1845); *Heugl. Syst. Uebers.* p. 14 (1856); *Antin. Cat. Ucc.* p. 26 (1865).
Hirundo filicauda, *Müll. J. f. O.* 1855, p. 5.
Cecropis filicauda, *Brehm, J. f. O.* 1855, p. 452.
Uromitrus filifera, *Bp. Rivist. Contemp., Torino*, 1857, p. 4; *Brehm, Reis. Habesch*, p. 209 (1863); *Hume, Nests and Eggs Ind. B.* p. 75 (1874); *Ball, Str. F.* 1874, p. 383, 1875, p. 289.
Hirundo velocissima, *Pr. Würt. MSS., teste Heuglin.*
Hirundo fuscicapilla, *Heugl. Orn. N.O.-Afr.* i. p. 154 (1869).
Hirundo anchietæ, *Bocage, Jorn. Lisb.* 1867, p. 150.
Uromitrus filiferus, *Oates, B. Brit. Burm.* i. p. 307 (1883).

Adult. Crown of the head bright chestnut; feathers before and round the eye dull black; ear-coverts, nape, and entire upper surface rich purplish blue; quills dark blackish brown, paler on the inner web, the upper surface glossed with deep steel-blue; tail black, the outer web elongated and much attenuated, the two centre feathers purplish blue, unspotted, the rest having a roundish white spot on the inner web; under surface white, faintly tinged with pink on the throat and upper part of the breast; a crescent-shaped patch of feathers on each side of the latter dull purplish blue; bill black; feet dark brown. Total length 5·7 inches, wing 4·3, tail 2·85.

Young. Crown dull brown; rest of the upper surface of the body brown glossed with dull blue; tail quite square, or only slightly emarginate; underparts white, beautiful light pink on the throat and upper part of the breast.

Hab. The greater part of India, extending into Tenasserim on the east and to Scinde on the west. In Africa, occurring in Abyssinia, along the east coast to the Zambesi, and on the west coast reappearing in Benguela and the Congo region.

a, b. ♂ ♀ ad. sk.	Kamaulai, Salween River, Tenasserim, July 24.	Capt. C. T. Bingham [P.].
c. Ad. sk.	Bhamo, Burmah.	E. W. Oates, Esq. [C.].
d. Ad. sk.	India.	Gould Collection.
e. ♂ ad. sk.	India.	Gould Collection.
f. Ad. sk.	Bengal (*Falconer*).	India Museum.
g, h. Ad.; *i, k.* Juv. sk.	Kumaon (*Strachey*).	India Museum.
l. Ad. st.	Nepal.	B. H. Hodgson, Esq. [P.].
m. Ad. ..	Behar.	B. H. Hodgson, Esq. [P.].
n. ♂ *ɛ* ..; *o.* ♂ juv. sk.	Mhow, March.	Col. Swinhoe [P.].
p, q. ♂ ad.; *r.* ♀ juv. sk.	Mhow, April.	Col. Swinhoe [P.].
s. Ad. sk.	Madras.	Sir W. Elliot [P.].
t. Ad. sk.	Malabar.	R. B. Sharpe, Esq. [P.].

u, *v*. Ad.; *w*. Juv. sk.	Deccan (*Sykes*).	India Museum.
x. ♂ ad. sk.	Muddur, Mysore, Aug. 9.	W. Davison, Esq. [P.].
y, *z*, *a'*. Ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
b'. Ad. sk.	Kattiawar, June 6.	Major J. Hayes Lloyd [P.].
c'. Ad. sk.	Cashmere.	R. B. Sharpe, Esq. [P.].
d'. Ad. sk.	Scinde (*Dr. Gould*).	India Museum.
e'. Ad. sk.	Abyssinia.	Dr. Rüppell [C.].
f', *g'*. Ad.; *h'*. Juv. sk.	Tete, Zambesi (*Sir J. Kirk*).	Livingstone Expedition.
i', *k'*, *l'*. Ad. sk.	Landana, Congo (*L. Petit*).	R. B. Sharpe, Esq. [P.].

15. Hirundo griseopyga.

Hirundo griseopyga, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1850, p. 107; *Layard, B. S. Afr.* p. 55 (1867); *Sharpe, P. Z. S.* 1870, p. 313; *id. ed. Layard's B. S. Afr.* p. 368 (1882).
Atticora melbina, *J. Verr. Rev. et Mag. de Zool.* 1851, p. 310; *Strickl. Contr. Orn.* 1851, p. 163; *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 6 (1853); *Hartl. J. f. O.* 1853, p. 398; *id. Orn. W.-Afr.* p. 25 (1857); *Cass. Proc. Philad. Acad.* 1859, p. 33; *Hartl. J. f. O.* 1861, p. 103; *Forbes, Ibis*, 1883, p. 514.
Hirundo melbina, *Strickl. Contr. Orn.* 1851, p. 131.
Atticora cypseloides, *Heugl. J. f. O.* 1862, p. 297, 1864, p. 276.
Atticora griseopyga, *Heugl. Orn. N.O.-Afr.* i. p. 149, tab. vii. (1869); *Sharpe, Ibis*, 1870, p. 428.
Hirundo cypseloides, *Boucard, Cat. Av.* p. 334 (1876).
Psalidoprocne melbina, *Bouvier, Cat. Ois. etc. Marche*, p. 9 (1875).
Hirundo poucheti, *Petit, Bull. Soc. Zool. France*, viii. p. xliii (1883).

Adult. Entire head, lower part of back, and rump dull brownish grey; middle of the back and wing-coverts dark blue; quills brownish black glossed with dull blue; tail dull brown, glossed above with blue; lores black; a narrow line of feathers extending backwards over the eye whitish; cheeks and ear-coverts dull grey-brown; under surface of the body milky white, the sides of the upper part of the breast being greyish brown; bill and feet pale brown. Total length 5·8 inches, of wing 3·9, tail 3·3.

Hab. North-eastern Africa; West Africa, in Gaboon; South Africa, in Natal and Swazi-Land.

a. Ad. sk.	Gaboon.	P. B. Du Chaillu, Esq. [C.].
b. Ad. sk.	Gaboon (*Du Chaillu*).	Sharpe Collection.
c. Ad. sk.	Mayumba, Congo, Aug. (*L. Petit*).	R. B. Sharpe, Esq. [P.].

16. Hirundo cucullata.

Hirondelle à tête rousse du Cap de Bonne Espérance, *Daubent. Pl. Enl.* 723. fig. 2.
Hirundo cucullata, *Bodd. Tabl. Pl. Enl.* p. 45 (1783, *ex Daubent.*); *Gray, Gen. B.* i. p. 58 (1845); *id. Cat. Fissir. Brit. Mus.* p. 23 (1848); *Jard. Edinb. New Philos. Journ.* n. ser. iii. p. 241 (1856); *Gray, Hand-l. B.* i. p. 69, no. 795 (1869); *Heugl. Orn. N.O.-*

Afr. i. p. 162 (1869); *Sharpe, P. Z. S.* 1870, p. 318; *id. Cat. Afr. B.* p. 46 (1871); *Gurney, in Anderss. B. Dam. Ld.* p. 50 (1872); *Ayres, Ibis*, 1873, p. 281; *Shelley, Ibis*, 1875, p. 67; *Ayres, Ibis*, 1876, p. 424; *Bocage, Orn. Angola*, p. 183 (1881); *Sharpe, in Oates's Matabele Land*, App. p. 311 (1881); *Shelley, Ibis*, 1882, p. 260; *Salvin, Cat. Strickl. Coll.* p. 149 (1882); *Butler, Feilden, & Reid, Zool.* 1882, p. 251; *Holub & Von Pelz. Beitr. Orn. Südafr.* p. 58 (1882); *Sharpe, ed. Layard's B. S. Afr.* p. 370 (1882).

Hirundo capensis, *Gm. Syst. Nat.* i. p. 1019 (1788, *ex Daubent.*); *Bp. Consp.* i. p. 339 (1850); *Grill, Zool. Anteckn.* p. 34 (1858); *Layard, B. S. Afr.* p. 54 (1867); *Bocage, Jorn. Lisb.* 1868, p. 47.

Cecropis capensis, *Boie, Isis*, 1826, p. 971, 1844, p. 174; *Cab. Mus. Hein.* Th. i. p. 47 (1850).

Hirundo rufula ?, *Blyth, Cat. B. Mus. As. Soc.* p. 198 (1849).

Cecropis cucullata, *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 3 (1853).

Lillia capensis, *Boie, Isis*, 1858, p. 364.

Adult. Head intense sienna, the base of the feathers blue-black, showing occasionally a few markings of this colour on the crown; upper part of the back and scapulars glossy purplish blue, marked with white in the extreme upper part of the neck, this appearance being caused by the whitish edging to the feathers when they are disarranged; wing-coverts like the back, the edge of the wing marked with white, especially on the primary-coverts, all of which are edged with white; quills brownish black, lighter on the inner web, washed externally with dark greenish steel-blue; lower part of the back pale sienna, much paler on the upper tail-coverts, where it is nearly white, the outermost upper tail-coverts being steel-blue; tail brownish black, glossed with dark greenish steel-blue, the middle feathers without any white spot on the inner web, the next two on each side with a small white spot on the inner web, and so on till the last, which has a very large white spot; under surface of body fulvous white, the shaft of each feather strongly marked with brown, these shaft-stripes being very small on the throat and cheeks; the sides of the body washed with pale sienna; under tail-coverts white, with very distinct shaft-stripes: "bill black; feet brown; iris brown" (*Shelley*). Total length 7·8 inches, culmen 0·35, wing 5·1, tail 4·1, tarsus 0·6.

Young. Head dark brownish sienna, very pale on the sides of the neck, the base of the feathers conspicuously showing, so that a quantity of blue-black diamond-shaped marks appear on the head; back and scapulars steel-blue, with the white edgings to the feathers showing conspicuously on the upper part of the back; wing-coverts blackish brown, edged at the tip with pale sienna; quills blackish brown, glossed with deep greenish steel-blue, the secondaries tipped with pale sienna; rump pale sienna, the white edging to the rump not very distinct, the shafts of all the feathers clearly defined; the blue upper tail-coverts edged with sienna; tail blackish brown, glossed above with deep greenish steel-blue, the outer feathers not very long, but having the white spot on the inner web very large, as in the adult, decreasing in size as it approaches the two centre feathers, which are unspotted; under surface of the

body white tinged with fulvous, deepest on the flanks and abdomen; the shafts of the feathers very broad and plain, but thicker and not giving such a striped appearance in the adult; bill dark brown; legs flesh-colour.

Hab. South Africa, throughout the Cape Colony to Natal and the Transvaal, occurring on the western side of the continent in Damara Land and Mossamedes.

a. Juv. sk.	South Africa (*Surtees*).	Sharpe Collection.
b, c. Ad. sk.	Cape Colony (*Layard*).	Sharpe Collection.
d. Ad. sk.	Kingwilliamstown.	Capt. Trevelyan [P.].
e. ♀ ad. sk.	Pinetown, Natal, March 19 (*T. L. Ayres*).	Sharpe Collection.
f. Ad. sk.	Natal.	R. B. Sharpe, Esq. [P.].
g, h. ♂ ♀ ad. sk.	Transvaal (*T. L. Ayres*).	Sharpe Collection.
i. ♂ ad. sk.	Tati, Matabele Land, Oct. 4 (*F. Oates*).	W. E. and C. G. Oates, Esqrs. [P.].
k. ♀ ad. sk.	Otjimbinque, Damara Land, Oct. 1 (*Andersson*).	Sharpe Collection.
l. Ad. sk.	Otjimbinque, Damara Land, Nov. 23 (*Andersson*).	Sharpe Collection.

17. Hirundo puella.

Hirundo puella, *Temm. & Schl. in Faun. Japon., Aves*, p. 33 (1842); *Heugl. Orn. N.O.-Afr.* i. p. 160 (1869); *Gray, Hand-l. B.* i. p. 69, no. 797 (1869); *Finsch & Hartl. Vög. Ostafr.* p. 160 (1870); *Sharpe, P. Z. S.* 1870, p. 319; *id. Ibis*, 1870, p. 479; *Layard, Ibis*, 1870, p. 229; *Blanf. Geol. & Zool. Abyss.* p. 346 (1870); *Finsch, Trans. Z. S.* vii. p. 218 (1870); *Sharpe, Cat. Afr. B.* p. 47, no. 441 (1871); *id. Ibis*, 1871, p. 479; *Shelley & Buckley, Ibis*, 1872, p. 288; *Antin. & Salvad. Ucc. Bogos*, p. 73 (1873); *Sharpe, P. Z. S.* 1873, p. 713; *Ussher, Ibis*, 1874, p. 63; *Reichen. Corresp. Afrik. Gesellsch.* 1875, p. 178; *Sharpe & Bouv. Bull. Soc. Zool. France*, i. p. 38 (1876); *Cab. J. f. O.* 1878, p. 222; *Fisch. & Reichen. t. c.* p. 257; *Fisch. t. c.* p. 280; *id. ibid.* 1879, p. 344; *Sharpe, in Oates's Matabele Land*, App. p. 311 (1881); *Shelley, P. Z. S.* 1881, p. 565; *Bocage, Orn. Angola*, p. 184 (1881); *Shelley, Ibis*, 1882, p. 260; *Sharpe, ed. Layard's B. S. Afr.* p. 373 (1882); *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 121 (1884); *Ayres, Ibis*, 1884, p. 228.

Hirundo abyssinica, *Guér. Rev. Zool.* 1843, p. 322; *id. in Ferr. et Gal. Voy. en Abyss.* iii. p. 240, t. 10 (1847); *Des Murs in Lefebvr. Voy. Abyss., Zool.* p. 77 (1845); *Gray, Gen. B.* i. p. 58 (1845); *Bp. Consp.* i. p. 340 (1850); *Hartl. J. f. O.* 1853, p. 399, & 1855, p. 360; *id. Orn. Westafr.* p. 28 (1857); *id. J. f. O.* 1861, p. 103; *Kirk, Ibis*, 1864, p. 320.

Cecropis striolata, *Rüpp. Syst. Uebers.* p. 18, t. 6 (1845).

Hirundo striolata, *Gray, Cat. Fissir. Brit. Mus.* p. 23 (1848); *Jard. Contr. Orn.* 1848, p. 4; *Horsf. & Moore, Cat. Birds Mus. E.I. Co.* i. p. 94 (1854).

Hirundo korthalsi, *Bp. Consp.* i. p. 340 (1850); *Gray, Hand-l. B.* i. p. 69, no. 800 (1869).

Cecropis abyssinica, *Cass. Cat. Hirund. Mus. Phil. Acad.* p. 3 (1853); *Brehm, Reise nach Habesch*, p. 209 (1863).

Hirundo capensis, *A. E. Brehm, J. f. O.* 1855, p. 492.

Adult. Head and back of neck pale sienna; back and scapulars bright steel-blue; wing-coverts duller steel-blue; lower part of the back and rump deep sienna; quills brownish black glossed with dull greenish blue; tail-feathers brownish black, glossed above with greenish steel-blue, all the feathers except the centre ones having a large white spot on the inner web; underneath fulvous white, profusely marked with broad longitudinal stripes of dark brown; under wing-coverts deeper fulvous; bill black; feet dark brown. Total length 7·8 inches, culmen 0·3, wing 4·2, tail 4·8, tarsus 0·5.

Young (type of *H. korthalsi*, Bp.). General colour above dull blue-black; wing-coverts and quills dusky blackish with a slight gloss of blue-black, all the coverts and quills with an obsolete tip of sandy rufous, much broader on the inner secondaries; lower back and rump pale rufous; upper tail-coverts blue-black, with sandy rufous tips; tail-feathers blackish, with a gloss of blue-black, the outer feathers only a little elongated, the two outermost with a long patch of white on the inner web; crown of head dusky blackish, with sandy margins to all the feathers; nape, hind neck, and sides of neck pale sandy rufous; lores ashy; sides of face and ear-coverts dull sandy rufous; cheeks and under surface of body whitish, broadly streaked with dusky blackish on the throat and breast, the streaks becoming much narrower on the abdomen and being absent on the under tail-coverts, which are entirely white; flanks and sides of body washed with pale sandy rufous; under wing-coverts and axillaries uniform pale sandy rufous, the small coverts near the edge of the wing mottled with blackish bases; quills dusky below, more ashy along the inner web. Total length 5 inches, culmen 0·3, wing 3·85, tail 2·2, tarsus 0·45. (*Mus Lugd.*)

Hab. North-eastern and Eastern Africa; West Africa, apparently only found on the Gold Coast; South Africa generally, extending to the eastern districts of the Cape Colony.

a. Ad. st.	Abyssinia.	Dr. Rüppell [P.].
b. ♂ ad. sk.	Senafé, Abyssinia, May 21 (*Jesse*).	Sharpe Collection.
c. Ad. sk.	Rayrayguddy, Abyssinia, May 27 (*Jesse*).	Sharpe Collection.
d. ♀ ad sk.	Dongolo, Tigré, May 18.	W. T. Blanford, Esq.
e. ♂ ad. sk.	Ankober, Abyssinia (*Harris*).	India Museum.
f. Juv. sk.	West Africa.	F. D. Godman and O. Salvin, Esqrs. [P.].
g, h. Ad. sk.	Connor's Hill, Cape Coast (*Ussher*).	Sharpe Collection.
i. Ad. sk.	Connor's Hill, Cape Coast (*Ussher*).	Capt. Shelley [P.].
k, l. ♂ ad. sk.	Landana, Congo, Jan. & Feb. (*L. Petit*).	R. B. Sharpe, Esq. [P.].
m. Ad. sk.	Benguela.	J. J. Monteiro, Esq. [C.].
n. Ad. sk.	Kingwilliamstown, S. Africa.	Capt. H. Trevelyan [P.].
o. Ad. sk.	Natal.	Sharpe Collection.
p. ♂ juv. sk.	Pinetown, Natal, March 14 (*T. L. Ayres*).	Sharpe Collection.

q, *r*. Ad. sk.	Tati, Matabele Land (*F. Oates*).	W. E. and C. G. Oates, Esqrs. [P.].
s. Ad. sk.	Shupanga, Zambesi (*Sir J. Kirk*).	Livingstone Expedition.
t. Ad. sk.	Mombasa (*Wakefield*).	R. B. Sharpe, Esq. [P.].
u. ♀ ad. sk.	Mombasa Town.	J. M. Hildebrandt [C.].
v. ♂ ad. sk.	Kitui, Ukanda.	J. M. Hildebrandt [C.].

18. Hirundo rufula.

Hirundo daurica, *Savi, Orn. Tosc.* iii. p. 201 (1831, *nec L.*); *Selys Longch. Ibis*, 1870, p. 453.

Hirundo alpestris (*non Pall.*), *Bp. Faun. Ital., Ucc.* Intr. p. xxx (1832); *Heugl. Orn. N.O.-Afr.* i. p. 158 (1869); *Blanf. Geol. & Zool. Abyss.* p. 346 (1870).

Hirundo rufula, *Temm. Man.* iii. p. 298 (1835, *syn. excl.*); *Werner, Atlas, Chelidones*, pl. 1*a*; *Schl. & Susem. Vög. Eur.* vi. Taf. 1. fig. 2 (c. 1839); *Gray, Gen. B.* i. p. 58 (1845); *Schl. Rev. Crit.* pp. xviii, 41 (1844); *Bp. Consp.* i. p. 339 (1850); *Brehm, J. f. O.* 1853, p. 453; *Tristr. Ibis*, 1859, p. 27; *Linderm. Vög. Griechenl.* p. 27; *Simpson, Ibis*, 1860, p. 289; *Blasius, Nachtr. Naum. Vög. Deutschl.* xiii. p. 209, Taf. 383. fig. 4 (1860); *Dubois, Ois. Eur.* pl. 34 (c. 1862); *Blasius, Ibis*, 1862, p. 65; *Gray, Cat. Brit. B.* p. 33 (1863); *Wright, Ibis*, 1864, pp. 42, 57; *Giglioli, Ibis*, 1865, p. 51; *Tristr. t. c.* p. 79; *id. Ibis*, 1867, p. 362; *Degl. et Gerbe, Orn. Eur.* i. p. 590 (1867); *Doderl. Avif. Sicil.* p. 144 (1869); *Gray, Hand-l. B.* i. p. 69, no. 808 (1869); *Saunders, Ibis*, 1869, p. 396; *Selys Longch. Ibis*, 1870, p. 453; *Sharpe, P. Z. S.* 1870, p. 314; *Salvad. Faun. Ital., Ucc.* p. 53 (1871); *Shelley, B. Egypt*, p. 122 (1872); *Dresser, B. Eur.* iii. p. 487, pl. 161 (1875); *Lilford, Ibis*, 1875, p. 16; *Cordeaux, t. c.* p. 184; *Dresser, Ibis*, 1876, p. 188; *Blanf. East. Persia*, ii. p. 215 (1876); *Giglioli, Elench. Ucc. Ital.* p. 64 (1881); *id. Ibis*, 1881, p. 192; *B. O. U. List Brit. B.* p. 43 (1883); *Seebohm, Ibis*, 1883, p. 169.

Hirundo capensis (*nec Gm.*), *Duraz. Ucc. Lig.* p. 14 (1840).

Cecropis rufula, *Boie, Isis*, 1844, p. 174; *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 4 (1853); *Vierth. Naum.* 1855, p. 472; *Gould, B. Asia*, i. pl. 27 (1868).

Cecropis alpestris (*non Pall.*), *Heugl. Syst. Uebers.* p. 16 (1856); *Borggr. Vogelf. Norddeutschl.* p. 100 (1869); *Severtz. Turkest. Jevotn.* p. 67 (1873).

Hirundo (Cecropis) rufula, *Jaub. et Barth.-Lap. Rich. Orn.* p. 308, pl. 19. fig. 1 (1859).

Lillia rufula, *Boie, J. f. O.* 1858, p. 364.

Hirundo daurica (*nec L.*), *Wright, Ibis*, 1864, pp. 42, 57, & 1874, p. 233.

Adult male (Smyrna, May 24). General colour above glossy purplish blue, with white streaks on the back where the white bases to the feathers show through; wing-coverts like the back; bastard-wing feathers, primary-coverts, and quills blackish, externally washed with dull steel-blue; rump pale cinnamon-rufous, verging into creamy white on the upper tail-coverts, the longer ones of which are purplish blue with pale cinnamon-buff bases; tail-feathers blackish glossed with dull blue; crown of head purplish blue, forming a cap, which is separated from the mantle

by the cinnamon-coloured sides of the neck, which converge from behind the eye to the nape, where they form a collar; base of forehead and a narrow line over the eye cinnamon-rufous; cheeks and ear-coverts pale sandy buff, the lores mixed with dusky plumes; entire under surface of body pale cinnamon-buff, a little deeper on the fore neck, breast, and flanks; the throat very minutely, and the rest of the body a little more distinctly, striated with narrow dusky shaft-lines; sides of upper breast purplish blue; thighs and under tail-coverts creamy whitish, the longer coverts blue-black with creamy white bases; axillaries and under wing-coverts pale sandy buff, the coverts near the edge of the wing with blackish shaft-lines; quills dusky below, paler along the edge of the inner web. Total length 7·8 inches, culmen 0·35, wing 4·8, tail 4·15, tarsus 0·5.

Adult female. Exactly like the male in colour. Total length 7·5 inches, culmen 0·35, wing 4·7, tail 3·85, tarsus 0·55.

Obs. In many specimens the crown of the head appears as if connected with the mantle by a few purplish-blue feathers; this is, however, due to the faulty preparation of the skin, as in properly preserved examples the collar on the hind neck is perfect. I have seen only one young bird which has also this partial connexion between the crown and the mantle, but I do not consider it to be simply a sign of immaturity.

Young (Smyrna, July 29). Much duller in colour than the adult, being blackish glossed with steel-blue, the rufous colour on the neck and rump very much paler; wing-coverts and secondaries tipped with pale rufous; beneath paler than in the adult, the throat and abdomen whitish, the fore neck rufescent; the throat and breast with tolerably distinct dusky shaft-lines; axillaries and under wing-coverts pale cinnamon, rather deeper than in the adult. Total length 6·8 inches, wing 4·8, tail 3·2, tarsus 0·55.

Hab. Southern Europe, occurring as far westward as Italy, Sicily, and Malta, ranging through Greece, Asia Minor, and Palestine, to Egypt and Abyssinia, and eastwards to Turkestan. On its occurrence in Dauria, as erroneously given by me in the P. Z. S. for 1870, *cf.* Dresser, B. Eur. *l. c.*

a. Ad. sk.	Genoa, spring of 1871.	R. B. Sharpe, Esq. [P.].
b. ♂ ad. sk.	Smyrna, May 24, 1871 (*Dr. Krüper*).	F. D. Godman and O. Salvin, Esqrs. [P.].
c. ♀ ad. sk.	Smyrna, June 26, 1871 (*Dr. Krüper*).	F. D. Godman and O. Salvin, Esqrs. [P.].
d. ♂ ad.; *e, f.* ♂ juv. sk.	Smyrna, June (*Dr. Krüper*).	R. B. Sharpe, Esq. [P.].
g, h. ♂ juv. sk.	Smyrna, July 29, 1871 (*Dr. Krüper*).	R. B. Sharpe, Esq. [P.].
i, k. ♂ ♀ ad. sk.	Calameta.	Consul Merlin [P.].
l. ♂ ad. sk.	Tiberias.	Canon Tristram [C.].
m. ♀ ad. sk.	Mount Carmel.	Canon Tristram [C.].
n. ♂ ad. sk.	Banias, Palestine, May 4, 1864 (*Tristram*).	F. D. Godman and O. Salvin, Esqrs. [P.].
o. ♂ ad. sk.	Wady El Beerha, April 1864 (*Tristram*)	F. D. Godman and O. Salvin, Esqrs. [P.].

p. ♂ ad. sk.	N.W. of Bampúr, Persian Baluchistan, April 12, 1872.	W. T. Blanford, Esq.	[C.].
q. ♀ imm. sk.	Koomaylee, Abyssinia, Feb. 14, 1868.	W. T. Blanford, Esq.	[C.].

Subsp. *a*. **Hirundo scullii.**

Hirundo rufula (*non Temm.*), *Wardlaw Ramsay, Ibis*, 1880, p. 48; *Scully, Ibis*, 1881, p. 427.
Hirundo rufula, var. scullii, *Seebohm, Ibis*, 1883, p. 168.

Adult (Residency Grounds, Nepal; Dr. Scully: type of species). Very similar to *H. rufula*, but smaller: "bill black; legs and toes dusky brownish fleshy; claws black; iris dark brown" (*Scully*). Total length 7·5 inches, culmen 0·35, wing 4·5, tail 3·8, tarsus 0·5. (*Mus. H. Seebohm.*)

The specimens from Pushut agree with the type in coloration. Wing 4·35–4·45 inches.

Obs. In Capt. Wardlaw Ramsay's collection is a bird obtained by himself at Byan Khyl, in Afghanistan, with the wing 4·5 inches long. It closely resembles a male from Mount Tabor in his collection, which only measures 4·6 inches in the wing (*cf.* Wardlaw Ramsay, *l. c.*). Possibly intermediate forms may be found between *H. rufula* and *H. scullii*.

Hab. Afghanistan, along the Himalayas to Nepal.

a, *b*. Ad. sk.	Pushut, Afghanistan (*Griffith*).	India Museum.	

Hirundo daurica and its allies.

Two ornithologists have recently devoted their attention to this extremely difficult group of Swallows, with somewhat similar results. Mr. A. O. Hume (Str. F. 1877, pp. 254–267) has contributed a paper on the Indian species and their allies, which has greatly increased our knowledge of the subject, while Mr. Seebohm ('Ibis,' 1883, pp. 167–169) has treated the species from a Palæarctic as well as an Indian point of view.

Out of the eleven species recognized by Mr. Hume and the eight allowed by Mr. Seebohm, three are easily distinguishable, viz. *H. melanocrissa*, *H. domicella*, and *H. rufula*; and Mr. Seebohm's new race, *H. scullii*, is allowed by me to be different. But as regards the other species, it seems that both the above-named authors have not much faith in their characters of distinction, for the latter often consist merely in a longer or shorter wing. The other characters, such as the breadth of the rump-band or the amount of striation on the rump, seem to me to be equally as variable as the length of the wing and the coarseness or fineness of the shaft-stripes on the under surface. Some stress has also been laid by Mr. Hume on the dusky ear-coverts; and at one time I thought myself that this would prove a reliable point of difference between the races; but I find

that in a large series the darker and coarser the breast-stripes the darker the ear-coverts, and just as every gradation in length of wing can be found, so every intermediate form between the narrowly striped examples, with finely streaked ear-coverts, and the coarsely streaked specimens, with nearly uniform blackish ear-coverts, can be met with in a series.

With some slight modifications, I have adopted Mr. Seebohm's classification of the races or subspecies, as it embodies Mr. Hume's conclusions; but I must confess that when a larger series is at our disposal, I shall expect to find a perfect gradation from one to the other, beginning with the faintly-streaked *H. erythropygia* and leading through *H. nipalensis* to *H. daurica*, and then through *H. japonica* to *H. striolata* and its races. It also appears to me impossible to settle the question of some of these races until a larger series is at our disposal from various parts of China, and especially from the headquarters of these Swallows in winter, viz. Assam, Burmah, Cochin China, &c., from which countries I have not examined nearly enough material.

It must therefore be understood that the synonymy of these Mosque-Swallows is liable to modification, as it will be necessary to examine specimens from the localities to which the references belong. A great deal will also depend upon future observation, as to whether all these Mosque-Swallows are migratory in the different countries they inhabit, or whether they are stationary, forming colonies in various parts of Asia.

19. Hirundo daurica.

Hirundo daurica, *Linn. Mantissa Plant.* p. 528 (1771); *Gm. Syst. Nat.* i. p. 1024 (1788); *Gray, Gen. B.* i. p. 57 (1845); *Bp. Consp.* i. p. 338 (1850); *De Selys-Longchamps, Bull. Acad. R. Belg.* xxii. pt. 2, p. 103 (1855).

Hirundo alpestris, *Pall. Reis. Russ. Reichs.* ii. *App.* no. 19 (1771–76); *id. Zoogr. Rosso-Asiat.* p. 534, pl. 30 (1811); *Blas. Nachtr. Naum. Vög. Deutschl.* xiii. p. 209, pl. 383. fig. 3 (1860); *Radde, Reis. Sibir. Vög.* p. 280 (1863); *Finsch, Reis. West-Sibir.* p. 38 (1879); *Seebohm, Ibis*, 1883, p. 169; *Homey. & Tancré, MT. orn. Ver. Wien*, 1883, p. 83.

Daurian Swallow, *Lath. Gen. Syn.* ii. pt. 2, p. 570 (1783).

Hirundo dauurica, *Lath. Ind. Orn.* ii. p. 576 (1790).

Cecropis daurica, *Less. Compl. Buff.* viii. p. 498 (1837); *Boie, Isis*, 1844, p. 174; *Dybowski, J. f. O.* 1876, p. 192.

Cecropis alpestris, *Boie, Isis*, 1844, p. 174; *Gould, B. Asia*, i. pl. 28 (1860); *Dybowski, J. f. O.* 1868, p. 336, 1872, p. 352, 1874, p. 334, 1875, p. 244; *Tacz. Bull. Soc. Zool. France*, i. p. 133 (1876); *Prjev. in Dawson Rowley's Orn. Misc.* ii. p. 161 (1877); *David & Oust. Ois. Chine*, p. 125 (1878).

Lillia alpestris, *Boie, J. f. O.* 1858, p. 364.

? Lillia intermedia, *Hume, Str. F.* 1877, p. 263.

Adult male. General colour above deep blue, the back much streaked with white when the feathers are disturbed; head like the back, and not separated by a nuchal collar from the mantle; lesser and median wing-coverts like the back, the greater coverts, bastard-

wing, primary-coverts, and quills blackish, externally glossed with blue; lower back and rump cinnamon-rufous, with a few blackish shaft-lines, very indistinct; upper tail-coverts dark blue; tail-feathers blackish, glossed slightly with blue; lores blackish, whiter at base, and surmounted by a narrow line of rufous, forming a slight eyebrow, which expands into a broad neck-patch of cinnamon-rufous behind the ear-coverts, which are dingy whitish washed with rufous and distinctly striped with black shaft-streaks; cheeks and throat also dingy whitish, with broader blackish shaft-streaks; remainder of under surface pale rufous, everywhere streaked with dusky blackish shaft-lines, less marked on the vent and under tail-coverts, the long ones of which end in dark blue or blue-black like the upper tail-coverts; sides of body and flanks washed with a little deeper rufous; axillaries and under wing-coverts clear rufous, with scarcely any shaft-lines, the edge of the wing more distinctly streaked with the latter; quills dusky below. Total length 8·4 inches, culmen 0·4, wing 5·15, tail 4·7, tarsus 0·65.

Adult female. Similar to the male in plumage. Total length 7·5 inches, culmen 0·35, wing 4·75, tail 4·5, tarsus 0·55.

Young. Duller in colour than the adult, and easily distinguished by the rufescent margins to the tips of the wing-coverts and secondary quills; rump more coarsely striped than in the old birds; ear-coverts nearly uniform sooty brown; rufous colour on sides of hinder crown very dull and less developed than in the adults. Wing 4·35 inches.

Obs. H. daurica is a large form of *H. nipalensis*, and has a more northern habitat. The following measurements of wing are taken from the specimens in the British Museum and the collection of Mr. Seebohm:—

	Wing. in.	
a. ♂. Irtisch (*Finsch*).....	5·1.	Mus. Seebohm.
β. ♂. Irtisch (*Finsch*)	5·0.	Mus. Brit.
γ. ♀. Irtisch (*Finsch*)	5·0.	Mus. Brit.
δ. ♂. Dauria (*Dybowski*)	5·1.	Mus. Brit.
ε. ♀. Dauria (*Dybowski*)	4·8.	Mus. Brit.

Hab. From the Altai Mountains extending over Western Siberia from Irtisch, throughout Dauria and Amoor Land, southwards to Kansu.

a, b. ♂ ♀ ad. sk.	Irtisch River, June 16.	Dr. O. Finsch [C.].
c, d. ♂ ♀ ad. sk.	Dauria (*Dybowski*).	Warsaw Museum [E.].
e. Juv. sk.	Ussuri River.	Warsaw Museum [E.].

Subsp. *a*. **Hirundo nipalensis.**

Hirundo nipalensis, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 6, no. 329; *id. J. A. S. Beng.* v. p. 780 (1836); *id. in Gray's Zool. Misc.* p. 82 (1844); *Hume & Davison, Str. F.* 1878, p. 44; *Hume, Str. F.* 1879, p. 84; *Scully, t. c.* p. 233; *Bingham, Str. F.* 1880, p. 148; *Hume, t. c.* p. 246; *Oates, B. Brit. Burm.* i. p. 306 (1883).

Hirundo daurica (*non Pall.*), *Gray, Cat. Fissir. Brit. Mus.* p. 23 (1848); *Blyth, Cat. B. Mus. As. Soc.* p. 198 (1849); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 92 (1854, pt.); *Swinh. Ibis*, 1861, p. 328; *Jerd. B. Ind.* i. p. 160 (1862, pt.); *Swinh. Ibis*, 1863, p. 255; *Beavan, Ibis*, 1865, p. 405; *Tytler, Ibis*, 1868, p. 196; *Pelz. t. c.* p. 307; *Brooks, Ibis*, 1869, p. 46; *Beavan, t. c.* p. 404.
Hirundo erythropygia (*nec Sykes*), *Gray, Hand-l. B.* i. p. 69, no. 806 (1869, pt.).
Cecropis daurica (*nec Pall.*), *Jerd. Ibis*, 1871, p. 352.
Cecropis arctivitta, *Swinh. P. Z. S.* 1871, p. 346.
Lillia daurica, *Hume, Nests and Eggs Ind. B.* p. 78 (1873).
Cecropis nipalensis, *Hume, Str. F.* 1875, p. 42.
Hirundo (Cecropis) nipalensis, *Brooks, Str. F.* 1875, p. 230.
Cecropis erythropygia (*nec Sykes*), *Blyth, B. Burm.* p. 127 (1875).
Lillia arctivitta, *Hume, Str. F.* 1877, pp. 261, 266.
Lillia nipalensis, *Hume, Str. F.* 1877, p. 262.
Hirundo arctivitta, *Oates, B. Brit. Burm.* i. p. 307 (1883).
Hirundo alpestris, *β.* nipalensis, *Seebohm, Ibis*, 1883, p. 169.

Very similar to *H. daurica*, but smaller, with the wing measuring from 4·4 to 4·7 inches. Bill black; feet dusky; claws black; iris blackish brown. (*Scully.*)

In the young bird, according to Dr. Scully, the soft parts are as follows:—Bill black, the base of the lower mandible and gape fleshy yellow; feet dusky brownish; claws yellow; iris brownish black.

Hab. Northern China, where probably a separate colony exists; Himalayas, from Simla to Assam, wintering in the plains of India and the Burmese countries.

a. Ad. sk.	Shanghai.	Dr. McKinlay [P.].
b. Ad. sk.	Woosung, April (*Capt. Ince*).	Mrs. Ince [P.].
c. Ad. sk.	China.	J. R. Reeves, Esq. [P.].
d. Ad. sk.	Upper Assam (*Dr. Reid*).	R. B. Sharpe, Esq. [P.].
e, f. Ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.]. (Types of *H. nipalensis*.)
g. Juv. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
h. Imm. sk.	Nepal, Aug. 29.	Dr. J. Scully [P.].
i. Ad. sk.	Himalayas.	India Museum.
k. ♀ ad. sk.	Behar.	B. H. Hodgson, Esq. [P.].
l. Ad. sk.	Kamptee, C. P.	Dr. B. Hinde [P.].
m. ♂ imm. sk.	Godavery valley, Jan.	W. T. Blanford, Esq. [P.].
n. ♂ ad. sk.	Pegu, March 29.	E. W. Oates, Esq. [C.].
o. ♂ ad. sk.	Shwaygeen, Pegu, May.	E. W. Oates, Esq. [C.].
p, q. ♂ ♀ ad.; *r.* ♂ juv. sk.	Kaukarit, Houndraw River, Tenasserim, May.	Capt. C. T. Bingham [P.].

Subsp. β. Hirundo striolata.

Cecropis striolata, *Boie, Isis*, 1844, p. 174 (*ex Temm. MS.*); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 3 (1853); *Wald. in Blyth B. Burm.* p. 127 (1875).
Hirundo striolata, *Gray, Gen. B.* i. p. 58 (1845); *Temm. & Schl. Faun. Jap.* p. 33 (1850); *Bp. Consp.* i. p. 340 (1850); *Blyth, Ibis*, 1866, p. 337; *Gray, Hand-l. B.* i. p. 69, no. 801 (1869); *Hume & Davison, Str. F.* 1878, p. 44; *Seebohm, Ibis*, 1883, p. 169.
Lillia striolata, *Hume, Str. F.* 1877, p. 261.

Adult male (type of species). General colour above dark purplish blue, the back perceptibly streaked with white where the white bases to the feathers show through; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills black, washed with purplish blue externally; lower back and rump light chestnut-rufous, with narrow blackish shaft-lines, not very distinct; upper tail-coverts purplish blue with rufous bases; tail-feathers black washed with purplish blue; head like the back, with a few streaks of rufous on the hind neck; no rufous on base of forehead; loral plumes dusky with whitish bases, surrounded by a narrow streak of rufous; from behind the eye a triangular patch of dull chestnut, extending on the sides of the neck, but not meeting behind the nape; ear-coverts dingy fulvous, with blackish shaft-streaks; cheeks and under surface of body light fulvous, more silky white on the throat and a little deeper buff on the sides of the body; all the under surface from the chin to the vent streaked with distinct blackish centres to the feathers, broader on the throat and breast; under tail-coverts fulvescent, with broad and conspicuous tips of blue-black; under wing-coverts and axillaries pale fulvescent, with narrow shaft-lines of black, the outer coverts more strongly mottled with blackish central markings; quills dusky below, more ashy along the edge of the inner web. Total length 7·6 inches, culmen 0·35, wing 5·05, tail 4, tarsus 0·6. (*Mus Lugd.*)

Adult female. Does not differ from the male in colour. Total length 7 inches, wing 5·1, tail 3·67, tarsus 0·65.

Obs. H. striolata is a slightly larger race of *H. japonica*, with the wing 5·05–5·1 inches in length, and with coarser and broader shaft-stripes below. A still darker race seems to occur in the Karen Hills in Burmah, where Capt. Wardlaw Ramsay discovered it.

Hab. Java; ? extending northwards into Burmah.

a. Ad. sk. Java. Leiden Museum [P.].

Subsp. γ. Hirundo japonica.

Hirundo alpestris japonica, *Temm. & Schl. Faun. Jap., Aves*, p. 33, pl. 11 (1850).
Hirundo japonica, *Bp. Consp.* i. p. 340 (1850); *Gray, Hand-l. B.* i. p. 69, no. 809 (1869).
Hirundo daurica, *Swinh. Ibis*, 1860, p. 48, 1863, pp. 89, 255; *id. P. Z. S.* 1863, p. 18; *id. Ibis*, 1870, p. 90.
Cecropis japonica, *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 4 (1853); *Swinh. P. Z. S.* 1871, p. 346; *id. Ibis*, 1874, p. 436.
Hirundo striolata (*non Temm. & Schl.*), *Wall. P. Z. S.* 1863, p. 485; *Wald. B. Burm.* p. 127 (1875, pt.); *Hume & Davison, Str. F.* 1878, p. 44; *Oates, B. Br. Burm.* i. p. 305 (1883).
Cecropis japonica, *David & Oust. Ois. Chine*, p. 127 (1877); *Blakist. & Pryer, Ibis*, 1878, p. 231; *Seebohm, Ibis*, 1879, p. 30.
Lillia japonica, *Hume, Str. F.* 1877, p. 261.
Lillia substriolata, *Hume, Str. F.* 1877, p. 264.
Cecropis erythropygia (*nec Sykes*), *Blakist. & Pryer, B. Japan*, p. 130 (1882).
Hirundo striolata, β. substriolata, *Seebohm, Ibis*, 1883, p. 169.
Hirundo striolata, γ. japonica, *Seebohm, t. c.* p. 169.

Adult male (Japan; Prof. Milne). General colour above dark purplish blue, streaked with white where the white bases show through; the wing-coverts like the back; bastard-wing, primary-coverts, and quills blackish, glossed externally with steel-blue; rump and upper tail-coverts cinnamon-rufous, with distinct narrow black shaft-lines, the long coverts dark purplish blue, with light rufous bases; tail-feathers black glossed with steel-blue; crown of head dark purplish blue like the back; over the eye a few rufous feathers; sides of the hinder crown deep rufous, converging towards the nape, but not forming a distinct collar, the nape-plumes being blue edged with rufous; lores whitish, tipped with dusky; ear-coverts smoky brown, slightly tinged with rufous and broadly streaked with dusky brown; cheeks and throat dull white, broadly streaked with blackish, more distinctly on the latter; remainder of the under surface pale rufescent buff, very distinctly streaked with black; sides of upper breast purplish blue; thighs rather whiter; under tail-coverts like the abdomen, the lower ones blue-black, with pale rufescent bases and black shaft-lines; lateral under tail-coverts white, with black shaft-lines and a distinct oval spot of blue-black near the tip; axillaries and under wing-coverts rufescent buff, all with distinct black shaft-lines, broader on the outer under wing-coverts; quills dusky below, paler along the inner web. Total length 7·4 inches, culmen 0·4, wing 4·55, tail 4, tarsus 0·65.

Obs. Very similar to *H. nipalensis*, and differing only in its under surface being more coarsely streaked. The shaft-stripes on the rump are very distinct when present, but vary considerably in strength of marking.

Hirundo substriolata of Hume is a slightly larger race, as will be seen by the following series of measurements. It ranges from Formosa to Assam in winter.

A.—*H. japonica.*

	Wing. in.	
α. Japan (*Milne*)	4·55.	(Mus. Brit.)
β. Karen Hills (*Wardlaw Ramsay*)	4·6.	(Mus. R. G. W. R.)
γ. Flores (*Wallace*)	4·45.	(Mus. Brit.)
δ. Flores (*Wallace*)	4·4.	(Mus. H. Seeb.)
ε. Flores (*Wallace*)	4·5.	(Mus. H. Seeb.)

B.—*H. substriolata.*

ζ. Formosa (*Swinhoe*)	5·0.	(Mus. H. Seeb.)
η. Formosa (*Swinhoe*)	4·9.	(Mus. H. Seeb.)
θ. Formosa (*Swinhoe*)	4·85.	(Mus. H. Seeb.)

Hab. Japan and China, extending into the Burmese countries and as far south as the island of Flores.

a. Ad. sk.	Japan.	Professor Milne [C.].
b. Ad. sk.	Japan.	R. B. Sharpe, Esq. [P.].
c. Ad. sk.	China.	R. B. Sharpe, Esq. [P.].
d. Ad. sk.	Flores.	A. R. Wallace, Esq. [C.].

Subsp. ♂. **Hirundo erythropygia.**

Hirundo erythropygia, *Sykes, P. Z. S.* 1832, p. 83; *Jerd. Madr. Journ.* xi. p. 237 (1840); *Blyth, Ibis*, 1866, pp. 237, 337; *Gray, Hand-l. B.* i. p. 69, no. 806 (1869); *Brooks, Ibis*, 1869, pp. 46, 47; *Blyth, Ibis*, 1870, p. 161; *Cock & Marsh. Str. F.* 1873, p. 350; *Adam, t. c.* p. 370; *Aitken, Str. F.* 1875, p. 212; *Hume, t. c.* p. 318; *Butler, t. c.* p. 451; *Walden, Ibis*, 1876, p. 338; *Butler, Str. F.* 1877, p. 226; *Davidson & Wenden, Str. F.* 1878, vol. ii. p. 76; *Murray, t. c.* p. 113; *Legge, B. Ceylon*, p. 594 (1879); *Hume, Str. F.* 1879, p. 84; *Butler, Cat. B. Sind &c.* p. 13 (1879); *id. Cat. B. S. Bomb. Pres.* p. 14 (1880); *id. Str. F.* 1880, p. 377; *Wardlaw Ramsay, Ibis*, 1880, p. 48; *Vidal, Str. F.* 1880, p. 43; *Butler, t. c.* p. 377; *Reid, Str. F.* 1881, p. 18; *Davidson, Str. F.* 1882, p. 292; *Davison, Str. F.* 1883, p. 345; *Seebohm, Ibis*, 1883, p. 169.

Hirundo daurica (*non Pall.*), *Blyth, Cat. B. Mus. As. Soc.* p. 198 (1849, pt.); *Layard, Ann. & Mag. Nat. Hist.* xii. p. 170 (1853); *id. & Kelaart, Prodr. Cat., App.* p. 58 (1853); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 4 (1853); *Horsf. & Moore, Cat. B. E. I. Co. Mus.* i. p. 92 (1854, pt.); *Jerd. B. Ind.* i. p. 160 (1862, pt.); *Bulger, P. Z. S.* 1866, p. 508; *Holdsw. P. Z. S.* 1872, p. 419; *Murray, Vertebr. Faun. Sind*, p. 103 (1884).

Cecropis daurica, *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 4 (1853).

Cecropis erythropygia, *Gould, B. Asia*, i. pl. 29 (1868); *Jerd. Ibis*, 1871, p. 352; *Blyth, B. Burm.* p. 127 (1875); *Fairb. Str. F.* 1876, p. 254.

Lillia erythropygia, *Hume, Nests and Eggs Ind. B.* p. 76 (1873); *id. Str. F.* 1877, p. 255.

Adult. General colour above deep purplish blue, with white striations where the bases of the feathers show through; the wing-coverts like the back; quills blackish, externally glossed with dull blue; rump and upper tail-coverts deep ferruginous, the longer coverts deep purplish blue; tail-feathers blackish glossed with dull blue; crown of head like the back, from which it is almost separated by a nuchal collar of deep ferruginous, the sides of the hinder crown and sides of the neck being of the latter colour and converging on to the nape, the nuchal collar being only interrupted by a few dark-blue plumes in the form of spots; a narrow frontal line and a streak over the eye deep ferruginous; lores whitish, tipped with dusky; ear-coverts pale rufous with dusky shaft-streaks; cheeks, throat, and under surface of body whitish, slightly marked with fulvous on the breast and flanks; the whole of the underparts narrowly streaked with dusky blackish shaft-lines, disappearing on the under tail-coverts, the long ones of which are deep blue-black with whitish bases; under wing-coverts and axillaries rather deeper fulvous than the breast, with nearly obsolete dusky shaft-lines, which are, however, more plainly developed on the small wing-coverts near the edge of the wing; quills dusky below, paler along the edge of the inner web: "bill, legs, and feet black; iris brown" (*Legge*). Total length 6·2 inches, culmen 0·35, wing 4·45, tail 3·1, tarsus 0·5.

Hab. Indian Peninsula and Ceylon.

a. Ad. sk.	Deccan (*Sykes*).	India Museum. (Type of species.)
b. Ad. sk.	Madras (*Jerdon*).	Gould Collection.

c. Ad. sk.	Calcutta (*A. S. B.*).	India Museum.
d. Ad. sk.	Behar.	B. H. Hodgson, Esq. [P.].
e. Ad. sk.	Kangra, Punjab.	Capt. Stackhouse Pinwill [P.].
f. Ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
g. Ad. sk.	N.W.Himalayas (*Dr.Bellew*).	India Museum.
h. Ad. sk.	India (*J. R. Reeves*).	India Museum.
i. Ad. sk.	India.	India Museum.
k. Ad. sk.	Ceylon.	R. B. Sharpe, Esq. [P.].

20. Hirundo melanocrissa.

Cecropis melanocrissus, *Rüpp. Syst. Uebers.* p. 22 (1845); *Des Murs in Lefebvr. Voy. Abyss., Zool.* p. 79 (1849); *Heugl. Syst. Uebers.* p. 16 (1856).
Hirundo rufula (pt.), *Bp. Consp.* i. p. 339 (1850).
Hirundo melanocrissa, *Gray, Hand-l. B.* i. p. 69, no. 807 (1869); *Heugl. Orn. N.O.-Afr.* i. p. 159 (1869); *Sharpe, P. Z. S.* 1870, p. 315; *Blanf. Geol. & Zool. Abyss.* p. 346 (1870); *Finsch, Trans. Z. S.* vii. p. 319 (1870); *Heugl. Orn. N.O.-Afr.* iv. *App.* p. lvii (1874); *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 121 (1884).
Lillia melanocrissa, *Hume, Str. F.* 1877, p. 258.

Adult. Above deep indigo-blue glossed with purple, with the usual white lines on the upper part of the back; feathers in front of the eye black; a narrow line of feathers from the base of the bill extending backwards over the eye, sides of the neck, and round the nape, and forming an interrupted nuchal collar, deep sienna; rump paler sienna; quills brownish black, glossed with greenish steel-blue; upper tail-coverts deep steel-blue; tail-feathers brownish black, glossed with greenish above; cheeks and throat pale buffy white, the shafts of the feathers marked by small black lines; rest of the body buff, with faint marks; the apical end of the under tail-coverts glossy blue-black, having the appearance of a black crissum; bill black; feet dark brown. Total length 7 inches, of wing 4·7, tail 3·6.
Hab. North-eastern Africa.

a. Ad. sk.	Abyssinia.	Dr. Rüppell [C.].
b. ♂ ad. sk.	Undul Wells, Abyssinia, April.	W. T. Blanford, Esq. [C.].

Subsp. *a.* Hirundo domicella.

Hirundo melanocrissa (*non Rüpp.*), *Hartl. Orn. W.-Afr.* p. 27 (1857); *Heugl. J. f. O.* 1863, p. 168 (var.); *Antin. Cat. descr. Ucc.* p. 25 (1865).
Hirundo domicella, *Finsch & Hartl. Vög. Ostafr.* p. 143 (1870); *Heugl. Orn. N.O.-Afr.* i. p. 159 (1869–70); *Sharpe, P. Z. S.* 1870, p. 315; *id. Cat. Afr. B.* p. 46 (1871); *Shelley, Ibis*, 1883, p. 547.
Lillia domicella, *Hume, Str. F.* 1877, p. 260.

Adult. Head, back, and scapulars deep indigo; feathers in front of the eye black; a thin narrow line of bright rufous; extending over this line to the eye, ear-coverts, and sides of the neck rich rufous, extending round the neck and forming a narrow collar; the feathers on the upper back loose, so that a few of the margins show, giving a striped appearance; wing-coverts dull steel-blue; quills brownish,

slightly glossed with dull steel-blue, paler on the under surface and on the inner edge of the secondaries; lower part of the back and rump uniform rich sienna; upper tail-coverts glossy steel-blue; tail forked, black above, paler beneath, glossed on the upper surface with greenish steel-blue; under surface of the body white, fulvous on the breast and abdomen, and marked on the breast with a few narrow black striæ; under tail-coverts glossy steel-blue; under wing-coverts white: "iris brown" (*W. A. Forbes*). Total length 7 inches, culmen 0·35, wing 4·4, tail 3·85, tarsus 0·55.

Hab. West Africa, from Senegambia to the Niger.

a, *b*. Ad. sk.	River Gambia.	Sharpe Collection.
c, *d*. ♂ ♀ ad. sk.	Shonga, River Niger.	W. A. Forbes, Esq. [P.].

21. Hirundo badia.

Cecropis badia, *Cass. Proc. Philad. Acad.* 1853, p. 371; *id. Cat. Hirund. Mus. Philad. Acad.* p. 4 (1853).
Hirundo badia, *Gray, Hand-l. B.* i. p. 69, no. 804 (1869).
Cecropis archetes, *Hume, Str. F.* 1877, p. 266.
Hirundo archetes, *Hume, Str. F.* 1879, p. 47; *Legge, B. Ceylon*, p. 592 (1879).

Adult. General colour above glossy steel-blue; hind neck and mantle slightly streaked with reddish on disturbing the feathers; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills blackish, externally washed with steel-blue; rump and upper tail-coverts deep chestnut, the long upper tail-coverts steel-blue; tail-feathers black glossed with steel-blue; crown of head like the back; lores dusky; a narrow line of red commencing at the base of the forehead and extending over the eye, forming a narrow and scarcely perceptible eyebrow; sides of hinder crown, ear-coverts, cheeks, and under surface of body deep chestnut, with indistinct blackish streaks, very tiny on the ear-coverts and throat, but a little larger on the breast, abdomen, and flanks; a patch of steel-blue feathers on the sides of the upper breast; thighs and under tail-coverts chestnut, the long ones of the latter with steel-blue ends, the longest entirely steel-blue; under wing-coverts and axillaries chestnut, the latter slightly mottled with dusky bases and narrow blackish shaft-lines; quills below dusky brown. Total length 6 inches, culmen 0·4, wing 4·95, tail 2·7, tarsus 0·6.

The specimen described is in the British Museum, and the only other specimen which we have seen in this country is one in Capt. Wardlaw Ramsay's collection; it was obtained in Malacca by the late Dr. Maingay. This specimen measures as follows:—Total length 7 inches, culmen 0·4, wing 5·3, tail 1·9, outer tail-feathers 3·9. It is apparently in more complete plumage than the Museum skin, as there is considerable difference between the dimensions of the two birds.

Hab. Malacca.

Ad. sk.	Malacca.	R. B. Sharpe, Esq. [P.].

22. Hirundo hyperythra.

Hirundo hyperythra, *Blyth, J. A. S. Beng.* xviii. p. 814 (1849); *id. Cat. B. Mus. As. Soc.* p. 198 (1849); *Kelaart, Prodr. Cat.* p. 118 (1852); *Layard, Ann. & Mag. Nat. Hist.* xii. p. 170 (1853); *Blyth, Ibis*, 1867, p. 306; *Gray, Hand-l. B.* i. p. 69, no. 798 (1869); *Holdsw. P. Z. S.* 1872, p. 419; *Legge, B. Ceylon*, p. 592 (1879); *Hume, Str. F.* 1879, p. 84.
Herse hyperythra, *Bp. Consp.* i. p. 340 (1850).
Cecropis hyperythra, *Gould, B. Asia*, i. pl. 30 (1868); *Jerd. Ibis*, 1871, p. 352; *Hume, Str. F.* 1877, p. 266.

Adult. General colour above purplish blue or deep steel-blue, a little streaked on the hind neck and mantle with fulvous, the feathers having a concealed fulvous edging, which becomes evident when they are disarranged; wing-coverts like the back; bastard-wing, primary-coverts, and quills blackish, externally glossed with steel-blue; feathers of lower back steel-blue, tipped with rufous like the adjoining rump and upper tail-coverts, the longest of the latter being steel-blue; tail-feathers blackish glossed with steel-blue; crown of head like the back; lores dusky, surmounted by a narrow line of rufous from the base of the forehead, extending over the eye, and forming a scarcely perceptible eyebrow; sides of hinder crown, ear-coverts, cheeks, sides of neck, and entire under surface of body deep chestnut, very plainly marked with narrow blackish shaft-lines, a little broader on the ear-coverts and on the throat; thighs and under tail-coverts chestnut, the longer under tail-coverts tipped or subterminally spotted with blue, the longest entirely blue; the under wing-coverts and axillaries chestnut, with distinct blackish shaft-lines near the edge of the wing; quills below dusky black: "bill deep brown, in some specimens blackish, the base of the lower mandible reddish; legs and feet vinous brown; iris sepia-brown" (*Legge*). Total length 6·4 inches, culmen 0·4, wing 4·55, tail 2·95, tarsus 0·55.

Sexes alike in plumage.

Immature birds have the hue of the under surface paler than the adults and the shaft-streaks not so clear (*Legge*).

Hab. Ceylon.

a, b. Ad. sk.	Ceylon.	T. Thwaites, Esq. [C.].
c. Ad. sk.	Kandy.	Dr. Kelaart [P.].
d. Ad. sk.	Ceylon.	Gould Collection.

23. Hirundo semirufa.

Hirundo semirufa, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1850, p. 107; *Sharpe, Ibis*, 1869, p. 188; *Ayres, t. c.* p. 290; *Gray, Hand-l. B.* i. p. 69, no. 802 (1869); *Sharpe, P. Z. S.* 1870, p. 317; *id. Cat. Afr. B.* p. 46 (1871); *Ayres, Ibis*, 1880, p. 260; *Sharpe, in Oates's Matabele Land, App.* p. 312; *id. ed. Layard's B. S. Afr.* p. 370, pl. ix. fig. 1 (1883); *Shelley, Ibis*, 1882, p. 260; *Ayres, Ibis*, 1884, p. 227.

Adult. Above dark blue, inclining to indigo; rump chestnut; upper tail-coverts dark blue; quills black, brownish underneath, glossed above with dark blue; tail black, glossed with blue above,

every feather, except the two centre ones, having a very large white spot on the inner web; space between the bill and the eye velvety black; cheeks and ear-coverts deep blue-black; entire under surface chestnut, very deep on the flanks and abdomen; under wing-coverts fulvous; edge of wing fulvous mottled with black: "bill black; legs dusky; iris dusky" (*T. Ayres*). Total length 8·8 inches, culmen 0·4, wing 5·2, tail 5·3, tarsus 0·55.

Hab. Southern Africa, from Natal to the Transvaal and northwards to the Matabele country.

a, b. Ad. sk.	Natal.	Sharpe Collection.
c. Ad. sk.	Between Pretoria and Lydenburg.	F. A. Barratt, Esq. [C.].
d. ♂ ad. sk.	Transvaal (*T. Ayres*).	Sharpe Collection.
e. ♀ ad. sk.	Tati, Matabele Land, Oct. 4 (*F. Oates*).	W. E. and C. G. Oates, Esqrs. [P.].
f. Ad. sk.	Inchlangin River, December (*F. Oates*).	W. E. and C. G. Oates, Esqrs. [P.].

Subsp. α. **Hirundo gordoni.**

Hirundo melanocrissa (*nec Rüpp.*), *Jard. Contr. Orn.* 1849, p. 4.
Hirundo gordoni, *Jard. Contr. Orn.* 1851, p. 141, 1852, p. 47; *Hartl. Orn. W.-Afr.* p. 27 (1857); *id. J. f. O.* 1861, p. 103; *Gray, Hand-l. B.* i. p. 69, no. 799 (1869); *Sharpe, Ibis*, 1869, p. 188; *id. P. Z. S.* 1870, p. 317; *id. Cat. Afr. B.* p. 46 (1871); *Shelley & Buckley, Ibis*, 1872, p. 288; *Ussher, Ibis*, 1874, p. 62; *Reichen. J. f. O.* 1875, p. 21; *Bocage, Orn. Angola*, p. 182 (1881).
Cecropis gordoni, *Cass. Proc. Philad. Acad.* 1859, p. 33.

Adult. Above glossy indigo-blue, duller on the wing-coverts; quills brownish black, glossed above, especially on the secondaries, with dark blue; rump sienna-rufous; upper tail-coverts dark indigo; tail brownish black, washed with dull indigo above, the inner webs of all but the six central feathers having a large white patch; entire under surface of body sienna-rufous, a little paler on the throat, thighs, and under wing-coverts; bill black; feet dark brown. Total length 6·5 inches, culmen 0·35, wing 4·5, tail 4, tarsus 0·55.

Hab. West Africa, from Senegal to the Congo.

a. Ad. sk.	Senegal.	M. Laglaize [C.].
b. Ad. sk.	Ashantee.	John Gould, Esq.
c. Ad. sk.	Elmina, May (*Blissett*).	Sharpe Collection.
d, e. Ad. sk.	Cape Coast (*Ussher*).	Sharpe Collection.
f, g, h. Ad. sk.	Accra (*Ussher*).	Sharpe Collection.
i, k. Ad. sk.	Gaboon.	Sharpe Collection.
l. Ad. sk.	Landana, Congo (*Lucan*).	R. B. Sharpe, Esq. [P.].

24. **Hirundo senegalensis.**

Hirondelle à ventre roux de Sénégal, *Daubent. Pl. Enl.* vii. pl. 310.
Hirundo senegalensis, *Linn. Syst. Nat.* i. p. 345 (1766); *Swains. B. W. Afr.* ii. p. 72, pl. 6 (1837); *Gray, Gen. B.* i. p. 58 (1845); *id. Cat. Fissir. Brit. Mus.* p. 23 (1848); *Jard. Contr. Orn.* 1849, p. 4; *Bp. Consp.* i. p. 339 (1850); *Hartl. Orn. Westafr.* p. 27 (1857); *Dubois, Ois. Eur.* pl. 35 (1862); *Hartl. J. f. O.* 1869, p. 103; *Gray, Hand-l. B.* i. p. 69, no. 796 (1869); *Heugl. Orn. N.O.-Afr.* i. p. 156 (1869); *Sharpe, P. Z. S.* 1870, p. 316; *id. Ibis*, 1872,

p. 71; *Shelley & Buckley, t. c.* p. 288; *Heugl. Orn. N.O.-Afr.* iv. *App.* p. lvii (1874); *Ussher, Ibis*, 1874, p. 62; *Reichen. Corresp. Afrik. Gesellsch. Berlin*, 1875, no. 178; *id. J. f. O.* 1875, p. 21; *Sharpe & Bouv. Bull. Soc. Zool. France*, i. p. 37 (1876); *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 120 (1884).

Hirundo rufula, *Gould, B. Eur.* ii. pl. 55 (1837, *nec Temm.*).

Cecropis senegalensis, *Less. Compl. Buff.* viii. p. 498 (1837); *Boie, Isis*, 1844, p. 174; *Rüpp. Syst. Uebers.* p. 22 (1845); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 3 (1853); *Heugl. Syst. Uebers.* p. 16 (1856); *Bouvier, Cat. Ois. Marche &c.* p. 9.

Hirundo melanocrissus (*nec Rüpp.*), *Heugl. J. f. O.* 1862, p. 297.

Cecropis melanocrissus, *Antin. Cat. descr. Uec.* p. 25 (1865); *Salvad. Atti R. Accad. Sci. Torino*, 1870, p. 728.

Above purplish blue; sides of the head and back of the neck, almost forming a nuchal collar, as well as the entire rump, deep sienna; quills dull black slightly glossed with blue; upper tail-coverts dull purplish blue; tail-feathers black, unspotted; throat and cheeks buffy white, as also are the under wing-coverts; rest of the underparts deep chestnut; bill black; feet very dark brown. Total length 9 inches, wing 5·7, tail 4·2.

Hab. N.E. Africa and W. Africa.

a.	Ad. sk.	Senegal.	Governor Rendall [P.].
b.	♂ ad. sk.	Casamance (*Verreaux*).	Sharpe Collection.
c.	Ad. sk.	Ekraful, Gold Coast, May (*Blissett*).	Sharpe Collection.
d.	Ad. sk.	Ashantee.	J. Gould, Esq.
e.	Ad. sk.	Plains of Accra, Feb. 13 (*Ussher*).	Sharpe Collection.
f.	Ad. sk.	Abyssinia.	Sharpe Collection.

25. Hirundo monteiri.

Hirundo monteiri, *Hartl. Ibis*, 1862, p. 340, pl. 11; *Gurney, Ibis*, 1863, p. 116; *Kirk, Ibis*, 1864, p. 320; *Gray, Hand-l. B.* i. p. 69, no. 803 (1869); *Bocage, Jorn. Lisb.* 1868, p. 40, 1869, p. 339; *Finsch & Hartl. Vög. Ostafr.* p. 139 (1870); *Sharpe, P. Z. S.* 1870, p. 316; *id. Cat. Afr. B.* p. 46 (1871); *Gurney in Anderss. B. Dam. Ld.* p. 49 (1872); *Sharpe, P. Z. S.* 1873, p. 713; *id. & Bouvier, Bull. Soc. Zool. France*, p. 38 (1876); *Cab. J. f. O.* 1878, p. 222; *Fischer & Reichen. t. c.* p. 257; *id. J. f. O.* 1879, p. 344; *Bocage, Orn. Angola*, p. 181 (1881); *Shelley, P. Z. S.* 1881, p. 565; *Sharpe, ed. Layard's B. S. Afr.* p. 368 (1883).

Male. Above glossy blue-black, the head capped and united to the nape by a broad interrupted band of blue-black feathers; a narrow line of feathers from the base of the nostrils to the eye dusky black; space below this line, and feathers at the base of the beak, cheeks and ear-coverts whitish, tinged with grey on the latter; lower part of the back and rump deep chestnut; upper tail-coverts blue-black; quills dusky brown, with a dark greenish-blue lustre on the upper surface; tail greenish blue above, blackish underneath, with an oblong white spot on the inner web of the exterior tail-feathers; throat and under wing-coverts white tinged with light rufous; a triangular patch of feathers on the side of the head extending from the eye backwards, nearly encircling the head, and extending down

the sides of the neck, very bright rufous; shoulders and sides of the chest dark blue-black like the back; breast and under tail-coverts deep rufous, with a black spot near the tip of the two interior feathers of the latter; thighs white; bill black; feet dark brown. Total length 8·5 inches, culmen 0·45, wing 5·75, tail 4·75, tarsus 0·65.

Young. Above blue-black, but not so rich or so glossy as in the adult; quills and tail dusky brown, with scarcely any perceptible gloss on the upper surface; lower part of the back pale rufous; throat, cheeks, and under wing-coverts pure white; sides of the neck and breast rufous, but not so rich as in the adult; under tail-coverts rufous, the basal half of the two interior feathers black.

Hab. S.W. Africa, ranging across to the Zambesi and Zanzibar districts.

a. Ad. sk.	Angola.	J. J. Monteiro, Esq. [C.]. (Type of species.)
b. Ad. sk.	Angola (*Monteiro*).	Sharpe Collection.
c, d. ♂ ♀ ad. sk.	Ondonga, Ovampo Land (*Andersson*).	Sharpe Collection.
e. ♂ ad. sk.	Elephant Vley, Damara Land, Sept. 22 (*Andersson*).	Sharpe Collection.
f. Ad. sk.	Mombas, E. Africa (*Wakefield*).	R. B. Sharpe, Esq. [P.].

26. Hirundo euchrysea.

Hirundo euchrysea, *Gosse, B. Jamaica*, p. 68, pl. 12 (1847); *Gray, Cat. Fissir. Brit. Mus.* p. 26 (1848); *March, Proc. Philad. Acad.* 1863, p. 295; *Gray, Hand-l. B.* i. p. 72, no. 849 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 14 (1873).

Herse euchrysea, *Bp. Consp.* i. p. 34 (1850).

Petrochelidon euchrysea, *Sclater, P. Z. S.* 1861, p. 72; *id. Cat. Amer. B.* p. 39 (1862).

Callichelidon euchrysea, *Baird, Review Amer. B.* p. 304 (1865); *A. & E. Newt. Handb. Jamaica*, 1881, p. 107.

Adult. General colour above metallic golden green, greener on the head; wing-coverts like the back; greater coverts, bastard-wing, and primary-coverts blackish, externally washed with golden bronze; quills black, with a slight bronzy shade on the outer edge; tail-feathers blackish washed with golden bronze; lores velvety black; ear-coverts, fore part of cheeks, and base of chin metallic golden green like the upper surface; throat and remainder of under surface of body pure white; thighs black; under tail-coverts pure white; axillaries and under wing-coverts metallic golden green, with dusky bases; quills sooty black below: "bill black; feet purplish black" (*Gosse*). Total length 5 inches, culmen 0·3, wing 4·2, tail 2·2, tarsus 0·4.

Young. Differs from the adult in having the feathers of the throat and breast obscured with dusky subterminal bars. The metallic plumage is also duller and greener, with not such a strong golden lustre.

Hab. Jamaica.

a, *b*. Ad. et juv. sk.	Jamaica.	Capt. Hamilton [P.].
c. Ad. sk.	Jamaica.	P. H. Gosse, Esq. [C.]. (Type of species.)
d. Juv. sk.	Jamaica.	Sclater Collection.
e. Ad. sk.	Jamaica (*Osburn*).	Sclater Collection.

27. Hirundo sclateri.

Hirundo euchrysea, var. dominicensis, *Bryant, Proc. Bost. Soc. N. H.* xi. p. 95 (1866).

Hirundo sclateri, *Cory, Auk*, 1884, p. 2; *id. B. S. Domingo*, p. 45 (1884).

Adult male. Above bright bluish green, showing a golden colour in some lights, becoming decidedly blue on the forehead; upper surface of wings and tail showing a tinge of dull blue, brightest on the tail; underparts pure white; primaries brown; bill and legs very dark brown. Length 5·25 inches, wing 5·75, tail 2. (*Cory.*)

Adult female. Similar to the male. (*Cory.*)

Hab. S. Domingo.

Obs. Differs from *H. euchrysea*, according to Mr. Cory, in being larger and in wanting the blue on the forehead.

6. CHERAMŒCA.

Type.

Cheramœca, *Cab. Mus. Hein.* Th. i. p. 49 (1850).... C. leucosternum.

Range. Australia.

1. Cheramœca leucosternum.

Hirundo leucosternus, *Gould, P. Z. S.* 1840, p. 172.

Atticora leucosternon, *Gray, Gen. B.* i. p. 58 (1845); *Gould, B. Austr.* fol. pl. 12 (1848); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 6 (1853); *Diggles, Orn. Austr.* pl. 21. fig. 2; *Gray, Hand-l. B.* i. p. 73, no. 863 (1869).

Atticora leucosterna, *Bp. Consp.* i. p. 337 (1850).

Cheramœca leucosterna, *Cab. Mus. Hein.* Th. i. p. 49 (1850); *Gould, Handb. B. Austr.* i. p. 115 (1865).

Adult. Upper surface particoloured; crown of head white, with brown centres to the feathers; nape and hind neck as well as the sides of the neck brown; mantle and upper back white, the lateral feathers blackish along the outer web; scapulars, lower back, rump, and upper tail-coverts blue-black; least wing-coverts brown; remainder of the wing-coverts, bastard-wing, primary-coverts, and quills blue-black, browner on the inner webs of the feathers; tail-feathers blackish; lores blackish brown; ear-coverts brown; cheeks, throat, fore neck, and breast white, extending slightly down the flanks; centre of lower breast, abdomen, and under tail-coverts blue-black; thighs white; axillaries and under wing-coverts white, with a slight wash of smoky brown; quills dusky brown; "bill blackish brown; legs and feet greenish grey; iris dark reddish brown" (*Gould*). Total length 5·5 inches, culmen 0·25, wing 3·95, tail 3, tarsus 0·5.

Young. Differs from the adult in having the whole head brown, with only a streak of white across the forehead extending backwards

above the eye; the quills edged with white. Total length 4·6 inches, wing 3·8, tail 2·15, tarsus 0·5.

Hab. Interior of Australia.

a. Ad. sk. Australia.
b. Ad.; *c*. Juv. sk. Interior of S. Australia. F. D. Godman and O. Salvin, Esqrs. [P.].

7. PROGNE.

Type.
Progne, *Boie, Isis*, 1826, p. 971 ..... P. purpurea.
Phæoprogne, *Baird, Review Am. B.* p. 283 (1864) ..... P. tapera.



Tail and foot (to show connexion of toes) of *Progne purpurea*.

Range. North and South America; Antilles.

Key to the Species.

a. Purplish blue both above and below.
  a'. Under surface entirely purplish blue like the upper surface.
    a''. With a concealed patch of silky white feathers on the sides of the lower back and a second one on the sides of the flanks *purpurea*, p. 173.
    b''. With only one concealed patch of silky white feathers, viz. on the sides of the lower back; no white patch on the sides of the flanks ..... *furcata*, p. 175.
    c''. With no white patch either on the sides of the back or on the flanks ..... *concolor*, p. 176.
  b'. Centre of breast and abdomen white.
    d''. Throat and chest glossy purplish blue like the upper surface..... *dominicensis*, p. 176.
    e''. Throat and chest brown, with purplish-blue markings on the sides of the upper breast in old birds.
      a'''. Larger: tail 3·3 inches ..... *domestica*, p. 177.
      b'''. Smaller: tail 2·4–2·7 inches ..... *chalybea*, p. 178.

b. Upper surface brown as also the breast; throat and underparts white, with a longitudinal streak of brown on the breast ..... *tapera*, p. 180.

1. Progne purpurea.

Hirundo purpurea, *Catesby, Nat. Hist. Carol.* i. pl. 51 (1731).
The Great American Martin, *Edwards, Nat. Hist. B.* iii. pl. 120 (1750).
Le Martinet de la Caroline, *Briss. Orn.* ii. p. 515 (1760).
Hirundo purpurea, *Linn. Syst. Nat.* i. p. 344 (1766, *ex Catesby*); *Wilson, Amer. Orn.* v. p. 58, pl. 39. figs. 2, 3 (1812); *Audub. B. Amer.* pl. 22 (c. 1830); *Swains. Faun. Bor.-Amer., Aves*, p. 335 (1831); *Audub. Orn. Biogr.* i. p. 115 (1831); *id. B. Amer.* i. p. 170, pl. 45 (1839); *D'Orbign. in Ramon de la Sagra's Cuba, Ois.* p. 94 (1840); *Yarr. Brit. B.* ii. p. 232* (1843); *Jones, Nat. Bermuda*, p. 34 (1859).
Hirundo subis, *Linn. Syst. Nat.* i. p. 344 (1766, *ex Edwards*); *Maynard, B. Florida*, p. 71 (1874).
Hirondelle de la Louisiane, *Daubent. Pl. Enl.* vii. pl. 722.
Purple Swift, *Pennant, Arctic Zool.* p. 431 (1785).
Purple Swallow, *Lath. Gen. Syn.* ii. pt. 2, p. 575 (1783).
Canada Swallow, *Lath. tom. cit.* p. 575 (1783).
Violet Swallow, *Lath. tom. cit.* p. 574 (1783).
Hirundo violacea, *Gm. Syst. Nat.* i. p. 1026 (1788).
Hirundo cærulea, *Vieill. Ois. Amér. Sept.* i. p. 27, pls. 26, 27 (1807).
Hirundo versicolor, *Vieill. N. Dict. d'Hist. Nat.* xiv. p. 509 (1817).
Hirundo ludoviciana, *Cuv. Règne Anim.* i. p. 374 (1817).
Progne purpurea, *Boie, Isis*, 1826, p. 971; *Bp. Comp. List B. Eur. & N. Amer.* p. 8 (1838); *Gray, Gen. B.* i. p. 59 (1845); *id. Cat. Fissir. Brit. Mus.* p. 27 (1848); *Bp. Consp.* i. p. 337 (1850); *Cab. Mus. Hein.* i. p. 50 (1850); *id. J. f. O.* 1856, p. 3; *Burm. Th. Bras.* iii. p. 140 (1856); *Cass. Ill. B. Calif.* p. 245 (1856); *Brewer, N. Amer. Ool.* vol. i. p. 103, pl. iv. fig. 47 (1857); *Baird, in B., Cass., & Lawr. B. N. Amer.* p. 314 (1860); *Gundl. J. f. O.* 1861, p. 328; *Scl. Cat. Amer. B.* p. 38 (1862); *Blakist. Ibis*, 1862, p. 4, 1863, p. 65; *Gray, Cat. Brit. B.* p. 34 (1863); *Degl. et Gerbe, Orn. Eur.* i. p. 594 (1867); *Gray, Hand-l. B.* i. p. 74, no. 886 (1869); *Cooper, B. Calif.* p. 113 (1870); *Pelz. Orn. Bras.* p. 16 (1871); *Coues, Key N. Amer. B.* p. 114 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 14 (1873); *Coues, B. N.-West*, p. 91 (1874); *Newt. ed. Yarr. Brit. B.* ii. p. 361 (1880); *A. & E. Newt. Handb. Jamaica*, 1881, p. 107; *Salvin, Cat. Strickl. Coll.* p. 153 (1882); *id. & Godm. Biol. Centr.-Amer., Aves*, i. p. 223 (1883); *B. O. U. List Brit. B.* p. 45 (1883).
Cecropis violacea, *Boie, Isis*, 1828, p. 316.
Cecropis subis, *Less. Compl. Buff.* viii. p. 498 (1837).
Cecropis violacea, *Less. t. c.* p. 498 (1837).
Progne subis, *Baird, Review Amer. B.* p. 274 (1864); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 547 (1869); *Lawr. op. cit.* ii. p. 271 (1874); *Baird, Brewer, & Ridgw. Hist. N. Am. B.* i. p. 329, pl. 16. figs. 7–10 (1874); *Ridgw. U.S. Geol. Survey 40th Par.* pt. iii. *Orn.* p. 439 (1877); *Merrill, P. U.S. Nat. Mus.* i. p. 125 (1878); *Belding, t. c.* p. 408; *Coues, B. Color. Vall.* p. 445 (1878); *Cooper, P. U.S. Nat. Mus.* ii. p. 247 (1879); *Ridgw. op. cit.* iii. p. 175 (1880); *Coues, Key N. Amer. B.* 2nd ed. p. 325 (1884).
Progne elegans, ad., *Baird, Review Amer. B.* p. 275, note (1864).
Progne cryptoleuca, *Baird, t. c.* p. 277 (1864); *Gray, Hand-l. B.* i. p. 75, no. 894 (1869).

Progne subis, var. cryptoleuca, *Baird, Brewer, and Ridgw. Hist. N. Amer. B.* i. p. 332 (1874).
Progne subis cryptoleuca, *Ridgw. P. U. S. Nat. Mus.* iii. p. 175 (1880).

Adult male. General colour above glossy dark purplish blue, with a concealed spot of silky white on the sides of the back; lesser and median wing-coverts like the back but rather duller; greater coverts, bastard-wing, primary-coverts, and quills blackish, externally glossed with dull blue; tail-feathers also blackish with a dull blue gloss; lores blackish; sides of face, ear-coverts, cheeks, and entire under surface of body dark purplish blue like the back; axillaries and under wing-coverts like the breast; quills ashy black below, rather lighter along the inner web: "bill deep brownish black; feet purplish black; iris dark brown" (*Audubon*). Total length 7·5 inches, culmen 0·55, wing 5·85, tail 3·05, tarsus 0·55.

Adult female. Differs from the male in not being blue below. General colour above dark purplish blue, not so brilliant as in the male; the head like the back, the forehead browner, the feathers slightly mottled with purplish-blue centres; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, quills, and tail-feathers black, glossed externally with dull blue; lores black; ear-coverts dull blue; cheeks, throat, and breast light ashy brown, extending on to the sides of the neck; feathers of the throat with narrow dusky shaft-lines, those of the fore neck blacker, obscured with hoary whitish tips; sides of upper breast having a few feathers tipped with purplish blue like the back; centre of breast and abdomen white, the feathers with more or less distinct dusky shaft-lines; in the centre of the breast a longitudinal spot of dusky blackish; sides of body and flanks dark smoky brown, with ashy-whitish margins to the feathers; thighs brown externally, white internally; under tail-coverts white, with dusky centres to the feathers, becoming darker before the tips; axillaries and under wing-coverts dark sooty brown or blackish, the coverts near the edge of the wing glossed with steel-blue and distinctly edged with white; quills dusky below, more ashy along the inner web. Total length 7·5 inches, culmen 0·55, wing 5·65, tail 2·85, tarsus 0·55.

A specimen in the U.S. National Museum (no. 87661; Laurel, Maryland, May 30th, 1882) is exceedingly interesting as exhibiting the plumage of the male in the second year. The bird might easily be mistaken for a female, but for the appearance of some blue feathers on the throat, which indicate the approach to the perfect plumage of the male.

Young birds of both sexes resemble the adult female, though the young males are rather darker (*Coues*).

Hab. North America, throughout Central America in winter, to Brazil; Cuba.

a, b. ♂ ♀ ad. st.	North America.	Purchased.
c, d. ♂ ♀ ad. sk.	North America.	J. E. Harting, Esq. [P.].
e. ♂ ad. sk.	N. America (*G. C. Taylor*).	Sclater Collection.
f. ♂ juv. sk.	N. America.	Major-Gen. Hardwicke [P.].

g. ♀ ad. sk.	Canada, May (*O. Salvin*).	Sclater Collection.
h, *i*. ♂ ♀ ad. sk.	Chicago, Illinois, May 23 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
k. ♂ ad. sk.	Willow Spring, Arizona, July 12 (*H. W. Henshaw*).	U.S. Nat. Museum [P.].
l. ♂ ad. sk.	District of Columbia, May 8 (*Coues*).	U.S. Nat. Museum [P.].
m. ♀ juv. sk.	Fort Whipple, Arizona, Aug. 11 (*E. Coues*).	U.S. Nat. Museum [P.].
n. ♀ ad. sk.	Fort Macon, N.C. (*Beals*).	U.S. Nat. Museum [P.].
o, *p*. ♂ ad. et juv. sk.	Mount Shasta, California.	Lord Walsingham [P.].
q. ♂ imm. sk.	Mormon Island, California, June 22 (*A. Forrer*).	R. B. Sharpe, Esq. [P.].
r. ♂ imm. sk.	Big Trees, California, May 24 (*A. Forrer*).	R. B. Sharpe, Esq. [P.].
s. ♂ juv. sk.	Cape S. Lucas (*Xanthus*).	U.S. Nat. Museum [P.].
t. ♂ ad. sk.	Brazil.	Sclater Collection.
u. Juv. st.	Para.	R. Graham, Esq. [P.].
v, *w*. Ad. sk.	Bahia.	Sudbury Museum.
x. ♂ ad. sk.	Barra do Rio Negro, Dec. 24 (*Natterer*).	Sclater Collection.

2. Progne furcata.

Progne purpurea (*non L.*), *Gould, Voy. 'Beagle,' Birds*, p. 38 (1841); *Hudson, P. Z. S.* 1872, p. 675; *Durnford, Ibis*, 1877, pp. 32, 168, 1878, p. 392; *Gibson, Ibis*, 1880, p. 22.

Progne modesta (*nec Gould*), *Gray, Cat. Fissir. Brit. Mus.* p. 28 (1848).

Progne furcata, *Baird, Review Amer. B.* p. 278 (1864); *Sclater, P. Z. S.* 1867, pp. 321, 337; *id. P. Z. S.* 1868, p. 531; *Gray, Hand-l. B.* i. p. 74, no. 890 (1869).

Progne elegans, juv., *Baird, Review Amer. B.* p. 275 (1864); *id. in Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 328 (1874).

Progne domestica, *Scl. & Salv. P. Z. S.* 1869, p. 159.

Adult male. General colour purplish blue above and below; the lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills black, glossed externally with blue; tail-feathers black, washed with blue; on the sides of the back a small tuft of silky white feathers. Total length 7·7 inches, culmen 0·5, wing 5·55, tail 3·3, tarsus 0·6.

Adult female. General colour above dull blue, with a brown shade on the forehead and hinder neck; wing-coverts like the back, the greater and primary-coverts and quills blackish, glossed externally with dull blue, browner on the inner webs; tail-feathers blackish glossed with blue; lores dusky blackish; sides of face and ear-coverts dull smoky brown, with a slight blue gloss; cheeks and throat dull smoky brown; remainder of under surface of body dark smoky brown, with blackish shaft-streaks, and obscured with broad whity-brown edges to the feathers; the under tail-coverts coloured like the breast, the long ones dull brown, with whity-brown edges and a distinct subterminal shade of purplish black; sides of body nearly uniform dark brown, with a purplish gloss; axillaries and under wing-coverts uniform smoky brown, the coverts near the edge

of the wing edged with whity brown; quills smoky brown below. Total length 7·8 inches, culmen 0·55, wing 5·5, tail 3·3, tarsus 0·55.

Obs. The types of *Progne elegans* of Baird have been lent to the Trustees by the U.S. National Museum; and I find that the specimen no. 21009 agrees with our female birds in the British Museum: it is marked "♂ juv.," and may be a male of the second year. The second specimen (no. 21011) is undoubtedly quite young, judging from the light margins to the feathers of the upper surface, these being very distinct on the wing-coverts and secondaries. The under surface is nearly uniform sooty brown, with ashy margins, more distinct on the breast and abdomen, the under tail-coverts rather broadly tipped with white.

Hab. Chili and the province of Mendoza, across the Rio Negro into Patagonia and Paraguay.

a. Juv. sk.	South America.	Major-Gen. Hardwicke [P.].
b. ♂ ad. sk.	Chili.	Mr. Bridges [C.].
c. ♀ ad. sk.	Mendoza.	Mr. Weisshaupt [C.].
d. ♀ ad. sk.	Mendoza (*Weisshaupt*).	Sclater Collection.
e. ♂ ad. sk.	Mendoza (*Leybold*).	Sclater Collection.
f, g. ♂ ♀ ad. sk.	Rio Negro, Patagonia (*Hudson*).	Sclater Collection.

3. Progne concolor.

Hirundo concolor, *Gould, P. Z. S.* 1837, p. 22.
Progne modesta, *Gould in Voy. 'Beagle,' Birds*, p. 39, pl. v. (1841); *Gray, Gen. B.* i. p. 59 (1845); *Bp. Consp.* i. p. 337 (1850); *Prev. et Des Murs, Voy. 'Venus,'* v. p. 182 (1855).
Progne concolor, *Baird, Review Amer. B.* p. 278 (1864); *Gray, Hand-l. B.* i. p. 74, no. 888 (1869); *Salvin, Trans. Z. S.* ix. p. 476 (1876).
Hirundo modesta, *Neboux, Rev. Zool.* 1840, p. 291; *Sundev. P. Z. S.* 1871, p. 125.

Adult. Similar to *P. purpurea*, but smaller, and having no silky white feathers either on the sides of the back or sides of the breast. Total length 6·5 inches, culmen 0·45, wing 4·95, tail 2·7, tarsus 0·45.

Hab. Galapagos Islands.

a. ♂ ad. sk.	Chatham Island, Galapagos (*C. Darwin*).	Voy. H.M.S. 'Beagle.' (Type of species.)

4. Progne dominicensis.

Hirondelle de S. Domingue, *Briss. Orn.* ii. p. 493 (1760).
Hirondelle d'Amérique, *Daubent. Pl. Enl.* vii. pl. 545. fig. 1.
Le Grand Martinet noir à ventre blanc, *Montb. Hist. Nat. Ois.* vi. p. 669 (1799).
St. Domingo Swallow, *Lath. Gen. Syn.* ii. pt. 2, p. 573 (1783).
Hirundo dominicensis, *Gm. Syst. Nat.* i. p. 1025 (1788); *Vieill. Ois. Amér. Sept.* p. 59, pls. 28, 29 (1807); *E. C. Taylor, Ibis*, 1864, p. 166.
Hirundo albiventris, *Vieill. N. Dict. d'Hist. Nat.* xiv. p. 533 (1817).
Progne dominicensis, *Gray, Gen B.* i. p. 59 (1845); *Jard. Ann. & Mag. Nat. Hist.* xviii. p. 120 (1846); *Gosse, B. Jamaica*, p. 69 (1847); *Bp. Consp.* i. p. 337 (1850); *Sclater, P. Z. S.* 1857, p. 232; *March, Pr. Philad. Acad.* 1863, p. 295; *Baird, Review Amer. B.* p. 279 (1864); *Bryant, Proc. Bost. Soc. N. H.* x. p. 252,

xi. p. 94 (1866); *Gray, Hand-l. B.* i. p. 74, no. 891 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 14 (1873); *Lawr. Proc. U.S. Nat. Mus.* i. pp. 56, 269, 487 (1878); *A. & E. Newt. Handb. Jamaica*, 1881, p. 107; *Salv. Cat. Strickl. Coll.* p. 153 (1882); *Cory, B. S. Domingo*, p. 44 (1884).

Adult male. General colour above glossy purplish blue, the scapulars and lesser wing-coverts like the back; median and greater coverts, bastard-wing, primary-coverts, and quills blackish, externally glossed with dull blue, the inner webs of the quills internally brown; tail-feathers blue-black, browner on the inner webs; lores velvety black; sides of face, ear-coverts, cheeks, throat, chest, and sides of body and flanks glossy purplish blue like the back; centre of breast, abdomen, and under tail-coverts pure white, the lateral under tail-coverts with a shade of dusky slate-colour towards the end of the outer web; the blue breast-feathers adjoining the white centre of the body either edged with white, or else white on the outer web and blue on the inner; thighs dusky brown; on the sides of the breast a few concealed silky-white plumes, adjoining which on the sides of the back is another patch of silky white, which is entirely hidden by the closed wings; axillaries and under wing-coverts black glossed with blue; quills dusky blackish below: "iris dark hazel" (*Gosse*). Total length 7 inches, culmen 0·5, wing 5·65, tail 3·25, tarsus 0·55.

Adult female. Duller in colour than the male, but having the same white belly and under tail-coverts. General colour of the upper surface brown, glossed with purplish blue or dull purplish blue, with brown bases to the feathers; throat, chest, and sides of body brown. Total length 7 inches, culmen 0·45, wing 5·45, tail 2·9, tarsus 0·6.

A Jamaica female measures:—Total length 7·3 inches, culmen 0·5, wing 5·7, tail 3·2, tarsus 0·55. (*Mus. Salvin & Godman.*)

Hab. Antilles.

a, b. ♂ ♀ ad. sk.	Porto Rico (*Bryant*).	Sclater Collection.
c. ♀ ad. sk.	Porto Rico (*Swift*).	Sclater Collection.
d, e. ♂ ♀ ad. sk.	Porto Rico.	Dr. Bryant [P.].
f. Ad. st.	Jamaica.	P. H. Gosse, Esq. [C.].
g, h. ♂ ♀ ad. sk.	Jamaica (*March*).	Sclater Collection.
i. ♀ ad. sk.	Jamaica.	Sclater Collection.
k. ♂ ad. sk.	Dominica (*Ober*).	Sclater Collection.
l. ♀ ad. sk.	Santa Lucia (*Semper*).	Sclater Collection.

5. Progne domestica.

Golondrina domestica, *Azara, Apunt.* ii. p. 502, no. 300 (1805).
Hirundo domestica, *Vieill. N. Dict. d'Hist. Nat.* xiv. p. 520 (1817).
Progne domestica, *Gray, Gen. B.* i. p. 59 (1845); *id. Cat. Fissir. Brit. Mus.* p. 28 (1848); *Bp. Consp.* i. p. 337 (1850); *Cab. Mus. Hein.* Th. i. p. 51 (1850); *Burm. Th. Bras.* iii. p. 142 (1856); *id. La Plata Reis.* ii. p. 477 (1861); *Baird, Review Amer. B.* p. 282, note (1864); *Gray, Hand-l. B.* i. p. 75, no. 893 (1869); *Pelz. Orn. Bras.* pp. 17, 402 (1871).
Progne elegans, *Gray, Hand-l. B.* i. p. 74, no. 888 (1869).

Progne chalybea (*non Gm.*), *Hudson, P. Z. S.* 1872, p. 606; *Scl. & Salv. P. Z. S.* 1873, p. 258, 1879, p. 495; *White, P. Z. S.* 1882, p. 595.

Adult male (Sta. Catarina, Brazil; Rogers). General colour above bright purplish blue, the lesser and median wing-coverts like the back; greater wing-coverts, bastard-wing, primary-coverts, quills, and tail-feathers black, with a gloss of steel-blue externally; lores blackish; ear-coverts and sides of neck glossy purplish blue like the upper parts; cheeks dark smoky brown, tipped minutely with purplish blue; throat and fore neck and chest pale ashy, with minute dusky shaft-lines, and obscured with margins of ashy whitish, broader on the chest where they join the white breast; sides of the upper breast with crescentic tips of purplish blue; breast and abdomen and under tail-coverts pure white; thighs white, with dusky bases; flanks and sides of the body pale smoky brown, with dusky shaft-streaks; a patch of silky-white feathers on the sides of the lower back; feathers on the sides of the rump white with blue centres; axillaries smoky brown washed with blue; under wing-coverts smoky brown, with blackish shaft-stripes, the outer ones edged with white. Total length 8 inches, culmen 0·5, wing 5·75, tail 3·2, tarsus 0·55. (*Mus. Salvin and Godman.*)

Hab. Southern Brazil and Paraguay.

a. Ad. sk.	Santa Catarina, Brazil (*Rogers*).	Sclater Collection.
b. Ad. sk.	Buenos Ayres (*Hudson*).	Sclater Collection.
c. Ad.; *d*. Juv. sk.	Brazil.	R. B. Sharpe, Esq. [P.].

6. Progne chalybea.

Hirondelle de Cayenne, *Briss. Orn.* ii. p. 495 (1760); *Daubent. Pl. Enl.* vii. pl. 545. fig. 2 (fig. mal.); *Montb. Hist. Nat. Ois.* vi. p. 675 (1779).

Chalybeate Swallow, *Lath. Gen. Syn.* ii. pt. 2, p. 574 (1783).

Hirundo chalybea, *Gm. Syst. Nat.* i. p. 1026 (1788); *Neuwied, Beitr. Naturg. Bras.* iii. p. 354 (1830).

Cecropis chalybea, *Less. Compl. Buff.* viii. p. 498 (1837).

Progne chalybea, *Gray, Gen. B.* i. p. 59 (1845); *id. Cat. Fissir. Brit. Mus.* p. 28 (1848); *Bp. Consp.* i. p. 337 (1850); *Cab. Mus. Hein.* Th. i. p. 51 (1850); *Cass. Ill. B. Calif.* p. 246 (1850); *Cab. J. f. O.* 1860, p. 402; *Cass. Proc. Philad. Acad.* 1860, p. 133; *Lawr. Ann. Lyc. N. Y.* vii. p. 318 (1861); *Baird, Review Amer. B.* p. 282, note (1864); *Scl. & Salv. P. Z. S.* 1864, p. 348; *Gray, Hand-l. B.* i. p. 74, no. 887 (1869); *Layard, Ibis*, 1873, pp. 375, 377; *Scl. & Salv. Nomencl. Av. Neotr.* p. 14; *iid. P. Z. S.* 1873, p. 258, 1879, p. 495; *White, P. Z. S.* 1882, p. 595; *Salv. Cat. Strickl. Coll.* p. 154 (1882); *id. & Godm. Biol. Centr.-Amer., Aves*, i. p. 224 (1883).

Progne domestica, *Gray, Cat. Fissir. Brit. Mus.* p. 28 (1848).

Progne dominicensis (*non Gm.*), *Gray, Cat. Fissir. Brit. Mus.* p. 28 (1848); *Cab. Mus. Hein.* Th. i. p. 51 (1850); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 10 (1853); *Burm. Th. Bras.* iii. p. 141 (1856); *Sclater, P. Z. S.* 1857, pp. 201, 232, 1859, p. 364, 1860, p. 292; *Scl. & Salv. Ibis*, 1859, p. 13; *Salv. Ibis*, 1859, p. 466; *G. C. Taylor, Ibis*, 1860, p. 110; *Owen, Ibis*, 1861, p. 61; *Sclater,*

Cat. Amer. B. p. 38 (1862); *Salvin, Ibis*, 1866, p. 203; *Von Frantz. J. f. O.* 1869, p. 294; *Sumichr. Mem. Bost. Soc. Nat. Hist.* i. p. 587 (1869); *Sclater, P. Z. S.* 1872, p. 606, note, 1876, p. 14.

Progne purpurea (*non L.*), *Cab. in Schomb. Reis. Guian.* iii. p. 671 (1848).

Progne leucogastra, *Baird, Review Amer. B.* p. 280 (1864); *Scl. & Salv. P. Z. S.* 1867, pp. 569, 749, 754; *Lawr. Ann. Lyc. N. Y.* ix. p. 96 (1868); *Gray, Hand-l. B.* i. p. 75, no. 892 (1869); *Scl. & Salv. P. Z. S.* 1870, p. 836; *Wyatt, Ibis*, 1871, p. 323; *Lawr. Bull. U.S. Nat. Mus.* no. iv. p. 17 (1876); *Ridgw. Pr. U.S. Nat. Mus.* iii. p. 175 (1880); *Nutting, op. cit.* v. p. 391 (1882).

Adult male. General colour above glossy dark purple, with a concealed spot of white on the sides of the lower back, the feathers composing this spot being white with more or less purple towards the tip of the inner web; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills black, externally dull blue; upper tail-coverts like the back; tail-feathers blackish glossed with blue; lores velvety black; cheeks and ear-coverts black washed with purplish blue; throat and chest dark smoky brown, the fore neck and chest with hoary grey margins to the feathers, the throat rather darker and having dusky blackish shaft-stripes; sides of the upper breast more or less purplish blue, the feathers tipped with the latter colour, which extends some way down the sides of the body; entire abdomen, flanks, and under tail-coverts white; the white feathers of the lower breast where they adjoin the brown throat washed with smoky brown and having blackish shaft-streaks; axillaries dark purplish blue with brown bases; under wing-coverts dark sooty brown washed with blue; quills dusky below, lighter brown along their inner face: "bill brownish horn-black; legs dark fleshy brown; iris dark greyish brown" (*Neuwied*). Total length 6·6 inches, culmen 0·55, wing 5, tail 2·75, tarsus 0·5.

The *female* differs from the male in being duller blue and not so purple, but is otherwise similarly coloured. On the sides of the upper breast the blue ends to the feathers are less conspicuous and duller blue.

Young. Much more dingily coloured than the adults. Above sooty-brown slightly glossed with blue, the feathers having more or less obsolete pale margins; wing-coverts also dull blue with pale brown edges; quills and tail-feathers blackish glossed with steel-blue or greenish; lores dusky; cheeks, ear-coverts, and sides of neck brown, as well as the sides of the breast and flanks; throat and chest pale brown, the feathers of the latter edged with white; breast, abdomen, and under tail-coverts pure white; axillaries smoky brown; under wing-coverts brown edged with white. Tail less forked than in the adult.

Sometimes the under tail-coverts exhibit a brown shaft-streak, and still more rarely a pale shade of brown in the centre, but never to the extent of *P. purpurea* or *P. furcata*. The white belly and under tail-coverts in both the old and young birds are good characters for distinguishing the present species.

Hab. Central America and the greater part of South America as far as Southern Brazil and Bolivia.

a. Ad. sk.	Jalapa, Mexico (*De Oca*).	Sclater Collection.
b. Imm. sk.	Guatemala (*Salvin*).	Sclater Collection.
c. Ad. sk.	Costa Rica (*Carmiol*).	Sclater Collection.
d. Ad. sk.	Costa Rica.	Osbert Salvin, Esq.
e. Juv. st.	Honduras.	Mr. Dyson [C.].
f. Imm. sk.	Remedios, Antioquia (*Salmon*).	Sclater Collection.
g. ♂ imm. sk.	Esmeraldas, Ecuador (*Fraser*).	Sclater Collection.
h. Juv. sk.	Trinidad.	Zoological Society.
i. Ad. sk.	Guiana (*Brown*).	Sclater Collection.
k. ♂ ad. sk.	R. Oyapock, Cayenne (*Jelski.*)	Sclater Collection.
l, m. ♂ ♀ ad. sk.	Albina, Surinam, May and June (*C. Bartlett*).	R. B. Sharpe, Esq. [P.].
n. Ad. sk.	Brazil.	Sclater Collection.
o. Juv. sk.	Para.	R. Graham, Esq.
p. Ad. sk.	Upper Amazons.	Purchased.
q. ♂ ad. sk.	Xeberos, Upper Amazons, Oct. 10.	E. Bartlett, Esq. [C.].
r. ♂ ad. sk.	Xeberos, May 20 (*E. Bartlett*).	R. B. Sharpe, Esq. [P.].
s. ♀ ad. sk.	Xeberos, June 8 (*E. Bartlett*).	R. B. Sharpe, Esq. [P.].
t. Ad. sk.	Bolivia.	Mr. Bridges [C.].
u. Juv. sk.	S. America.	R. B. Sharpe, Esq. [P.].

7. Progne tapera.

L'Hirondelle de l'Amérique, *Briss. Orn.* ii. p. 502, pl. 45. fig. 3 (1760).
Hirundo tapera, *Linn. Syst. Nat.* i. p. 345 (1766).
Golondrina de la Parda, *Azara, Apunt.* ii. p. 505 (1805).
Hirundo fusca, *Vieill. N. Dict. d'Hist. Nat.* xiv. p. 510 (1817); *Baird, Review Amer. B.* p. 285.
Hirundo pascuum, *Neuwied, Beitr. Naturg. Bras.* iii. p. 360 (1830).
Cecropis tapera, *Less. Compl. Buff.* viii. p. 498 (1837).
Progne fusca, *Gray, Gen. B.* i. p. 59 (1845); *id. Cat. Fissir. Brit. Mus.* p. 28 (1848); *Bp. Consp.* i. p. 337 (1850); *Cab. Mus. Hein.* Th. i. p. 51 (1850); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 10 (1853); *Gray, Hand-l. B.* i. p. 75, no. 895 (1869).
Progne tapera, *Cab. in Schomb. Reis. Guian.* iii. p. 672 (1848); *id. Mus. Hein.* Th. i. p. 51 (1850); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 10 (1853); *Sclater, Cat. Amer. B.* p. 39 (1862); *id. & Salv. P. Z. S.* 1866, p. 178, 1867, pp. 569, 749, 1868, pp. 139, 627; *Wyatt, Ibis*, 1871, p. 323; *Scl. P. Z. S.* 1872, p. 606; *id. & Salv. Nomencl. Av. Neotr.* p. 14 (1873); *iid. P. Z. S.* 1873, p. 258, 1879, p. 595; *Taczan. P. Z. S.* 1877, p. 320; *Durnford, Ibis*, 1877, p. 68; *Gibson, Ibis*, 1880, p. 22; *White, Ibis*, 1882, p. 595; *Salv. Cat. Strickl. Coll.* p. 154 (1882).
Progne pascuum, *Bp. Consp.* i. p. 337 (1850); *Gray, Hand-l. B.* i. p. 75, no. 896 (1869).
Cotyle tapera, *Burm. Th. Bras.* iii. p. 143 (1856).
Progne (Phæoprogne) tapera, *Baird, Review Amer. B.* p. 286 (1864).
Progne (Phæoprogne) fusca, *Baird, t. c.* p. 285 (1864).
Petrochelidon tapera, *Pelz. Orn. Bras.* p. 17 (1871).

Adult. General colour above glossy brown; the wing-coverts dark brown, edged with whity brown; bastard-wing, primary-coverts, and quills blackish brown, with scarcely any paler margins, excepting on the secondaries, the innermost of which are paler brown externally, with whity-brown margins near the tips; upper tail-coverts like the back, with slight indications of paler edges, more or less obsolete; tail-feathers blackish brown, with a narrow fringe of whity brown along the edge towards the tip of the inner web; crown of head brown, the forehead blackish, the rest of the crown slightly mottled with blackish centres to the feathers; lores dusky brown; ear-coverts uniform brown; cheeks paler and more ashy brown; throat ashy white; fore neck and chest ashy brown in the centre, darker brown on the sides as well as on the sides of the body and flanks, the feathers on the lower flanks being white externally, brown internally; breast, abdomen, thighs, and under tail-coverts white; in the centre of the breast a longitudinal streak of dark brown, the feathers forming which are dark brown on the inner and whitish on the outer webs; axillaries and under wing-coverts brown, with whitish tips to the feathers; quills dusky brown below, more ashy brown along the inner face of the quills: "legs blackish brown; bill dark horn greyish brown; iris dark" (*Neuwied*). Total length 7 inches, culmen 0·5, wing 5·5, tail 2·65, tarsus 0·55.

Obs. Many specimens are more mottled than the bird described, and are apparently young birds or else in winter plumage. The whole of the upper surface is paler than in the adult, and there are more or less distinct remains of ashy-brown margins to the whole of the back, these edgings being very distinct on the upper tail-coverts and the wing-coverts; the brown chest-band becomes wholly obscured with ashy-whitish tips to the feathers. The last-named character looks like winter plumage, but the livery of the young bird would probably be very similar.

Hab. The greater part of South America from Bolivia and the Argentine Republic northwards to Colombia and Guiana.

a. Ad. sk.	Puerto Cabello, Venezuela (*Goering*).	Sclater Collection.
b. Ad.; *c.* Juv. sk.	Bogota.	Sclater Collection.
d. Ad. sk.	Corentyn River, British Guiana, Oct. (*Im Thurn*).	Sclater Collection.
e. ♂ ad. sk.	Yquitos, E. Peru, June (*H. Whitely*).	Sclater Collection.
f. ♀ ad. sk.	Yquitos, Aug. (*H. W.*).	Sclater Collection.
g,h. ♂ ad.; *i.* ♀ ad. sk.	Yquitos, E. Peru, Aug. 14, 1878 (*H. Whitely*).	R. B. Sharpe, Esq. [P.].
k. ♂ ad. sk.	Peru, June 21 (*H. Whitely*).	R. B. Sharpe, Esq. [P.].
l. ♂ ad. sk.	Upper Ucayali, May 31 (*E. Bartlett*).	R. B. Sharpe, Esq. [P.].
m. ♀ ad. sk.	Upper Ucayali, Aug. 20 (*E. Bartlett*).	R. B. Sharpe, Esq. Esq. [P.].
n. ♂ ad.	Upper Ucayali, Sept. 5 (*E. Bartlett*).	R. B. Sharpe, Esq. [P.].

o, *p*. Ad. sk.	Brazil.	M. Claussen [P.].
q. Ad. st.	Brazil.	J. Gould, Esq.
r. Ad. sk.	S. Brazil.	Sclater Collection.
s. Ad. sk.	S.E. Brazil.	Sclater Collection.
t. Ad. sk.	Rio Grande do Sul (*Plant*).	Sclater Collection.
u. ♀ ad. sk.	Buenos Ayres, Nov. 21 (*E. W. White*).	R. B. Sharpe, Esq. [P.].
v, *w*. ♂ ♀ ad. sk.	Oran Salta, Argentine Rep., Nov. (*E. W. White*).	R. B. Sharpe, Esq. [P.].
x. Ad. sk.	La Plata (*Hudson*).	Sclater Collection.
y. Ad. sk.	Bolivia.	Mr. Bridges [C.].

8. ATTICORA.

	Type.
Atticora, *Boie*, *Isis*, 1844, p. 172	A. fasciata.
Microchelidon, *Scl. Cat. Amer. B.* p. 39 (1862, *nec Reichb.*)	A. tibialis.
Neochelidon, *Sclater*, *t. c.* p. xvi (1861)	A. tibialis.
Notiochelidon, *Baird*, *Review Amer. B.* p. 306 (1865)	A. pileata.
Pygochelidon, *Baird*, *t. c.* p. 308 (1865)	A. cyanoleuca.



Foot of *Atticora fasciata*, to show junction of toes.

Range. The whole of South America, extending through Central America as far as Guatemala.

Key to the Species.

a. Under surface of body glossy blue-black like the upper surface, excepting for a broad pectoral band of white ..... *fasciata*, p. 183.

b. Under surface of body entirely chocolate or earthy brown.

a'. Thighs brown like the rest of the under surface *cinerea*, p. 184.

b'. Thighs white, contrasting with the brown under surface ..... *tibialis*, p. 185.

c. Under surface of body white, or with the chin and throat only mottled with brown bases to the feathers.

c'. Entire upper surface glossy blue, including the head; flanks white.

a''. With a blue band across the fore neck .... *melanoleuca*, p. 185.

b''. With no blue band across the fore neck .. *cyanoleuca*, p. 186.

d'. Mantle brown, contrasting with the head, which is glossy blue-black; flanks brown .. *pileata*, p. 188.

d. Under surface white except the throat and chest, which are tawny rufous; head also tawny .... *fucata*, p. 188.

1. Atticora fasciata.

Hirondelle de Cayenne à bande blanche sur le ventre, *Daubent. Pl. Enl.* vii. pl. 724. fig. 2.
Hirondelle à ceinture blanche, *Montb. Hist. Nat. Ois.* vi. p. 611 (1779).
White-bellied Swallow, *Lath. Gen. Syn.* ii. pt. 2, p. 567 (1783).
Hirundo fasciata, *Gm. Syst. Nat.* i. p. 1022 (1788); *Swains. Zool. Illustr.* 2nd ser. i. pl. 17 (1829).
Cecropis fasciata, *Less. Compl. Buff.* viii. p. 499 (1837).
Atticora fasciata, *Boie, Isis*, 1844, p. 172; *Cab. in Schomb. Reis. Guian.* iii. p. 672 (1848); *Bp. Consp.* i. p. 337 (1850); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 7 (1853); *Burm. Th. Bras.* iii. p. 146 (1856); *Sclater, Cat. Amer. B.* p. 39 (1862); *Baird, Review Amer. B.* p. 306 (1865); *Scl. & Salv. P. Z. S.* 1866, p. 178, 1867, p. 749; *Gray, Hand-l. B.* i. p. 72, no. 857 (1869); *Pelz. Orn. Bras.* pp. 18, 402 (1871); *Scl. & Salv. P. Z. S.* 1873, p. 259; *iid. Nomencl. Av. Neotr.* p. 14 (1873); *Tacz. P. Z. S.* 1882, p. 8; *Salv. Cat. Strickl. Coll.* p. 152 (1882); *id. & Godm. Biol. Centr.-Amer., Aves*, i. p. 229 (1883); *Tacz. Orn. Pérou*, p. 244 (1884).

Adult male. General colour above glossy blue-black; wing-coverts and quills black externally, edged with the colour of the back; tail very much forked, the feathers blue-black, glossy on their edges; lores and base of forehead velvety black; sides of face, ear-coverts, cheeks, and entire under surface of body glossy blue-black, including the under tail-coverts; across the breast a very broad band of white, extending a little way down the flanks; thighs white; under wing-coverts and axillaries brown, glossed with blue; quills dusky brown below, paler along the edge of the inner web. Total length 6 inches, culmen 0·35, wing 4·15, tail 3·1, tarsus 0·45.

Adult female. Similar to the male in colour.

There seems to be wonderfully little difference in specimens from various parts of South America, a greater or less extent of white on the pectoral band being the only difference observable. This will, however, be found to be principally due to the preparation of the skin or to the age of the bird, the young ones having undoubtedly a broader pectoral band than the old ones. Even after they have gained the full blue plumage and moulted out of the brown stage, the young birds can be told by the remains of white bars on the under wing-coverts.

Young. Duller blue than the adult, or brown glossed with blue, with narrow edgings of whity brown to the feathers, more distinct on the greater series of wing-coverts; throat and fore neck brown glossed with blue; the entire chest and breast white, forming a much larger patch than in the adult bird; the abdomen and sides of lower flanks brown mixed with dull white; under tail-coverts brown, slightly washed with blue, the shorter ones having paler brown edges; axillaries and under wing-coverts brown, margined with white near the carpal bend of the wing.

Nestling. Distinguished by the yellow gape, brown throat and chest and abdomen, the feathers edged with whity brown; upper surface duller blue than in the adult bird, the rump and upper tail-coverts brown, with paler brown edges.

Hab. Guiana and Amazonia, Ecuador, Peru and Bolivia.

a. Ad. st.	British Guiana.	Sir R. Schomburgk [P.].
b. Ad. st.	Cayenne.	Purchased.
c. Ad. sk.	Cayenne.	Sclater Collection:
d, *e*. ♂; *f*. ♀ ad. sk.	River Atapurow, British Guiana, Jan. (*H. Whitely*).	R. B. Sharpe, Esq. [P.].
g. Juv. sk.	Upper Ucayali.	E. Bartlett, Esq. [C.].
h. Ad. sk.	Upper Amazon.	J. Hauxwell, Esq. [C.].
i. Ad. sk.	Ecuador.	Sclater Collection.
k. ♀ ad. sk.	Chanchamayo, Peru, Aug. (*H. Whitely*).	Sclater Collection.
l. Ad. sk.	Yuyo, Bolivia (*Buckley*).	Sclater Collection.

2. Atticora cinerea.

Petite Hirondelle noire à ventre cendré, *Montb. Hist. Nat. Ois.* vi. p. 673 (1779).

Ash-bellied Swallow, *Lath. Gen. Syn.* ii. pt. 2, p. 573 (1783).

Hirundo cinerea, *Gm. Syst. Nat.* i. p. 1026 (1788); *Gray, Gen. B.* i. p. 58 (1845).

Hirundo andecola, *D'Orb. & Lafr. Syn. Av.* p. 69 (1837); *Tschudi & Cab. Faun. Peruan.* p. 132 (1855); *Scl. & Salv. P. Z. S.* 1867, p. 984, 1868, p. 569, 1869, p. 151; *Gray, Hand-l. B.* i. p. 72, no. 853 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 14 (1873); *Tacz. P. Z. S.* 1874, p. 510; *Scl. & Salv. P. Z. S.* 1879, p. 595; *Tacz. Orn. Pérou*, p. 242 (1884).

Petrochelidon murina, *Cass. Proc. Philad. Acad.* 1853, p. 370; *id. Cat. Hirund. Mus. Philad. Acad.* p. 6 (1853); *Sclater, P. Z. S.* 1860, p. 74.

Atticora cinerea, *Sclater, Cat. Amer. B.* p. 39 (1862); *Baird, Review Amer. B.* p. 312 (1865); *Scl. & Salv. P. Z. S.* 1869, p. 599; *iid. Nomencl. Av. Neotr.* p. 14 (1873); *Tacz. P. Z. S.* 1874, p. 510, 1882, p. 8; *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 229 (1883); *Tacz. Orn. Pérou*, p. 243 (1884).

Hirundo murina, *Gray, Hand-l. B.* i. p. 72, no. 852 (1869).

Atticora murina, *Berlepsch & Tacz. P. Z. S.* 1884, p. 287.

Adult. General colour above glossy greenish black, the lesser wing-coverts and scapulars like the back; median and greater wing-coverts and quills blackish brown, with a slight steel-green gloss; tail-feathers blackish brown, with dusky cross bars under certain lights; lores velvety black; ear-coverts and sides of neck glossy greenish black; cheeks and under surface of body clear earthy brown, including the thighs; under tail-coverts blackish brown, with glossy greenish-black edges; axillaries and under wing-coverts earthy brown like the breast; quills dusky, more ashy brown along the inner web. Total length 5·4 inches, culmen 0·3, wing 3·4, tail 2·4, tarsus 0·45.

A female from Tinta, Peru (H. Whitely), in the Salvin-and-Godman collection, measures as follows:—Total length 5·8 inches, culmen 0·25, wing 4·4, tail 1·25, tarsus 0·45.

The shade of colour on the upper parts varies between steel-blue and steel-green, as is the case with other American Swallows, the bluer shade indicating, as I believe, a fresher state of plumage.

Young. Sooty brown, lighter on the rump and upper tail-coverts; below ashy white, the throat dark brown.

Hab. The Andes of Peru, Ecuador, and Colombia.

a. Ad. sk.	Bogotá.	Sclater Collection.
b. Imm. sk.	Ecuador.	Sclater Collection.
c. Ad. sk.	Ecuador (*Fraser*).	Sclater Collection.
d. ♂ ad. sk.	Quito (*Fraser*).	Sclater Collection.
e, *f*. Ad. sk.	Ecuador.	Purchased.
g. Ad.; *h*. ♂ ad. sk.	Tinta, Peru.	H. Whitely, Esq. [C.].
i. ♀ juv. sk.	Tinta, Peru, Feb. 13 (*H. Whitely*).	R. B. Sharpe, Esq. [P.].
k. ♀ ad. sk.	Arequipa, Peru, May 31 (*H. Whitely*).	Sclater Collection.

3. Atticora tibialis.

Petrochelidon? tibialis, *Cass. Proc. Philad. Acad.* 1853, p. 370; *id. Cat. Hirund. Mus. Philad. Acad.* p. 6 (1853).
Microchelidon tibialis, *Sclater, Cat. Amer. B.* p. 39 (1862).
Neochelidon tibialis, *Sclater, t. c.* p. xvi, errata (1862); *Scl. & Salv. P. Z. S.* 1864, p. 347.
Atticora tibialis, *Baird, Review Amer. B.* p. 307 (1865); *Gray, Hand-l. B.* i. p. 72, no. 859 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 14 (1873); *iid. P. Z. S.* 1879, p. 495; *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 231 (1883); *Tacz. Orn. Pérou*, p. 242 (1884).

Adult. General colour above sooty brown, with an oily green gloss on the head and back, the rump and upper tail-coverts rather paler brown; wing-coverts and quills glossy brown; tail slightly forked, the feathers glossy brown; lores velvety black; ear-coverts and sides of neck dark brown, the latter with a slight greenish gloss like the head; cheeks and entire under surface of body dark earthy brown, a little darker on the under wing- and tail-coverts; thighs white; quills dusky brown below. Total length 4·1 inches, culmen 0·25, wing 3·3, tail 1·8, tarsus 0·4.

A male from Antioquia (Salmon), in the Salvin-and-Godman collection, is moulting, and shows that the new feathers on the head and mantle and wings are distinctly greenish black; the under surface is also deeper and more sooty brown; and it is evident that the paler coloration in some specimens is caused by the age and abrasion of the feathers.

Hab. From Panama and Colombia to Peru. Said to have come from Brazil, but the locality requires confirmation.

a. Ad. sk.	Panama.	Sclater Collection.
b. ♂ ad. sk.	Remedios, Antioquia (*Salmon*).	Sclater Collection.
c. ♂ ad. sk.	Cosnipata, Peru, Oct. 11 (*H. Whitely*).	Sclater Collection.

4. Atticora melanoleuca.

Hirundo melanoleuca, *Neuwied, Temm. Pl. Col.* iv. pl. 209. fig. 2 (1823*); *Neuwied, Beitr. Naturg. Bras.* iii. p. 371 (1830); *Gray, Gen. B.* i. p. 58 (1845); *id. Hand-l. B.* i. p. 72, no. 854 (1869).

* Either this date is wrong, and the plate was published after Prince Max's 'Beiträge' had appeared, or else Temminck figured the bird from a specimen supplied him by the Prince of Neuwied years before the work of the latter was published.

Cecropis melanoleuca, *Less. Compl. Buff.* viii. p. 499 (1837).
Herse melanoleuca, *Bp. Consp.* i. p. 341 (1850).
Atticora melanoleuca, *Burm. Syst. Uebers.* iii. p. 146 (1856); *Baird, Review Amer. B.* p. 310 (1865); *Pelz. Orn. Bras.* pp. 18, 402 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 14 (1873); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 229 (1883).

Adult. General colour above dull blue-black, the feathers with ash-coloured bases; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills brown, glossed slightly with blue on the outer web; tail-feathers brown, also faintly glossed with blue; lores velvety black; ear-coverts and feathers below the eye blue-black; cheeks and throat white, separated from the breast by a broad band of blue-black; remainder of under surface white, washed with brown on the sides of the body and thighs; in the centre of the chest a longitudinal spot of blue-black feathers below the breast-band; sides of upper breast blackish washed with blue; under tail-coverts blackish, slightly washed with blue; axillaries and under wing-coverts blackish brown, the coverts near the edge of the wing edged with white; quills dusky below: "bill black; legs blackish ashy brown; iris dark" (*Neuwied*). Total length 5·5 inches, culmen 0·3, wing 4·8, tail 2·9, tarsus 0·45.

Hab. Brazil.

a. Ad. sk. Forte do Principe, Brazil (*Natterer*). Sclater Collection.

5. Atticora cyanoleuca.

Golondrina de los timoneles negros, *Azara, Apunt.* ii. p. 508 (1802); *Hartl. Ind. Azara*, p. 19 (1847).
Hirundo cyanoleuca, *Vieill. N. Dict. d'Hist. Nat.* xiv. p. 509 (1817); *Gould in Darw. Voy. 'Beagle,' Birds*, p. 41 (1841); *Gray, Gen. B.* i. p. 58 (1845); *id. Cat. Fissir. Brit. Mus.* p. 27 (1848); *Scl. P. Z. S.* 1867, p. 321; *Gray, Hand-l. B.* i. p. 72, no. 851 (1869).
Hirundo minuta, *Neuwied, Beitr. Naturg. Bras.* iii. p. 369 (1830); *Temm. Pl. Col.* iv. pl. 209. fig. 1 (1823).
Hirundo melanopyga, *Licht. Verz. Doubl.* p. 57 (1823); *Tschudi & Cab. Faun. Peruan.* p. 133 (1855).
Hirundo patagonica, *Lafr. & d'Orb. Syn. Av.* 1837, p. 69; *Gray, Hand-l. B.* i. p. 72, no. 855 (1869).
Hirundo melanoleuca (*nec Neuwied*), *Gray, Cat. Fissir. Brit. Mus.* p. 26 (1848).
Herse cyanoleuca, *Bp. Consp.* i. p. 341 (1850).
Atticora cyanoleuca, *Cab. Mus. Hein.* Th. i. p. 47 (1850); *Burm. Th. Bras.* iii. p. 147 (1856); *Baird, Review Amer. B.* p. 309 (1865); *Cab. J. f. O.* 1860, p. 401, 1861, p. 92; *Burm. Reis. La Plata*, ii. p. 479 (1861); *Sclater, Cat. Amer. B.* p. 40 (1862); *id. & Salv. P. Z. S.* 1866, p. 178, 1867, pp. 749, 984, 1868, p. 568, 1869, p. 159; *Salv. Ibis*, 1869, p. 184; *id. P. Z. S.* 1870, p. 184; *Pelz. Orn. Bras.* pp. 18, 402 (1871); *Wyatt, Ibis*, 1871, p. 323; *Hudson, P. Z. S.* 1872, pp. 844, 845, 1873, p. 258; *Scl. & Salv. Nomencl. Av. Neotr.* p. 14; *id. P. Z. S.* 1873, p. 258; *Tacz. P. Z. S.* 1874, p. 510; *Scl. & Salv. P. Z. S.* 1876, p. 16; *Durnford, Ibis*, 1876, p. 158, 1877, pp. 32, 170, 1878, p. 392; *Tacz. P. Z. S.* 1879, p. 224;

Scl. & Salv. t. c. pp. 495, 595; *Tacz. P. Z. S.* 1880, p. 192; *W. A. Forbes, Ibis*, 1881, p. 329; *Salv. Cat. Strickl. Coll.* p. 152 (1882); *Tacz. P. Z. S.* 1882, p. 8; *White, t. c.* p. 596; *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 229 (1883).

Petrochelidon cyanoleuca, *Sclater, P. Z. S.* 1858, p. 551, 1859, p. 138, 1860, pp. 75, 85; *id. Cat. Amer. B.* p. 40 (1862).

Atticora hemipyga, *Burm. Reis. La Plata*, ii. p. 479 (1861).

Atticora patagonica, *Baird, Review Amer. B.* p. 311, note (1865); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 229 (1883).

Atticora cyanoleuca, var. montana, *Baird, Review Amer. B.* p. 310 (1865); *Lawr. Ann. Lyc. N. Y.* ix. p. 96 (1868); *v. Frantzius, J. f. O.* 1869, p. 294; *Boucard, P. Z. S.* 1878, p. 67.

Adult. General colour above glossy blue, the feathers of the hind neck slightly mottled with white bases to the feathers; scapulars and lesser and median wing-coverts like the back; bastard-wing, primary-coverts, and quills black, externally glossed with dull blue; tail-feathers blackish; lores, feathers below the eye, and ear-coverts black; cheeks and under surface of body pure white, the sides of the neck glossy blue, descending in a half-crescent on the sides of the chest; sides of body and flanks brown; thighs blackish brown; under tail-coverts black glossed with blue; axillaries and under wing-coverts smoky brown, the coverts near the edge of the wing edged with white: "bill black; legs dark brown; iris dark" (*Neuwied*). Total length 4·7 inches, culmen 0·25, wing 4·05, tail 2·2, tarsus 0·45.

Young. Much duller blue than the adult, and distinguished by the reddish-buff throat; the flanks and sides of body also tinged with reddish buff.

Hab. From Costa Rica in Central America, throughout South America to Bolivia, Paraguay, the Argentine Republic, and Chili.

a. Ad. sk.	"Valley of Aragua."	Purchased.
b. ♂ juv. sk.	Veragua (*Arcé*).	Sclater Collection.
c. Ad. sk.	Bogotá.	Sclater Collection.
d. Imm. sk.	Ecuador.	Sclater Collection.
e. Ad. sk.	Ecuador.	Purchased.
f. Ad.; *g.* Juv. sk.	Quito.	J. Gould, Esq.
h. ♂ ad. sk.	Riobamba, Ecuador (*Fraser*).	Sclater Collection.
i. ♀ imm. sk.	Chanchamayo, Peru, Aug. (*H. Whitely*).	Sclater Collection.
k. Ad. sk.	Arequipa, Peru, March 13.	H. Whitely, Esq. [C.].
l. ♂ juv. sk.	Cachupata, Sept. (*H. Whitely*).	R. B. Sharpe, Esq. [P.].
m. Ad. sk.	Arequipa, Peru, March 13.	H. Whitely, Esq. [C.].
n. ♂ ad. sk.	Cosnipata, Sept. 20 (*H. Whitely*).	R. B. Sharpe, Esq. [P.].
o. Ad. sk.	Bolivia.	Sclater Collection.
p. Ad. sk.	Bolivia.	Mr. Bridges [C.].
q. Ad. sk.	Chili.	Purchased.
r, s. Juv. sk.	Chili (*Reed*).	R. B. Sharpe, Esq. [P.].
t. ♂ ad. sk.	Santiago, Chili (*Landbeck*).	Sclater Collection.
u. Juv. sk.	Buenos Ayres (*Hudson*).	Sclater Collection.

v. Ad. sk.	Brazil.	Sclater Collection.
w. Juv. sk.	Brazil.	Lord Stuart de Rothesay [P.].
x. Ad. sk.	Bahia.	C. Darwin, Esq. [C.].
y. Ad. sk.	Para.	R. Graham, Esq. [P.].
z. ♀ juv. sk.	Nauta, April (*E. Bartlett*).	R. B. Sharpe, Esq. [P.].
a'. ♂ ad. sk.	Roraima, British Guiana, Nov. 23 (*H. Whitely*).	R. B. Sharpe, Esq. [P.].
b'. ♀ juv. sk.	Camacusa, British Guiana, May 6.	R. B. Sharpe, Esq. [P.].
c'. Imm. sk.	South America.	R. B. Sharpe, Esq. [P.].

6. Atticora pileata.

Atticora pileata, *Gould, P. Z. S.* 1858, p. 355; *Scl. & Salv. Ibis*, 1859, p. 13; *Baird, Review Amer. B.* p. 307 (1865); *Gray, Hand-l. B.* i. p. 72, no. 860 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 14 (1873); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 230, tab. xv. fig. 2 (1813).
Notiochelidon pileata, *Baird, Review Amer. B.* p. 306 (1865).

Adult male. General colour above chocolate-brown on the hind neck, mantle, and back; the scapulars, lower back, rump, and upper tail-coverts darker and more sooty brown; lesser and median wing-coverts blue-black; greater coverts, bastard-wing, and primary-coverts dark brown, the quills and tail-feathers blackish brown; crown of head and nape blue-black; lores and feathers round the eye velvety black; ear-coverts blackish with a slight blue gloss; cheeks and chin blackish brown, edged with white; throat, breast, and abdomen white, the feathers on the throat and chest more or less mottled with dark-brown bases to the feathers; sides of breast and flanks dark brown; thighs white; vent and under tail-coverts blackish brown; axillaries and under wing-coverts dark brown; quills dark brown below. Total length 4·8 inches, culmen 0·25, wing 3·5, tail 2·4, tarsus 0·4.

Adult female. Similar to the male in colour. Total length 4·8 inches, culmen 0·3, wing 3·7, tail 2·2, tarsus 0·45.

The only difference which I can detect between specimens of this species is a greater or less amount of mottling on the throat, owing to the way in which the brown bases of the feathers show through. This may be caused, it appears to me, by the abrasion or wearing away of the white edges to the feathers.

Hab. High regions of Guatemala.

a, *b*. Ad. sk.	Guatemala.	J. Gould, Esq. (Types of species.)
c. Ad. sk.	Guatemala.	O. Salvin, Esq. [C.].
d, *e*. Ad. sk.	Coban, Guatemala (*O. Salvin*).	Sclater Collection.

7. Atticora fucata.

Hirundo fucata, *Temm. Pl. Col.* iv. pl. 161. fig. 1 (1823); *Gray, Gen. B.* i. p. 58 (1845).

Cotile fucata, *Boie, Isis*, 1826, p. 971; *White, P. Z. S.* 1882, p. 596.
Herse fucata, *Less. Compl. Buff.* viii. p. 498 (1837).
Cotyle fucata, *Gray, Cat. Fissir. Brit. Mus.* p. 30 (1848); *Bp. Consp.* i. p. 342 (1850); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 10 (1853); *Burm. Syst. Uebers.* iii. p. 145 (1856); *id. Reis. La Plata*, ii. p. 478 (1861); *Pelz. Orn. Bras.* pp. 18, 402 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 14 (1873).
Atticora fucata, *Baird, Review Amer. B.* p. 308 (1865); *Gray, Hand-l. B.* i. p. 72, no. 858 (1869).

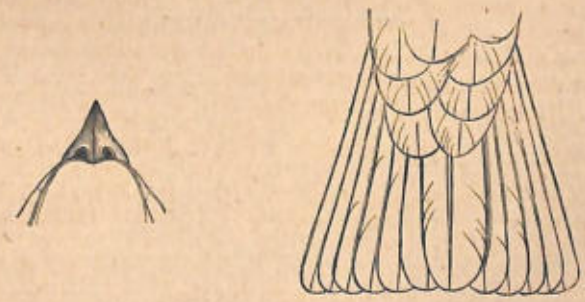
Adult. General colour above brown, the rump and upper tail-coverts obscurely edged with dull whity brown; wing-coverts like the back, the inner greater coverts edged with whity brown near their ends; bastard-wing, primary-coverts, and quills blackish brown, the innermost secondaries with whity-brown edges; tail-feathers dark brown; crown of head deep tawny rufous, becoming clearer on the hinder crown and nape; the ear-coverts and sides of neck tawny rufous, extending round the hind neck; cheeks, throat, and breast pale tawny; sides of body brown, slightly washed with rufous; centre of breast, abdomen, and under tail-coverts white; thighs brown; under wing-coverts and axillaries smoky brown, slightly washed with rufous; quills ashy brown below. Total length 4·6 inches, culmen 0·25, wing 4·15, tail 2, tarsus 0·45.

Hab. Guiana and Brazil.

a. Ad. sk.	Brazil.	Purchased.
b. ♂ ad. sk.	Ypanema, Brazil (*Natterer*).	Sclater Collection.
c. ♂ juv. sk.	Cordova, Argentine Republic, Sept. 29 (*E. W. White*).	Sclater Collection.
d. ♂ ad. sk.	Roraima, British Guiana, Dec. 8 (*H. Whitely*).	Sclater Collection.

9. PETROCHELIDON.

	Type.
Petrochelidon, *Cab. Mus. Hein.* Th. i. p. 47 (1850)	P. swainsoni.
Hylochelidon, *Gould, Handb. B. Austr.* i. p. 111 (1865)..	P. nigricans.
Lagenoplastes, *Gould, tom. cit.* p. 113 (1865).....	P. ariel.



Bill and tail of *Petrochelidon pyrrhonota*.

Range. North America; Central America; and South America to Brazil and Peru. Antilles. South Africa. Australia and the Papuan Islands. Central India.

Key to the Species.

a. A frontal band of sandy buff or rufous.
  a'. Rump whity brown; throat whitish with tiny black streaks ..... *nigricans*, p. 190. / *timoriensis*, p. 192.
  b'. Rump rufous; throat rufous.
    a''. Frontal band pale sandy buff; no complete rufous collar round the nape; base of chin black; on the lower throat a large patch of steel-blue feathers; flanks ashy brown .... *pyrrhonota*, p. 193.
    b''. Frontal band deep chestnut; round the nape a narrow rufous collar, continuous with the ear-coverts.
      a'''. Base of chin black; on the throat a small patch of blue-black feathers; flanks ashy brown ..... *swainsoni*, p. 194.
      b'''. No black on the chin; no throat-patch of blue-black feathers; the throat and breast rufous like the flanks ..... *fulva*, p. 195.
  c'. Rump rufous; throat white; a rufous band across the fore neck ..... *ruficollaris*, p. 196.
b. A narrow line of rufous across the extreme base of the forehead; head blue like the back; rump rufous; under surface rufous, deep chestnut on throat and under tail-coverts ..... *rufigula*, p. 197.
c. No frontal band; under wing-coverts and axillaries uniform pale rufous; long upper and under tail-coverts blue-black, with narrow rufous tips .... *spilodera*, p. 198.
d. Entire head rufous.
  d'. Rump conspicuously creamy white; throat narrowly streaked with dusky shaft-lines .... *ariel*, p. 199.
  e'. Rump smoky brown, mottled with dusky bases to the feathers; throat and fore neck broadly and distinctly streaked with black ..... *fluvicola*, p. 200.

1. Petrochelidon nigricans.

Hirundo nigricans, *Vieill. N. Dict. d'Hist. Nat.* xiv. p. 523 (1817); *Quoy et Gaim. Voy. Astrol., Zool.* i. p. 205, pl. 12. fig. 2 (1830); *Gray, Gen. B.* i. p. 58 (1845); *id. Cat. Fissir. Brit. Mus.* p. 24 (1848); *id. P. Z. S.* 1858, pp. 171, 189; *id. Cat. B. New Guinea*, pp. 18, 54 (1859); *id. P. Z. S.* 1861, p. 433; *Finsch, Neu-Guinea*, p. 162 (1865); *Gray, Hand-l. B.* i. p. 70, no. 817 (1869); *Buller, B. N. Zeal.* p. 141 (1873); *Finsch, Ibis*, 1881, p. 536; *Buller, Man. B. N. Zeal.* p. 6 (1882).

Dun-rumped Swallow, *Lath. Gen. Hist.* vii. p. 309 (1823).

Hirundo pyrrhonota, *Vig. & Horsf. Trans. Linn. Soc.* xv. p. 190 (1826, *ex Lath. MSS., nec V.*).

Herse nigricans, *Less. Compl. Buff.* viii. p. 497 (1837); *Gray, Gen. B.* i. p. 58 (1845); *Bp. Consp.* i. p. 340 (1850); *Rosenb. J. f. O.* 1864, p. 120.

Herse pyrrhonota, *Less. Compl. Buff. Ois.* viii. p. 497 (1837).
Cecropis nigricans, *Boie, Isis*, 1844, p. 175.
Cecropis pyrrhonota, *Boie, t. c.*
Collocalia arborea, *Gould, B. Austr.* ii. pl. 14 (c. 1848).
Chelidon arborea, *Gould, t. c., Intr.* p. xxix (1848).
Hirundo pyrrhonota australis, *Temm. & Schl. Faun. Jap., Aves*, p. 35 (1850).
Petrochelidon nigricans, *Cab. Mus. Hein.* Th. i. p. 47 (1850); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 7 (1853); *Sharpe, Rep. Zool. Coll. H.M.S. 'Alert,' Birds*, p. 21 (1884).
Chelidon nigricans, *Licht. Nomencl. Av.* p. 61 (1854).
Hylochelidon nigricans, *Gould. Handb. B. Austr.* i. p. 111 (1865); *Masters, Proc. Linn. Soc. N. S. W.* i. p. 47 (1875); *Ramsay, t. c.* p. 389 (1876), ii. p. 389 (1876), iv. p. 98 (1879); *Salvad. Ann. Mus. Civic. Genov.* x. p. 131 (1877); *id. P. Z. S.* 1878, p. 95; *id. Ann. Mus. Civic. Genov.* xiv. pp. 491, 648 (1879); *Buller, Trans. N. Zeal. Inst.* xi. p. 360 (1878); *Salvad. Orn. Papuasia etc.* ii. p. 6 (1881); *id. Report Voy. 'Challenger,'* ii. *Birds*, p. 78 (1884).
Hirundo (Herse) arborea, *Pelz. Reis. 'Novara,' Vög.* p. 41 (1875).
Hydrochelidon (*lapsu*) nigricans, *Ramsay, Proc. Linn. Soc. N. S. W.* iii. p. 275 (1879).

Adult male. General colour above deep steel-blue, slightly streaked with dusky white where the light bases of the feathers show through; lesser wing-coverts like the back, the remainder dusky brown as well as the quills, the innermost secondaries with narrow edgings of dull white at the tip; lower back and rump whity brown, slightly washed with sandy-rufous, the feathers edged with creamy white and having blackish shafts; upper tail-coverts dusky brown, rather broadly edged with creamy white; tail-feathers dusky brown; a frontal band of pale brick-red extending backwards to the corner of the eye; the base of the forehead near the culmen minutely spotted with dull steel-blue; lores, feathers round the eye, and ear-coverts sooty blackish; sides of the neck sandy buff, streaked with dull black; cheeks and throat dull whitish, with a tinge of buff, the feathers minutely streaked with dusky blackish shaft-lines; fore neck, chest, and sides of body pale sandy rufous, with narrow shaft-lines of dusky, less distinct on the flanks; breast and abdomen paler, being whitish with a sandy-rufous tinge; the under tail-coverts similarly coloured, and having dusky shaft-lines; sides of upper breast with a patch of blackish or dull blue; under wing-coverts and axillaries deeper sandy rufous, with dusky shaft-lines; quills dusky below, rather paler along the inner web: "bill, tarsi, and toes light brown; iris black" (*Buller*). Total length 5·2 inches, culmen 0·3, wing 4·2, tail 2·1, tarsus 0·5.

Young. Distinguished from the adult by the absence of the rufous band on the forehead, which is replaced by a few sandy-buff feathers. The whole tone of coloration is duller in the young than in the old birds, the upper surface being dusky brown with more or less of a blue gloss, the inner secondaries edged with pale rufous at the tips. The under surface is paler than in the adult.

Obs. Some specimens are remarkable for the rufous glow which pervades their lower surface; these are probably old birds killed in

spring. It seems certain that after breeding this tinge is lost and the plumage becomes more or less abraded, the chest fades to smoky brown in colour, and the throat, breast, and under tail-coverts are purer white. The rump, which in breeding birds is strongly suffused with rufous, also becomes gradually bleached, and fades to a dull whitish or pale smoky brown.

The size of the present species appears to vary to an unusual extent for a Swallow—the wing in adults ranging from 4 to 4·35 inches, a remarkable difference for so small a bird.

The Aru-Island specimens are identical with the Australian.

Hab. Australia; occasionally visiting New Zealand. New Britain, New Guinea, Aru Islands, Ké Islands.

a, *b*, *c*. Ad. sk.	Tasmania.	Ronald Gunn, Esq. [P.].
d. Ad. sk.	Tasmania.	Gould Collection.
e. Ad. sk.	Australia.	W. S. Macleay, Esq. [P.].
f. Ad. sk.	Australia.	R. Butler, Esq. [P.].
g. Juv. sk.	[Australia.]	R. B. Sharpe, Esq.
h. Juv. sk.	Australia.	Linnean Society. (Type of *H. pyrrhonota*.)
i, *k*. Ad. st.	S. Australia.	Sir George Grey [P.].
l. Ad. sk.	S. Australia.	J. Fortnum, Esq. [P.].
m. Imm. sk.	Melbourne.	Gould Collection.
n, *o*. Ad. sk.	New South Wales.	Gould Collection.
p. ♀ ad. sk.	Liverpool Plains.	Gould Collection.
q. ♀ ad. sk.	Dismore, Richmond River, Dec. 10, 1880.	Mr. A. P. Goodwin [C.].
r, *s*, *t*. Ad. sk.	Moreton Bay.	Gould Collection.
u, *v*, *w*. Ad. sk.	Queensland (*Cockerell*).	F. D. Godman and O. Salvin, Esqrs. [P.].
x. ♂ juv. sk.	Port Molle, Queensland (*Coppinger*).	Voy. H.M.S. 'Alert.'
y. ♀ ad. sk.	Aru Islands.	A. R. Wallace, Esq. [C.].
z. ♂ ad. sk.	Aru Islands.	A. R. Wallace, Esq. [C.].
a'. ♂ juv. sk.	Dobbo, Aru Islands.	Voy. H.M.S. 'Challenger.'

Subsp. *a*. **Petrochelidon timoriensis.**

Hirundo nigricans (*nec V.*), *Wall. P. Z. S.* 1863, p. 485.

Adult male. Similar to *P. nigricans*, but very much smaller in size, and distinguished by the dark smoky-brown colour of the rump, the smoky colour of the underparts, and the greater extent of the shaft-striping, which is very distinct and continues over the throat, breast, and entire sides of the body. Total length 4·5 inches, culmen 0·3, wing 3·65, tail 1·65, tarsus 0·4.

In the other two examples in the British Museum the wing measures 3·6 and 3·75 inches respectively.

Hab. Timor; Flores.

a. ♂ ad. sk.	E. Timor.	A. R. Wallace, Esq. [C.].
b, *c*. Ad. sk.	Timor (*Wallace*).	Gould Collection.

2. Petrochelidon pyrrhonota*.

Hirundo no. 35, *Forster, Philos. Trans.* p. 408 (1772).
Golondrina rabadilla acanelada, *Azara, Apunt.* ii. p. 511, no. 305 (1802); *Hartl. Ind. Azara*, p. 19 (1847).
Hirundo pyrrhonota, *Vieill. Nouv. Dict. d'Hist. Nat.* xiv. p. 519 (1817); *Gray, Gen. B.* i. p. 58 (1845).
Hirundo lunifrons, *Say in Long's Exped. Rocky Mts.* ii. p. 47 (1823); *Swains. Faun. Bor.-Amer., Birds*, p. 331 (1831); *Brewer, Proc. Bost. Soc. N. H.* 1852, p. 270; *Wood, Report Zuni and Color. R.* 1853, p. 64; *Cass. Ill. B. Calif.* p. 243 (1856); *Brewer, N. Amer. Ool.* p. 94, pl. 5. figs. 68–73 (1857); *Baird, in Baird, Cass., & Lawr. B. N. Amer.* p. 309 (1858); *Blakist. Ibis*, 1863, p. 64; *Gray, Hand-l. B.* i. p. 71, no. 836 (1869); *Dall & Bann. Trans. Chicago Acad.* i. p. 279 (1869); *Cooper, B. Calif.* p. 104 (1870); *Allen, Bull. Mus. Comp. Zool.* iii. p. 176 (1872); *Harting, Handb. Brit. B.* p. 125 (1872).
Hirundo opifex, *De Witt Clinton, Ann. Lyc. N. Y.* i. p. 161 (1824).
Hirundo respublicana, *Audub. Ann. Lyc. N. Y.* i. p. 164 (1824).
Hirundo fulva (*non V.*), *De Witt Clinton, Ann. Lyc N. Y.* i. p. 156 (1824); *Bp. Amer. Orn.* i. p. 63, pl. 7. fig. 1 (1825); *Audub. B. Amer.* pl. 68 (c. 1826); *id. Orn. Biogr.* i. p. 353 (1831); *Bp. Comp. List B. Eur. & N. Amer.* p. 9 (1838); *Audub. B. Amer.* 8vo, i. p. 77, pl. 47 (1840); *Gray, Gen. B.* i. p. 58 (1845, pt.).
Cecropis lunifrons, *Boie, Isis*, 1828, p. 315, 1844, p. 175.
Cecropis pyrrhonota, *Boie, Isis*, 1844, p. 173.
Herse fulva, pt. (*nec V.*), *Bp. Consp.* i. p. 341 (1850).
Petrochelidon americana, *Cab. Mus. Hein.* Th. i. p. 47, note (1850); *Pelz. Orn. Bras.* pp. 17, 402 (1871).
Petrochelidon fulva (*nec V.*), *Bp. C. R.* xxxviii. p. 650 (1854, pt.).
Hirundo fulvus (*nec V.*), *Willis, Smiths. Rep.* 1858–59, p. 281.
Petrochelidon lunifrons, *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 4 (1853); *Lawr. Ann. Lyc. N. Y.* vii. p. 317 (1861); *Scl. Cat. Amer. B.* p. 40 (1862); *Coues, Key N. Amer. B.* p. 114 (1872); *id. B. N.-West*, p. 88 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 334, pl. 16. fig. 13 (1874); *Ridgw. Rep. Survey 40th Par.* iv. p. 440 (1877); *Coues, B. Color. Vall.* p. 426; *id. Check-list N. Amer. B.* p. 43 (1882).
Herse lunifrons, *Coues, Ibis*, 1865, p. 159.
Petrochelidon pyrrhonota, *Scl. & Salv. Nomencl. Av. Neotr.* p. 14 (1873); *Durnf. Ibis*, 1877, p. 169; *White, P. Z. S.* 1882, p. 595; *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 226 (1883).

Adult male. General colour above glossy dark steel-blue, streaked on the back with more or less concealed ashy-whitish edges to the feathers; lower back and rump cinnamon-rufous, the upper tail-coverts brown with ashy margins; wing-coverts black, slightly

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* It is possible that the following references belong to the present species but the descriptions are not sufficiently good to determine the bird accurately:—

Hirondelle à croupion roux et queue carrée, *Montb. Hist. Nat. Ois.* vi. p. 638 (1779).
Rufous-rumped Swallow, *Lath. Gen. Syn.* ii. pt. 2, p. 582 (1783).
Hirundo americana, *Gm. Syst. Nat.* i. p. 1017 (1788, *ex Lath.*); *Gray, Hand-l. B.* i. p. 71, no. 840 (1869).

glossed with steel-blue, the inner greater coverts slightly edged with ashy whitish; bastard-wing, primary-coverts, and quills blackish, the inner secondaries with narrow ashy margins at the tips of the feathers; tail-feathers black, with a greenish gloss; crown of head glossy steel-blue, separated from the back by an indistinct collar of ashy brown; forehead pale sandy buff; lores black; ear-coverts, cheeks, and sides of face deep chestnut-rufous, spreading on to the sides of the hind neck; chin also deep chestnut-rufous, glossed with a few steel-blue feathers, the lower throat entirely glossy steel-blue; fore neck and chest light ashy brown washed with rufous; the sides of the body and flanks similarly coloured, with narrow dusky shaft-lines on the flanks; centre of the breast and abdomen whitish with a slight tint of brown; vent pale rufous; under tail-coverts ashy brown, darker towards the ends, the feathers distinctly margined with white; under wing-coverts and axillaries ashy brown, distinctly tinged with rufous, especially near the edge of the wing; quills dark ashy brown below. Total length 5·3 inches, culmen 0·3, wing 4·35, tail 2·05, tarsus 0·45.

Adult female. Similar to the male in colour. Total length 5·5 inches, culmen 0·3, wing 4·4, tail 2·15, tarsus 0·5.

Hab. North America, throughout Central America in winter, to Brazil and Paraguay.

a. Ad. sk.	North America.	Sclater Collection.
b. Ad. sk.	Kendall River.	Sir John Richardson [P.].
c. Ad. sk.	Niagara Falls (*J. G.*).	J. Gould, Esq.
d. ♂ ad. sk.	Fort Simpson.	B. R. Ross, Esq. [P.].
e, f. Ad. sk.	49th Parallel (*G. Dawson*).	N. A. B. Commission [P.].
g, h. ♂ ♀ ad. sk.	West side of Rocky Mountains.	J. K. Lord, Esq. [P.].
i, k. ♂ ♀ ad. sk.	Illinois, May (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
l. Juv. sk.	Illinois, July 28 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
m. ♀ ad. sk.	Carlisle, Pa., July 9 (*Prof. Baird*).	U.S. Nat. Museum [P.].
n, o, p. ♂; *q, r.* ♀ ad. sk.	Locust Grove, New York, May.	Dr. Hart Merriam [P.].
s. ♂ ad. sk.	Colorado springs, Colorado, Nov. 6 (*H. W. Henshaw*).	U.S. Nat. Museum [P.].
t. Juv. sk.	Sun River, Dakota, Aug. 15 (*R. B. Hitz*).	U.S. Nat. Museum [P.].
u. ♀ ad. sk.	California, March 2.	R. B. Sharpe, Esq. [P.].
v. Ad. sk.	Mexico (*De Saussure*).	Sclater Collection.
w. ♀ ad. sk.	Ytarare, Brazil (*Natterer*).	Sclater Collection.
x. ♂ ad. sk.	Pacheco, Buenos Ayres, March 17 (*E. W. White*).	R. B. Sharpe, Esq. [P.].

3. Petrochelidon swainsoni.

Hirundo melanogaster, *Swains. Philos. Mag.* new series, i. p. 366 (1827); *Gray, Gen. B.* i. p. 58 (1845).

Petrochelidon melanogastra, *Cab. Mus. Hein.* Th. i. p. 47 (1850).

Petrochelidon swainsoni, *Sclater, P. Z. S.* 1858, p. 296, 1859, p. 376; *Baird, Cat. Amer. B.* p. 40 (1862); *id. Review Amer. B.* p. 290 (1865); *Salvin, Ibis*, 1866, p. 192; *Sumichr. Mem. Bost. Soc. N. H.* i. p. 547 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 14 (1873); *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 17 (1876); *Salv. & Godm. Biol. Cent.-Amer., Aves*, i. p. 227 (1883).

Hirundo coronata, *Licht. Preis-Verz. mex. Vög.* p. 2 (1831); *Cab. J. f. O.* 1863, p. 58.

Petrochelidon lunifrons (pt.), *Coues, B. Color. Vall.* p. 426 (1878).

Adult female. General colour above glossy steel-blue, varied on the mantle and back with ashy-whitish streaks, with which the feathers are edged; wing-coverts blackish, slightly glossed with steel-blue; bastard-wing, primary-coverts, and quills also blackish, with scarcely any gloss except on the secondaries, the innermost of which have narrow ashy-whitish margins near the ends of the outer webs; lower back and rump pale cinnamon-rufous; upper tail-coverts brown with narrow blackish shaft-streaks, and edged with ashy whitish; crown of head glossy steel-blue, separated from the mantle by a narrow collar of deep chestnut extending from the ear-coverts, and followed by a less distinct collar of ashy brown like the sides of the neck; a broad frontal band of deep chestnut; lores velvety black, with reddish-buff bases; cheeks, sides of face, and ear-coverts deep chestnut, as also the throat; a line along the base of the chin black; in the centre of the throat a patch of blue-black feathers, not very distinct; sides of neck, breast, and sides of body pale ashy brown with a slight rufous tinge, the flanks with indistinct dusky shaft-lines; centre of body and abdomen white; thighs ashy brown slightly washed with rufous; vent pale rufous; under tail-coverts ashy brown tinged with rufous, the feathers subterminally dark brown and broadly edged with whitish; under wing-coverts and axillaries ashy brown washed with rufous, especially near the edge of the wing; quills dull ashy brown below. Total length 4·5 inches, culmen 0·35, wing 4·15, tail 2, tarsus 0·45.

Adult male. Similar in colour to the female. Total length 5·1 inches, culmen 0·3, wing 4, tail 2, tarsus 0·45.

Young. Much duller in colour than the adult, with scarcely any steel-blue gloss, the feathers of the upper surface narrowly edged with whitish; forehead, rump, throat, and sides of face much paler than in the adult and apparently bleached to a sandy-buff colour before the moult takes place; the wing-coverts also narrowly margined with whitish, the greater series more distinctly, like the secondaries.

Hab. Central America, from Mexico to Guatemala.

a, b. Ad. sk.	Mexico (*De Saussure*).	Sclater Collection.
♂ ad. sk.	Oaxaca, Mexico.	M. Sallé [C.].
Juv. sk.	Costa Rica.	R. B. Sharpe, Esq. [P.].

4. Petrochelidon fulva.

Hirundo fulva, *Vieill. Ois. Amér. Sept.* p. 62, pl. 32 (1807); *Gray, Cat. Fissir. Brit. Mus.* p. 24 (1847); *Thien. f. J. O.* 1857, p. 149;

March, Proc. Philad. Acad. 1863, p. 295; *Bryant, Proc. Bost. Soc. N. H.* x. p. 222 (1866).
Cecropis fulva, *Boie, Isis*, 1828, p. 315, 1844, p. 173; *Less. Compl. Buff.* viii. p. 498 (1837).
Hirundo melanogaster (*nec Swains.*), *Denny, P. Z. S.* 1847, p. 38.
Hirundo pœciloma, *Gosse, B. Jamaica*, p. 64 (1847); *Osburn, P. Z. S.* 1865, p. 63; *Gray, Hand-l. B.* i. p. 71, no. 837 (1869).
Herse fulva, pt., *Bp. Consp.* i. p. 341 (pt., 1850).
Hirundo coronata, *Lembeye, Av. Cuba*, p. 45 (1850).
Petrochelidon fulva, *Cab. Mus. Hein.* Th. i. p. 47 (1850); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 4 (1853); *Gundl. J. f. O.* 1856, p. 3, & 1861, p. 328; *Sclater, P. Z. S.* 1861, p. 72; *id. Cat. Amer. B.* p. 40 (1862); *Baird, Review Amer. B.* p. 291 (1865); *Bryant, Proc. Bost. Soc. N. H.* x. p. 252 (1866); *Gundl. Orn. Cuba*, p. 82 (1876) *Scl. & Salv. Nomencl. Av. Neotr.* p. 14 (1873); *A. & E. Newt. Handb. Jamaica*, 1881, p. 107; *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 228 (1883); *Cory, B. S. Domingo*, p. 47 (1884).
Petrochelidon pœciloma, *Baird, Review Amer. B.* p. 292 (1865).

Adult. General colour above glossy steel-blue, the feathers of the mantle and back edged with ashy white, giving a strongly streaked appearance; wing-coverts and quills blackish, with a slight greenish gloss, the inner secondaries edged with ashy whitish at the ends; lower back and rump rich chestnut; upper tail-coverts brown with a slight greenish gloss and narrowly edged with ashy whitish; tail-feathers blackish brown, slightly glossed with greenish; crown of head glossy steel-blue, separated from the mantle by a narrow collar of pale rufous, followed by a second collar of ashy brown like the sides of the neck; a broad frontal band of deep chestnut; lores velvety black, with pale rufous bases; cheeks, sides of face, and ear-coverts pale ferruginous, joining the collar round the nape; throat and chest, as well as the sides of the body and flanks, ferruginous, slightly mixed with ashy brown on the sides of the breast and flanks; vent ferruginous; centre of breast and abdomen white; under tail-coverts ashy brown washed with rufous, darker brown before the tips, which are whitish, all the feathers being broadly edged with the latter colour; under wing-coverts and axillaries smoky brown, edged with rufous, more distinct near the edge of the wing; quills dusky brown below, more ashy along the inner web: "bill black; feet dark grey; iris dark brown" (*Gosse*). Total length 4·8 inches, culmen 0·35, wing 4·05, tail 1·75, tarsus 0·45.

Hab. Central America, from Northern Yucatan to Panama. Cuba, S. Domingo, Jamaica, Porto Rico.

a. Ad. st.	Jamaica.	Purchased.
b. Ad. sk.	Jamaica.	P. H. Gosse, Esq. [C.]. (Type of *H. pœciloma*.)
c. Ad. sk.	Jamaica.	Sclater Collection.
d. Juv. sk.	Jamaica, Oct. 6, 1881.	Jamaica Museum [P.]
e. Ad. sk.	Jamaica (*Gosse*).	R. B. Sharpe, Esq. [P.

5. Petrochelidon ruficollaris.

Hirundo ruficollaris, *Peale, U.S. Expl. Exped., Birds*, p. 175 (1848); *Gray, Hand-l. B.* i. p. 71, no. 839 (1869).

Petrochelidon ruficollaris, *Baird, Review Amer. B.* p. 292 (1865); *Salvin & Godm. Biol. Centr.-Amer., Aves,* i. p. 225 (1883).

Adult male. General colour above dull purplish blue, streaked on the mantle and back with greyish-white edges to the feathers; lower back and rump pale chestnut; scapulars like the back: wing-coverts and quills brown, with ashy margins to the secondaries; upper tail-coverts pale brown, with ashy-whitish edges to the outer ones; tail-feathers dusky brown, paler brown towards the ends of the inner webs; crown of head purplish blue, separated from the back by a collar of smoky brown; base of forehead dull chestnut; ear-coverts and cheeks ashy white, the former posteriorly marked with light chestnut, which extends backwards and forms a patch on the sides of the hinder crown; throat ashy white; fore neck and chest pale chestnut, with a patch of smoky brown on the sides of the upper breast; centre of breast and abdomen white, the flanks and vent washed with pale chestnut; under tail-coverts pale brown, broadly edged with white, producing a mottled appearance; axillaries and under wing-coverts uniform smoky brown; quills dusky brown below, more ashy along the edge of the inner web. Total length 4·8 inches, culmen 0·35, wing 3·8, tail 1·9, tarsus 0·45.

Young. Much duller in colour than the adult; and distinguished by the narrow ashy margins to the feathers of the upper surface, the wing-coverts, secondaries, and tail-feathers being edged with pale chestnut; lower back and rump paler chestnut than in the adult; upper tail-coverts edged with rufous; throat washed with rufous; chestnut band on breast less pronounced; flanks smoky brown washed with pale rufous. Total length 4·6 inches, culmen 0·3, wing 3·45, tail 1·9, tarsus 0·4.

Hab. Peru.

a, b. ♂ juv. et ♀ ad. sk.	Lima (*Nation*).	Sclater Collection
c. ♂ ad. sk.	Lima.	Prof. Nation [P.].

6. Petrochelidon rufigula.

Hirundo rufigula, *Bocage, Jorn. Lisb.* 1878, pp. 256, 269; *id. Orn. Angola,* p. 545 (1881); *Sharpe, ed. Layard's B. S. Afr.* p. 840 (1884).

Adult male (type of species). General colour above glossy blue-black, the feathers of the hind neck and mantle edged with isabelline buff or reddish white, producing a streaked appearance; rump and upper tail-coverts chestnut, contrasting with the back *; lesser and median wing-coverts dull blue-black; greater coverts, bastard-wing, and primary-coverts and quills dusky, slightly glossed with blue on the outer web; tail-feathers dusky with a greenish gloss, all but the two centre ones with a large white spot on the inner web;

* An error has crept into my account of this species in my edition of Layard's 'Birds of South Africa' (*l. c.*), where the rump is stated not to differ from the back in colour.

head uniform glossy blue-black; lores pale rufous; in front of the eye a velvety black spot; ear-coverts dull blue-black, slightly varied with rufous margins to the feathers; cheeks and throat deep chestnut; remainder of under surface paler chestnut or rufous, deepening into rich chestnut on the under tail-coverts, the long ones of which have a large subterminal spot of blue-black; under wing-coverts and axillaries like the breast; quills dusky below, more ashy along the inner web. Total length 5·2 inches, culmen 0·3, wing 3·75, tail 2·1, tarsus 0·45. (*Mus. Lisb.*)

Hab. Benguela.

7. Petrochelidon spilodera.

Hirundo spilodera, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1850, p. 108; *Gray, Hand-l. B.* i. p. 70, no. 828 (1869).
Phedina spilodera, *Bp. Rivist. Contemp., Torino*, 1857, p. 4.
Hirundo lunifrons, *Layard, B. S. Afr.* p. 56 (1867, *nec Say*).
Hirundo alfredi, *Hartl. Ibis*, 1868, p. 153, pl. 4; *Gray, Hand-l. B.* i. p. 71, no. 838 (1869).
Petrochelidon spilodera, *Sharpe, P. Z. S.* 1870, p. 293; *Gurney, Ibis*, 1874, p. 101; *Butler, Feilden, & Reid, Zool.* 1882, p. 249; *Sharpe, ed. Layard's B. S. Afr.* p. 357 (1884).

Adult. Head dark brown, obscurely glossed with dark blue, lighter brown towards the nape; back and scapularies deep blue, the feathers edged latitudinally with ashy white, giving a striped appearance to the whole back, the scapularies and wing-coverts just faintly edged with rusty white; the lower part of the back blue, not marked with whitish stripes; rump and upper tail-coverts pale rufous; wing-coverts and quills brownish black, with a slight blue gloss on the latter and on the extremities of the quills; upper tail-coverts blue-black, all but the centre ones rufous at their ends; tail brownish black, also slightly glossed with blue; a patch of feathers in front of the eye pale sienna; cheeks, ear-coverts, and sides of the neck dark blue; chin white; throat tinged with sienna and covered with little black spots; below this a blackish band marked with whitish; under surface of the body white, washed on the upper part of the breast and on the flanks with sienna; a few scattered black spots on the breast; under tail-coverts and vent pale rufous, some of the former entirely black, and the others rufous with a blackish spot. Total length 5·9 inches; of bill from front 0·4, from gape 0·6; wing 4·5, tail 2·1, tarsus 0·5, middle toe 0·45, hind toe 0·2.

Young. Differs from the adult in being sooty blackish with scarcely any blue gloss; the wing-coverts like the back and narrowly edged with pale fawn-colour, more broadly on the great coverts and inner secondaries; rump pale fawn-colour, with whi also the upper tail-coverts are broadly tipped; quills and tail feathers blackish; head sooty black, only slightly paler than the back; a narrow line of rufous at base of forehead and over the eye; cheeks, ear-coverts, sides of face, and throat black, the chin mottled

with rufous white, the fore neck and chest also largely spotted with black; remainder of under surface pale fawn-colour, paler in the centre of the breast; under tail-coverts fawn-colour, the long ones black, edged and tipped with fawn-colour.

Dr. Exton has very kindly presented the Museum with a very young bird of the present species, and from this specimen it appears that the young has a broad black band across the lower throat. This at first appears strange, as the immature plumage is rather handsomer than the adult; but as this black throat-band is accompanied by the usual pale margins on the secondaries which distinguish a young Swallow, there can be little reason for doubting that the black-throated birds are the young of *P. spilodera*.

Hab. Eastern parts of Cape Colony, extending into the Transvaal.

a. ♂; *b*, *c*. ♀ ad. sk.	Eland's Post. (*T. C. Atmore*).	Sharpe Collection.
d. ♂ ad.; *e*. Juv. sk.	Bloemfontein, Oct. 28, 1876.	Dr. Exton [P.].
f. Ad. sk.	Bloemfontein, Oct. 28.	Dr. Exton [P.].
g. Ad. sk.	Transvaal (*Ayres*).	Sharpe Collection.
h. Ad. st.	South Africa.	Earl of Derby [P.].

8. Petrochelidon ariel.

Collocalia ariel, *Gould*, *P. Z. S.* 1842, p. 132; *id. B. Austr.* ii. pl. 15 (1848).
Hirundo ariel, *Gray*, *Gen. B.* i. p. 58 (1845); *id. Cat. Fissir. Brit. Mus.* p. 25 (1848); *id. Hand-l. B.* i. p. 70, no. 818 (1869).
Chelidon ariel, *Gould*, *B. Austr.*, *Intr.* p. xxx (1848); *Ramsay*, *Ibis*, 1865, pp. 299, 300.
Herse ariel, *Bp. Consp.* i. pp. 340 (1850).
Petrochelidon ariel, *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 6 (1853).
Lillia ariel, *Boie*, *J. f. O.* 1858, p. 364.
Lagenoplastes ariel, *Gould*, *Handb. B. Austr.* i. p. 113 (1865); *Ramsay*, *Ibis*, 1868, p. 275; *id. Proc. Linn. Soc. N. S. W.* ii. p. 179 (1878); *Salvad. Orn. Papuasia etc.* ii. p. 7 (1881).
Chelidon arborea (*nec Gould*), *Ramsay*, *Ibis*, 1865, p. 299 (*lapsu cal.*; *cf. Ramsay*, *Ibis*, 1866, p. 127).

Adult. General colour above deep blue, the lesser wing-coverts like the back; remainder of the wing-coverts and quills dusky, with a slight gloss externally; lower back and rump creamy white, slightly mottled with pale smoky brown where the bases to the feathers show through; upper tail-coverts dull smoky brown; tail-feathers dusky brown, glossed on the outer web with blue; crown of head bright rufous, with very minute blackish shaft-lines; nape mottled, the feathers being spotted with dark blue and edged with rufous; lores and a line above the eye black; sides of face and ear-coverts dull smoky brown; cheeks and throat white, very minutely spotted with dusky shaft-streaks; these streaks continued on to the fore neck, which is sandy brown like the sides of the body and flanks; breast and abdomen pure white; under tail-coverts white, with a

slight smoky tinge; under wing-coverts and axillaries dull sandy brown, the outer coverts mottled with blackish bases; quills dusky below, lighter brown along the inner webs: "bill blackish grey; legs and feet olive-grey; iris blackish brown" (*Gould*). Total length 4·6 inches, culmen 0·3, wing 3·7, tail 1·9, tarsus 0·4.

Hab. From Port Denison to New South Wales, Victoria, and South Australia.

a. ♀ ad. sk.	Moreton Bay (*F. Strange*).	Gould Collection.
b. Ad. sk.	Queensland.	Gould Collection.
c. Ad. sk.	Queensland (*J. T. Cockerell*).	F. D. Godman and O. Salvin, Esqrs. [P.].
d, *e*. Ad. st.	N.E. Australia.	Sir T. Mitchell [P.].

9. Petrochelidon fluvicola.

? Red-headed Swallow, *Lath. Gen. Syn.* ii. pt. 2, p. 57, pl. lvi. (1783).

? Hirundo erythrocephala, *Gm. Syst. Nat.* i. p. 1024 (1788, *ex Lath.*); *Gray, Cat. Fissir. Brit. Mus.* p. 25 (1848).

Herse erythrocephala, *Bp. Consp.* i. p. 340 (1850).

Hirundo fluvicola, *Blyth, J. A. S. B.* xxiv. p. 470 (1855, *ex Jerd. MSS.*); *Jerd. B. Ind.* i. p. 161 (1862); *Blyth, Ibis*, 1866, p. 337; *Blanf. Ibis*, 1867, p. 462; *Gray, Hand-l. B.* i. p. 70, no. 819 (1869); *Jerd. Ibis*, 1871, p. 352; *Hayes Lloyd, Ibis*, 1873, p. 406; *Hume, Nests and Eggs Ind. B.* p. 80 (1873); *Adam, Str. F.* 1873, p. 370; *Aitken, Str. F.* 1875, p. 213; *Butler, t. c.* p. 439; *Davidson & Wenden, Str. F.* 1878, vol. ii. p. 76; *Hume, t. c.* p. 97; *Ball, t. c.* p. 202; *Hume, Str. F.* 1879, p. 84; *Butler, Cat. B. Sind etc.* p. 13 (1879); *id. Cat. B. S. Bomb. Pres.* p. 14 (1880); *Vidal, Str. F.* 1880, p. 43; *Butler, t. c.* p. 378; *Davidson & Wenden, Str. F.* 1882, p. 293.

Lagenoplastes empusa, *Blyth, Ibis*, 1866, p. 337 (*ex Gould, MSS.*).

Hirundo fluminicola, *Sclater, P. Z. S.* 1867, p. 832.

Lagenoplastes fluvicola, *Gould, B. Asia*, i. pl. 33 (1868); *Hume, Str. F.* 1875, p. 452; *Fairb. Str. F.* 1876, p. 254; *Butler, Str. F.* 1877, p. 217.

Adult male. General colour above glossy blue-black, mottled with white streaks where the bases to the feathers show through; lesser wing-coverts like the back, the remainder dusky blackish, glossed with steel-green externally; rump and upper tail-coverts dark smoky brown, mottled with blackish bases to the feathers, many of which are glossed with blue; upper tail-coverts smoky brown; tail-feathers blackish with a slight steel-green gloss; crown of head dull brick-red with blackish shaft-lines; lores white, separated from the forehead by a line of black; ear-coverts dusky brown, with narrow streaks of fulvous-brown; cheeks, throat, and breast white, broadly streaked with blackish shafts; abdomen and under tail-coverts pure white, with narrow dusky shaft-lines; sides of body smoky brown, streaked with blackish shaft-lines; under wing-coverts and axillaries also dark smoky brown, with narrow shaft-lines of darker brown; quills dusky below, paler along the inner

web. Total length 4·5 inches, culmen 0·25, wing 4·6, tail 1·75, tarsus 0·4.

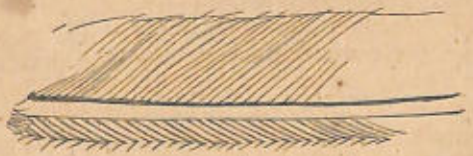
Young. Much duller in colour than the adult, and having the rump washed with sandy rufous, with which colour also the wing-coverts and inner secondaries are tipped; the breast and under wing-coverts are also strongly tinged with rufous.

Hab. Central India, extending into Kutch, Kattiawar, and Gujarat.

a.	Ad. sk.	India.	Gould Collection. (Type of *L. empusa*.)
b.	Ad. sk.	Kattiawar, Oct. 12, 1871.	Major Hayes Lloyd [P.].
c.	Ad. sk.	Kangra, Punjaub.	Capt. Stackhouse Pinwill [P.].
d.	♂ ad. sk.	Sambhur Lake, May 15, 1873 (*R. M. Adam*).	E. W. Oates, Esq.
e.	♀ ad. sk.	Near Nagpoor.	Gould Collection.
f.	♀ ad. sk.	Godavery Valley, Jan. 3, 1871.	W. T. Blanford, Esq. [P.].
g.	Juv. sk.	Behar.	B. H. Hodgson, Esq. [P.].

Subfamily II. PSALIDOPROCNINÆ.

The members of this subfamily of Swallows are easily distinguished by the serrations on the external edge of the wing in the male birds. The African species are of sombre coloration, being black or blue, while their American representatives are brown and approach the Sand-Martins (*Cotile*) in appearance. The possession of such a striking character as the serrated primary, confined in each instance to the male bird only, in one strictly African genus and another strictly American one, is an interesting instance of close affinity in birds of the Old and New Worlds, when considered along with the peculiar distribution of the genus *Petrochelidon* (*anteà*, p. 190).



Primary of *Psalidoprocne holomelæna* (magnified), to show serrations on external margin.

Key to the Genera.

a. Nostrils longitudinal, with an enlargement anteriorly, overhung with a posterior margin; prevailing colour of plumage black ..... 10. PSALIDOPROCNE, [p. 202.

b. Nostrils rounded and exposed, with no overhanging membrane; prevailing colour of plumage brown ..... 11. STELGIDOPTERYX, [p. 202.

10. PSALIDOPROCNE.

Type.
Psalidoprocne, *Cab. Mus. Hein.* Th. i. p. 48 (1850) .. P. holomelæna.
Pristoptera, *Bp. Rivist. Contemp., Torino*, 1857, p. 4.. P. pristoptera.



Bill of *Psalidoprocne holomelæna* (magnified), to show nostrils.

Range. Africa.

Key to the Species.

a. Head like the back.
  a'. Under wing-coverts like the breast.
    a''. Tail forked.
      a'''. Dull bottle-green or greenish black above *holomelæna*, p. 202.
      b'''. Glossy steel-green above ..... *obscura*, p. 203.
    b''. Tail square ..... *nitens*, p. 204.
  b'. Under wing-coverts white or smoky brown, in strong contrast to the breast.
    c''. Above sooty black.
      c'''. Under wing-coverts smoky brown .... *petiti*, p. 204.
      d'''. Under wing-coverts pure white ..... *antinorii*, p. 205.
    d''. Above glossy steel-blue; under wing-coverts white ..... *pristoptera*, p. 205.
b. Head white, forming a cap ..... *albiceps*, p. 206.

1. Psalidoprocne holomelæna*.

Hirundo holomelas, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1850, p. 108; *Hartl. J. f. O.* 1855, p. 360; *Grill, Zool. Anteckn.* p. 36 (1858); *Layard, Ibis*, 1864, p. 134; *Gray, Hand-l. B.* i. p. 70, no. 823 (1869).
Atticora hamigera, *Cass. Proc. Phil. Acad.* 1850, p. 57, pl. 12.
Psalidoprocne cypselina, *Cab. Mus. Hein.* Th. i. p. 48 (1850).
Atticora holomelas, *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 6 (1852); *Gurney, Ibis*, 1863, p. 322; *Layard, B. S. Afr.* p. 57 (1867); *id. Ibis*, 1869, p. 72; *Ayres, Ibis*, 1876, p. 424.
Psalidoprocne holomela, *Bp. Rivist. Contemp., Torino*, 1857, p. 4.
Psalidoprocne holomelæna, *Sclater, P. Z. S.* 1864, p. 108; *Heugl. Orn. N.O.-Afr.* i. p. 148 (1869); *Sharpe, P. Z. S.* 1870, p. 288 (pt.); *id. Cat. Afr. B.* p. 45 (1871, pt.); *Shelley, Ibis*, 1875, p. 67; *Barratt, Ibis*, 1876, p. 204; *Salvin, Cat. Strickl. Coll.* p. 152 (1882); *Sharpe, ed. Layard's B. S. Afr.* p. 356 (1883).

Adult male. Above dark greenish black, deepest in the centre of the back and on the breast; quills deep black with a slight greenish lustre, the outer web of the first primary distinctly serrated; tail

* The following references also probably refer to the species, but Levaillant's plate is too inaccurate to be accepted as a representation of the species:—
Le Martinet vélocifère, *Levaill. Ois. d'Afr.* v. p. 147, pl. 244. fig. 2 (1806).
Hirundo velox, *Vieill. N. Dict. d'Hist. Nat.* xiv. p. 533 (1817).
Cypselus velox, *Layard, B. S. Afr.* p. 51 (1869).

dark greenish black, long, and deeply forked: "bill black; nostrils large and oval; tarsi and feet dusky pale; iris very dark brown" (*T. Ayres*): "legs purplish brown, shading off into flesh-colour on the back of the tarsus and soles of the feet" (*Shelley*). Total length 5·4 inches, culmen 0·3, wing 4·1, tail 3, tarsus 0·3, middle toe 0·3, lateral toes 0·2.

Adult female. Similar to the male, but smaller and somewhat more dusky, the outer edge of the external primary not serrated, and the tail less forked.

Hab. Forest districts of the Cape Colony from the Knysna to British Caffraria, extending into Natal and the Eastern Transvaal.

a. ♂ ad. sk.	South Africa (*Surtees*).	Sharpe Collection.
b. ♂ ad. sk.	South Africa (*Layard*).	Sharpe Collection.
c. ♂ ad. sk.	Knysna, Jan. 9, 1866 (*C. J. Andersson*).	Sharpe Collection.
d. ♀ ad. sk.	Knysna, Aug. 3, 1866 (*C. J. A.*).	Sharpe Collection.
e. Pull. sk.	Bat's Cove, near East London, December 21, 1870 (*Rickard*).	Sharpe Collection.
f. ♀ ad. sk.	Kingwilliamstown.	Capt. Trevelyan [P.].
g. ♂ ad. sk.	Natal (*Ayres*).	J. H. Gurney, Esq. [P.].
h. Ad. sk.	Pinetown, Natal, March 20 (*T. L. Ayres*).	R. B. Sharpe, Esq. [P.].
i. ♂ ad. sk.	Pinetown, Natal, April 29 (*T. L. Ayres*).	R. B. Sharpe, Esq. [P.].
k. ♂ ad. sk.	Lydenberg, E. Transvaal.	F. A. Barratt, Esq. [C.].
l. ♂ ad. st.	South Africa.	Purchased.
m. ♂ ad. sk.	South Africa.	Sir A. Smith [C.].

2. Psalidoprocne obscura.

Atticora obscura, *Temm. MSS. in Mus. Lugd.*, undè
Atticora obscura, *Hartl. J. f. O.* 1855, p. 35; *id. Orn. Westafr.* p. 26 (1857); *id. J. f. O.* 1861, p. 103.
Hirundo obscura, *Hartl. J. f. O.* 1855, p. 360; *Gray, Hand-l. B.* i. p. 71, no. 831 (1869).
Atticora holomelas, *Hartl. Orn. Westafr.* p. 25 (1857, *nec Sundev.*).
Psalidoprocne holomelæna, *Sharpe, P. Z. S.* 1870, p. 288 (pt.); *id. Ibis*, 1870, p. 479; *id. Cat. Afr. B.* p. 45 (1871, pt.); *Shelley & Buckley, Ibis*, 1872, p. 288; *Ussher, Ibis*, 1874, p. 61; *Reichen. J. f. O.* 1875, p. 67.

Adult male. General colour above glossy bottle-green, the head like the back; the rump and upper tail-coverts with somewhat of a steel-blue appearance; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills blackish, washed externally with glossy green like the back; tail-feathers blackish, slightly washed with green; lores velvety black; cheeks, ear-coverts, and entire under surface of body glossy bottle-green like the upper surface; axillaries and under wing-coverts smoky brown with a slight greenish wash; quills dusky brown below. Total length 6·9 inches, culmen 0·25, wing 3·85, tail 4·1, tarsus 0·35.

Adult female. Similar in colour to the male, but smaller, and

having the outer edge of the first primary smooth, not serrated. Total length 5·1 inches, culmen 0·25, wing 3·45, tail 3, tarsus 0·35.

Young. Sooty brown with a greenish wash on the back; below dull sooty brown; gape yellow.

Young (*A. obscura*, Temm.). Distinguished by its yellow gape and sooty-brown plumage; tail much shorter and only slightly forked.

Hab. Gold Coast, W. Africa.

a, *b*. ♂ ad. sk.	Fantee (*Ussher*).	Sharpe Collection.
c. ♂ ad. sk.	Fort Victoria, Gold Coast (*Ussher*).	Sharpe Collection.
d, *e*. Juv. sk.	Fantee.	A. Swanzy, Esq. [P.].
f. ♀ ad. sk.	Wasa, March 1872 (*Blissett*).	Sharpe Collection.
g. Juv. sk.	Ashantee.	J. Gould, Esq.

3. Psalidoprocne nitens.

Atticora nitens, *Cass. Proc. Acad. Philad.* 1857, p. 38; *Hartl. Orn. Westafr.* p. 261 (1857); *Cass. Proc. Philad. Acad.* 1859, p. 33; *Hartl. J. f. O.* 1861, p. 103; *Du Chaillu, Equat. Afr.* p. 472 (1861).

Hirundo nitens, *Gray, Hand-l. B.* i. p. 71, no. 831 (1869).

Psalidoprocne nitens, *Sharpe, P. Z. S.* 1870, p. 291; *id. Ibis*, 1872, p. 70; *Ussher, Ibis*, 1874, p. 61.

Adult. Above glossy greenish black, very bright and distinct both above and below; quills dark brown, glossed with greenish above, as also is the tail, which is quite square; bill black; feet light brown. Total length 4·3 inches, wing 3·8, tail 2·2.

Obs. The specimens from Gaboon and the Camaroons have the throat sooty brown, but whether this is a specific character, or merely a sign of youth or abrasion of the plumage, I am unable to say from the series before me.

Hab. West Africa, from the Gold Coast to Gaboon.

a, *b*. ♂ ad. sk.	Fort Victoria, Gold Coast (*Ussher*).	Sharpe Collection.
c. ♂ ad. sk.	Camaroons (*Crossley*).	Sharpe Collection.
d. ♂ ad. sk.	Muni River.	P. B. Du Chaillu, Esq. [C.].
e. ♂ ad. sk.	Gaboon.	P. B. Du Chaillu, Esq. [C.].
f, *g*. ♂ ♀ ad. sk.	Landana, Congo (*L. Petit*).	R. B. Sharpe, Esq. [P.].

4. Psalidoprocne petiti.

Psalidoprocne petiti, *Sharpe & Bouvier, Bull. Soc. Zool. France*, i. p. 38, pl. ii. (1876); *Oustalet, Bull. Soc. Philom.* (7) i. p. 106 (1877); *Bocage, Orn. Angola*, p. 188 (1881); *Oustalet, Nouv. Arch. Mus.* (2) ii. p. 96 (1879).

Adult male (type of species). General colour above sooty black; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills black; tail-feathers black; lores velvety black; cheeks, ear-coverts, and under surface of body sooty black like the upper surface; under wing-coverts and axil-

laries pale smoky brown; quills dusky below, browner along the inner web: "eyes black" (*Petit*). Total length 5·8 inches, culmen 0·25, wing 4·05, tail 2·9, tarsus 0·35.

Adult female. Similar to the male in colour, but wanting the serrated edge to the outer web of the first primary. Total length 5·2 inches, culmen 0·25, wing 3·55, tail 2·5, tarsus 0·4.

Young. Similar to the adult, but not so glossy; below much paler and more earthy brown.

Hab. West Africa, from Gaboon to the Congo.

a. ♂ ad. sk.	Landana.	M. L. Petit [C.]. (Type of species.)
b. ♀ ad. sk.	Chinchonxo, Congo.	Dr. Lucan [C.].
c. Ad.; *d.* Juv. sk.	Landana, Congo (*Petit*).	R. B. Sharpe, Esq. [P.].

5. Psalidoprocne antinorii.

Psalidoprocne antinorii, *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 123 (1884).

Adult male (type of species). Very similar to *P. petiti*, but with the under wing-coverts and axillaries pure white instead of smoky brown. Total length 5·5 inches, culmen 0·25, wing 4·15, tail 2·95, tarsus 0·35.

Hab. Shoa, extending southwards to the Zambesi.

a. Ad. sk.	Zambesi.	Sir J. Kirk [P.].

6. Psalidoprocne pristoptera.

Hirundo pristoptera, *Rüpp. Neue Wirb.* Taf. 39. fig. 2 (1835).
Atticora albiscapulata, *Boie, Isis*, 1844, p. 172 (*ex Rüpp. MSS.*).
Chelidon pristoptera, *Rüpp. Syst. Uebers.* p. 22 (1845).
Atticora pristoptera, *Gray, Gen. B.* i. p. 58 (1845); *id. Cat. Fissir. Brit. Mus.* p. 21 (1848); *Bp. Consp.* i. p. 337 (1850); *Heugl. J. f. O.* 1861, p. 420, 1863, p. 4; *Brehm, Reis. Habesch*, p. 208 (1863).
Chelidon (?) pristoptera, *Heugl. Syst. Uebers.* p. 17 (1856).
Pristoptera typica, *Bp. Rivist. Contemp., Torino*, 1857, p. 4.
Psalidoprocne pristoptera, *Sclater, P. Z. S.* 1864, p. 109; *Heugl. Orn. N.O.-Afr.* i. p. 148 (1869); *Blanf. Geol. & Zool. Abyss.* p. 349 (1870); *Sharpe, P. Z. S.* 1870, p. 290; *Antin. & Salvad. Viagg. Bogos*, p. 71 (1873); *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 123 (1884).

Adult. Above glossy blue-black, with a greenish tinge on the wings and tail; quills greenish black, the inner web dusky; tail much forked, greenish black above, dusky underneath; under surface of the body glossy blue-black; under wing-coverts white. Total length 5·5 inches; of bill from front 0·6, from gape 0·4; wing 4·4, tail 3; tarsus 0·35, middle toe 0·4, hind toe 0·2, lateral toes 0·25.

Hab. N.E. Africa.

a. ♂ ad. sk.	Dongolo, Tigré, 6500 feet, May 18, 1868.	W. T. Blanford, Esq. [C.].
b. Ad. sk.	Abyssinia.	Dr. Rüppell [C.].

7. Psalidoprocne albiceps.

Psalidoprocne albiceps, *Sclater, P. Z. S.* 1864, p. 108, pl. xiv.; *Heugl. Orn. N.O.-Afr.* i. p. 147 (1869); *Sharpe, P. Z. S.* 1870, p. 291.

Atticora albiceps, *Gray, Hand-l. B.* i. p. 73, no. 862 (1869); *Finsch & Hartl. Vög. Ostafr.* p. 133 (1869).

Adult. General colour above and below black, the crown and top of the throat white. Total length 5·5 inches, wing 4·2, centre tail-feathers 2·2, outer ones 3·1.

Hab. Usui, Central Africa.

a. Ad. in spirit.	Usui.	Capt. Speke [P.]. (Type of species.)

11. STELGIDOPTERYX.

Type.

Stelgidopteryx, *Baird, B. N. Amer.* p. 312 (1858) .. S. serripennis.



Bill of *S. ruficollis* (magnified), to show nostrils.

Range. The whole of North America except the North-eastern States, from Canada and British Columbia southwards. Throughout Central America and South America, as far as Southern Brazil and Bolivia.

Key to the Species.

a. Throat ashy brown, or slightly tinged with rufous; abdomen and under tail-coverts white ..... *serripennis*, p. 206.

b. Throat brick-red; abdomen sulphur-yellow; under tail-coverts white or pale yellow, the longest ones with a broad subterminal bar of blackish brown ..... *ruficollis*, p. 208. *uropygialis*, p. 209.

1. Stelgidopteryx serripennis.

Hirundo serripennis, *Audub. Orn. Biogr.* iv. p. 593 (1838); *id. B. Amer.* 8vo, i. p. 193, pl. 51 (1840); *Maynard, B. Florida*, p. 76 (1871).

Cotyle serripennis, *Boie, Isis*, 1844, p. 170; *Bp. Consp.* i. p. 342 (1850); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 11 (1853); *id. Ill. B. Calif. & Texas*, p. 247 (1856); *Scl. & Salv. Ibis*, 1859, p. 13; *G. C. Taylor, Ibis*, 1860, p. 111; *Baird, Cass., & Lawr. B. N. Amer.* p. 313 (1858); *Owen, Ibis*, 1861, p. 61; *Sclater, Cat. Amer. B.* p. 41 (1862); *Coues, Ibis*, 1865, p. 163; *Dresser, t. c.* p. 479; *Brown, Ibis*, 1868, p. 421; *Cooper, B. Calif.* p. 110 (1870).

Cotyle fulvipennis, *Scl. P. Z. S.* 1859, p. 364; *id. & Salv. Ibis*, 1860, p. 31; *Scl. Cat. Amer. B.* p. 41 (1862).

Stelgidopteryx serripennis, *Baird, B. N. Amer.* p. 312 (1858); *id. Review Amer. B.* p. 314 (1865); *Coues, Key N. Amer. B.* p. 114

(1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 15 (1873); *Coues, B. N.-West*, p. 90 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* p. 350, pl. 16. fig. 12 (1874); *Ridgw. Rep. Surv. 40th Par.* iv. p. 446 (1877); *Coues, B. Color. Vall.* p. 438 (1878); *Belding, Proc. U.S. Nat. Mus.* i. p. 409 (1878); *Ridgw. op. cit.* iii. p. 175 (1880); *Coues, Check-list N. Amer. B.* p. 43 (1882); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 237 (1883); *Coues, Key N. Amer. B.* p. 324 (1884).

Cotile serripennis, *Gray, Hand-l. B.* i. p. 73, no. 867 (1869).

Cotile fulvipennis, *Gray, t. c.* p. 73, no. 869 (1869).

Stelgidopteryx fulvipennis, *Salv. P. Z. S.* 1870, p. 184; *Scl. & Salv. Nomencl. Av. Neotr.* p. 15 (1873); *Boucard, P. Z. S.* 1878, p. 67.

Adult male. General colour above brown, the lesser and median wing-coverts like the back; median and greater coverts blackish brown, washed externally with the same colour as the back; bastard-wing, primary-coverts, and quills blackish brown, the inner secondaries edged with lighter brown; tail-feathers dark brown, paler towards the base of the inner web; head a trifle darker brown than the back; a narrow line of whity brown from the base of the forehead above the eye; lores blackish; ear-coverts dark brown; cheeks, throat, and breast, as well as the flanks and sides of the body, light brown, shaded with hoary whitish on the throat and fore neck, the chin and throat slightly washed with rufous; abdomen and under tail-coverts pure white; the breast-feathers with a few dusky shaft-lines; thighs white, with brown bases; axillaries brown; under wing-coverts brown, with hoary-white edges to those near the edge of the wing. Total length 4·8 inches, culmen 0·35, wing 4·45, tail 2·25, tarsus 0·4.

Adult female. Differs from the male in wanting the saw-like edges to the first primary.

A pair in the Salvin-and-Godman collection, from Presidio, Mexico (*Forrer*), measure as follows:—

a. ♂ ad. Total length 4·9 in., culmen 0·35, wing 4·4, tail 2·1, tarsus 0·45.
b. ♀ ad. „ „ 4·4 „ 0·3, „ 4·1, „ 1·9, „ 0·45.

Young. Distinguished from the adult by the light rufous edges to the wing-coverts and inner secondaries; the whole of the back also washed with rufous edges to the feathers; the throat and breast light rufous, and the flanks also slightly washed with rufous; under wing-coverts broadly edged with rufous; gape yellow.

Obs. The rufous on the throat in this species seems to me to be indicative of immaturity, as in full breeding-plumage it is nearly obsolete. The white edgings to the inner secondaries, which are seen in all specimens shot in the winter months, appear to me to be a distinct sign of winter plumage, as in breeding birds these white margins become gradually obsolete.

Hab. North America, wintering in Central America as far south as Guatemala.

a. ♀ ad. sk. Carlisle, Pa., May 11 (*S. F. Baird*). U.S. Nat. Museum [P.].

b. ♂ ad. sk.	Washington, D. C., May 3 (*H. W. Henshaw*).	U.S. Nat. Museum [P.].
c, d. ♂; *e, f.* ♀ ad. sk.	West side of Rocky Mountains.	J. K. Lord, Esq. [P.].
g. ♂ Ad. sk.	Santa Fé, New Mexico, July 22 (*H. W. Henshaw*).	U.S. Nat. Museum [P.].
h, i. Juv. sk.	Mazatlan, Mexico, June 14 (*A. Forrer*).	R. B. Sharpe, Esq. [P.].
k. ♂ sk.	Presidio, Mexico, Feb. 12 (*A. Forrer*).	R. B. Sharpe, Esq. [P.].
l. ♀ ad. sk.	Presidio, April 15 (*A. Forrer*).	R. B. Sharpe, Esq. [P.].
m. Ad. sk.	Mexico.	R. B. Sharpe, Esq. [P.].
n. Ad. st.	Mexico.	Purchased.
o. Ad.; *p.* Jun. sk.	Orizaba, Mexico (*Botteri*).	Sclater Collection.
q. Jun. sk.	Jalapa (*De Oca*).	Sclater Collection. (Type of *Cotyle fulvipennis*, Scl.)
r. Ad. sk.	Guatemala.	Sclater Collection.
s. Ad. sk.	Guatemala (*Salvin*).	Sclater Collection.
t. Ad. sk.	Coban, Vera Paz, Jan. 1860.	Osbert Salvin, Esq. [P.].

2. Stelgidopteryx ruficollis.

Golondrina de la vientre amarillazo, *Azara, Apunt.* iii. p. 512 (1802); *Hartl. Ind. Azara*, p. 19 (1847).
Hirundo ruficollis, *Vieill. N. Dict. d'Hist. Nat.* xiv. p. 523 (1817).
Hirundo jugularis, *Neuwied, Beitr. Naturg. Bras.* iii. p. 365 (1830); *Temm. Pl. Col.* iv. pl. 161. fig. 2.
Hirundo hortensis, *Licht. Verz. Doubl.* p. 57 (1823).
Cotyle jugularis, *Gray, Gen. B.* i. p. 60 (1845).
Cecropsis ruficollis, *Boie, Isis*, 1844, p. 175.
Cotyle flavigastra, *Gray, Cat. Fissir. Brit. Mus.* p. 30 (1848); *Bp. Consp.* i. p. 342 (1850); *Cab. Mus. Hein.* Th. i. p. 49 (1850); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 11 (1853); *Burm. Th. Bras.* iii. p. 144 (1856); *Pelz. Orn. Bras.* pp. 17, 402 (1871).
Cotyle ruficollis, *Gray, Gen. B.* i. p. 60 (1845); *Cass. Cat. Hirund. Mus. Philad. Acad.* p. 11 (1853); *Sclater, P. Z. S.* 1860, p. 292; *id. Cat. Amer. B.* p. 41 (1862).
Stelgidopteryx ruficollis, *Baird, Review Amer. B.* p. 315 (1865); *Scl. & Salv. P. Z. S.* 1866, p. 178, 1867, p. 749, 1873, pp. 185, 259; *iid. Nomencl. Av. Neotr.* p. 15 (1873); *Layard, Ibis*, 1873, p. 377; *Tacz. P. Z. S.* 1874, p. 510; *Scl. & Salv. P. Z. S.* 1879, p. 596; *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 237 (1883).
Cotile ruficollis, *Gray, Hand-l. B.* i. p. 73, no. 868 (1869).

Adult male (Yquitos, Upper Amazon; H. Whitely). General colour above brown, the head decidedly darker than the back, the rump and upper tail-coverts paler brown; wing-coverts blackish brown, the inner median and greater coverts edged with paler brown; bastard-wing, primary-coverts, and quills blackish, the secondaries rather browner, the inner ones edged with white towards the tip and round the latter; upper tail-coverts and tail-feathers blackish brown, the latter paler towards the base of the inner web; lores and ear-coverts dark brown, the latter a little paler than the crown; cheeks and throat brick-red; sides of neck, breast and sides of body brown; centre of breast and abdomen sulphur-

yellow, extending on to the thighs and vent; under tail-coverts white, the basal ones with a tinge of yellow, the long ones with a broad subterminal bar of blackish brown; axillaries brown; under wing-coverts brown, with rufous edges to the feathers; quills dusky blackish below: "bill and legs brownish black, the latter sometimes paler brown or flesh-colour; iris greyish brown" (*Neuwied*). Total length 4·9 inches, culmen 0·35, wing 4·3, tail 2·2, tarsus 0·4.

Adult female. Similar to the male in colour, but without the serrations on the outer edge of the outer web of the first primary. Total length 4·5 inches, culmen 0·35, wing 3·7, tail 1·9, tarsus 0·4. (*Mus. Salvin and Godman.*)

The male killed in July is rather paler than the female shot in December, and has the rump decidedly paler. Measurements as follows:—

	Total length. in.	Culmen. in.	Wing. in.	Tail. in.	Tarsus. in.
♂. Upper Ucayali	4·8	0·35	4·35	2·15	0·4
♀. Yurimaguas	4·1	0·35	3·9	1·95	0·4

Hab. Brazil, extending to Amazonia and Eastern Ecuador, and southwards to Bolivia.

a. ♂ ad. sk.	Upper Ucayali, July 16, 1865.	E. Bartlett, Esq. [C.].
b. ♀ ad. sk.	Yurimaguas, Dec. 10, 1866.	E. Bartlett, Esq. [C.].
c. ♂ ad. sk.	Yquitos, E. Peru, March 24 (*H. Whitely*).	R. B. Sharpe, Esq. [P.].
d. Ad. sk.	South Brazil.	R. B. Sharpe, Esq. [P.].
e, f. Ad. sk.	Brazil.	R. B. Sharpe, Esq. [P.].
g. Ad. st.	Brazil.	M. Claussen [P.].
h. Ad. sk.	Para, Dec. 27 (*E. L. Layard*).	R. B. Sharpe, Esq. [P.].
i. Ad. sk.	Rio.	Sclater Collection.
k, l. ♂ ad. sk.	Pernambuco (*W. A. Forbes*).	Sclater Collection.
m. Ad. sk.	Bahia.	Sudbury Museum.
n. Ad. sk.	Cayenne.	Sclater Collection.
o. Ad. st.	Caracas, Venezuela.	Mr. Dyson [C.].

3. Stelgidopteryx uropygialis.

Cotyle flavigastra (*non V.*), *Cass. Proc. Philad. Acad.* 1860, p. 133; *Scl. P. Z. S.* 1860, p. 292; *Lawr. Ann. Lyc. N. Y.* vii. p. 317 (1861).

Cotyle ruficollis (*nec Vieill.*), *Sclater, Cat. Amer. B.* p. 41 (1862, pt.).

Cotyle uropygialis, *Lawr. Ibis*, 1863, p. 181; *id. Ann. Lyc. N. Y.* viii. p. 3 (1863); *Scl. & Salv. P. Z. S.* 1864, p. 348; *Gray, Hand-l. B.* i. p. 73, no. 870 (1869).

Stelgidopteryx uropygialis, *Baird, Review Amer. B.* p. 317 (1865); *Salv. P. Z. S.* 1870, p. 108; *Wyatt, Ibis*, 1870, p. 184; *Scl. & Salv. Nomencl. Av. Neotr.* p. 15 (1873); *iid. P. Z. S.* 1879, p. 496, *Tacz. P. Z. S.* 1877, p. 744; *Salv. & Godm. Biol. Centr.-Amer. Aves*, i. p. 238 (1883).

Stelgidopteryx fulvigula, *Baird, Review Amer. B.* p. 317 (1865);

v. Frantz. J. f. O. 1869, p. 295; *Salv. Ibis*, 1869, p. 313, 1870, p. 108, 1874, p. 307.
Cotile fulvigula, *Gray, Hand-l. B.* i. p. 73, no. 871 (1869).

Adult. Similar to *S. ruficollis*, from which it differs only in having the upper surface much darker and the rump more ashy and in rather more pronounced contrast to the back. The brown on the under surface is darker on the breast and flanks, and the yellow on the abdomen somewhat more restricted.

Young. Differs from the adult in having the rump creamy buff, and in having distinct rufous margins to the feathers of the upper surface, especially the wing-coverts and inner secondaries; the throat is bright rufous, as well as the fore neck; the sides of the body brown washed with rufous, and the rest of the underparts white with a slight tinge of yellow. (*Mus. Salvin and Godman.*)

Obs. The light colour of the rump, though easily recognizable in Central-American specimens, is also visible in specimens from some parts of South America. It is distinctly seen in examples from Colombia and British Guiana, and is also noticeable in some of the birds from Ecuador, but not in all. In Brazil and Amazonia the birds have the rump only a little lighter than the back; while in others from Bolivia there is scarcely any difference in the tint of the whole upper surface, the birds being very dark coloured, both above and below. (*Cf.* Salvin and Godman, *l. c.*)

Hab. Central America, from Costa Rica to Panama, and extending into Colombia, Venezuela, and Guiana, and even to Brazil.

a. Ad. sk.	Panama (*McLeannan*).	Osbert Salvin, Esq.
b. Ad. sk.	Panama (*McLeannan*).	Sclater Collection.
c, d. Ad. sk.	Esmeraldas, Ecuador (*Fraser*).	Sclater Collection.
e. ♂ juv. sk.	Babahoyo, Ecuador (*Fraser*).	Sclater Collection.
f. Ad. sk.	Venezuela.	R. B. Sharpe, Esq. [P.].
g, h. ♂ ad. sk.	Roraima, British Guiana, Nov. (*H. Whitely*).	R. B. Sharpe, Esq. [P.].
i. Ad. sk.	Bahia.	R. B. Sharpe, Esq. [P.].

Family AMPELIDÆ.

The genus *Ampelis*, which is the typical form of the Chatterers, is characterized by coloured appendages to the feathers of the wing and tail, in two species taking the form of wax-like drops, whence the popular name of Waxwing. A swollen bill with rounded nasal aperture and a long silky crest are also distinguishing features of *Ampelis*. In America, besides the latter genus, there occur a few others, whose affinity to *Ampelis* seems unquestionable; but it is quite possible that in a future re-arrangement of the *Passeriformes* the *Ampelidæ* will be suppressed as a family, as its characters are not clearly definable, especially when *Dulus* is retained within its limits. More than one ornithologist, however, have questioned the propriety of associating *Dulus* with the *Ampelidæ*; but as I cannot propose a better location for the genus in the allied families, I have deemed it best to follow Professor Baird in his limitation of the family.

Key to the Genera.

a. Wing longer than the tail.
  a'. Wing very long, falling short of tail by no more than length of tarsus; nasal plumes extending beyond nasal opening and hiding the latter; wax-like or red tips to the secondaries and tail-feathers in the adults ..... 1. AMPELIS, p. 212.
  b'. Wing shorter, the distance between the tips of the primaries and the tips of the tail-feathers much exceeding the length of the tarsus; upper edge of nostrils bare.
    a''. Bill stout and Finch-like, the chin-angle conspicuously rounded; nostrils rounded, not placed in a groove ..... 2. DULUS, p. 218.
    b''. Bill more elongated, the chin-angle more acute; nostrils oval, situated in a distinct groove ..... 3. PHAINOPTILA, [p. 219.
b. Tail longer than the wing.
  c'. Tail square; nostrils overhung with frontal feathers; nasal groove a large oval, the opening of the nostril being a small aperture in the lower part of a large membrane which occupies the whole of the nasal depression ..... 4. PHAINOPEPLA, [p. 220.
  d'. Tail square or strongly graduated; nostrils exposed, with a large oval nasal aperture with a posterior membrane ..... 5. PTILOGONYS, [p. 222.

1. AMPELIS.

	Type.
Ampelis, *Linn. Syst. Nat.* i. p. 297 (1766)	A. garrulus.
Bombiciphora, *Meyer, Vög. Liv- u. Esthl.* p. 104 (1815)..	A. garrulus.
Bombycivora, *Temm. Man. d'Orn.* i. p. 77 (1815)	A. garrulus.
Bombycilla, *Vieill. Analyse*, p. 37 (1816)	A. garrulus.

Range. The northern portions of both the Old and New World, wintering in the Central Palæarctic and Nearctic Regions, but irregular in its migrations.

Key to the Species.

a. Tail-feathers with a broad yellow bar; secondaries tipped with drops of sealing-wax red.
  a'. Larger: no yellowish colour on flanks, which are grey; under tail-coverts deep chestnut.. *garrulus*, p. 212.
  b'. Smaller: flanks olive-yellow, paler on the abdomen; under tail-coverts white ..... *cedrorum*, p. 215.
b. Tail-feathers tipped with a bar of crimson; secondaries with a small spot of crimson at the end, but not having a wax-like appendage. *japonicus*, p. 217.

1. Ampelis garrulus.

Le Jaseur de Bohême, *Briss. Orn.* ii. p. 333 (1760); *Daubent. Pl. Enl.* ii. pl. 461.

Ampelis garrulus, *Linn. Syst. Nat.* i. p. 297 (1766); *Gm. Syst. Nat.* i. p. 838 (1788); *Gray, Gen. B.* i. p. 278 (1846); *Bp. Consp.* i. p. 336 (1850); *Schl. Vog. Nederl.* pl. 121 (1854); *Sundev. Sv. Fogl.* pl. 18. fig. 4 (c. 1858); *Baird, B. N. Amer.* pp. 317, 923 (1858); *A. Newt. Ibis*, 1861, p. 92; *Scl. Cat. Amer. B.* p. 46 (1862); *Blakist. Ibis*, 1863, p. 65; *Gray, List Br. B.* p. 80 (1863); *Baird, Review Amer. B.* p. 405 (1865); *id. Ibis*, 1867, p. 286; *Degl. & Gerbe, Orn. Eur.* i. p. 577 (1867); *Gould, B. Gr. Brit.* ii. pl. 21 (c. 1869); *Gray, Hand-l. B.* i. p. 365, no. 5565 (1869); *Dall & Bann. Tr. Chicago Acad.* i. p. 280 (1869); *Cooper, B. Calif.* p. 127 (1870); *Swinh. P. Z. S.* 1871, p. 374; *Alston & Harvie Brown, Ibis*, 1873, p. 60; *Swinh. t. c.* p. 362, 1874, pp. 153, 445; *Harting, Handb. Brit. B.* p. 23 (1872); *Coues, Key N. Amer. B.* p. 115 (1872); *Dresser, B. Eur.* iii. p. 429, pl. 155 (1873); *Newt. ed. Yarr. Brit. B.* i. p. 523 (1874); *Coues, B. N.-West*, p. 91 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* p. 396, pl. 18. fig. 1 (1874); *Cordeaux, Ibis*, 1875, p. 180; *Danf. & Harvie Brown, t. c.* p. 302; *Dresser, Ibis*, 1876, p. 188; *Seebohm & Harvie Brown, t. c.* p. 219; *David & Oust. Ois. Chine*, p. 130 (1877); *Blakist. & Pryer, Ibis*, 1878, p. 235; *Coues, B. Color. Vall.* p. 459 (1878); *Seebohm, Ibis*, 1879, p. 1, 1880, p. 189; *Blakist. & Pryer B. Japan*, p. 149 (1882); *Coues, Check-list*, p. 43 (1882); *Giglio. Icon. Avif. Ital.* pl. 78 (1882); *Ridgw. Bull. U.S. Nat. Mus.* no. 2. p. 20 (1881); *Seebohm, Ibis*, 1882, p. 377; *id. Hist. Brit. B.* ii. p. 3, pl. 11 (1884); *B. O. U. List Brit. B.* p. 39 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 326 (1884).

Le Jaseur, *Montb. Hist. Nat. Ois.* iii. p. 429 (1775).

Waxen Chatterer, *Lath. Gen. Syn.* ii. pt. 1, p. 91 (1783).

Parus bombycilla, *Pall. Zoogr. Rosso-Asiat.* i. p. 548 (1811).
Bombyciphora poliocœlia, *Meyer, Vög. Liv- u. Esthl.* p. 104 (1815).
Bombycivora garrula, *Temm. Man. d'Orn.* p. 77 (1815); *Werner, Atlas, Insectiv.* pl. 13 (1827); *Gould, B. Eur.* iii. pl. 160 (1837).
Bombycilla bohemica, *Leach, Syst. Cat. Mamm. etc. Brit. Mus.* p. 18 (1816); *Brehm, Vög. Deutschl.* p. 219 (1831).
Bombycilla garrula, *Vieill. N. Dict. d'Hist. Nat.* xvi. p. 523, pl. 10. fig. 3 (1817); *Naum. Vög. Deutschl.* ii. pl. 59 (1822); *Bp. Amer. Orn.* iii. p. 7, pl. 16. fig. 2 (1828); *Swains. & Richards. Faun. Bor.-Amer. Birds*, ii. p. 237 (1831); *Bp. Comp. List B. Eur. & N. Amer.* p. 9 (1838); *Audub. B. Amer.* pl. 245; *id. Orn. Biogr.* v. p. 462 (1838); *Keys. & Blas. Wirbelth. Eur.* p. 167 (1840); *Macgill. Brit. B.* iii. p. 533 (1840); *Audub. B. Amer.* iv. p. 165, pl. 245 (1842); *Yarr. Brit. B.* i. p. 356 (1843); *Giraud, B. Long Isl.* p. 165 (1844); *Cab. Mus. Hein.* Th. i. p. 55 (1850); *Middend. Sibir. Reis.* p. 156 (1851); *Neuwied, J. f. O.* 1858, p. 189; *Nordm. t. c.* p. 307; *Fritsch, Vög. Eur.* pl. 27. figs. 4, 5 (c. 1870); *Seebohm, Ibis*, 1882, p. 219.
Bombycilla brachyrhynchus, *Brehm, Naum.* 1855, p. 275.
Bombycilla cærulea, *Dubois, Rev. et Mag. de Zool.* xii. pl. 2 (1860, *err. typogr.*).

Adult male in breeding-plumage. General colour above drab-brown, gradually becoming greyer on the rump and changing to pure grey on the upper tail-coverts; wing-coverts like the back, with grey bases to the feathers, showing distinctly on the greater series; bastard-wing like the wing-coverts; primary-coverts black, conspicuously tipped with white; quills black, the feathers somewhat quadrate at the ends, yellow near the end of the outer web and broadly edged with white at the tip; secondaries grey, white at the ends with a subterminal shade of blackish, the white-tipped feathers having each a wax-like red tip; innermost secondaries browner like the rump; tail-feathers grey, with a broad subterminal band of black broadly tipped with yellow, with a tiny shaft-mark of red near the tip; head and a large crest drab-brown like the back; the fore part of the crown and above the eyes chestnut; base of forehead, lores, and feathers round the eye black, extending a little way behind and above the eye towards the nape; sides of face and ear-coverts pale rufous-drab, the hinder cheeks a little more chestnut; fore part of cheeks white, forming a spot; above the ear-coverts a narrow line of white, including the hinder part of the lower eyelid; throat black; remainder of under surface of body from the lower throat downwards light drab, getting gradually greyer in the centre of the breast and abdomen, and inclining to yellowish white towards the vent; on the sides of the body some long silky white plumes; under tail-coverts deep chestnut; thighs ashy grey; under wing-coverts pale ashy grey, slightly washed with drab-brown; quills dusky below, ashy grey along the inner web. Total length 7·25 inches, culmen 0·6, wing 4·6, tail 2·55, tarsus 0·75.

The number of the red tips to the secondaries seems to vary, the two wings not always having the same quantity of feathers tipped with wax-drops: thus one fine male in the Museum has seven on one wing and only five on the other. The acquisition of the red tips to the tail-feathers seems to be a sign of fully adult birds only,

and is probably confined to very old individuals. Their appearance is preceded by a streak of wax-red colour along the shaft of the feathers, before the waxy appendages are developed.

Adult female. Similar to the male, but with the crest smaller and apparently not having so many waxy appendages to the secondaries, and, as far as my experience goes, not having any on the tail. Total length 7 inches, culmen 0·55, wing 4·4, tail 2·5, tarsus 0·75.

Young males in first winter plumage resemble the fully adult birds, but have the white cheek-spot much smaller, the secondaries only minutely tipped with wax-drops, the first primaries white near the end of the outer web instead of yellow; the tail-feathers not tipped with wax-drops.

Young females resemble the young male, but have the crest smaller and the black on the throat not so distinct nor coming so far down on the lower throat.

Young. Differs from the adult. General colour above dark olive-brown, streaked with pale edges of whity brown on the feathers of the hind neck and back, less distinct on the rump; head uniform brown, with a line of velvety black running from the fore part of the eye across the base of the forehead and surmounted by a narrow whitish line, which extends also across the base of the forehead above the eye; ear-coverts and cheeks brown; the fore part of the latter white, forming a spot; a narrow moustachial line of black; throat, breast, and flanks brown, streaked with pale fulvous edges to the feathers; centre of abdomen yellowish white, becoming clearer yellow on the vent; the under tail-coverts pale tawny buff; upper wing-coverts ashy grey, slightly washed with brown; primary-coverts and quills ashy grey; the inner secondaries browner, with white edges to the inner webs; the primaries externally edged with hoary white; tail-feathers ashy grey, tipped with bright yellow, before which is a subterminal band of black.

Hab. Breeds within the Arctic circle in the Nearctic and Palæarctic Regions, migrating south in winter; its immigrations very irregular.

a, *b*. Ad. st.	Norfolk.	Mr. J. Baker.
c. Ad. sk.	Kent.	Col. Montagu [P.].
d. Ad. st.	Sussex, Oct. 1882.	Messrs. Swaysland.
e. Ad. st.	England.	J. R. Reeves, Esq. [P.].
f. Pull. sk.	N. Europe.	J. Gould, Esq.
g, *h*. ♂ ad. sk.	S. Norway, Feb. (*F. G.*).	F. D. Godman and O. Salvin, Esqrs. [P.].
i, *k*. ♂ ♀ ad. sk.	S. Norway, Jan. 30 (*F. G.*).	F. D. Godman and O. Salvin, Esqrs. [P.].
l, *m*, *n*. Imm. sk.	Norway.	F. D. Godman and O. Salvin, Esqrs. [P.].
o. ♀ imm. sk.	Wermland, Sweden, Feb. 1872.	Hr. W. Meves [C.].
p, *q*. ♂ imm.; *r*. ♀ ad. sk.	Stockholm, Feb.	Hr. W. Meves [C.].
s. ♂ ad. sk.	Stockholm, March.	Hr. W. Meves [C.].
t, *u*. Ad. et juv. sk.	Gotenborg, Sweden.	Prof. Malm [P.].

v. Ad. sk.	Holland.	Mr. J. C. Van Dam [P.].
w. ♂ ad. sk.	Belgrade, Turkey, Feb. (*T. Robson*).	R. B. Sharpe, Esq. [P.].
x. Ad. sk.	Shanghai, China.	R. Webb, Esq. [P.].
y. Ad. sk.	North America.	Sclater Collection.
z. Ad. sk.	Arctic America.	Sir G. Back [P.].
a'. Ad. sk.	Fort Simpson, April 20.	B. R. Ross, Esq. [P.].
b'. Imm. sk.	Niagara Falls.	Gould Collection.
c'. Ad. sk.	Racine, Wisconsin (*Baird*).	Sclater Collection.
d'. Ad. sk.	Racine, Wisconsin (*Hoy*).	Gould Collection.
e', *f'*. ♂; *g'*, *h'*. ♀ ad. sk.	West side of Rocky Mountains, British Columbia.	J. K. Lord, Esq. [P.].
i', *k'*, *l'*. Ad. sk.	Oregon.	Lord Walsingham [P.].

2. Ampelis cedrorum.

The Chatterer, *Catesby, N. H. Carol.* i. p. 46, pl. 46 (1754).
The Chatterer of Carolina, *Edwards, Gleanings*, v. p. 66, pl. 242 (1758).
Le Jaseur de la Caroline, *Briss. Orn.* ii. p. 337 (1760).
Ampelis garrulus β, *Linn. Syst. Nat.* i. p. 297 (1766).
Variété du Jaseur, *Montb. Hist. Nat. Ois.* iii. p. 441 (1775).
Prib Chatterer, *Penn. Arctic Zool.* ii. p. 346 (1785).
Ampelis garrulus (*nec L.*), *Bartram, Trav. Florida*, p. 290 *bis* (1791).
Bombycilla cedrorum, *Vieill. Ois. Amér. Sept.* i. p. 88, pl. 57 (1807); *id. & Oud. Gal. Ois.* i. p. 186, pl. 118 (1825); *Cab. Mus. Hein.* Th. i. p. 55; *id. J. f. O.* 1856, p. 3; *Neuwied, J. f. O.* 1858, p. 189; *Gundl. J. f. O.* 1861, p. 328; *id. Orn. Cuba*, p. 80 (1876).
Ampelis americana, *Wils. Amer. Orn.* i. p. 107, pl. 17. fig. 1 (1808).
Bombycilla carolinensis, *Steph. Gen. Zool.* x. p. 422 (1817); *Audub. B. Amer.* pl. 43; *id. Orn. Biogr.* i. p. 227 (1831); *Bp. Comp. List B. Eur. & N. Amer.* p. 9 (1838); *Audub. Syn.* p. 165 (1839); *id. B. Amer.* iv. p. 169, pl. 246 (1842); *Giraud, B. Long Isl.* p. 163 (1844); *R. Gray, B. W. Scotl.* p. 109 (1871).
Bombycilla americana, *Licht. Preis-Verz. mex. Vög.* p. 1 (1830); *Swains. Faun. Bor.-Amer., Birds*, p. 239 (1831); *Jones, Nat. Bermuda*, p. 29 (1859); *Cab. J. f. O.* 1863, p. 56.
Bombyciphora cedrorum, *Brehm, Vög. Deutschl.* p. 220 (1831).
Ampelis carolinensis, *Gosse, B. Jamaica*, p. 197 (1847); *Bp. Consp.* i. p. 336 (1850); *A. Newt. Zool.* 1852, p. 3506.
Ampelis cedrorum, *Gray, Gen. B.* i. p. 278 (1846); *Scl. P. Z. S.* 1856, p. 299, 1858, p. 302; *Baird, B. N. Amer.* p. 318 (1858); *Scl. P. Z. S.* 1859, p. 364; *id. & Salv. Ibis*, 1859, p. 13; *G. C. Taylor, Ibis*, 1860, p. 111; *Scl. Cat. Amer. B.* p. 46 (1862); *March, Proc. Philad. Acad.* 1863, p. 294; *Gray, List Brit. B.* p. 81 (1863); *Blakist. Ibis*, 1863, p. 65; *Lord, Proc. R. Artill. Inst.* iv. p. 116 (1864); *Scl. P. Z. S.* 1864, p. 172; *Dresser, Ibis*, 1865, p. 480; *Baird, Review Amer. B.* p. 407 (1865); *Lawr. Ann. Lyc. N. Y.* viii. p. 285 (1866); *Baird, Ibis*, 1867, p. 276; *Brown, Ibis*, 1868, p. 421; *Sumichr. Mem. Bost. Soc. N. H.* i. p. 547 (1869); *Gray, Hand-l. B.* i. p. 365, no. 5566 (1869); *Cooper, B. Calif.* p. 129 (1870); *Allen, Bull. Mus. Comp. Zool. Cambr.* iii. p. 176 (1872); *Coues, Key N. Amer. B.* p. 116 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 13 (1873); *Coues, B. N.-West*, pp. 93, 233 (1874); *Baird, Brewer, & Ridgway, Hist. N. Amer. B.* i. p. 401, pl. 18. fig. 2 (1874); *Newt. ed. Yarr. Brit. B.* i. p. 53, note (1874); *Hensh.*

Rep. Zool. Expl. W. 100th Mer. p. 229 (1875); *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 18 (1876); *Coues, B. Color. Vall.* p. 470 (1874); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 30 (1881); *Cōues, Check-list*, p. 43 (1882); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 215 (1883); *B.O.U. List Brit. B.* p. 40 (1883); *Coues, Key N. Amer. B.* p. 327 (1884).

Adult male. General colour above brown, the lower back, rump, and upper tail-coverts dove-coloured grey; scapulars and wing-coverts like the back, the latter rather darker, the greater coverts with ashy bases; bastard-wing brown; primary-coverts blackish, externally washed with slaty grey; quills blackish, externally slaty grey, hoary on the primaries; the secondaries with wax-like red appendages to the ends of the feathers, the innermost secondaries drab; tail-feathers slaty grey, broadly tipped with yellow, before which is a broad black subterminal shade; head much crested, more rufescent drab-brown, especially towards the forehead; a frontal band of black, enclosing the lores, feathers round the eye, and extending behind the latter along the sides of the crown to the occiput; this black line surmounted by a narrow line of whitish, separating the crown from the black frontal band; sides of face and ear-coverts clearer rufous-brown, fading off into the drab-brown colour of the sides of the neck; along the fore part of the cheeks a whitish streak; chin black, extending in a dusky blackish shade on the upper throat; remainder of throat and breast as well as the sides of body rufescent drab-brown; abdomen and lower flanks olive-yellow, paler in the centre of the abdomen; under tail-coverts white; thighs ashy; axillaries and under wing-coverts ashy, with dusky bases to those near the edge of the wing; quills dusky below, ashy along the inner web; "bill plumbeous black, sometimes paler at base below; feet black" (*Coues*). Total length 6·3 inches, culmen 0·45, wing 3·95, tail 2·5, tarsus 0·65.

Adult female. Similar in plumage to the male, but with a smaller crest. Total length 6·4 inches, culmen 0·45, wing 3·75, tail 2·25, tarsus 0·7.

Hab. North America, ranging into Central America in winter; Cuba; Jamaica. An accidental visitor to Great Britain.

a, b. Ad. sk.	Niagara Falls.	Gould Collection.
c. ♀ ad. sk.	49th Parallel.	N. A. Bound. Commission.
d, e. ♀ ad. sk.	Fort Dufferin, Manitoba.	N. A. Bound. Commission.
f, g, h. Ad. sk.	British Columbia.	J. K. Lord, Esq. [C.].
i, k. ♂; *l.* ♀ ad. sk.	West side of Rocky Mountains.	J. K. Lord, Esq. [P.].
m. Ad. sk.	Michigan.	Prof. Steere [P.].
n. ♀ ad.; *o.* ♀ juv. sk.	Mackinac, Wisconsin, Sept. (*P. L. S.*).	Sclater Collection.
p. Ad. sk.	Mexico.	Gould Collection.
q. Ad. sk.	Guatemala.	Gould Collection.
r. Ad. sk.	Choctum, Vera Paz (*Salvin*).	Sclater Collection.

3. Ampelis japonicus.

Bombycivora japonica, *Siebold, Hist. Nat. Jap. St.* no. 2 (1824); *id. in Féruss. Bull.* 2nd sect. iv. p. 87 (1825)*.
Bombycilla phœnicoptera, *Temm. Pl. Col.* ii. pl. 450 (1828); *id. & Schleg. Faun. Jap., Aves*, pl. xliv. (1850); *Schrenck, Bull. Acad. St. Pétersb.* iv. p. 190 (1862); *Dybowski, J. f. O.* 1875, p. 249; *Taczan. Bull. Soc. Zool. France*, 1876, p. 164.
Ampelis japonica, *Gray, Gen. B.* i. p. 278 (1846).
Ampelis phœnicoptera, *Bp. Consp.* i. p. 336 (1850); *Radde, Reis. Sibir., Vög.* p. 201, Taf. 6. fig. 1 (1863); *Swinhoe, Ibis*, 1864, p. 427; *id. Ibis*, 1866, p. 307; *Whitely, Ibis*, 1867, p. 200; *Gray, Hand-l. B.* i. p. 365, no. 5567 (1869); *David & Oust. Ois. Chine*, p. 132 (1877); *Blak. & Pryer, Ibis*, 1878, p. 235; *iid. B. Japan*, p. 149 (1882); *Jouy, Proc. U.S. Nat. Mus.* vi. p. 291 (1883).

Adult male. General colour above drab-brown, shading off into dove-colour on the lower back, rump, and upper tail-coverts; scapulars and lesser and median wing-coverts like the back, the latter with a slight wash of crimson at the end; greater coverts paler and more ashy, washed on the outer web rather broadly with dull crimson; bastard-wing brown with a slight reddish shade; primary-coverts and quills blackish, externally edged with slaty grey, the primaries with a white edging near the tip, extending round the latter, the first primary without any white mark near the end, this being very small on the second and third quill also; secondaries tipped with crimson, with a tiny white terminal spot and a distinct subterminal shade of black; innermost secondaries ashy drab; tail-feathers slaty grey, broadly tipped with crimson, before which is a distinct subterminal bar of black; head crested, coloured like the back, the forehead and vertex more chestnut-rufous; lores and feathers at base of nostrils black, as well as the feathers round the eye, this black line joining on the nape the lower crest-feathers, which are also black; ear-coverts and sides of face rufescent drab, inclining to chestnut-rufous on the sides of the crown, below the eye, and along the cheeks; base of cheeks whitish; throat deep black, becoming narrower on the lower throat, where the feathers are tipped with rufous; sides of neck, fore neck, and chest, as well as the sides of the body and flanks, light drab-brown; centre of the breast and abdomen pale sulphur-yellow; thighs light ashy; under tail-coverts crimson, fawn-colour towards the base; under wing-coverts and axillaries light ashy, slightly washed with yellow, the greater series whiter; quills dusky below, ashy along the inner web: "bill black; legs and claws black, flesh-coloured on their sides; iris blood-red; inside of mouth flesh-coloured, slightly ochreous" (*Swinhoe*). Total length 7 inches, culmen 0·5, wing 4·25, tail 2, tarsus 0·75.

Adult female. Similar to the male but smaller, and with much

* Although I have not succeeded in seeing a copy of Siebold's first work, yet the complete description of the species in 1825 in Férussac's 'Bulletin' is sufficient to secure the priority of his name.

smaller crest, with less crimson on the greater wing-coverts; the red tips to the tail narrower; primaries with a small white spot at the end of the outer web, the secondaries with a tiny spot of crimson at the end of the outer web. Total length 6·5 inches, culmen 0·45, wing 4·1, tail 1·9, tarsus 0·75.

Hab. Eastern Siberia, Japan, and Northern China.

a. Ad. sk.	Hakodadi, Nov. 28, 1865 (*H. Whitely*).	Gould Collection.
b, *c*. ♂ ♀ ad. sk.	Nagasaki.	F. Ringer, Esq. [P.].
d, *e*. ♂ ♀ ad. sk.	Japan.	C. Maries, Esq. [C.].

2. DULUS.

Dulus, *Vieillot, Analyse*, p. 42 (1816) ..... Type. D. dominicus.



Bill of *Dulus dominicus*, to show position of nasal aperture and form of chin-angle.

Range. Antilles.

1. Dulus dominicus.

Le Tangara de S. Domingue, *Briss. Orn.* iii. p. 37, pl. ii. fig. 4 (1760); *Daubent. Pl. Enl.* v. pl. 156. fig. 2.
Tanagra dominica, *Linn. Syst. Nat.* i. p. 316 (1766); *Gm. Syst. Nat.* i. p. 895 (1788).
L'Esclave, *Buff. Hist. Nat. Ois.* iv. p. 263 (1778).
St. Domingo Tanager, *Lath. Gen. Zool.* ii. pt. 1, p. 226 (1783).
Dulus palmarum, *Vieill. Nouv. Dict. d'Hist. Nat.* x. p. 435 (1817); *Bp. Consp.* i. p. 331 (1850, pt.); *Lafr. Rev. Zool.* 1851, p. 585.
Arremon palmarum, *Gray, Gen. B.* iii. *App.* p. 16 (1849).
Dulus dominicus, *Strickl. Contr. Orn.* 1851, p. 103; *Scl. Cat. Amer. B.* p. 41 (1862); *Gray, Hand-l. B.* i. p. 385, no. 5827 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 13 (1873); *Cory, B. S. Domingo*, p. 51 (1884).

Adult. General colour above dark brown, the rump and upper tail-coverts dull olive; wing-coverts brown, the greater series edged with olive; bastard-wing and primary-coverts and quills blackish, edged externally with olive-yellow, broader on the secondaries and brighter yellow on the primaries; the innermost secondaries browner; tail-feathers brown, edged with olive, the centre feathers washed with ashy grey; head and neck dark olive-brown, with dusky centres to the feathers; lores, feathers below the eye, and ear-coverts blackish brown; cheeks, throat, and under surface of body yellowish white, broadly streaked with dark brown down the centre of the feathers, rather more narrowly on the abdomen; lower flanks and

under tail-coverts washed with olive, the latter broadly centred with dusky brown; axillaries and under wing-coverts pale tawny buff, with narrow shaft-lines of dark brown; quills dusky, ashy fulvous along the inner web: "bill and iris black" (*Younglove*; *teste Baird*). Total length 7·8 inches, culmen 0·65, wing 3·6, tail 3·15, tarsus 0·85.

Hab. S. Domingo.

a. Ad. sk.	S. Domingo.	Hugh Cuming, Esq. [C.].
b. Ad. sk.	S. Domingo (*Cory*).	Sclater Collection.
c. Ad. sk.	S. Domingo (*Sallé*).	Sclater Collection.

2. Dulus nuchalis.

Dulus nuchalis, *Swains. An. in Menag.* p. 345 (1837); *Strickl. Contr. Orn.* 1851, p. 104; *Baird, Review Amer. B.* p. 403 (1865); *Scl. & Salv. Nomencl. Av. Neotr.* p. 13 (1873).

Adult (type of species). With a white patch on the nape (apparently a varietal mark); otherwise only differs from *D. dominicus* in being slightly smaller. Total length 7·2 inches, culmen 0·55, wing 3·2, tail 2·95, tarsus 0·75. (*Mus. Cantabr.*)

Hab. Said to be from Brazil, but the locality is doubtless erroneous. It is probably from one of the Antilles.

Obs. The perceptibly smaller dimensions render it probable that the present species is really different from *Dulus dominicus*, and the white mark on the nape may also prove to be a character. It looks, however, as if the latter were an accidental peculiarity, as is often the case with Sparrows, Blackbirds, &c. in England and elsewhere.

3. PHAINOPTILA.

Type.

Phainoptila, *Salv. P. Z. S.* 1877, p. 367 ..... P. melanoxantha.



Bill of *Phainoptila melanoxantha*, to show position of nasal aperture and form of chin-angle.

Range. Costa Rica.

1. Phainoptila melanoxantha.

Phainoptila melanoxantha, *Salv. P. Z. S.* 1877, p. 367; *id. in Rowley's Orn. Misc.* p. 439, pl. 79 (1877); *Boucard, P. Z. S.* 1878, p. 53; *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 221, pl. xiv. (1883).

Adult male. General colour above glossy black, with a band of olive-yellow across the rump; wing-coverts entirely black; quills and tail-feathers black; head, entire sides of face, sides of neck, and throat black as far as the centre; the lower throat dark olive-

greenish; fore neck olive-yellow, becoming brighter yellow on the sides of the upper breast; centre of breast and abdomen ashy grey, the flanks also bright yellow; thighs black; under tail-coverts olive-yellow; axillaries and under wing-coverts olive-yellow, with ashy bases to the feathers; quills blackish below, ashy brown along the edge of the inner web; bill and feet black. Total length 8 inches, culmen 0·65, wing 3·75, tail 3·6, tarsus 1·05.

Adult female. Different from the male. General colour above dark yellowish olive, rather more dusky on the hind neck and mantle; wing-coverts dusky ash-colour, externally olive, rather yellower on the greater series; bastard-wing ashy; primary-coverts dusky, externally edged with olive; quills dusky, edged with olive-yellow, duller on the secondaries; tail-feathers dull ashy brown, washed with olive-yellow on the outer web; crown of head dusky black, forming a cap, the frontal feathers edged with dull ashy; lores, feathers above the eye, cheeks, and ear-coverts dark ashy grey, the latter washed with yellowish olive like the sides of the neck; throat dark ashy grey, with dull whitish shaft-streaks; lower throat and fore neck dark olive, slightly washed with brighter yellow; sides of body and flanks bright yellow; centre of breast and abdomen dark ashy grey, inclining to dull whitish on the latter; thighs ashy; under tail-coverts olive-yellow; axillaries and under wing-coverts pale yellowish with dull ashy centres; quills dusky below, ashy along the edge of the inner web. Total length 8·4 inches, culmen 0·7, wing 3·85, tail 3·45, tarsus 1·1.

Hab. Costa Rica.

a, *b*. ♂ ♀ ad. sk.	Irazu district, Costa Rica (*Rogers*).	Sclater Collection.

4. PHAINOPEPLA.

Ptilogonys, pt., *auct.*

Phainopepla, *Scl. P. Z. S.* 1858, p. 543 ..... Type. P. nitens.



Bill of *Phainopepla nitens*, to show position of nasal aperture.

Range. Southern United States and Mexico.

1. Phainopepla nitens.

Ptilogonys nitens, *Swains. Anim. in. Menag.* p. 285 (1838); *Gray, Gen. B.* i. p. 281 (1846); *Bp. Consp.* i. p. 335 (1850); *Cass. Illust.* p. 169, pl. 29 (1854); *Heerm. Pacif. Railroad Rep.* x. p. 38 (1859); *Gray, Hand-l. B.* i. p. 366, no. 5570 (1869).

Hypothymis nitens, *Lafr.*

Lepturus galeatus, *Less. Rev. Zool.* 1849, p. 4.

Ptilogonys aterrima, *Licht. Mus. Berol.*
Cichlopsis nitens, *Baird, B. N. Amer.* p. 320 (1858).
Phainopepla nitens, *Scl. P. Z. S.* 1858, p. 543; *Baird, B. N. Amer.* p. 923 (1858); *Kenn. Pacific Railroad Rep.* x. p. 25 (1859); *Scl. Cat. Amer. B.* p. 47 (1862); *id. P. Z. S.* 1864, p. 173; *Dresser, Ibis*, 1865, p. 480; *Dugès, La Natur.* i. p. 141 (1868); *Cooper, B. Calif.* i. p. 131 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 13 (1873); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 220 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 328 (1884).
Phænopepla nitens, *Coues, Ibis*, 1865, p. 163; *Baird, Rev. Amer. B.* p. 416 (1866); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 548 (1869); *Coues, Key N. Amer. B.* p. 116 (1872); *id. B. N.-West*, p. 95 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 405, pl. 18. figs. 3, 4 (1874), iii. p. 507 (1874); *Hensh. Zool. Expl. W. 100th Merid.* p. 229 (1875); *Ridgw. Rep. Geol. Surv. 100th Par.* p. 447 (1877); *Coues, B. Col. Vall.* p. 475 (1878).
Myiadestes townsendi, *Brew. Proc. Bost. Soc. N. H.* xvi. p. 109 (1874).

Adult male. General colour above glossy blue-black, with a greatly developed crest; wing-coverts like the back; quills black, externally glossy black, the inner webs of the primaries for the most part white; tail-feathers black, externally washed with glossy black; sides of face, ear-coverts, and under surface of body glossy blue-black; thighs browner; under tail-coverts black, laterally broadly edged with white; under wing-coverts and axillaries black. Total length 6·9 inches, culmen 0·5, wing 3·8, tail 3·8, tarsus 0·7.

Adult female. Different from the male. General colour above dark ashy grey; lesser wing-coverts dark brown with ashy margins; median and greater coverts dark brown, margined with white; bastard-wing and primary-coverts dark brown; quills dark brown, edged with ashy, dull white on the inner secondaries, all the primaries much paler on the inner webs; upper tail-coverts blackish, margined with ashy olive; tail-feathers black, edged with ashy brown; head and neck ashy grey, with an occipital crest of long black feathers margined with ashy; lores, eyelid, and feathers below the eye dusky; ear-coverts browner; cheeks, throat, and chest ashy grey; remainder of under surface brown, including the thighs and under tail-coverts, the latter edged with dull whitish; axillaries and under wing-coverts ashy brown; quills dark brown below, ashy on the inner webs. Total length 7·4 inches, culmen 0·5, wing 3·55, tail 3·45, tarsus 0·65.

Young male. Like the female; and during the progress to maturity every gradation between the characters of the two sexes is observed. Sometimes nearly all the feathers are skirted with white. (*Coues.*)

Hab. Southern, Middle, and Western United States, Arizona, Texas, &c., extending into Northern and Central Mexico.

a. ♂ ad. sk.	Mexico.	Sclater Collection.
b. ♀ ad. sk.	Mexico (*De Saussure*).	Sclater Collection.

5. PTILOGONYS.

	Type.
Ptilogonatus, *Swains. Zool. Journ.* iii. p. 164 (1827)	P. cinereus.
Ptiliogonys, *Swains. Phil. Mag.* new series, i. p. 368 (1827)	P. cinereus.
Ptilogonys, *Bp. Consp.* i. p. 335 (1850).	
Sphenotelus, *Baird, Review Amer. B.* p. 412 (1865) * ..	P. caudatus.



Bill of *Ptilogonys cinereus*, to show position of nasal aperture.

Range. Central America; Mexico to Panama.

Key to the Species.

a. Tail square; no yellow on throat or hinder head and neck; eyelid white.
  a'. Bluish grey above; head lavender-grey; forehead white; flanks olive-yellow..... *cinereus* ♂ ad., p. 222
  b'. Brown above; head like the back; base of forehead white; flanks brown like the breast ..... *cinereus* ♀ ad. et juv., p. 223.
b. Tail graduated; eyelid yellow.
  c'. Back grey; breast grey ..... *caudatus* ♂ ad., p. 224.
  d'. Back and breast olive-yellow ..... *caudatus* ♀, p. 224.

1. Ptilogonys cinereus.

Ptilogonatus cinereus, *Swains. Zool. Journ.* iii. p. 164 (1827).
Ptilogonys cinereus, *Swains. Phil. Mag.* new ser. ii. pl. 62 (1831–32), iii. pl. 102 (1832–33); *Gray, Gen. B.* i. p. 281 (1846); *Bp. Consp.* i. p. 335 (1850); *Scl. P. Z. S.* 1856, p. 299, 1858, p. 302; *Scl. & Salv. Ibis*, 1859, p. 13, 1860, p. 31; *Scl. P. Z. S.* 1859, p. 364, 1864, p. 173; *id. Cat. Amer. B.* p. 47 (1862); *Baird, Review Amer. B.* p. 412 (1865); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 548 (1869); *Gray, Hand-l. B.* i. p. 366, no. 5568 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 13 (1873); *Dugès, La Natur.* i. p. 141 (1868); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 273 (1874); *Salv. Cat. Strickl. Coll.* p. 147 (1882); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 217 (1883).
Hypothymis chrysorrhœa, *Temm. Pl. Col.* iii. pl. 452 (1828).
Hypothymis mexicanus, *Licht. Preis-Verz. mex. Vög.* p. 2 (1830); *Cab. J. f. O.* 1863, p. 58.

Adult male. General colour above delicate bluish grey, the long feathers on the sides of the rump with subterminal marks of silky white; lesser and median wing-coverts like the back; greater

* The very different form of tail in *P. caudatus* would warrant the separation of the species under a distinct generic name, were it not for the absolute similarity in character and colour of plumage to that of *P. cinereus*. If it were done, then *Ampelis japonicus* might reasonably be separated from *A. garrulus*, as the wax-like appendages to the wings and tail are not present in the Japanese bird.

series dusky, externally ashy; bastard-wing and primary-coverts black, edged with dull slaty grey; quills black, externally edged with slaty grey, hoary on the primaries, the inner secondaries washed with steel-green; tail-feathers black, externally glossed with steel-green, all but the centre feathers with a spot of white on the inner web, which increases in extent towards the outermost feather; head crested, dove-colour or lavender-grey; base of forehead and eyelid white; lores and feathers below the eye dusky; ear-coverts and sides of hinder crown lavender-brown, extending round the hind neck; sides of neck grey like the back; fore part of cheeks and chin white; remainder of throat lavender-brown; fore neck and breast bluish grey like the back; abdomen and thighs white; lower flanks deep olive-yellow; under tail-coverts golden yellow; axillaries ashy grey with whitish edges; under wing-coverts ashy, more or less broadly edged with white; quills blackish below, white along the inner webs: "bill and feet black" (*Salvin*); "iris carmine" (*Xantus*). Total length 8·5 inches, culmen 0·55, wing 3·65, tail 4·15, tarsus 0·7.

Adult female. Not so richly coloured as the male. Brown above, somewhat more isabelline on the lower back and rump; the head lavender-brown; upper tail-coverts slaty grey; wing-coverts like the back, the greater series dusky, externally brown; quills blackish, externally edged with ashy brown, the primaries with grey; tail-feathers as in the male, but the centre ones washed with brown, and the white marks on the others not so large, and scarcely visible beyond the three outer ones; sides of head and ear-coverts and throat pale lavender-brown; chin, base of forehead, and eyelid white; sides of body ruddy brown, the centre of the breast and abdomen white; thighs white; under tail-coverts golden yellow; no olive-yellow on the flanks; axillaries and under wing-coverts ruddy brown, those near the edge of the wing edged with white; quills blackish below, ashy white along the inner web. Total length 8·4 inches, culmen 0·55, wing 3·75, tail 4, tarsus 0·65.

Young. Like the old female but browner, the back reddish brown; under surface of body reddish brown, the throat grey, whiter on the chin.

The bird in first plumage is described by Messrs. Salvin and Godman as resembling the female; "the belly is yellowish and the same colour as the crissum, the wings and tail being coloured like those of the adult."

Hab. Mexico to Guatemala.

a. [♀] ad. sk.	Mexico.	Gould Collection.
b. [♀] ad. sk.	Mexico.	J. Gould, Esq.
c. [♂] ad. sk.	Mexico.	Sclater Collection.
d, *e.* ♂ ♀ ad. st.	Mexico.	Purchased.
f. [♂] ad. sk.	Guatemala.	Gould Collection.
g. [♂] ad. sk.	Guatemala.	J. Gould, Esq.
h. [♀] juv. sk.	Guatemala (*Constancia*).	Sclater Collection.
i. ♂ ad. sk.	Volcan de Fuego, Guatemala, Sept. 4, 1873 (*Salvin*).	Sclater Collection.

2. Ptilogonys caudatus.

Ptilogonys caudatus, *Cab. J. f. O.* 1860, p. 402; *Baird, Review Amer. B.* p. 413 (1865); *Scl. & Salv. Ex. Orn.* p. 11, pl. 6 (1866); *Lawr. Ann. Lyc. N. Y.* ix. p. 97 (1868); *von Frantz. J. f. O.* 1869, p. 295; *Gray, Hand-l. B.* i. p. 366, no. 5569 (1869); *Salv. P. Z. S.* 1870, p. 185; *Scl. & Salv. Nomencl. Av. Neotr.* p. 13 (1873); *Boucard, P. Z. S.* 1878, p. 53; *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 219 (1883).

Sphenotelus caudatus, *Baird, Review Amer. B.* p. 412 (1865).

Adult male. General colour above bluish grey, the long silky plumes on the side of the lower back tipped with olive-yellow, with a subterminal whitish spot; lesser and median wing-coverts like the back; greater series blackish, externally bluish grey; bastard-wing, primary-coverts, and quills black, narrowly edged with ashy grey, rather more distinct on the latter; upper tail-coverts bluish grey like the back; tail-feathers black, externally glossed with steel-green, the three outer ones with a large white spot about middle of the inner web; head crested; the hinder crown and hind neck olive-yellow, fore part of crown pale ashy grey, hoary whitish towards the base of the forehead; eyelid golden yellow; lores dusky; sides of face, ear-coverts, cheeks, throat, and sides of neck olive-yellow, tinged with brighter yellow on the fore part of the cheeks, the upper throat slightly more ashy; fore neck and breast clear bluish grey; abdomen and thighs pale yellow; sides of body and flanks olive-yellow; under tail-coverts golden yellow; axillaries and under wing-coverts bluish grey; quills blackish below, ashy whitish along the inner web. Total length 9·5 inches, culmen 0·5, wing 3·65, tail 5·1, tarsus 0·75.

Adult female. Different from the male. Olive-yellowish on the back, ashy olive on the lower rump and upper tail-coverts; wing-coverts ashy, washed with olive-yellow like the back; quills black, edged with ashy, slightly tinged with olive on the secondaries; tail-feathers black, edged with ashy, the three outer ones with a large white patch on the inner web; fore part of crown ashy grey, whitish at the base of the forehead; eyelid golden; lores dusky; sides of face, sides of neck, and breast dull yellowish olive, ashy on the ear-coverts; the throat greyish, whiter on the chin; abdomen and thighs pale yellow; sides of breast and flanks olive-yellow; under tail-coverts golden yellow; axillaries and under wing-coverts ashy grey; quills dusky, whitish along the inner web. Total length 8·5 inches, culmen 0·5, wing 3·65, tail 4·6, tarsus 0·7.

Young. Like the old female, but somewhat mottled with pale tips to the feathers of the upper surface.

Hab. Costa Rica and Panama.

a, b. ♂ ♀ ad. sk.	Costa Rica (*Arcé*).	Sclater Collection.
c, d. ♂ ♀ ad. sk.	Volcan de Irazu, Costa Rica (*Zeledon*).	Sclater Collection.
e. ♂ ad. sk.	Volcan de Cartago, Costa Rica (*Arcé*).	Osbert Salvin, Esq.
f. ♂ ad. sk.	Costa Rica (*Arcé*).	Osbert Salvin, Esq.

Family MNIOTILTIDÆ.

The genera included in this family are the same as those admitted by Professor Baird in his celebrated 'Review,' and subsequently by Dr. Coues and by Messrs. Sclater and Salvin; but I have great doubts as to the correctness of amalgamating all these genera under the heading of one family, the characteristics of which it is impossible to define. These doubts are held in common with the three ornithologists above mentioned.

Dr. Coues has simplified matters, to a great extent, by dividing the *Mniotiltidæ* into three subfamilies; but the characters which he has given are really not sufficient to warrant such a subdivision if all the genera enumerated are true Mniotiltine birds, and it seems to me certain that several of them have little, or nothing, to do with the genera of the other subfamilies, to which they ought, at least, to show some kind of affinity.

It has become more and more clear to me, during my study of the *Passeriformes*, that there is not a single arrangement of the Perching Birds as yet propounded by any naturalist which can be held to be a natural one; and that, in taking the number of primaries in a bird's wing as an essential character, too much stress has been laid on this peculiarity. In the case of the *Mniotiltidæ* it has certainly resulted in the placing together of many forms not really allied; and in the readjustment of the family, which must inevitably take place some day, *Setophaga* and its allies will probably be considered to be Flycatchers rather than Warblers, *Helminthophaga* and *Helminthotherus* will very probably prove to be Wrens, *Icteria* to be an aberrant Vireonine form, while *Granatellus* will be placed with the Tanagers. However, in accordance with the plan of the 'Catalogue,' we accept the limits of the *Mniotiltidæ* as they have been established by the majority of recent ornithologists.

As with the common European species, I have not quoted every trivial reference, confining myself to the citation of those which deal principally with the life-history and distribution of these American Warblers. Students who desire a more detailed reference to the periodical literature of the family are referred to Dr. Coues's 'Birds of the Colorado Valley,' a work which has been of the utmost service to myself in the compilation of the synonymy of the *Mniotiltidæ*.

Key to the Genera *.

a. Rictal bristles obsolete or entirely absent; bill acute and pointed.

a'. Wing concave and greatly rounded; the first primary much shorter than the second, which is again shorter than the third, the latter being the longest ..... 1. LEUCOPEZA, p. 227.

* Many of the generic characters here enumerated are taken from Baird's 'Review.'

b'. Wing more pointed, the 1st, 2nd, and 3rd primaries subequal and longest.
a''. Bill not notched.
a'''. Tail shorter, the wings falling short of its tip by less than the length of the tarsus; outstretched feet reaching nearly to the end of the tail ..... 2. HELMINTHOTHERUS, [p. 229.
b'''. Tail longer, the wings falling short of its tip by more than the length of the tarsus; outstretched feet falling a long way short of the tip of the tail .... 3. HELMINTHOPHILA, [p. 233.
b''. Bill with a slight notch; culmen very long and equal to the tarsus. 4. PROTONOTARIA, p. 249.
b. Rictal bristles so feebly developed that they do not extend beyond the nostrils, but still evident; bill slightly swollen but not decurved.
c'. Toes very powerful, the middle toe and claw as long as the tarsus; tail even or only slightly emarginate .. 5. MNIOTILTA, p. 251.
d'. Toes weaker, the middle toe and claw much less than the tarsus.
c''. Wing longer than tail.
c'''. Basal half of inner toe adherent; basal joint of outer toe and part of the next adherent ..... 6. PARULA, p. 254.
d'''. Inner toe cleft to the base, the second joint of outer toe free.
a^4. Tarsus not twice the length of outer toe and claw ..... 7. DENDRŒCA, p. 264. 8. PERISSOGLOSSA, p. 334.
b^4. Tarsus twice the length of the outer toe and claw.
a^5. Wings very long, falling short of the tail by less than the length of the culmen; bill laterally incurved towards the tip, the edges of the bill, when viewed from above, curving inwards gradually about the middle of the bill..... 9. PEUCEDRAMUS, p. 337.
b^5. Wings long, but falling short of the tip of the tail by more than the length of the culmen; lateral outline of bill nearly straight from gape to tip.
a^6. Outer toe and inner toes subequal ..... 10. SIURUS, p. 339.
b^6. Outer toe longer than inner toe ..... 11. OPORORNIS, p. 346.
d''. Wing shorter than the tail ..... 13. GEOTHLYPIS *, p. 350.

* Mr. Cory's genus 12. *Ligia* comes in somewhere in the neighbourhood of *Geothlypis*, with which genus he compares it. The wing is, however, stated to be equal to the tail in length, and therefore it would belong to the previous section; but without seeing a specimen I am unable to locate it more exactly.

c. Rictal bristles obsolete or feebly developed, so as not to reach beyond the nostrils; bill swollen and not so pointed, in fact greatly curved, and without a notch; wing rounded, the first primary shorter than the second, which is shorter than the third, the latter being the longest.
  e'. Bill about equal in height and breadth at nostrils ..... 14. TERETISTRIS, p. 367.
  f. Bill higher than broad at nostrils.
    e''. Tail shorter than the wing; red in the plumage ..... 15. GRANATELLUS, p. 369.
    f''. Tail equal to the wing; no red in the plumage; breast yellow .... 16. ICTERIA, p. 373.
d. Rictal bristles very powerfully developed and extending beyond the nostrils; bill very much depressed and Muscicapine in character.
  g'. Bill narrower, about equal in breadth and depth at nostrils.
    g''. Bill rather large, the culmen exceeding the hind toe and claw .. 17. BASILEUTERUS, p. 376.
    h''. Bill very small, the culmen not exceeding the hind toe and claw . 18. ERGATICUS, p. 406.
  h'. Bill rather narrow, deeper at nostrils than it is broad..... 19. CARDELLINA, p. 408.
  i'. Bill broader, much deeper than it is high at nostrils.
    i''. Wings shorter, falling short of tail by more than the length of the tarsus; bill widened and depressed, with a tolerably sharp culminal ridge ..... 20. SETOPHAGA, p. 410.
    k''. Wings longer, falling short of the tail by less than the length of the tarsus; bill narrower, with the culminal ridge rounded ..... 21. MYIODIOCTES, p. 431.

1. LEUCOPEZA.

Type.
Leucopeza, *Sclater*, *P. Z. S.* 1876, p. 14..... L. semperi.

Range. West Indies: islands of Santa Lucia and S. Vincent.

Key to the Species.

a. No white on the tail-feathers; no band on the breast ..... *semperi*, p. 228.
b Two outer tail-feathers with a triangular spot of white at the end of the inner web; a broad black band on the upper breast *..... *bishopi*, p. 228.

* I have not seen *L. bishopi*, and therefore have been obliged to draw up the "Key to the Species" from Mr. Lawrence's description of the latter bird, as compared with the types of *L. semperi*. Mr. Lawrence does not state in what way *L. bishopi* differs from *L. semperi*.



Bill and wing of *Leucopeza semperi*.

1. Leucopeza semperi.

Leucopeza semperi, *Sclater*, *P. Z. S.* 1876, p. 14; *Lawr. Ann. N. Y. Acad. Sci.* p. 151 (1878).

Adult (type of species). General colour above dark slaty grey, slightly washed with brown on the lower back and rump; lesser and median wing-coverts like the back, the greater series dusky, edged externally with dull slaty grey; bastard-wing, primary-coverts, and quills blackish, obsoletely margined with dull slaty grey, a little paler on the primaries; tail-feathers blackish, washed with dull slaty grey on the outer webs; head like the back, a little lighter grey on the forehead; lores dusky; sides of face and ear-coverts lighter slate-colour, still paler on the cheeks and throat, which are pale ashy grey, deepening into slaty grey on the breast and much darker slaty grey on the sides of the breast and flanks, the lower flanks washed with brown; thighs also slaty grey; centre of breast and abdomen white; under tail-coverts brownish ashy, with slaty centres to the feathers; axillaries and under wing-coverts slaty-grey, the feathers edged with white; quills dusky below, ashy along the edge of the inner web. Total length 5·8 inches, culmen 0·7, wing 2·65, tail 2·2, tarsus 0·9.

Hab. Island of Santa Lucia, West Indies.

a. Ad. sk.	Santa Lucia (*Semper*).	Sclater Collection.	(Type of species.)
b. Ad. sk.	Santa Lucia (*Semper*).	Sclater Collection.	

2. Leucopeza bishopi.

Leucopeza bishopi, *Lawr. Ann. N. Y. Acad. Sci.* p. 151 (1878); *id. Pr. U.S. Nat. Mus.* pp. 189, 486 (1879).

Male. The general plumage is smoky black, rather darker on the

head; the sides are blackish cinereous; a circle of pure white surrounds the eye; a large roundish spot on the middle of the throat, the upper part of the breast, and the middle of the abdomen are dull white, somewhat mixed with blackish on the throat and with cinereous on the abdomen; a very small spot on the chin and the tips of the feathers on the upper part of the throat are dull white; the black on the upper part of the breast has the appearance of a broad band, separating the white of the throat from that of the lower part of the breast; the under tail-coverts are cinereous black at base, ending largely with dull white; wings and tail black; the outer two tail-feathers have a small white spot, triangular in shape, on their inner webs at the end; bill black; tarsi and toes very pale yellowish brown, perhaps much lighter in the living bird, nails also pale. Length (fresh) $5\frac{3}{4}$ inches, wing $2\frac{3}{4}$, tail $2\frac{1}{2}$, tarsus $\frac{7}{8}$. (*Lawrence.*)

Sexes alike (*Ober*).

Two specimens marked as females do not differ in plumage from the males. Length (fresh) $5\frac{1}{2}$ inches, wing $2\frac{3}{4}$, tail $2\frac{3}{8}$, tarsus $\frac{7}{8}$. (*Lawrence.*)

Young. Dark olive-brown above, lighter below, and where the white markings are in the adult it is of a pale dull rufous; on the throat showing some white, and around the eye partially white; the marks on the end of the tail-feathers are precisely as in the black specimen; the quills are dark brown; the tail-feathers are black. (*Lawrence.*)

Hab. Island of S. Vincent, West Indies.

2. HELMINTHOTHERUS.

Type.

Helmitheros, *Rafin. Journ. de Phys.* lxxxviii. p. 417 (1819) ..... H. vermivorus.
Vermivora, *Swains. Phil. Mag.* 2nd ser. i. p. 434 (1827). H. vermivorus.
Helinaia, *Audub. Syn.* p. 66 (1839) ..... H. swainsoni.
Helmitherus, *Baird, Review Amer. B.* p. 179 (1865).
Helmintherus, *Coues, B. Color. Vall.* p. 211 (1878).
Helonæa, *Newton, P. Z. S.* 1879, p. 552.
Helminthotherus, *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 112 (1880).



Bill and tail of *Helminthotherus vermivorus.*

Range. North America, principally the Eastern States; Central America; Cuba; Jamaica.

Key to the Species.

a. Above olive-greenish; below fawn-buff, whitish on abdomen and olive-brown on sides of body; top and sides of head ochreous buff or fawn-colour, with a black line through the eye and a broad black band along the sides of the crown, leaving a central band of ochraceous buff ..... *vermivorus*, p. 230.

b. Russet-brown above; yellowish below; head rufous, with a faint paler streak on the forehead; no black bands on crown ..... *swainsoni*, p. 232.

1. Helminthotherus vermivorus.

The Worm-eater, *Edw. Glean.* pt. ii. p. 200, pl. 305 (1760); *Lath. Gen. Syn.* ii. pt. 2, p. 499 (1783).
Le Figuier de Pensilvanie, *Briss. Orn.* vi. *App.* p. 102 (1760).
Le Demi-fin mangeur de vers, *Montb. Hist. Nat. Ois.* v. p. 325 (1778).
Worm-eater Warbler, *Penn. Arct. Zool.* ii. p. 406 (1785).
Motacilla vermivora, *Gm. Syst. Nat.* i. p. 951 (1788).
Sylvia vermivora, *Lath. Ind. Orn.* ii. p. 544 (1790); *Wils. Amer. Orn.* iii. p. 74, pl. 24. fig. 4 (1811); *Vieill. N. Dict. Hist. Nat.* xi. p. 278 (1817); *Nutt. Man.* i. p. 409 (1832); *Aud. Orn. Biogr.* i. p. 177 (1832), v. p. 460 (1839).
Helmitheros migratorius, *Rafin. Journ. Phys.* lxviii. p. 417 (1819); *Hartl. Rev. Zool.* 1845, p. 342.
Dacnis vermivora, *Audub. B. Amer.*, name on pl. 34.
Sylvicola vermivora, *Richards. Rep. Brit. Assoc.* 1836–37, p. 171.
Vermivora pennsylvanica, *Swains. Phil. Mag.* 2nd ser. i. p. 434 (1827); *Jard. ed. Wils. Amer. Orn.* i. p. 363 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 20 (1838); *Gosse, B. Jam.* p. 150 (1847); *March, Proc. Phil. Acad.* 1863, p. 293.
Vermivora fulvicapilla, *Sw. Classif. B.* ii. p. 245 (1837).
Helinaia vermivora, *Audub. Syn.* p. 66 (1839); *id. B. Amer.* ii. p. 86, pl. 105 (1841); *Lembeye, Av. Cuba*, p. 35, pl. 6. fig. 4 (1850).
Mniotilta vermivora, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 239, no. 3463 (1869).
Helmitherus vermivorus, *Bp. Consp.* i. p. 314 (1850); *Cab. Mus. Hein.* i. p. 20, note (1850); *Gundl. J. f. O.* 1855, p. 476; *Baird, B. N. Amer.* p. 252 (1858); *Scl. P. Z. S.* 1859, p. 363; *Scl. & Salv. Ibis*, 1859, p. 11; *Scl. Cat. Amer. B.* p. 28 (1862); *Baird, Rev. Amer. B.* p. 179 (1865); *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1866); *id. ibid.* ix. p. 94 (1868); *id. t. c.* p. 200 (1869); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 546 (1869); *Gundl. J. f. O.* 1872, p. 412; *Coues, Key N. Amer. B.* p. 93 (1872); *Maynard, B. Florida*, p. 45 (1873); *Scl. & Salv. Nomencl. Av. Neotr.* p. 8 (1873); *Coues, B. N.-West*, p. 48 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 187, pl. 10. fig. 10 (1874); *Gundl. Orn. Cuba*, p. 63 (1876); *Cory, B. Bahamas*, p. 56 (1880); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 171 (1880).
Helmintherus vermivorus, *Salv. P. Z. S.* 1867, p. 135; *Von Frantz J. f. O.* 1869, p. 293; *Coues, B. Color. Vall.* p. 211 (1878); *id. Check-list*, p. 34 (1882); *id. Key N. Amer. B.* 2nd ed. p. 291 (1884).
Helminthotherus vermivorus, *Salv. & Godm. Biol. Centr.-Amer., Aves* i. p. 112 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881); *A. & E. Newt. Handb. Jamaica*, p. 105 (1881); *Salv. Cat. Strickl. Coll.* p. 89 (1882).

Adult male. General colour above olive, the wing-coverts like the back; greater coverts dusky, externally like the back; bastard-wing

and primary-coverts dusky, externally ashy olive; quills dusky brown, externally washed with olive, the secondaries more broadly, the first primary edged with ashy whitish; tail-feathers pale dusky brown, externally olive and narrowly fringed with whitish near the tips of the inner web; along the centre of the crown a broad stripe of ochreous buff, rather clearer ochreous on the nape, and laterally bordered with a broad band of black from the base of the nostrils to the nape, and followed by another broad superciliary streak of ochreous buff; eyelid and sides of face ochreous buff, slightly shaded with olive-brown on the ear-coverts, and the cheek-feathers tipped with dusky; in front of the eye a dusky spot, and along the upper edge of the ear-coverts a streak of black, the anterior and posterior margin of the eyelid being likewise black; sides of neck ashy olive; under surface of body light ochreous buff, very pale and inclining to buffy white on the centre of the abdomen; under tail-coverts also pale buffy white, with dusky ashy-olive bases; thighs ochreous buff; sides of breast and flanks distinctly olive; axillaries and under wing-coverts clear yellowish buff; quills dusky below, ashy along the edge of the inner web: "bill blackish brown above, greenish grey beneath; iris hazel" (*Audubon*). Total length 4·7 inches, culmen 0·6, wing 2·75, tail 2·15, tarsus 0·7.

Adult birds in winter seem to be rather deeper buff on the under surface of the body; but there is really very little difference in the colouring of the species at the various seasons of the year. Some have the buff stripes on the head a little lighter and clearer ochreous, but as a rule summer and winter plumages are alike.

A nestling, lent to the Trustees by Mr. H. K. Coale of Chicago, is reddish brown above, the head more dingy than the back, with a broad central streak of pale ochreous buff, and a streak of the same colour along the sides of the crown, widening out on the nape; wing-coverts dusky blackish, narrowly edged and broadly spotted at the tips with pale ochreous buff; quills dusky, margined with yellowish olive like the primary-coverts and bastard-wing; entire under surface of body clear ochreous buff, whiter on the centre of the abdomen.

Hab. North America: Eastern United States, rather southerly, but north regularly, casually to Maine; west to Kansas, Missouri, and the Indian Territory; breeds throughout its U.S. range; winters in Florida (*Coues*). Winters in Central America from Mexico to Panama (*S. & G.*). Cuba; Jamaica.

a. Ad. sk.	North America (*Bell*).	Sclater Collection.
b. ♂ ad. sk.	Maple, Pa., June 12 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
c. ♀ ad. sk.	St. Louis County, Missouri, May 22 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
e. ♂ ♀ ad. sk.	Brookville, Ind., May (*A. W. Butler*).	U.S. Nat. Museum [P.].
. Ad. sk.	Mexico.	Purchased.
g. Ad. sk.	Guatemala.	Sclater Collection.
h, *i*. Ad. sk.	Guatemala.	Gould Collection.
k. Ad. sk.	Guatemala.	J. Gould, Esq.
l. Ad. sk.	Chiriqui, Veragua (*Arcé*).	Sclater Collection.
m. Ad. sk.	Jamaica.	Sclater Collection.

2. Helminthotherus swainsoni.

Sylvia swainsoni, *Audub. B. Amer.* pl. 198; *id. Orn. Biogr.* ii. p. 563 (1834).
Sylvicola swainsoni, *Richards. Rep. Brit. Assoc.* 1836-37, p. 171.
Vermivora swainsoni, *Bp. Comp. List B. Eur. & N. Amer.* p. 21 (1838).
Helinaia swainsoni, *Audub. Syn.* p. 66 (1839); *id. B. Amer.* ii. p. 83, pl. 104 (1841).
Mniotilta swainsoni, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 239, no. 3464 (1869).
Helmitheros swainsoni, *Cab. Mus. Hein.* Th. i. p. 20 (1850); *Bp. Consp.* i. p. 314 (1850).
Helmitherus swainsoni, *Baird, B. N. Amer.* p. 180 (1858); *Allen, Proc. Ess. Inst.* iv. p. 82 (1864); *Baird, Review Amer. B.* p. 180 (1865); *Allen, Am. Nat.* iii. p. 576 (1869); *Coues, Key N. Amer. B.* p. 93 (1872); *Gundl. J. f. O.* 1872, p. 412; *Maynard, B. Florida*, p. 47 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 190, pl. 10. fig. 9, iii. p. 504 (1874); *Brewer, Proc. Bost. Soc. N. H.* xvii. p. 451 (1875); *Coues, B. Color. Vall.* p. 213 (1878).
Helminthophaga swainsoni, *Allen, Amer. Nat.* iii. p. 513 (1869).
Helonæa swainsoni, *Ridgw. Pr. U.S. Nat. Mus.* iii. p. 171 (1880); *id. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881).
Helminthotherus swainsoni, *Salvin & Godm. Biol. Centr.-Amer., Aves*, i. p. 112 (1880); *A. & E. Newt. Handb. Jamaica*, p. 105 (1881).
Helmintherus swainsoni, *Coues, Check-list*, p. 35 (1882); *id. Key N. Amer. B.* 2nd ed. p. 292 (1884).

Adult male. General colour above dull russet-brown, with a slight olive tinge on the back; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills dusky, externally russet-brown like the back, the primaries a little paler; rump and upper tail-coverts a little deeper russet than the rest of the back; tail-feathers dusky, externally russet-brown tinged with olive; head clearer rufous than the back, with a fairly indicated pale streak along the middle of the forehead; eyebrow pale ochreous or yellowish white; lores dusky; ear-coverts reddish brown; sides of neck ashy olive; cheeks and under surface of body pale yellowish, the sides of the fore neck and of the chest washed with pale ashy; the sides of the body and flanks as well as the thighs olive-brown; under tail-coverts white, slightly washed with yellow, and with pale brown bases; axillaries pale yellowish; under wing-coverts dusky, edged with pale yellowish; quills dusky below, ashy along the inner web: "upper mandible dark brown, lower mandible yellowish; legs and toes flesh-colour; iris dark brown" (*E. Newton*). Total length 5·2 inches, culmen 0·65, wing 2·7, tail 1·85, tarsus 0·7. (*Mus. E. Newton.*)

Adult female. Similar in plumage to the male. Total length 5·2 inches, culmen 0·7, wing 2·8, tail 1·9, tarsus 0·7. (*Mus. E. Newton.*)

The adult male was killed on the 31st of December, and the female on the 16th of March. There is little or no difference between them; but a female killed on the 1st of October is darker russet-brown, the head being scarcely more rufous than the back; the under surface yellowish white, the fore neck and sides of the

breast dull ashy brown, the feathers of the throat being faintly edged with ashy. These greyish edgings to the feathers are also seen in a male killed on the 8th of February, and therefore the greyish colour on the fore neck appears in the adult birds, while the young ones have the under surface yellowish. So little, however, is known about this species, that it is impossible to state the phases of plumage correctly, especially as I have never seen a specimen from the breeding-quarters of the species, and have been greatly indebted to Mr. Edward Newton for the loan of four skins of birds killed in winter in Jamaica.

Hab. Southern United States, wintering in Jamaica.

a. ♀ ad. sk. Jamaica, March 16. Edward Newton, Esq. [P.].

3. HELMINTHOPHILA.

Type.

Helminthophaga, *Cab. Mus. Hein.* Th. i. p. 20 (1850, *nec Bechst.*) ..... H. ruficapilla.

Helminthophila, *Ridgw. Bull. Nutt. Orn. Club*, vii. p. 53 (1882) ..... H. ruficapilla.



Head of *Helminthophila chrysoptera*.

Range. North America generally, throughout Central America, and extending as far as Colombia and Venezuela; Cuba.

Key to the Species *.

a. Rump and upper tail-coverts grey like the rest of the back; three outer tail-feathers white for greater part of inner web.

a'. Throat black; ear-coverts black; crown golden yellow; median and greater wing-coverts golden yellow, forming a wing-patch *chrysoptera* ♂, p. 235.

b'. Throat and ear-coverts ashy blackish; crown olive-yellow; median and greater wing-coverts tipped with golden yellow, forming a double wing-bar ..... *chrysoptera* ♀, p. 235.

b. Rump and upper tail-coverts olive or olive-yellow, only a little lighter than the back, which is also olive.

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* The following species are believed to be hybrid *Helminthophilæ* by Dr. Coues:—

1. HELMINTHOPHILA LAWRENCII.

Helminthophaga lawrencii, *Herrick, Proc. Philad. Acad.* 1874, p. 220, pl. xv.; *id. Bull. Nutt. Orn. Club*, ii. p. 19 (1877); *Coues, B. Color. Vall.* p. 214, note (1878); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 171 (1880); *id. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881); *Coues, Check-list*, p. 35 (1882).

c'. Three outer tail-feathers white for the greater part of their inner web; forehead golden yellow.
  a''. No black patch on throat; a double white wing-bar ..... *pinus*, p. 237.
  b''. A large black patch on the throat; no white wing-bar ..... *bachmanni*, p. 239.
d'. No white on outer tail-feathers.
  c''. No concealed rufous patch on the crown; abdomen and under tail-coverts white (or tinged with yellow in autumn).
    a'''. Head and ear-coverts grey; eyebrow white ..... *peregrina* æstiv., p. 239.
    b'''. Head and ear-coverts yellowish olive; eyebrow yellowish ..... } *peregrina* juv. et ad. autumn., p. 241.
  d''. A more or less concealed rufous patch on the crown (often absent); under tail-coverts clear yellow.
    c'''. Crown-patch deep chestnut; head grey; underparts bright yellow except the lower abdomen, which is whitish .. *ruficapilla*, p. 242.
    d'''. Crown-patch pale orange-rufous.
      *a*⁴. Head greyish; eyebrow and eyelid white; below pale yellow streaked with grey ..... *celata*, p. 244.
      *b*⁴. Head olive; eyebrow, eyelid, and under surface of body olive-yellow . *lutescens*, p. 246.
c. Rump and upper tail-coverts bright olive-yellow, contrasting with the grey back; a concealed chestnut patch on the crown; chin, breast, and abdomen white; sides of body ashy; throat with a bright yellow patch; under tail-coverts bright yellow ..... *virginiæ*, p. 247.
d. Upper tail-coverts chestnut, contrasting with the ashy-grey back; under surface of body ashy white; a concealed chestnut patch on the head ..... *luciæ*, p. 248.

Helminthophila lawrencii, *Ridgw. Bull. Nutt. Orn. Club*, vii. p. 52 (1882); *Coues, Key N. Amer. B.* 2nd ed. p. 293 (1884).

Like *H. pinus*; but a large black patch on the throat and breast, and broad black eye-stripe reaching over auriculars, as in *H. chrysoptera*; thus it is *H. pinus* crossed with *H. chrysoptera*, and doubtless a hybrid between the two. (*Coues.*)

Hab. New Jersey; two specimens noted to date (1884, *Coues*).

2. Helminthophila cincinnatiensis.

Helminthophaga cincinnatiensis, *Langdon, Journ. Cincinn. Soc. Nat. Hist.* ii. p. 119 (1880); *id. Bull. Nutt. Orn. Club*, v. p. 208, pl. 4 (1880); *Coues, Check-list*, p. 35 (1882).

Helminthophila cincinnatiensis, *Coues, Key N. Amer. B.* 2nd ed. p. 293 (1884).

Like *H. pinus* in colour; bill with evident rictal bristles; no white wing-bars or tail-blotches; no ashy blue on wings or tail; concealed black on crown and sides of head like the incompleted black mark of *Oporornis formosa*, with which the bird otherwise closely agrees in colour, thus curiously being *H. pinus* crossed with *O. formosa*. Length 4·75 inches, wing 2·50, tail 1·85, bill 0·44. One specimen known, Ohio. (*Coues.*)

1. Helminthophila chrysoptera.

The Golden-winged Flycatcher, *Edw. Glean.* ii. p. 189, pl. 299 (1760).
Le Figuier cendré à gorge noire de Pensilvanie, *Briss. Orn.* vi., *Suppl.* p. 109 (1760).
Motacilla chrysoptera, *Linn. Syst. Nat.* i. p. 333 (1766); *Gm. Syst. Nat.* i. p. 971 (1788).
Le Figuier aux ailes dorées, *Buff. Hist. Nat. Ois.* v. p. 311 (1778).
Gold-winged Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 492 (1783).
Yellow-fronted Warbler, *Lath. t. c.* p. 461 (1783); *Penn. Arct. Zool.* ii. p. 404 (1785).
Gold-wing Warbler, *Penn. Arct. Zool.* ii. p. 403 (1785).
Motacilla flavifrons, *Gm. Syst. Nat.* i. p. 976 (1788).
Sylvia chrysoptera, *Lath. Ind. Orn.* ii. p. 541 (1790); *Vieill. Ois. Amér. Sept.* ii. p. 37, pl. 97 (1807); *Wils. Amer. Orn.* ii. p. 113, pl. 15. fig. 5 (1810); *Bp. Amer. Orn.* i. p. 12, pl. 1. fig. 3 (1825); *Audub. B. Amer.* pl. 414; *id. Orn. Biogr.* v. p. 154 (1839).
Sylvia flavifrons, *Lath. Ind. Orn.* ii. p. 541 (1790).
Parus alis aureis, *Bartr. Trav. Flor.* p. 292 (1791); *Coues, Proc. Philad. Acad.* 1875, p. 352.
Sylvicola inornata, *Swains. Phil. Mag.* new series, i. p. 434 (1827).
Vermivora chrysoptera, *Jard. ed. Wils. Amer. Orn.* i. p. 259 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 21 (1838).
Sylvicola chrysoptera, *Richards. Rep. Brit. Assoc.* 1836–37, p. 171.
Helinaia chrysoptera, *Audub. Syn.* p. 67 (1839); *id. B. Amer.* ii. p. 91, pl. 107 (1841).
Mniotilta chrysoptera, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 239, no. 3459 (1869).
Helmitheros chrysoptera, *Bp. Consp.* i. p. 315 (1850); *Scl. P. Z. S.* 1865, p. 143.
Helminthophaga chrysoptera, *Cab. Mus. Hein.* Th. i. p. 20, note (1850); *Baird, B. N. Amer.* p. 255 (1858); *Salv. & Scl. Ibis*, 1860, p. 397; *Lawr. Ann. Lyc. N. Y.* vii. p. 293 (1861); *Scl. Cat. Amer. B.* p. 28 (1862); *Scl. & Salv. P. Z. S.* 1864, p. 347; *Baird, Rev. Amer. B.* p. 175 (1864); *Dresser, Ibis*, 1865, p. 477; *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1866); *Salv. P. Z. S.* 1867, p. 135; *Lawr. Ann. Lyc. N. Y.* ix. p. 94 (1868); *Von Frantz. J. f. O.* 1869, p. 293;

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3. HELMINTHOPHILA LEUCOBRONCHIALIS.

Helminthophaga leucobronchialis, *Brewster, Amer. Sportsm.* v. Oct. 17th, p. 33 (1874, *teste Coues*); *Coues, B. N.-West*, p. 760 (1874); *Brewer, Proc. Bost. Soc. N. H.* xvii. p. 439 (1875); *Brewster, Bull. Nutt. Orn. Club*, i. p. 1, pl. 1 (1876); *Trotter, Bull. Nutt. Orn. Club*, ii. p. 79 (1877); *Coues, B. Color. Vall.* p. 213 (1878); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 171 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881); *Coues, Check-list*, p. 35 (1882).
Helminthophila leucobronchialis, *Ridgw. Bull. Nutt. Orn. Club*, vii. p. 53 (1882); *Coues, Key N. Amer. B.* 2nd ed. p. 293 (1884).

Like *H. chrysoptera*, but a black bar through the eye as in *H. pinus*, and lacking the black breast-patch of *H. chrysoptera*, the entire underparts being white; thus it is *H. chrysoptera* crossed with *H. pinus*, and doubtless a hybrid between the two, though up to date (1884) a dozen or more specimens have been described. (*Coues.*)

Hab. New England, New York, Pennsylvania, and Michigan.

Salv. P. Z. S. 1870, p. 182; *Coues, Key N. Amer. B.* p. 94, fig. 3 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 8 (1873); *Coues, B. N.-West*, p. 49 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 192, pl. 11. fig. 2 (1874); *Gundl. Orn. Cuba*, p. 63 (1876); *Coues, B. Color. Vall.* p. 216 (1878); *Scl. & Salv. P. Z. S.* 1879, p. 494; *Merrill, Proc. U.S. Nat. Mus.* i. p. 123 (1878); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 114 (1880); *id. Ibis*, 1880, p. 117; *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881); *Coues, Check-list*, p. 35 (1882).

Helminthophila chrysoptera, *Ridgw. Bull. Nutt. Orn. Club*, vii. p. 53 (1882); *Coues, Key N. Amer. B.* 2nd ed. p. 294 (1884).

Adult male. General colour above pale ashy grey, with here and there a tinge of olive-yellow; lesser wing-coverts like the back; median and greater coverts dusky blackish, tipped with golden yellow, the latter series externally golden yellow, the whole forming a wing-patch; primary-coverts and bastard-wing dusky blackish, externally ashy olive; quills dusky, the secondaries externally yellowish olive, the primaries edged with ashy grey, whiter on the margin of the first primary; upper tail-coverts and centre tail-feathers ashy grey; remainder of the tail-feathers dusky, externally ashy grey, the four outer feathers white near the end of the outer web, occupying more than half of the inner web on the outermost feather and gradually decreasing towards the centre of the tail, so as to occupy only a small spot on the fourth feather; a large frontal patch of golden yellow; rest of the crown and neck ashy grey like the back, slightly washed with yellowish olive; lores, feathers round and below the eye, and ear-coverts black, separated from the crown by a narrow line of white, which broadens out a little above the ear-coverts; cheeks and malar line white, extending down the sides of the throat; throat and fore neck black; centre of breast and abdomen white, the sides of the breast and flanks light ashy grey; thighs dusky; under tail-coverts white; under wing-coverts and axillaries white, the edge of the wing olive; quills dusky below, whitish along the edge of the inner web: "bill and feet black; iris brown" (*Audubon*). Total length 4·6 inches, culmen 0·55, wing 2·45, tail 1·95, tarsus 0·65.

Obs. The wash of yellowish olive on the upper surface, which is alluded to in the above description, is evidently the remains of winter plumage, most specimens shot in the winter-quarters of the species having the back grey washed with olive and also the yellow forehead more or less obscured with dusky-olive tips to the feathers. The specimen described was shot in the spring in Illinois; but in the Salvin-and-Godman collection is a specimen, killed in Costa Rica in December, which is much more advanced and has the entire back pure bluish grey without any trace of olive in it.

Adult female. Much duller in colour than the male, the grey back entirely obscured by a wash of olive-yellow; the yellow frontal patch also obscured by dusky-olive tips to the feathers; the wings and tail as in the male, but the white marks on the outer feathers less extended and the wing-patch less pronounced; lores and ocular region and ear-coverts dark slate-colour instead of black; superciliary

line and moustachial band duller than in the male; throat dull slate-colour; breast and abdomen dull white; the sides of the body dull slaty grey. Total length 4·1 inches, culmen 0·5, wing 2·25, tail 1·8, tarsus 0·65.

Young male. Resembles the adult female (*Coues*).

Hab. Eastern province of North America generally and Canada; Texas; wintering in Central America and extending to Colombia; of accidental occurrence in Cuba on spring migration.

a.	Ad. st.	North America.	Purchased.
b.	♂ ad. sk.	Niagara Falls.	Gould Collection.
c.	♂ ad. sk.	N. America (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
d.	♂ ad. sk.	Wheatland, Indiana (*R. Ridgway*).	U.S. Nat. Museum [P.].
e.	♂ ad. sk.	Hyde Park, Ill., May 4 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
f.	♀ ad. sk.	Michigan, June (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
g.	♂; *h*, *i*. ♀ ad. sk.	Guatemala.	Gould Collection.
k.	♂ ad. sk.	Chiriqui, Veragua (*Arcé*).	Sclater Collection.
l.	Ad. sk.	Bogotá, Colombia.	Sclater Collection.
m.	Ad. sk.	Colombia.	E. Wilson, Esq. [P.].
n.	♂ ad. sk.	Santa Elena, Antioquia.	T. K. Salmon, Esq. [C.].
o.	♀ ad. sk.	Medellin.	T. K. Salmon, Esq. [C.].

2. Helminthophila pinus.

Pine Creeper, *Edwards, Gleanings*, vi. p. 139, pl. 277. fig. 2 (1760, *nec Catesby*, 1760).
Le Figuier de la Louisiane, *Briss. Orn.* vi., App. p. 59 (1760).
Certhia pinus, *Linn. Syst. Nat.* i. p. 187 (1766, pt.).
Le Figuier des Sapins, *Buff. Hist. Nat. Ois.* v. p. 296 (1778).
Pine Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 483 (1783, pt.); *Penn. Arctic Zool.* ii. p. 412 (1785, pt.).
Sylvia pinus, *Lath. Ind. Orn.* ii. p. 537 (1790, pt.); *Vieill. Ois. Amér. Sept.* ii. p. 44 (1807, *nec Wils.*).
Parus aureus alis cæruleis, *Bartr. Trav. Florida*, p. 292 (1791); *Coues, Proc. Philad. Acad.* 1875, p. 352.
Motacilla pinus, *Turton, Syst. Nat.* i. p. 606 (1806).
Sylvia solitaria, *Wils. Amer. Orn.* ii. p. 109, pl. 15. fig. 4 (1810); *Audub. B. Amer.* pl. 20; *id. Orn. Biogr.* i. p. 102 (1831).
Vermivora solitaria, *Swains. Phil. Mag.* new ser. i. p. 434 (1827); *Jard. ed. Wils. Amer. Orn.* i. p. 256 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 21 (1838).
Sylvicola solitaria, *Richards. Rep. Brit. Assoc.* 1836–37, p. 171.
Helinaia solitaria, *Audub. Syn.* p. 69 (1839); *id. B. Amer.* ii. p. 98, pl. 111 (1841).
Mniotilta solitaria, *Gray, Gen. B.* i. p. 196 (1848).
Helmitherus solitarius, *Bp. Consp.* i. p. 315 (1850); *Sclater, P. Z. S.* 1856, p. 291.
Helminthophaga solitaria, *Cab. Mus. Hein.* Th. i. p. 20, note (1850).
Helminthophaga pinus, *Baird, B. N. Amer.* p. 254 (1858); *Scl. & Salv. Ibis*, 1859, p. 11; *Scl. Cat. Amer. B.* p. 28 (1862); *Baird,*

Review Amer. B. p. 174 (1865); *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1866); *Allen, Bull. Mus. Comp. Zool. Cambr.* iii. pp. 124, 175 (1872); *Coues, Key N. Amer. B.* p. 94 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 8 (1873); *Coues B. N.-West.* p. 49 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 195, pl. 11. fig. 1 (1874); *Coues, B. Color. Vall.* p. 214 (1878); *Merrill, Proc. U.S. Nat. Mus.* i. p. 123 (1878); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 115 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881); *Coues, Check-list*, p. 35 (1882); *Boucard, P. Z. S.* 1883, p. 440.

Mniotilta pinus, *Gray, Hand-l. B.* i. p. 239, no. 3455 (1869).

Helminthophila pinus, *Ridgw. Bull. Nutt. Orn. Club*, vii. p. 53 (1882); *Coues, Key. N. Amer. B.* 2nd ed. p. 293 (1884).

Adult male. General colour above yellowish olive from the nape to the rump, a little clearer yellow on the latter and the upper tail-coverts; lesser wing-coverts slaty grey; median and greater coverts slaty grey, with large white ends to the outer webs, forming a white wing-patch; bastard-wing dark grey; primary-coverts dusky, externally edged with slaty grey; quills dusky, externally margined with slaty grey, the inner secondaries washed with olive on the edges, the primaries edged with slightly paler grey, the margin of the outer one whitish; nearly all the quills with a narrow margin of white at the tips; upper tail-coverts and tail-feathers slaty grey, the former slightly washed with olive-yellow like the back; the three outer tail-feathers white for the terminal half of the inner web, with a small patch of white near the end of the fourth feather; forehead and sinciput bright golden yellow, the posterior feathers tipped with yellowish olive like the back; lores and a narrow ring of feathers round the eye, ending in a streak behind the latter, black; cheeks, sides of face, and ear-coverts golden yellow, the latter washed with olive on the upper margin; throat and entire under surface of body bright golden yellow; thighs and under tail-coverts white, the latter washed with golden yellow near the vent; axillaries white, with golden-yellow tips; under wing-coverts white; quills dusky below, white along the inner webs: "bill black, with a pale margin; feet and claws flesh-colour, tinged with yellow; iris dark brown" (*Audubon*). Total length 4·8 inches, culmen 0·5, wing 2·45, tail 1·95, tarsus 0·7.

Adult female. A little greener than the male; the frontal patch more obscure and shaded with olive; beneath duller yellow; the white tips to the wing-coverts smaller and less conspicuous, with a slight shade of olive. Total length 4 inches, culmen 0·5, wing 2·2, tail 1·8, tarsus 0·6.

Young. Resembling the adult female.

Hab. Eastern United States, north to Massachusetts (doubtful) and Minnesota, west to Iowa, Kansas, Indian Territory, and Texas (*Coues*); wintering in Mexico and Guatemala.

a. Ad. st.	North America.	Purchased.
b. Ad. sk.	St. Louis (*Baird*).	Sclater Collection.
c, d. ♂ ♀ ad. sk.	Wheatland, Indiana, April (*R. Ridgway*).	U.S. Nat. Museum [P.].

e, f. ♂ ♀ ad. sk.	St. Louis County, Missouri, May 2 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
g. Ad. sk.	Guatemala.	Sclater Collection.
h, i. Ad. sk.	Guatemala.	Purchased.
k. Ad.; *l, m.* Imm. sk.	Guatemala.	Gould Collection.
n. Ad. sk.	Guatemala.	J. Gould, Esq.
o. Ad. sk.	Honduras.	Mr. Dyson [C.].

3. Helminthophila bachmanni.

Sylvia bachmani, *Audub. B. Amer.* pl. 185; *id. Orn. Biogr.* ii. p. 483 (1834).
Sylvicola bachmani, *Richards. Rep. Brit. Assoc.* 1836–37, p. 172.
Vermivora bachmani, *Bp. Comp. List B. Eur. & N. Amer.* p. 21 (1838).
Helinaia bachmani, *Audub. Syn.* p. 68 (1839); *id. B. Amer.* ii. p. 93, pl. 108 (1841); *Lembeye, Av. Cuba*, p. 36, pl. 6. fig. 1 (1850).
Mniotilta bachmani, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 239, no. 3460 (1869).
Helmitheros bachmani, *Bp. Consp.* i. p. 315 (1850).
Helminthophaga bachmani, *Gundl. J. f. O.* 1855, p. 475, 1861, pp. 326, 409; *Baird, B. N. Amer.* p. 255 (1858); *id. Review Amer. B.* p. 175 (1864); *Coues, Key N. Amer. B.* p. 94 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 194, pl. 11. fig. 3 (1874); *Gundl. Orn. Cuba*, pp. 62, 248 (1876); *Coues, B. Color. Vall.* p. 214, note (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881); *Coues, Check-list*, p. 35 (1882).
Helminthophila bachmani, *Ridgw. Bull. Nutt. Orn. Club*, vii. p. 53 (1882); *Bailey, Bull. Nutt. Orn. Club*, viii. p. 38 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 294 (1884).

The general colour of the upper parts is brownish olive; the rump yellowish green, the feathers of the crown brownish black in the centre; the forehead, a line over the eye, the cheeks, the chin, the sides of the neck, the flexure of the wing, lower wing-coverts, and breast yellow; the sides greenish grey; the lower tail-coverts white; on the fore part of the neck is a large patch of black enlarging beneath; quills and tail wood-brown, narrowly margined with whitish; a large white spot on the inner web of each of the tail-feathers, excepting the two middle ones; bill dusky brown above, light blue beneath; iris dark brown; feet umber. Length $4\frac{1}{16}$ inches, bill along the ridge $\frac{5}{12}$, tarsus $\frac{8}{12}$. (*Audubon.*)

The female is considerably smaller than the male, and differs only in having the tints fainter, the forehead yellowish green, and the fore neck dusky. Length $3\frac{10}{12}$ inches. (*Audubon.*)

Hab. South Carolina and Georgia, wintering in Cuba.

4. Helminthophila peregrina.

Sylvia peregrina, *Wilson, Amer. Orn.* iii. p. 83, pl. 25. fig. 2 (1811); *Audub. B. Amer.* pl. 154; *id. Orn. Biogr.* ii. p. 307 (1834).
Sylvia tenennsæi, *Bonn. et Vieill. Enc. Méth.* ii. p. 452 (1823).
Sylvia (Vermivora) peregrina, *Swains. & Rich. Faun. Bor.-Amer., Birds*, p. 221, pl. 42, lower fig. (1831).

Vermivora peregrina, *Jard. ed. Wils. Amer. Orn.* i. p. 372 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 21 (1838); *Nutt. Man.* p. 469 (1840).
Sylvicola peregrina, *Richards. Rep. Brit. Assoc.* 1836–37, p. 171.
Helinaia peregrina, *Audub. Syn.* p. 68 (1839); *id. B. Amer.* ii. p. 96, pl. 110 (1841).
Mniotilta peregrina, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 239, no. 3456 (1869).
Helmitheros peregrina, *Bp. Consp.* i. p. 315 (1850).
Helminthophaga peregrina, *Cab. Mus. Hein.* Th. i. p. 20, note (1850); *Baird, B. N. Amer.* p. 258 (1858); *Scl. P. Z. S.* 1859, p. 373; *Salv. & Scl. Ibis*, 1860, p. 31; *Lawr. Ann. Lyc. N. Y.* vii. p. 322 (1861); *Scl. Cat. Amer. B.* p. 29 (1862); *Blakist. Ibis*, 1862, p. 4, 1863, p. 62; *Scl. & Salv. P. Z. S.* 1864, p. 347; *Lawr. Ann. Lyc. N. Y.* viii. p 174 (1865); *Baird, Review Amer. B.* p. 178 (1865); *Salv. P. Z. S.* 1867, p. 135; *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1860), ix. p. 94 (1868); *Von Frantz. J. f. O.* 1869, p. 293; *Salvin, P. Z. S.* 1870, pp. 182, 836; *Wyatt, Ibis*, 1871, p. 322; *Coues, Key N. Amer. B.* p. 95 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 8 (1873); *Coues, B. N.-West*, p. 53 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 205, pl. 11. figs. 10, 11 (1874); *Lawr. Bull. U.S. Nat. Mus.* iv. p. 15 (1876); *Gundl. Orn. Cuba*, p. 63 (1876); *Coues, B. Color. Vall.* p. 230 (1878); *id. Bull. U.S. Geol. Surv.* iv. p. 563 (1878); *Merrill, Pr. U.S. Nat. Mus.* i. p. 123 (1878); *Scl. & Salv. P. Z. S.* 1879, p. 494; *Salv. & Godm. Ibis*, 1880, p. 117; *iid. Biol. Centr.-Amer., Aves*, i. p. 117 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1882) *Coues, Check-list*, p. 36 (1882).
Sylvia missuriensis, *Neuwied, J. f. O.* 1858, p. 117.
Helminthophila peregrina, *Ridgw. Bull. Nutt. Orn. Club*, vii. p. 54 (1882); *Coues, Key N. Amer. B.* 2nd ed. p. 295 (1882).

Adult male. General colour above yellowish olive, a little clearer on the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater coverts dusky, externally yellowish olive, brighter yellow on the extreme margins; bastard-wing dull brown, externally shaded with ashy brown; primary-coverts and quills brown, externally margined with dull olive, yellower on the margins of the secondaries, which have a narrow fringe of white at the tip; tail-feathers dull ashy brown, margined with yellowish olive, the outer feathers fringed with white near the end of the inner web, broader on the outermost, which has an obscure spot of dull whitish towards the end of the inner web; head and hind neck dull ashy, slightly washed with olive-yellow; a narrow white eyebrow; lores dull yellowish; in front of and behind the eye a blackish spot, the anterior and posterior margins of the eyelid also black; upper and lower edge of eyelid white; feathers below the eye dull ashy white, as well as the cheeks and malar line, the latter slightly obscured with dull ashy tips to the feathers; ear-coverts dull white, with dusky olive margins; under surface of body dull white, shaded with olive-yellow on the breast and sides of the body and flanks; thighs and under tail-coverts dull white; axillaries and under wing-coverts dull white, slightly washed with olive-yellow, brighter along the edge of the wing; quills dusky below, ashy whitish along the edge of the inner web; "bill dark

brown, paler beneath; feet brown, tinged with blue; iris hazel" (*Audubon*). Total length 4·4 inches, culmen 0·45, wing 2·55, tail 1·75, tarsus 0·65.

Adult female. Like the male, but the ashy of the head less pure and clear, and the underparts more or less tinged with greenish yellow. (*Coues.*)

The male in winter plumage is much more uniformly olive above than in summer, the upper surface being entirely yellowish olive, including the head, which is only a little more dusky than the back; the eyebrow, sides of face, and throat are yellow instead of white; centre of breast and abdomen, as well as the under tail-coverts, white; the flanks and sides of the body olive-yellow.

Young birds are described by Dr. Coues as being similar in plumage to the above, and the changes appear to resemble those of the common *Phylloscopi* of Europe, which are always yellower in autumn than in summer; but, unlike the European birds, this *Helminthophila* appears to regain its full spring plumage by the wearing away of the olive tips to the grey crown, rather than by a complete spring moult—at least I can find no evidence of the latter in the series of specimens examined.

The *adult female* in winter differs from the male of the same time of year only in being duller in colour.

Hab. Chiefly Eastern North America, but west to the Upper Missouri region and in Colorado to the Rocky Mountains; common, especially in tke Mississippi valley, but less so in the Atlantic States; migratory; breeds in New England and the northern tier of States, and thence to high latitudes in British America (*Coues*). Winters throughout Central America, and as far south as Colombia and Venezuela.

a, b. Ad. æstiv. sk.	Arctic America.	Dr. Rae [P.].
c, d. ♂ *e,* ♀ ad. æstiv. sk.	Fort Simpson, June.	B. R. Ross, Esq. [P.].
f. Ad. æstiv. sk.	Carlton, N. America (*Blakiston*).	R. B. Sharpe, Esq. [P.].
g, h. Ad. æstiv. et autumn. sk.	Rocky Mountains (*Blakiston*).	R. B. Sharpe, Esq. [P.].
i. Ad. autumn. sk.	Sheffield, Indiana, Sept. (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
k. ♂ ad. æstiv. sk.	Evanston, Ill., May 14 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
l. ♂ ad. æstiv. sk.	Mt. Carmel, Ill., May 3 (*S. Turner*).	U.S. Nat. Museum [P.].
m. Juv. autumn. sk.	Halfday, Ill. (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
♂ ad. autumn. sk.	Pennsylvania, Sept. 10 (*Roosevelt*).	U.S. Nat. Museum [P.].
Juv. autumn. sk.	Mexico.	Sclater Collection.
Juv. autumn. sk.	Guatemala (*Constancia*).	Sclater Collection.
i. Imm. æstiv. sk.	Vera Paz, Guatemala, March (*O. Salvin*).	Sclater Collection.
s. Imm, autumn. sk.	Guatemala.	Gould Collection.
Imm. autumn. sk.	Chiriqui, Veragua (*Arcé*).	Sclater Collection.

u. Ad. hiem. sk.	Bogotá.	Sclater Collection.
v. Ad. hiem. sk.	Concordia, Antioquia (*Salmon*).	Sclater Collection.
w. Ad. hiem. sk.	Caracas, Venezuela.	Mr. Dyson [C.].

5. Helminthophila ruficapilla.

Sylvia ruficapilla, *Wils. Amer. Orn.* iii. p. 120, pl. 27. fig. 3 (1811).
Sylvia rubricapilla, *Wils. Amer. Orn.* vi. p. 15 (1812); *Audub. B. Amer.* pl. 89; *id. Orn. Biogr.* i. p. 450 (1831).
Sylvia leucogastra, *Steph. Gen. Zool.* x. p. 622 (1817).
Sylvia nashvillei, *Bonn. et Vieill. Enc. Méth.* ii. p. 451 (1823).
Sylvicola (Vermivora) rubricapilla, *Swains. & Richards. Faun. Bor.-Amer., Birds*, p. 220, pl. 42, upper fig. (1831).
Sylvicola rubricapilla, *Richards. Rep. Brit. Assoc.* 1836–37, p. 171.
Vermivora rubricapilla, *Jard. ed. Wilson's Amer. Orn.* i. p. 407 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 21 (1838); *Nutt. Man.* p. 472 (1840).
Helinaia rubricapilla, *Audub. Syn.* p. 70 (1839); *id. B. Amer.* ii. p. 103, pl. 113 (1841).
Mniotilta ruficapilla, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 239, no. 3456 (1869).
Helmitheros rubricapilla, *Bp. Consp.* i. p. 315; *Scl. P. Z. S.* 1856, p. 291.
Helminthophaga rubricapilla, *Cab. Mus. Hein.* Th. i. p. 20 (1850); *Scl. P. Z. S.* 1859, p. 363.
Helminthophaga ruficapilla, *Baird, B. N. Amer.* p. 256 (1858); *Scl. P. Z. S.* 1858, p. 298, 1859, p. 373; *id. Cat. Amer. B.* p. 29 (1862); *Blakist. Ibis*, 1863, p. 62; *Baird, Review Amer. B.* p. 175 (1865); *Dresser, Ibis*, 1865, p. 477; *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1866); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 546 (1869); *Cooper, B. Calif.* p. 82 (1870); *Allen, Bull. Mus. Comp. Zool. Cambr.* iii. p. 175 (1872); *Coues, Key N. Amer. B.* p. 95 (1872); *Maynard, B. Florida*, p. 63 (1873); *Scl. & Salv. Nomencl. Av. Neotr.* p. 8 (1873); *Coues, B. N.-West*, p. 50 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 196, pl. 11. figs. 7, 8 (1874); *Hensh. List B. Ariz.* p. 156 (1875); *id. Zool. Expl. W. 100th Merid.* p. 188 (1876); *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 15 (1876); *Ridgw. Rep. U.S. Geol. Surv. 40th Par.* p. 427 (1877); *Sennett, Bull. U.S. Geol. Surv.* iv. p. 12 (1878); *Merrill, Proc. U.S. Nat. Mus.* i. p. 123 (1878); *Salv. Cat. Strickl. Coll.* p. 89 (1882); *id. & Godm. Biol. Centr.-Amer., Aves*, i. p. 115 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881); *Coues, Check-list*, p. 45 (1882).
Mniotilta rubricapilla, *Reinh. Ibis*, 1861, p. 6.
Helminthophaga ruficapilla, var. ocularis, *Ridgw. in Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 191 (1874).
Helminthophaga ruficapilla, var. gutturalis, *id. t. c.* p. 191 (1874).
Helminthophila ruficapilla, *Ridgw. Bull. Nutt. Orn. Club*, vii. p. 54 (1882); *Coues, Key N. Amer. B.* 2nd ed. p. 294 (1884).

Adult male. General colour above dull yellowish olive, a little brighter on the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater coverts dusky, externally like the back, a little tinged with ashy; bastard-wing dusky, externally ashy olive; primary-coverts and quills dusky, externally dull yellowish olive, the first primary margined with ashy whitish;

feathers ashy brown, edged with yellowish olive, the two centre feathers entirely of the latter colour, the outer ones with a narrow fringe of white near the end of the inner web; head and hind neck dull ashy grey, with a patch of deep chestnut in the centre of the crown; lores ashy whitish; round the eye a conspicuous ring of white feathers; sides of face, cheeks, sides of neck, and ear-coverts dull ashy grey; entire under surface of body yellow, a trifle more olive on the flanks; lower abdomen whitish; thighs ashy, externally washed with olive; under tail-coverts yellow; axillaries white, tipped with yellow; under wing-coverts yellow, brighter along the edge of the wing: quills dusky ash-colour below, whitish along the edge of the wing; "bill greenish brown; feet yellowish green; iris dark brown" (*Audubon*). Total length 4·5 inches, culmen 0·45, wing 2·4, tail 1·95, tarsus 0·65.

Adult male in winter. Differs from the summer plumage, as described above, in having the coronal chestnut patch obscured by ashy-grey tips to the feathers; the mantle and upper back have also greyish margins, remains of which may often be seen in spring plumage. In some winter-killed specimens the grey occupies the whole of the head and back, leaving only the rump and upper tail-coverts olive-yellow. This may take place in young birds of the first year only, or may be a sign of extreme age, a fact which further research and a larger series of skins alone can determine. The extent of grey on the mantle is very variable, even in breeding birds.

Adult female in breeding-plumage (Upper Klamath Lake, Oregon, May 18; A. Forrer). Very similar to the male, but rather duller in colour, the chestnut patch on the crown more obscured by ashy-grey tips to the feathers, the white eye-ring not quite so distinct. Total length 4 inches, culmen 0·5, wing 2·3, tail 1·7, tarsus 0·65. (*Mus. Salvin and Godman.*)

Young. Similar to the adult female, but wanting the chestnut patch on the crown.

Dr. Coues says that the adult female is often without the chestnut patch on the crown. Autumnal specimens, according to the same author, "of both sexes, though quite as yellow below as in summer, have the ash of the head glossed over with olivaceous, and in birds of the year the crown-patch may be entirely wanting."

Hab. Temperate North America, but especially the Eastern Province; west only rarely to Utah, Nevada, and even California: common, migratory in most of its U.S. range, but breeding in New England (and further south in alpine regions) and thence northwards (*Coues*). Winters in Mexico and Guatemala.

a. Ad. sk.	N. America.	Sclater Collection.	
b. Ad. sk.	N. America (*Cassin*).	Sclater Collection.	
c. ♂ ad. sk.	Sugar Grove, N. Y., May 10 (*H. K. Coale*).	R. B. Sharpe, Esq.	[P.].
d. ♂ ad. sk.	Chicago, Ill., Sept 28 (*H. K. Coale*).	R. B. Sharpe, Esq.	[P.].
e. ♀ ad. sk.	Lake Forest, Ill., May 15 (*H. K. Coale*).	R. B. Sharpe, Esq.	[P.].

f. ♂ ad. sk.	Laurel, Maryland, May 22 (*G. Shoemaker*).	U.S. Nat. Museum [P.].
g. ♂ ad. sk.	West side of Rocky Mountains, British Columbia.	J. K. Lord, Esq. [P.].
h. ♀ ad. sk.	Crittenden, Arizona, Aug. 27 (*H. W. Henshaw*).	U.S. Nat. Museum [P.].
i. ♂ ad. sk.	Calaveras County, Calif., April (*L. Belding*).	U.S. Nat. Museum [P.].

6. Helminthophila celata.

Sylvia celata, *Say in Long's Exped. Rocky Mts.* i. p. 169 (1823); *Bp. Amer. Orn.* i. p. 45, pl. 5. fig. 2 (1825); *Audub. B. Amer.* pl. 178; *id. Orn. Biogr.* ii. p. 449 (1844).

Vermivora celata, *Jard. ed. Wils. Amer. Orn.* iii. p. 332 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 21 (1838); *Nutt. Man.* p. 473 (1840).

Sylvicola celata, *Richards. Rep. Brit. Assoc.* 1836–37, p. 171; *Finsch, Abhandl. nat. Ver. Bremen*, 1872, p. 36.

Helinaia celata, *Audub. Syn.* p. 69; *id. B. Amer.* ii. p. 100, pl. 112 (1841).

Mniotilta celata, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 239, no. 3457 (1869).

Helmitheros celata, *Bp. Consp.* i. p. 315 (1850); *Sel. P. Z. S.* 1859, p. 212.

Helminthophaga celata, *Baird, B. N. Amer.* p. 257 (1858); *id. U.S. Mex. Surv.* ii. *Birds*, p. 10 (1859); *Sel. P. Z. S.* 1858, p. 298, 1859, pp. 235, 373; *id. P. Z. S.* 1862, p. 19; *id. Cat. Amer. B.* p. 29 (1862); *Blakist. Ibis*, 1862, p. 4, 1863, p. 62; *Baird, Review Amer. B.* p. 176 (1865); *Dresser, Ibis*, 1865, p. 477; *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1866); *Dall & Bann. Trans. Chicago Acad.* i. p. 278 (1869); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 546 (1869); *Cooper, B. Calif.* p. 83 (1870); *Allen, Bull. Mus. Comp. Zool. Cambr.* ii. p. 268 (1872), iii. p. 175 (1872); *Coues, Key N. Amer. B.* p. 95 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 8 (1873); *Mayn. B. Florid.* p. 62 (1873); *Coues, B. N.-West*, p. 52 (1874); *Hensh. List B. Arizona*, p. 156 (1875); *id. Zool. Exped. W. 100th Merid.* p. 191 (1876); *Ridgw. Rep. U.S. Geol. Surv. 40th Par.* p. 429 (1877); *Coues, B. Color. Vall.* p. 226 (1878); *id. Bull. U.S. Geol. Surv.* iv. p. 564 (1878); *Sennett, t. c.* p. 12 (1878); *Merrill, Proc. U.S. Nat. Mus.* i. p. 123 (1878); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 116 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881); *Coues, Check-list*, p. 36 (1882); *Nelson, Cruise R. S. 'Corwin,'* p. 63 (1883); *Hartl. J. f. O.* 1883, p. 267.

Helminthophaga celata, var. celata, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 202, pl. 11. figs. 5, 6 (1874).

Helminthophila celata, *Ridgw. Bull. Nutt. Orn. Club*, vii. p. 54 (1882); *Coues, Key N. Amer. B.* 2nd ed. p. 295 (1884).

Adult. General colour above dull olive-yellowish, shaded with ashy grey, clearer and brighter on the rump and upper tail-coverts; lesser wing-coverts like the back, the median and greater series dusky, externally edged with olive, yellower on the extreme margins of the feathers; bastard-wing and primary-coverts nearly uniform dusky brown, with very slight olive margins; quills dusky brown, edged with olive like the back, a little more ashy on the primaries,

the quills with narrow ashy fringes at the tips; tail-feathers dusky brown, edged with olive-yellow, with narrow white fringes near the end of the inner web; head ashy grey, contrasting with the back, with a concealed patch of orange-rufous on the crown; from the base of the bill above the eye a line of ashy white, the eyelid also ashy white; lores and feathers below the eye ashy; ear-coverts and sides of neck light ashy grey; throat and breast light ashy grey, streaked with yellow, the feathers being yellow in the centre with ashy margins; the abdomen less distinctly marked, the lower abdomen ashy whitish; under tail-coverts purer and brighter yellow; axillaries pale yellow; under wing-coverts white washed with yellow, brighter along the edge of the wing: "bill dusky above, pale greyish blue beneath: feet and claws dusky: iris hazel" (*Audubon*). Total length 4·6 inches, culmen 0·45, wing 2·45, tail 2·1, tarsus 0·65. (*Mus. Salvin and Godman.*)

The specimen described is marked "adult" by Dr. Coues, who procured it in Dakota (Souris River) on the 18th of September. It ought therefore to be in perfect autumn plumage, as its new feathering indeed shows it to be. No other specimen in the Salvin-and-Godman collection, or in that of the British Museum, exactly resembles it, all the others having a yellow eyebrow, and little or no grey on the head, which is olive-yellow like the back.

The specimen described as *H. lutescens* (p. 246) is in the British Museum, and was killed on the 18th of May; it must be therefore in breeding-dress. The yellow eyebrow and eyelid are so distinct, that I scarcely understand why the trinomial name of *H. celata lutescens* should be given to it, as it would appear to be a much more easily recognizable species than our Willow-Wren and Chiffchaff in Europe. Dr. Coues's description of *H. celata* in summer corresponds exactly with the specimen killed in autumn and described above, especially in the colour of the under surface, which in *H. lutescens* is nearly entirely yellow, without the grey on the throat and breast, nor does it show the streaked appearance of *H. celata*. Only two explanations appear to me possible. Either *H. celata* and *H. lutescens* are two thoroughly distinct species, or else, as in *H. peregrina* and the Old-World *Phylloscopi*, the autumn plumage of the young bird is much yellower than that of the adult, *and the bird does not lose this yellow plumage in its first year, but returns to North America and breeds in it.* When fully adult, on the other hand, it must retain the grey head, white eyebrow, and yellow-and-grey streaked under surface throughout the winter. The specimens at my disposal are not sufficient to settle this question. All the birds in the Salvin-and-Godman collection from Utah (1), Vancouver Island (2), San Francisco (1), Mazatlan (2), Presidio, Mexico (2), La Parada, S. Mexico (1), and Vera Paz (1) belong to *H. lutescens*.

Hab. North America at large, but especially the middle and western regions; rare or occasional in the Eastern Province; north to high latitudes in British America and Alaska: migratory; breeds in arctic regions and in alpine localities further south (*Coues*). Winters in Mexico.

a. Ad. sk.	Arctic America.	Dr. Rae [P].
b. Ad. sk.	Rocky Mountains, Canada.	R. B. Sharpe, Esq. [P.].
c. Ad. autumn. sk.	Chicago, Ill., Oct. 9 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
d. Ad. æstiv. sk.	Chicago, Ill., May 10 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].
e. Ad. autumn. sk.	Colehour, Illinois, May 8 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].
f. ♂ ad. vix æstiv. sk.	Rockport, Ohio, May 12 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].
g. ♀ ad. autumn sk.	New Mexico, Sept. 11 (*C. E. Aiken*).	U.S. Nat. Museum [P.].
h. Ad. hiem. sk.	Orizaba, Mexico (*Botteri*).	Sclater Collection.

Subsp. *a*. **Helminthophila obscura.**

Helminthophaga celata, var. obscura, *Ridgw. in Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 192 (1874).

Helminthophaga celata obscura, *Allen & Brewster, Bull. Nutt. Orn. Club*, viii. p. 157 (1883).

This race was described by Mr. Ridgway as follows :—"Similar to *H. celata*, but the plumage darker and more dingy; no white edgings to tail-feathers, and apparently no rufous on the crown in either sex." Subsequently he appears to have become convinced that the race was not permanently recognizable, and it has been recently ignored both by himself and by Dr. Coues.

Messrs. Allen and Brewster, however, have lately insisted that the race is well distinguished, and have given the following description of it :—

Adult male. Above dark greenish plumbeous; beneath dingy greenish olive, darkest on the sides, palest on the middle of the abdomen; sides of head and neck scarcely lighter than back; eyelids and a short ill-defined superciliary stripe greenish yellow; a concealed crown-patch of deep orange-rufous; inner webs of outer tail-feathers narrowly margined with white near their terminal ends.

Adult female. Lacking the rufous crown-patch; otherwise similar to the male.

Hab. Georgia and Florida in winter, perhaps migrating northwards to breed.

7. **Helminthophila lutescens.**

Helminthophaga celata, var. lutescens, *Ridgw. Amer. Journ. Sci.* 1872, p. 457; *id. Amer. Nat.* vii. p. 606 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 204, pl. 11. fig. 4 (1874).

Helminthophaga celata, β. lutescens, *Coues, B. N.-West*, p. 52 (1874); *Ridgw. U.S. Geol. Expl. 40th Par.* p. 429 (1877); *Coues, B. Color. Vall.* p. 227 (1878).

Helminthophaga celata lutescens, *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 171 (1880); *id. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881); *Coues, Check-list*, p. 36 (1882).

Helminthophila celata lutescens, *Coues, Key N. Amer. B.* 2nd ed. p. 295 (1884).

Adult male. General colour above dull greenish olive, washed

with ashy grey on the head and back, paler and clearer on the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater coverts dusky brown, externally dull olive, a little more ashy on the margins of the feathers; bastard-wing and primary-coverts dusky, very narrowly edged with olive; quills dusky brown, edged with ashy olive; tail-feathers dark brown, edged with yellowish olive like the rump, and fringed with white near the end of the inner web; head resembling the back, with a concealed coronal patch of orange-chestnut; eyelid and a streak over the eye clear olive-yellow; lores and a small mark behind the eye blackish; ear-coverts olive-greenish; cheeks and under surface of body pale olive-yellow, lighter on the abdomen and under tail-coverts; the breast slightly streaked with lighter yellow; sides of the body rather more olive; axillaries and under wing-coverts pale olive-yellow, brighter on the edge of the wing; quills dusky below, whitish along the edge of the inner web. Total length 4·2 inches, culmen 0·45, wing 2·3, tail 1·9, tarsus 0·65.

Hab. Pacific coast-region, from Alaska to California (*Coues*). Winters in Mexico and Guatemala (*vide* p. 245).

a, *b*. ♂ ad. sk.	Orcas Island.	Dr. Lyall [P.].
c, *d*. ♂ ♀ ad. sk.	West side of Rocky Mountains, British Columbia.	J. K. Lord, Esq. [P.].
e, *f*. Ad. sk.	California.	Purchased.
g. Ad. sk.	California.	Sclater Collection.
h. ♂ ad. sk.	Nicosio, California, April 27 (*C. A. Allen*).	R. B. Sharpe, Esq. [P.].
i. Ad. sk.	La Paz, California (*L. Belding*).	U.S. Nat. Museum [P.].
k, *l*. Ad. sk.	Mexico.	Gould Collection.

8. Helminthophila virginiæ.

Helminthophaga virginiæ, *Baird, B. N. Amer.*, *Atlas*, p. xi, footnote, pl. 79. fig. 1 (1860); *id. Review Amer. B.* p. 177 (1865); *Cooper, B. Calif.* p. 85 (1870); *Coues, Key N. Amer. B.* p. 94 (1872); *id. B. N.-West*, p. 51 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 199, pl. 11. fig. 12, iii. *App.* p. 504 (1874); *Hensh. Rep. Orn. Spec.* 1874, p. 41; *id. List B. Arizona*, p. 156 (1875); *id. Zool. Expl. W. 100th Merid.* p. 189 (1876); *Ridgw. Rep. U.S. Geol. Expl. 40th Par.* p. 428 (1877); *Coues, B. Color. Vall.* p. 222 (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881); *Coues, Check-list*, p. 35 (1882).

Helminthophila virginiæ, *Ridgw. Bull. Nutt. Orn. Club*, vii. p. 54 (1882); *Allen & Brewst. op. cit.* viii. p. 155 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 294 (1884).

Adult male (Colorado Springs, Colorado, May 13; W. Brewster). General colour above clear ashy grey, leaving only the rump and upper tail-coverts olive-yellow; lesser wing-coverts like the back; median and greater coverts dusky, more brownish ashy on the outer webs; bastard-wing brown; primary-coverts and quills dusky, narrowly edged with ashy brown, greyer on the outer edge of the primaries; tail-feathers dusky, edged with ashy, the two centre ones washed with ashy; entire head and neck clear ashy grey, with

a chestnut coronal patch, more or less obscured by ashy-grey tips to the feathers; lores, base of cheeks, feathers below the eye, and a ring round the latter white; sides of face, cheeks, and ear-coverts clear ashy grey, as also the sides of the neck and sides of breast; chin white, inclining to yellow on the throat and widening into a broad patch of brighter yellow on the fore neck; centre of breast and abdomen white, the sides of the body pale ashy, washed with yellow on the lower flanks; under tail-coverts bright yellow, the long ones white at the ends; thighs ashy; under wing-coverts and axillaries white, the latter slightly washed with ashy brown; quills dusky below, ashy whitish along the edge of the inner web. Total length 4·5 inches, culmen 0·4, wing 2·5, tail 2, tarsus 0·65. (*Mus. Salvin and Godman.*)

Adult female. Duller in colour than the male, the chestnut patch on the head somewhat more obscured by the ashy tips to the feathers; the whole shade of the ash-colour of the upper parts more brownish ash than in the male; the yellow on the fore neck not so bright or extensive, and the under tail-coverts much paler yellow. Total length 4·3 inches, culmen 0·5, wing 2·25, tail 1·75, tarsus 0·7. (*Mus. Salvin and Godman.*)

Hab. Southern Rocky-Mountain region; north to Colorado, Nevada, and Utah at least (*Coues*).

9. Helminthophila luciæ.

Helminthophaga luciæ, *Cooper, Proc. Calif. Acad.* 1862, p. 120; *Baird, Review Amer. B.* p. 178 (1865); *Coues, Ibis*, 1866, p. 260; *Elliot, New & Unfig. B. N. Amer.* pl. 5 (1869); *Cooper, B. Calif.* p. 84 (1870); *Coues, Key N. Amer. B.* p. 94 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 200, pl. 2. fig. 9, iii. *App.* p. 504 (1874); *Hensh. List B. Ariz.* p. 156 (1875); *id. Rep. Zool. Expl. W. 100th Merid.* p. 190 (1876); *Coues, B. Color. Vall.* p. 219 (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881); *Coues, Check-list*, p. 35 (1882).

Mniotilta luciæ, *Gray, Hand-l. B.* i. p. 239, no. 3426 (1869).

Helminthophila luciæ, *Ridgw. Bull. Nutt. Orn. Club*, vii. p. 54 (1882); *Coues, Key N. Amer. B.* 2nd ed. p. 294 (1884).

Adult female (Fort Whipple, Arizona, May 17; E. Coues). General colour above light ashy grey; lesser wing-coverts like the back; median and greater coverts dusky, externally brownish ash-colour; bastard-wing and primary-coverts dusky brown, the latter narrowly edged with ashy grey; quills dusky brown, edged with brownish ashy, more broadly on the secondaries; upper tail-coverts bright chestnut or bay; tail-feathers dark brown, edged with ashy, the outer feather edged with white along the inner web, increasing to a large white patch towards the end, the penultimate feather with a narrow fringe of white along its inner web; head light ashy grey like the back, with a central patch of deep chestnut on the crown, more or less obscured by ashy-grey tips to the feathers; lores and feathers around and below the eye dull white; ear-coverts and sides of neck light ashy grey like the head and back; cheeks and under surface of body dull white, with an isabel-

line tinge on the throat and breast, slightly browner on the sides of the latter and flanks; thighs ashy; under tail-coverts white; axillaries and under wing-coverts white; quills dusky below, white along the edge of the inner web: "feet dull leaden olive; iris dark brown or black" (*Coues*). Total length 4·3 inches, culmen 0·35, wing 2·15, tail 1·65, tarsus 0·65. (*Mus. Salvin and Godman.*)

Adult male. Similar to the female. Total length 3·8 inches, culmen 0·4, wing 2·25, tail 1·55, tarsus 0·65.

Young. "Lacks the chestnut of the crown, though that of the rump is present; the throat and breast are milk-white, without the ochry tinge of the adults; the wing-coverts are edged with pale rufous." (*Coues.*)

Hab. Valley of the Colorado, not yet found outside of Arizona.

a. ♂ ad. sk. Tucson, Arizona, April 13 (*E. W. Nelson*). U.S. Nat. Museum [P,].

4. PROTONOTARIA.

Type.
Protonotaria, *Baird, B. N. Amer.* p. 235 (1858) ..... P. citrea.



Bill of *Protonotaria citrea.*

Range. Eastern United States; throughout Central America to Colombia and Venezuela; Cuba.

1. Protonotaria citrea.

Le Grand Figuier de Canada, *Briss. Orn.* iii. p. 508, pl. 26. fig. 1 (1760).
Figuier à ventre et tête jaunes de la Louisiane, *Daubent. Pl. Enl.* vi. 704. fig. 2.
Figuier à gorge orangée, *Buff. Hist. Nat. Ois.* v. p. 290 (1778).
Figuier Protonotaire, *Buff. Hist. Nat. Ois.* v. p. 316 (1778).
Prothonotary Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 494 (1783).
Motacilla citrea, *Bodd. Tabl. Pl. Enl.* p. 44 (1783).
Orange-throat Warbler, *Penn. Arctic Zool.* ii. p. 408 (1785).
Motacilla protonotarius, *Gm. Syst. Nat.* i. p. 972 (1788).
Motacilla auricollis, *Gm. Syst. Nat.* i. p. 984 (1788).
Sylvia auricollis, *Lath. Ind. Orn.* ii. p. 536 (1790).
Sylvia protonotaria, *Lath. Ind. Orn.* ii. p. 542 (1790); *Vieill. Ois. Amér. Sept.* ii. p. 27, pl. 83 (1807); *Wilson, Amer. Orn.* iii. p. 72, pl. 24. fig. 3 (1811); *Audub. Orn. Biogr.* i. p. 22 (1832), v. p. 461 (1839).
Dacnis protonotaria, *Audub. B. Amer.* pl. iii.
Sylvicola protonotaria, *Richards. Rep. Brit. Assoc.* 1836–37, p. 171.
Vermivora protonotarius, *Jard. ed. Wils. Amer. Orn.* i. p. 362, pl. 24. fig. 3 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 21 (1838).
Helinaia protonotarius, *Audub. Syn.* p. 67 (1839); *id. B. Amer.* ii. p. 89, pl. 106 (1841).
Sylvicola auricollis, *Nuttall, Man.* 1840, p. 431.
Mniotilta citrea, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 239, no. 3454 (1869).

Mniotilta auricollis, *Gray, Gen. B.* i. p. 196 (1848).
Helmitheros protonotarius, *Bp. Consp.* i. p. 314 (1850).
Helminthophaga protonotarius, *Cab. Mus. Hein.* Th. i. p. 20 (1850).
Protonotaria citrea, *Baird, B. N. Amer.* p. 239 (1858); *Gundl. J. f. O.* 1861, p. 324; *Scl. Cat. Amer. B.* p. 26 (1862); *Baird, Review Amer. B.* p. 173 (1865); *Lawr. Ann. Lyc. N. Y.* ix. p. 94 (1868); *Von Frantz. J. f. O.* 1869, p. 292; *Scl. & Salv. P. Z. S.* 1870, p. 780; *Coues, Key N. Amer. B.* p. 93 (1872); *Snow, B. Kansas*, p. 4 (1873); *Scl. & Salv. Nomencl. Av. Neotr.* p. 8 (1873); *Coues, B. N.-West*, p. 47 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 184, pl. 10. fig. 8 (1874); *Gundl. Orn. Cuba*, p. 62 (1876); *Coues, B. Color. Vall.* p. 210, note (1878); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 171 (1880); *Salvin & Godm. Biol. Centr.-Amer., Aves*, i. p. 111 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881); *Coues, Check-list*, p. 34 (1882); *id. Key N. Amer. B.* 2nd ed. p. 291 (1884).
Helminthophaga citrea, *Cab. J. f. O.* 1861, p. 85.

Adult male. General colour above olive-yellow on the mantle and upper back, the lower back, rump, and upper tail-coverts clear slaty grey; lesser and median wing-coverts like the back; greater series clear slaty grey, slightly washed with olive-yellow; bastard-wing feathers black, internally washed with slaty grey and rather broadly edged with white; primary-coverts and quills blackish, externally slaty grey; centre tail-feathers dark slaty grey, with longitudinal blackish centres, the remainder black, edged with slaty grey, the inner webs white except at the ends, which are blackish like the outer web; entire head and hind neck golden yellow; entire face, sides of neck, and under surface of body also golden yellow, including the thighs; under tail-coverts white; axillaries and under wing-coverts white, externally bright yellow, the edge of the wing brilliant yellow; quills dusky below, ashy white along the inner web: "bill brownish black; feet and claws greyish blue; iris hazel" (*Audubon*). Total length 5·4 inches, culmen 0·65, wing 2·85, tail 2, tarsus 0·7.

Adult female. Similar to the male, but duller in colour, and the head and neck washed with the olive-yellow of the back; the yellow of the under surface paler than in the male. Total length 4·5 inches, culmen 0·6, wing 2·7, tail 1·8, tarsus 0·7.

Hab. Eastern United States, rather southerly; north casually to Maine and New Brunswick; west to Missouri, Kansas, Indian Territory, and Texas (*Coues*). Winters in Central America from Mexico to Panama (*S. & G.*). Colombia and Venezuela. Cuba.

a. Ad. sk.	North America.	Zoological Society.
b. ♂ ad. sk.	Chicago, Illinois, May 11 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.]
c. ♂ ad. sk.	Hyde Park, Illinois, April 26 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.]
d. ♂ ad. sk.	Wheatland, Indiana, April 17 (*R. Ridgway*).	U.S. Nat. Museum [P.]
e. ♀ ad. sk.	Knox Co., Indiana, May 25 (*R. Ridgway*).	U.S. Nat. Museum [P.]
f. Ad. sk.	Santa Martha, Colombia.	Sclater Collection.

5. MNIOTILTA.

Type.
Mniotilta, *Vieill. Analyse*, p. 45 (1816) ..... M. varia.
Oxyglossus, *Swains. Zool. Journ.* iii. p. 357 (1828) ..... M. varia.

Range. Whole of North America, ranging in winter throughout Central America to Colombia, Venezuela. Jamaica; Cuba; S. Domingo.

1. Mniotilta varia*.

? The Small Black and White Creeper, *Sloane, N. H. Jamaica*, ii. p. 309, pl. 265. fig. 1 (1725).
Black and White Creeper, *Edwards, Gleanings*, vi. p. 191, pl. 300 (1760).
Le Figuier varié de S. Domingue, *Briss. Orn.* iii. p. 529, pl. 27. fig. 5 (1760).
Motacilla varia, *Linn. Syst. Nat.* i. p. 333; *Gm. Syst. Nat.* i. p. 979 (1788).
Le Figuier varié, *Buff. Hist. Nat. Ois.* v. p. 305 (1778).
White-poll Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 488 (1783); *Penn. Arctic Zool.* ii. p. 293 (1785).
Sylvia varia, *Lath. Ind. Orn.* ii. p. 539 (1790).
Certhia picta, *Bartr. Trav. Florida*, p. 289 bis (1791).
Le Grimpereau varié, *Audeb. et Vieill. Ois. Dor.* i. p. 111, pl. 74 (1802).
Certhia varia, *Vieill. Ois. Amér. Sept.* ii. p. 69 (1807); *Audub. B. Amer.* pl. 90; *id. Orn. Biogr.* i. p. 452 (1831).
Certhia maculata, *Wils. Amer. Orn.* iii. p. 23, pl. 19. fig. 3 (1811).
Mniotilta varia, *Vieill. et Oud. Gal. Ois.* i. p. 276, pl. 169 (1825); *Bp. Comp. List B. Eur. & N. Amer.* p. 11 (1838); *Audub. Syn.* p. 71 (1839); *id. B. Amer.* ii. p. 105, pl. 114 (1839); *Gosse, B. Jamaica*, p. 134 (1847); *Gray, Gen. B.* i. p. 196 (1848); *Bp. Consp.* i. p. 311 (1850); *Lembeye, Av. Cuba*, p. 68, pl. 10. fig. 1 (1850); *Gundl. J. f. O.* 1855, p. 475; *Scl. P. Z. S.* 1855, p. 143, 1856, pp. 140, 291, 1858, p. 208; *Neuwied, J. f. O.* 1858, p. 108; *Baird, B. N. Amer.* p. 235 (1858); *A. & E. Newt. Ibis*, 1859, p. 143; *Scl. & Salv. t. c.* p. 10; *Scl. P. Z. S.* 1859, pp. 363, 373; *Bryant, Pr. Bost. Soc. N. H.* vii. p. 110 (1859); *Lawr. Ann. Lyc. New York*, vii. p. 322 (1861); *Gundl. J. f. O.* 1861, p. 326; *Scl. P. Z. S.* 1861, p. 70; *id. Cat. Amer. B.* p. 25 (1862); *March, Proc. Philad. Acad.* 1863, p. 293; *Scl. P. Z. S.* 1864, p. 172; *Baird, Review Amer. B.* p. 167 (1865); *Lawr. Ann. Lyc. N. Y.* viii. p. 174 (1865), p. 283 (1866); *Dresser, Ibis*, 1865, p. 476; *Salv. P. Z. S.* 1867, p. 135; *Lawr. Ann. Lyc. N. Y.* ix. p. 93 (1868); *Von Frantz. J. f. O.* 1869, p. 292; *Sumichr. Mem. Bost. Soc. N. H.* i. p. 546 (1869); *Gray, Hand-l. B.* i. p. 238, no. 3447 (1869); *Scl. & Salv. P. Z. S.* 1870, p. 780; *Wyatt, Ibis*, 1871, p. 322; *Allen, Bull. Mus. Comp. Zool. Cambr.* iii. p. 175 (1872); *Coues, Key N. Amer. B.* p. 92 (1872); *Snow, B. Kansas*, p. 4 (1873); *Scl. & Salv. Nomencl. Av. Neotr.* p. 8 (1873); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 269 (1874); *Coues, B. N.-West*, p. 45 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 180, pl. 10. fig. 6 (1874); *Gundl. Orn. Cuba*, p. 63 (1876); *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 15 (1876); *Coues, B. Color. Vall.* p. 204, note (1878);

* Long usage has familiarized ornithologists with this name for the Black and White Creeper; but I am not at all sure that Sloane's description, on which Linnæus founded his *Motacilla varia*, does not really apply to *Dendroica pharetra*.

Merrill, Proc. U.S. Nat. Mus. i. p. 122 (1878); *Coues, Bull. U.S. Geol. Surv.* iv. p. 563 (1878); *Cory, B. Bahamas*, p. 54 (1880); *Salv. & Godm. Ibis*, 1880, p. 117; *iid. Biol. Centr.-Amer., Aves*, i. p. 110 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881); *A. & E. Newt. Handb. Jamaica*, p. 105 (1881); *Coues, Check-list*, p. 34 (1882); *Boucard, P. Z. S.* 1883, p. 440; *Tristr. Ibis*, 1884, p. 168; *Coues, Key N. Amer. B.* 2nd ed. p. 290 (1884); *Cory, B. St. Domingo*, p. 23 (1884).

Oxyglossus maculatus, *Swains. Zool. Journ.* iii. p. 357 (1828).

Sylvicola varia, *Jard. ed. Wils. Amer. Orn.* i. p. 314, pl. 19. fig. 3 (1832); *Richards. Rep. Brit. Assoc.* 1836–37, p. 172; *Bryant, Proc. Bost. Soc. N. Hist.* xi. p. 91 (1867).

Nectarinia varia, *Hahn & Küst. Orn. Atlas*, Lief. viii. Taf. 4 (1834).

Mniotilta borealis, *Nutt. Man.* i. p. 705 (1840).

Mniotilta varia, var. longirostris, *Baird, B. N. Amer.* p. xxxi (1858).

Mniotilta varia, var. borealis, *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881); *Coues, Check-list*, p. 34 (1882); *Ridgw. Bull. Nutt. Orn. Club*, vii. p. 17 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 290 (1884).

Adult male. General colour above ashy, streaked with black and white, the feathers glossy black in the centre, edged with hoary grey; rump and upper tail-coverts black, the lateral ones broadly edged with white; lesser wing-coverts glossy black; median and greater series black, tipped with white, more broadly on the median coverts, the inner ones of which are broadly edged with white; bastard-wing black, with a long white spot at the end of the inner web; primary-coverts black; quills black, edged with slaty grey, the inner secondaries more broadly with white; tail-feathers black, broadly edged with slaty grey, the centre feathers slaty grey with black centres, the penultimate ones with a white spot at the end of the inner web, larger on the outer feather; centre of crown and nape pure white, the forehead and sides of crown glossy black, skirting the white central streak on either side; lores black; a broad white eyebrow, extending along the sides of the head to the hind neck; eyelid white; ear-coverts glossy black; cheeks white; throat black, the feathers edged with hoary white; fore neck, breast, and abdomen pure white, the sides of the breast and flanks broadly streaked with glossy black centres; thighs white; under tail-coverts white, with black centres to the feathers; under wing-coverts and axillaries white; quills dusky below, white along their inner edge: "bill black; feet dusky yellow; iris hazel" (*Audubon*). Total length 5 inches, culmen 0·5, wing 2·7, tail 1·9, tarsus 0·65.

Adult female. Resembling the male on the upper surface, but not so richly coloured and somewhat washed with brown; facial markings as in the male, but with the ear-coverts dusky brown streaked with black; no black on the throat, the under surface of the body being white from the chin to the under tail-coverts, the latter having black bases; flanks washed with brown, the sides of the breast and flanks indistinctly streaked with blackish brown. Total length 4·5 inches, culmen 0·45, wing 2·6, tail 1·9, tarsus 0·6.

Young female in first autumn plumage. Very similar to the full-plumaged female, but still more strongly suffused with brown,

which pervades the whole of the white on the upper surface and is especially strong on the cheeks and sides of body, flanks, and under tail-coverts.

The adult female in winter plumage does not perceptibly differ from the summer dress; it is perhaps a trifle more washed with brown on the lower back and rump, and the dusky streaks on the lower parts are not so pronounced.

The adult male in winter plumage differs from the summer plumage in having the ear-coverts ashy grey instead of black, and in having the under surface white, through which, however, the black streaks are more or less perceptible, so that the under surface is strongly mottled. Many specimens gain the full summer dress before leaving their winter home, and are then precisely similar to examples from northern localities.

"Northerly specimens are said to have the bill shorter and straighter" (*Coues*). Recent American authors have separated them as *M. borealis*, but Dr. Coues (*l. c.*) does not seem to believe that they are even subspecifically distinct from *M. varia*.

Hab. Eastern North America, west to Dakota, but not, as far as is known, to the Rocky Mountains, in any portion of the United States; north to the Fur Countries. Breeds throughout its North-American range (*Coues*). Winters in the southern borders of the United States (*Coues*), and throughout Central America to Colombia and Venezuela (*S. & G.*). Jamaica; Cuba; S. Domingo.

a. ♂ ad. sk.	Fort Simpson, June.	B. R. Ross, Esq. [P.].
b. ♀ ad. sk.	49th Parallel, May 18 (*Dawson*).	N. A. B. Commission [P.].
c, d. ♂ ♀ ad. sk.	Niagara Falls (*J. G.*).	Gould Collection.
e. ♀ ad. sk.	Oyster Bay, Long Island, June 1 (*Roosevelt*).	U.S. Nat. Museum [P.].
f. ♂ ad. sk.	Chicago, May 11 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
g. ♀ sk.	Halfday, Illinois, Aug. 20 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
h. ♂ ad. sk.	Hyde Park, Illinois, May 11 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
i. ♀ ad. sk.	Colehour, Illinois, Sept. (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
k. ♂ ad. sk.	Mt. Carmel, Ill., May (*S. Turner*).	R. B. Sharpe, Esq. [P.].
l. ♂ ad. sk.	Washington, D.C. (*Shufeldt*).	U.S. Nat. Museum [P.].
m. ♂ ad sk.	Washington, D.C., April 27 (*R. Ridgway*).	U.S. Nat. Museum [P.].
n. Ad. sk.	Guatemala.	Gould Collection.
o. Ad. sk.	Guatemala (*Constancia*).	Sclater Collection.
Ad. sk.	Bogotá.	Sclater Collection.
Ad. sk.	Bogotá.	J. Purdie, Esq. [P.].
, s. Ad. sk.	Bogotá.	Purchased.
t. Ad. sk.	Venezuela.	Mr. Dyson [C.].
u, v. Ad. sk.	Jamaica.	Sclater Collection.
w. Ad. sk.	Jamaica.	Capt. Hamilton [P.].
x. Ad. sk.	Jamaica.	Purchased.

6. PARULA*.

Type.

Chloris, *Boie, Isis*, 1826, p. 972 (*nec Cuv.* 1792)..... P. americana.
Sylvicola, *Swains. Zool. Journ.* iii. p. 169 (1827, *nec Harris*, 1782) ..... P. americana.
Parula, *Bp. Comp. List B. Eur. & N. Amer.* p. 20 (1838) ..... P. americana.
Compsothlypis, *Cab. Mus. Hein.* Th. i. p. 20 (1850) .. P. americana.
Oreothlypis, *Stejneger, Auk*, 1884, p. 168 † ..... P. superciliosa.

Cf. *Stejneger, Auk*, 1884, pp. 168–170.

Range. North America. Central America, and South America to Southern Brazil and Bolivia.

Key to the Species.

a. Rump and upper tail-coverts olive-yellow like the back; no white bands on wing-coverts; a broad white eyebrow ..... *superciliosa*, p. 255.
b. Rump and upper tail-coverts slaty blue or blue-grey like the head; mantle olive-yellow.
a'. With a double wing-bar, formed by the white tips to the median and greater coverts.
a''. With a black patch on lower throat, followed by a chestnut patch; rest of throat and fore neck yellow; breast white, with a vinous patch on the sides of the upper breast.... *americana* ♂, p. 257.
b''. No chestnut patch on the throat, which is yellow, sometimes deepening to orange.
a'''. Lores and feathers below the eye black.
*a*⁴. Abdomen yellow like the breast. *pitiayumi* ♂ ♀, p. 259.
*b*⁴. Abdomen white..... *nigrilora* ♂, p. 261.
b'''. Lores and feathers below the eye ashy.
*c*⁴. Eyelid white; a distinct white spot on the outer tail-feathers. *americana* ♀, p. 258.
*d*⁴. No white eyelid; outer tail-feathers edged with white near the end of the inner web .... *insularis* ♂ ♀, p. 262.
b'. With a single wing-bar formed by the tips to the greater coverts ..... *inornata* ♂ ♀, p. 260.
c. Rump and upper tail-coverts slaty grey like the head; mantle black; throat and breast brilliant orange, approaching scarlet ..... *gutturalis*, p. 263.

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* Dr. Stejneger would supersede *Parula* of Bonaparte by *Compsothlypis* Cabanis, because Spix has already described a genus *Parulus*; but on th principle *Pica* must be suppressed on account of its resemblance to *Picus*.

† *Parula superciliosa* and *P. gutturalis*, generically separated by Dr. Stejneger, seem to me to be only thick-billed *Parulæ*.

1. Parula superciliosa.

Conirostrum superciliosum, *Hartl. Rev. Zool.* 1844, p. 215.
Sylvia mexicana, *Licht. MSS. in Mus. Berol.*, undè
Compsothlypis mexicana, *Cab. Mus. Hein.* Th. i. p. 21 (1850).
Parula mexicana, *Bp. Consp.* i. p. 310 (1850).
Parula superciliosa, *Sclater, P. Z. S.* 1858, p. 299, 1859, p. 373; *Scl. & Salv. Ibis*, 1859, p. 10; *Scl. Cat. Amer. B.* p. 26 (1862); *Baird, Review Amer. B.* p. 171 (1865); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 545 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 8 (1873); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 122, pl. viii. fig. 2 (1880).
Mniotilta superciliosa, *Gray, t. c.* p. 238, no. 3450 (1869).
Mniotilta mexicana, *Gray, Hand-l. B.* i. p. 238, no. 3453 (1869).
Oreothlypis superciliosa, *Stejn. Auk*, 1884, p. 169.

Adult male. General colour above olive-yellow; lesser wing-coverts like the back; median coverts ashy grey, the greater series and bastard-wing dusky, externally ashy grey; primary-coverts and quills dusky, narrowly edged with slaty grey, the secondaries more broadly washed with the same colour, the primaries edged with slaty grey; upper tail-coverts slaty grey; centre tail-feathers slaty grey, longitudinally blackish along the shafts, the remainder of the feathers dusky brown, externally slaty grey, fringed with white near the end of the inner web, the outer feathers more broadly margined; crown of head, nape, and hind neck slaty grey; lores and feathers below the eye blackish; a broad white eyebrow from the sides of the neck to the sides of the nape; feathers round the eye white above and below, black in front and behind; ear-coverts slaty grey, blackish on the upper part; cheeks, throat, and breast golden yellow, with a large spot of chestnut on the lower throat; sides of neck slaty grey; sides of fore neck and sides of breast olive-green; abdomen whitish; sides of body and flanks pale ashy brown washed with olive; thighs white; under tail-coverts white; under wing-coverts and axillaries white, the edge of the wing yellow; quills dusky below, whitish on the inner web: "bill blackish, lower mandible pale at base; legs brown" (*Salvin and Godman*). Total length 4·3 inches, culmen 0·5, wing 2·55, tail 1·8, tarsus 0·65.

Adult female. Differs from the male in being rather paler slaty grey on the head, and especially on the sides of the face and sides of neck; the under surface of body similar to that of the male but rather paler yellow, and with the patch of chestnut on the throat smaller and paler in colour. Total length 4·7 inches, culmen 0·5, wing 2·4, tail 1·85, tarsus 0·65.

In the Salvin-and-Godman collection is a bird marked "female," from the Volcan de Fuego, which is scarcely to be distinguished from the adult male. It is equally brightly coloured on the head and underparts, but has the chestnut throat-patch rather smaller.

Another skin from the Volcan de Fuego is apparently a younger female and has only a few chestnut-tipped feathers where the throat-patch is coming. From the variation in size in this throat-patch, it would appear that it is gradually assumed, and is probably smaller in young than it is in old birds.

In the very young stage the head is apparently olive-yellow like the back, or only slightly greyer; white eyebrow slightly tinged with yellow; throat ashy brownish; abdomen white. [Description taken from a female bird in the Salvin-and-Godman collection, from Ciudad Durango, Mexico, June 20th (*A. Forrer*). The specimen is in full moult, the yellow throat being assumed.]

Hab. Central America, from Mexico to Guatemala.

a. ♂ ad. sk.	La Parada, South Mexico (*Sallé*).	Sclater Collection.
b, *c*. ♂ ♀ ad. sk.	La Parada, South Mexico.	M. A. Sallé [C.].
d. ♂ ad. sk.	S. Mexico, December.	M. A. Sallé [C.].
e. ♂ ad. sk.	Guatemala.	Gould Collection.
f. Imm. sk.	Volcan de Fuego, Guatemala, Aug. 9 (*O. Salvin*).	Sclater Collection.

2. Parula americana.

The Finch Creeper, *Catesby, N. H. Carol.* i. p. 64, pl. 64 (1731).
Le Figuier cendré de la Caroline, *Briss. Orn.* iii. p. 522 (1760); *Daubent. Pl. Enl.* v. pl. 731. fig. 1.
Le Figuier de la Louisiane, *Briss. Orn.* iii. p. 500, pl. 26. fig. 4 (1760).
Parus americanus, *Linn. Syst. Nat.* i. p. 341 (1766); *Gm. Syst. Nat.* i. p. 1007 (1788).
Le Figuier cendré à collier, *Buff. H. N. Ois.* v. p. 301 (1778).
Motacilla eques, *Bodd. Tabl. Pl. Enl.* p. 46 (1783).
Yellow-backed Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 440 (1783).
Louisiane Warbler, *Lath. t. c.* p. 480 (1783); *Penn. Arctic Zool.* ii. p. 407 (1785).
Creeping Titmouse, *Lath. t. c.* p. 558 (1783); *Penn. t. c.* p. 423 (1785).
Motacilla americana, *Gm. Syst. Nat.* i. p. 960 (1788).
Sylvia americana, *Lath. Ind. Orn.* ii. p. 520 (1790); *Audub. B. Amer.* pl. 15; *id. Orn. Biogr.* i. p. 78 (1831); *D'Orb. in Ramon de la Sagra H. N. Cuba*, p. 62 (1838).
Sylvia ludoviciana, *Lath. Ind. Orn.* ii. p. 535 (1790).
Parus varius, *Bartr. Trav. Florida*, p. 292 (1791).
Sylvia torquata, *Vieill. Ois. Amér. Sept.* p. 38, pl. 99 (1807).
Sylvia pusilla, *Wils. Amer. Orn.* iv. p. 17, pl. 28. fig. 3 (1811).
Thriothurus torquatus, *Steph. Gen. Zool.* xiv. p. 194 (1826).
Sylvicola pusilla, *Swains. Zool. Journ.* iii. p. 169 (1828).
Motacilla ludoviciana, *Less. Traité*, i. p. 418 (1831).
Sylvicola americana, *Jard. ed. Wils. Amer. Orn.* ii. p. 6 (1832); *Richards. Rep. Brit. Assoc.* 1836–37, p. 172; *Audub. Syn.* p. 59 (1839); *id. B. Amer.* ii. p. 57, pl. 91 (1841); *Scl. P. Z. S.* 1857, p. 202; *Neuwied, J. f. O.* 1858, p. 116.

Parula americana, *Bp. Comp. List B. Eur. & N. Amer.* p. 20 (1838); *Goose, B. Jamaica*, p. 154 (1847); *Bp. Consp.* i. p. 310 (1850); *Baird, B. N. Amer.* p. 238 (1858); *Scl. & Salv. Ibis*, 1859, p. 10; *A. & E. Newt. t. c.* p. 143; *Cass. Proc. Philad. Acad.* 1860, p. 376; *Scl. P. Z. S.* 1861, p. 70; *Gundl. J. f. O.* 1861, p. 326; *Scl. Cat. Amer. B.* p. 26 (1862); *March, Proc. Philad. Acad.* 1863, p. 293; *Baird, Review Amer. B.* p. 169 (1865); *Dresser, Ibis*, 1865, p. 476; *Lawr. Ann. Lyc. N. Y.* viii. p. 283 (1866), ix. p. 200 (1869); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 546 (1869); *Allen, Bull. Mus. Comp. Zool. Cambr.* ii. p. 267 (1871), iii. pp. 124, 175 (1872); *Coues, Key. N. Amer. B.* p. 93 (1872); *Gundl. J. f. O.* 1872, p. 411; *Scl. & Salv. Nomencl. Av. Neotr.* p. 8 (1873); *Coues, B. N.-West*, p. 46 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 48, pl. 10. fig. 7 (1874); *Newt. B. Greenl.* p. 98 (1875); *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 15 (1876); *Gundl. Orn. Cuba*, p. 62 (1876); *Coues, B. Color. Vall.* p. 208 (1878); *Sennett, Bull. U.S. Geol. Surv.* iv. p. 11 (1878); *Merrill, Proc. U.S. Nat. Mus.* i. p. 123 (1878); *Cory, B. Bahamas*, p. 55 (1880); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 119 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881); *A. & E. Newt. Handb. Jamaica*, p. 105 (1881); *Coues, Check-list*, p. 34 (1882); *Cory, B. S. Domingo*, p. 24 (1884); *Coues, Key N. Amer. B.* 2nd ed. p. 200 (1884).

Mniotilta americana, *Gray, Gen. B.* i. p. 196 (1848); *Reinh. Ibis*, 1861, p. 6; *Gray, Hand-l. B.* i. p. 238, no. 3448 (1869).

Compsothlypis americana, *Cab. Mus. Hein.* Th. i. p. 20 (1850); *Gundl. J. f. O.* 1855, p. 476; *Stejn. Auk*, 1884, p. 170.

Adult male. General colour above clear slaty blue, the upper back bronzy olive-yellow; scapulars and lesser wing-coverts like the back; median series bluish white at the ends, forming a wing-band; greater coverts blackish, externally slaty blue and tipped with white, forming a second wing-band; bastard-wing feathers black, narrowly fringed with slaty blue; primary-coverts and quills blackish, margined with slaty blue, broader on the secondaries, which have also a slight tinge of olive; centre tail-feathers slaty blue with blackish centres, the remainder blackish, fringed with white on the end of their inner webs, the two outer ones with a large subterminal spot of white on the inner web; crown of head and hind neck slaty blue; loral region, feathers round and below the eye, as well as the fore part of the cheeks, blackish; below the eye a white spot; remainder of cheeks, ear-coverts, and sides of neck slaty blue; throat golden yellow, the feathers with black bases, as they approach a black spot on the lower throat, the feathers of which are edged with golden yellow; below the black a conspicuous patch of orange-rufous, succeeded by a yellow breast-patch; the slaty blue of the sides of the neck descending on to the sides of the upper breast; lower breast and abdomen white, flushed with slaty blue on the flanks; on each side of the lower breast a patch of delicate vinaceous brown; thighs ashy, edged with white; under tail-coverts white; axillaries and under wing-coverts white; quills dusky below, white along the edge of the inner web: "bill brownish black above, yellow beneath; feet and

claws dusky; iris dark brown" (*Audubon*). Total length 4·2 inches, culmen 0·45, wing 2·45, tail 1·7, tarsus 0·65.

Adult female. Differs from the male in being less pure slaty blue, these parts having a slight wash of yellowish olive; the white tips to the wing-coverts not so broad and the wing-bars in consequence not so distinct; the spots on the outer tail-feathers smaller; underneath, the throat and breast are yellow, with a little orange on the fore neck and a slight appearance of blackish bases to the feathers of the lower throat; the white spot below the eye is well marked, and there is a slight appearance of a narrow white eyebrow; the vinaceous patches on either side of the breast are wanting altogether or are almost obsolete. Total length 4·2 inches, culmen 0·4, wing 2·15, tail 1·85, tarsus 0·6.

The winter plumage of both sexes is like that of the adult female, the blue of the upper surface being entirely washed with olive-yellow. Males can be distinguished by the somewhat deeper yellow of the throat, and in the adult bird some traces of the chestnut and black can be discovered below the yellow tips to the feathers, and the vinaceous breast-patches still remain.

Young birds of either sex in their winter plumage, however, cannot be told from the adult females, and show little or no trace of the throat-markings below the yellow feathers. As in the old hen bird, also, there is a slight trace of a whitish eyebrow.

Adult males on their return to the United States often show a good deal of olive shading on the blue of the head, being the remains of their winter plumage, and the yellow tips to the plumes of the fore neck gradually wear off, allowing the black and chestnut throat-patches to become distinct.

The variation in the number of white spots on the outer tail-feathers is curious: sometimes the third tail-feather has a small white spot near the end, but this is often obsolete, and occasionally it is present on one side of the tail and absent on the other.

Hab. North America as far as the foot of the Rocky Mountains. Winters in Central America from Mexico to Guatemala; Bahamas, Cuba, Jamaica, S. Croix, S. Domingo.

a. [♂] ad. st.	North America.	J. Gould, Esq. [P.].
b. ♂ ad. sk.	North America.	Sclater Collection.
c. ♂ ad. sk.	North America.	Gould Collection.
d. ♂ ad. sk.	North America.	J. J. Audubon, Esq. [P.].
e. ♂ ad. sk.	Wisconsin, May 8.	Dr. Brewer [P.].
f. ♂ ad. sk.	St. Louis County, Missouri, May 22 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
g. ♂ ad. sk.	Illinois, May (*H. K. Coale*).	R. B. Sharpe, Esq. [P.]
h, *i*. ♀ ad. et juv. sk.	Illinois, Sept. (*H. K. Coale*).	R. B. Sharpe, Esq. [P.
k. ♀ ad. sk.	Michigan, May (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
l. ♂ ad. sk.	Massachusetts (*Wight*).	R. B. Sharpe, Esq. [P.].
m. ♂ ad. sk.	Washington, D.C., May 16 (*Prentiss*).	R. B. Sharpe, Esq. [P.].

n, *o*. ♂ ♀ ad. sk.	Knox County, Indiana, April (*R. Ridgway*).	U.S. Nat. Museum [P.].
p. juv. sk.	Guatemala.	Gould Collection.
q. ♀ ad. sk.	Jamaica.	Purchased.
r. [♂] ad. sk.	Jamaica.	P. H. Gosse, Esq. [C.].
s. [♂] ad. sk.	Jamaica.	Sclater Collection.
t. [♂] ad. sk.	S. Domingo.	M. A. Sallé [C.].
u. [♀] hiem. sk.	Porto Rico (*Bryant*).	Sclater Collection.
v. [♂] hiem. sk.	Porto Rico.	Dr. Bryant [P.].

3. Parula pitiayumi. (Plate XI. fig. 1.)

Pico de Punzou celeste pecho de Oro, *Azara, Apunt.* i. p. 421 (1802).
Sylvia pitiayumi, *Vieill. N. Dict. d'Hist. Nat.* xi. p. 276 (1817).
Sylvia venusta, *Temm. Pl. Col.* iii. pl. 293. fig. 1 (1824); *d'Orb. Voy. Amér. mérid.* iv. p. 218 (1844).
Sylvia plumbea, *Swains. Zool. Illustr.* iii. pl. 139 (1822–23).
Sylvia brasiliana, *Licht. Verz. Doubl.* p. 35 (1823).
Sylvicola minuta, *Swains. Classif. B.* ii. p. 245 (1837).
Sylvicola venusta, *Hartl. Ind. Azara*, p. 8 (1844); *Burm. Th. Bras.* iii. p. 116 (1856); *id. Reis. La Plata St.* ii. p. 473 (1861).
Mniotilta venusta, *Gray, Gen. B.* i. p. 196 (1848).
Parula brasiliana, *Bp. Consp.* i. p. 310 (1850); *Scl. P. Z. S.* 1859, p. 137†, 1860, p. 273†.
Compsothlypis pitiayumi, *Cab. Mus. Hein.* Th. i. p. 21 (1850); *Stejn. Auk*, 1884, p. 170.
Compsothlypis brasiliana, *Scl. P. Z. S.* 1855, p. 143†.
Parula pitiayumi, *Scl. Cat. Amer. B.* p. 26 (1862); *Baird, Review Amer. B.* p. 170 (1865); *Scl. & Salv. P. Z. S.* 1868, pp. 166, 627†; *Scl. P. Z. S.* 1869, p. 631; *Pelz. Orn. Bras.* p. 71 (1871); *Hamilton, Ibis*, 1871, p. 302; *Wyatt, t. c.* p. 322†; *Scl. & Salv. Nomencl. Av. Neotr.* p. 8 (1873); *iid. P. Z. S.* 1876, p. 16†; *Berlepsch, J. f. O.* 1873, p. 231; *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 207 (1874); *Durnf. Ibis*, 1876, p. 158, 1877, p. 168; *Tacz. P. Z. S.* 1877, p. 319, 1879, p. 223†; *Scl. & Salv. P. Z. S.* 1879, p. 593†; *Salv. & Godm. Ibis*, 1880, p. 117†; *Durnf. t. c.* p. 419; *Salv. t. c.* p. 352; *White, P. Z. S.* 1882, p. 594; *Berlepsch & Tacz. P. Z. S.* 1883, p. 541†; *Barrows, Bull. Nutt. Orn. Club*, viii. p. 87 (1883); *Tacz. Orn. Pérou*, p. 46 (1884)†.
Mniotilta pitiayumi, *Gray, Hand-l. B.* i. p. 238, no. 3449 (1869).
Parula pitiayumi pacifica, *Berlepsch, P. Z. S.* 1884, p. 286.

Adult. General colour above clear slaty blue, the mantle and upper back olive-yellow; lesser wing-coverts clear slaty blue; median and greater coverts blackish, externally slaty blue, tipped with white on the outer web, forming a double wing-bar; bastard-wing blackish, with a narrow white fringe to the outer feathers; primary-coverts dusky blackish, with obsolete margins of slaty grey; quills blackish, externally edged with slaty blue, hoary whitish near the end of the primaries, the secondaries fringed with white at the tips; centre tail-feathers slaty blue like the upper tail-coverts, with a longitudinal mark of black near the shaft of the feathers; remainder of the tail-feathers blackish, externally edged with slaty blue, fringed with white near the end of the inner web; the two outer feathers with a large subterminal spot of white on the inner web; head and hind neck slaty blue; lores and a narrow line along

the extreme base of the forehead black, as well as the feathers round and below the eye; a line extending from the angle of the mouth below the eye and the ear-coverts slaty blue; cheeks and under surface of body brilliant yellow, inclining to orange on the lower throat and fore neck; lower abdomen, thighs, and under tail-coverts white; sides of body washed with ashy; sides of vent and lower flanks white; axillaries and under wing-coverts white; edge of wing grey; quills dusky below, white along the edge of the inner web: "upper mandible black, the lower one clear yellow; legs clear fleshy brown; iris brown" (*Burmeister*); "legs pale yellow" (*Durnford*). Total length 4 inches, culmen 0·45, wing 2·05, tail 1·55, tarsus 0·65.

Adult female. Paler in colour than the male, the grey more ashy and less distinctly blue; the mantle-patch smaller and duller olive; wing-bands less distinct, those on the median series ashy, obscuring the white tips to the feathers; lores and feathers below the eye dusky blackish, with a slightly indicated line of whitish above the lores; under surface of body paler yellow, without any tinge of orange on the throat. Total length 4·7 inches, culmen 0·45, wing 2, tail 1·6, tarsus 0·65.

Hab. The whole of Brazil, extending westwards to Tucuman. In Bolivia, Peru, Ecuador, Colombia, Venezuela, and Guiana the birds are darker and more richly coloured, showing a decided approach to *P. inornata*. It is to this dark race that Von Berlepsch has applied the name of *P. pacifica*, and the synonyms appertaining to it have been marked above with a dagger (†).

a. Ad. st.	South America.	J. Gould, Esq.
b, *c*. [♂] ad. sk.	Brazil.	Gould Collection.
d. [♂] ad. sk.	Brazil.	M. Claussen [P.].
e. ♀ ad. sk.	Conchitas, Buenos Ayres, Sept. (*W. H. Hudson*).	Sclater Collection.
f. [♀] ad. sk.	Paysandu, Banda Oriental, August.	Alan Peel, Esq. [C.].
g. [♂] ad. sk.	[Chili.]	Gould Collection.
h. [♂] ad. sk.	[Chili.]	Zoological Society.
i. [♂] ad. sk.	Quito, Ecuador.	Gould Collection.
k. ♂ ad. sk.	Babahoyo, July (*Fraser*).	Sclater Collection.
l. ♂ ad. sk.	Pallatanga, August (*Fraser*).	Sclater Collection.
m, *n*. [♂ ♀] ad. sk.	Bogotá.	Sclater Collection.

Subsp. *a*. Parula inornata.

Parula brasiliana (*nec Licht.*), *Salv. & Sel. Ibis*, 1860, p. 397.
Parula inornata, *Baird, Review Amer. B.* p. 171 (1865); *Lawr. Ann. Lyc. N. Y.* ix. p. 93 (1868); *Von Frantz. J. f. O.* 1869, p. 292; *Salv. P. Z. S.* 1870, p. 182; *Scl. & Salv. Nomencl. Av. Neotr.* p. (1873); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 120, pl. v fig. 1 (1880).
Mniotilta inornata, *Gray, Hand-l. B.* i. p. 238, no. 3451 (1869).
Parula pitiayumi, var. inornata, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 208 (1874).
Compsothlypis pitiayumi inornata, *Stejn. Auk*, 1884, p. 193.

Adult male. General colour above dark slaty blue, with a broad

patch of olive-yellow across the mantle and upper back; lesser wing-coverts like the back; median coverts also slaty blue, with blackish bases; greater coverts blackish, externally slaty blue, with a white spot at the end of the outer ones, forming a wing-bar; bastard-wing black; primary-coverts and quills blackish, externally margined with slaty blue, paler and more hoary blue on the edge of the primaries; tail-feathers blackish, edged externally with slaty blue, the centre ones of the latter colour with black centres, the outer feathers with a large white mark near the end of the inner web, decreasing in size on the penultimate feather and very much smaller on the third one; head and hind neck dark slaty blue; lores and a line across the base of the forehead, feathers round and below the eye black; ear-coverts dark slaty blue, shaded anteriorly with black; sides of neck dark slaty blue; cheeks and under surface of body rich deep yellow, orange on the throat and breast, the flanks washed with olive, with several longitudinal streaks of greenish black, very distinct on the sides of the upper breast; thighs slaty grey, edged with white; under tail-coverts white; under wing-coverts and axillaries white; quills blackish below, white along the edge of the inner web. Total length 4·2 inches, culmen 0·45, wing 2·15, tail 1·7, tarsus 0·65.

Adult female. Much paler than the male, the olive-yellow patch on the mantle smaller, the black on the side of the face less pronounced, and the under surface of the body much paler. Total length 3·7 inches, culmen 0·45, wing 1·85, tail 1·4, tarsus 0·6.

Hab. Central America, from Guatemala to Costa Rica and Panama.

a. ♀ ad. sk.	Costa Rica (*Carmiol*).	Sclater Collection.
b. Imm. sk.	Costa Rica.	Mr. Van Patten [C.].
c. [♂] ad. sk.	Chiriqui, Veragua (*Arcé*).	Osbert Salvin, Esq.
d, e. ♂ ♀ ad. sk.	Chiriqui, Veragua (*Arcé*).	Sclater Collection.

Subsp. β. Parula nigrilora. (Plate XI. fig. 2.)

Parula pitiayumi (*nec V.*), *Brewer, Ibis*, 1878, p. 116.

Parula nigrilora, *Coues, Bull. U.S. Geol. Surv.* iv. p. 11 (1878); *Sennett, t. c.* p. 11; *id. op. cit.* v. p. 384 (1878); *Coues, B. Color. Vall.* p. 207 (1878); *Brewer, Ibis*, 1878, p. 204; *Merrill, Proc. U.S. Nat. Mus.* i. p. 123 (1878); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 121 (1880); *Coues, Check-list*, p. 34 (1882); *id. Key N. Amer. B.* 2nd ed. p. 291 (1884).

Parula pitiayumi nigrilora, *Ridgw. Proc. U.S. Nat. Mus.* iv. p. 209 (1881); *id. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881).

Compsothlypis nigrilora, *Stejneger, Auk*, 1884, p. 170.

Adult male. General colour above delicate slaty blue; mantle and upper back golden yellow; lesser and median wing-coverts like the back, the latter white at the ends, forming a wing-bar; greater coverts blackish, externally slaty blue, with a large white spot near the end of the outer web, forming a second wing-bar; bastard-wing and primary-coverts black, narrowly edged with dark slaty blue, the margins almost obsolete on the former; quills blackish, edged externally with pale slaty blue a little lighter than the rump, and

inclining to greyish white towards the ends of the feathers; centre tail-feathers slaty blue, with a longitudinal black streak down the middle; remainder of tail blackish, externally slaty blue, fringed with white near the end of the inner web, increasing towards the outside of the tail, the two external feathers having a large white spot near the end of the inner web, and a slight trace of a white spot on the third tail-feather; crown of head and hind neck clear slaty blue; a line across the base of the forehead, lores, feathers round and below the eye black, occupying also the fore part of the ear-coverts and descending obliquely along the hinder cheeks; remainder of ear-coverts and sides of neck slaty blue; cheeks, throat, and breast golden yellow, inclining to orange on the fore neck and chest; abdomen and under tail-coverts white, the latter slightly tinged with yellow; sides of body washed with slaty blue, ashy brown on the flanks; thighs white; axillaries and under wing-coverts white; quills dusky below, white along the edge of the inner web. Total length 4·2 inches, culmen 0·4, wing 2·05, tail 1·6, tarsus 0·6.

Hab. Texas.

a. ♂ ad. sk. Texas, Feb. 28 (*G. B. Sennett*). Sclater Collection.
b. ♂ ad. sk. Texas, Feb. 28. G. B. Sennett, Esq. [P.]

Subsp. γ. Parula insularis.

Parus insularis, *Lawr. Ann. Lyc. N. Y.* x. p. 4 (1871); *Grayson, Proc. Bost. Soc. N. H.* xiv. pp. 278, 300 (1871); *Lawr. Mem. Bost. Soc. Nat. Hist.* ii. p. 269 (1874); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 121 (1880).

Parula pitiayumi, var. insularis, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 207 (1874).

Parula pitiayumi insularis, *Ridgw. Proc. U.S. Nat. Mus.* iv. p. 208 (1881); *id. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881).

Compsothlypis insularis, *Stejn. Auk*, 1884, p. 170.

Adult male. General colour above light slaty blue, distinctly washed with olive-yellow; the mantle entirely olive-yellow; scapulars and lesser wing-coverts slaty blue; median and greater coverts blackish, externally edged with slaty blue and tipped with white, forming a double wing-bar, less distinct on the greater wing-coverts, the innermost of which have no white tips at all; bastard-wing and primary-coverts dusky blackish; quills blackish, externally edged with slaty grey, washed with olive-yellow; upper tail-coverts and centre tail-feathers slaty blue; the latter longitudinally blackish along the shafts; the remaining tail-feathers blackish, externally edged with slaty grey and fringed with white on the inner web; crown of head and hind neck slaty blue, slightly washed with orange-yellow; lores dusky blackish, surmounted by a narrow line of white; eye-lid whitish above and below, blackish in front and behind; feathers below the eye spotted with white; ear-coverts, hinder cheeks, and sides of neck delicate slaty grey; cheeks, throat, and breast bright yellow, slightly paler on the latter; abdomen and under tail-coverts white, with a yellowish tinge on the latter; sides of breast slaty grey, more isabelline or pale vinous on the flanks; thighs ashy;

axillaries and under wing-coverts white; quills dusky below, ashy white along the edge of the inner web. Total length 4·2 inches, culmen 0·45, wing 2·15, tail 1·75, tarsus 0·75.

Adult female. Not distinguishable from the male. Total length 4·2 inches, culmen 0·5, wing 2·15, tail 1·8, tarsus 0·7. (*Mus. Salvin and Godman.*)

Hab. Tres Marias and Socorro Islands.

a. Ad. sk. Tres Marias Islands, April 8 (*A. Forrer*). Sclater Collection.

4. Parula gutturalis.

Compsothlypis gutturalis, *Cab. J. f. O.* 1860, p. 329.
Parula gutturalis, *Baird, Review Amer. B.* p. 172 (1865); *Lawr. Ann. Lyc. N. Y.* ix. p. 93 (1868); *Von Frantz. J. f. O.* 1869, p. 292; *Salv. P. Z. S.* 1870, p. 182; *Scl. & Salv. Nomencl. Av. Neotr.* p. 8 (1873); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 123, pl. viii. fig. 3 (1880).
Mniotilta gutturalis, *Gray, Hand-l. B.* i. p. 238, no. 3452 (1869).
Oreothlypis gutturalis, *Stejn. Auk*, 1884, p. 169.

Adult male. General colour above slaty grey, the mantle and upper back black, the feathers being broadly tipped with the latter; scapulars and lesser wing-coverts slaty grey; greater series blackish, externally slaty grey, rather more hoary than the back; bastard-wing and primary-coverts blackish, narrowly margined with slaty grey; quills blackish, externally slaty grey, more hoary on the outer web of the primaries, the first of which is narrowly margined with whitish; centre tail-feathers grey, with a longitudinal centre; the remainder of tail-feathers blackish, externally ashy grey, narrowly fringed with white on the edge of the inner web; head and hind neck slaty grey, the latter slightly paler, as also the sides of the neck; lores, feathers round the eye, and ear-coverts slaty black; above the latter a faint indication of a greyish-white superciliary line; cheeks, throat, and chest beautiful orange-yellow; breast and abdomen white; sides of body and flanks delicate ashy grey; thighs ashy; under tail-coverts white, the long ones ashy with white margins; under wing-coverts and axillaries white, ashy near the end of the wing; quills blackish below, ashy white along the inner web: "bill black; feet lead-colour" (*Salvin & Godman*). Total length 4·8 inches, culmen 0·55, wing 2·5, tail 1·95, tarsus 0·7.

Adult female. Differs from the male in being duller slaty grey above, with the black on the mantle much more restricted; orange-yellow colour on the throat somewhat paler. Total length 5 inches, culmen 0·55, wing 2·4, tail 1·9, tarsus 0·7. (*Mus. Salvin and Godman.*)

Young. Duller grey than the adult female and somewhat washed with olive-brown; wing-coverts tipped with olive; throat and chest dull yellow, intermixed with brown (the latter probably remains of first plumage); breast and abdomen dull white; the sides of the body ashy.

Hab. Central America; Costa Rica and Panama.

a. ♂ ad. sk. Volcan de Chiriqui, Veragua (*Arcé*). Sclater Collection.
b. Ad. sk. Chiriqui, Veragua (*Arcé*). Sclater Collection.

7. DENDRŒCA *.

	Type.
? Rhimamphus, *Rafinesque, Journ. de Phys.* 1819, p. 417 (*teste Hartlaub*)	D. æstiva.
Sylvicola, *Gray, List Gen. B.* 1841, p. 32 (*nec Humph., nec Sw.*)	D. coronata.
Dendroica, *Gray, List Genera*, 1842, *App.* p. 8	D. coronata.
Dendrœca, *nom. emend. auct. recent.*	

Range. The whole of North America, Central America, and South America to Southern Brazil, Bolivia, and Chili. All the West-Indian Islands.

Key to the Species.

a. Outer tail-feather for the most part yellow, the outer web brown or olive-brown, widening towards the end and extending on to the tip of the inner web.

a'. Throat golden yellow, not chestnut or rufous.

a''. Only a tinge of chestnut on the head, which is often entirely yellow.

a'''. Tail shorter, 1·7 inch: rufous stripes on under surface not seen above the lower throat; no rufous stripes on the under tail-coverts ..... *æstiva*, p. 273.

b'''. Tail longer, 2·05 inches: the rufous stripes on the under surface continued over the throat and on the under tail-coverts ..... *ruficapilla*, p. 275.

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* Dr. Hartlaub (Rev. Zool. 1845, p. 342) gives his opinion that *Rhimamphus citrinus* of Rafinesque (*l. c.*) is *Dendrœca æstiva*, and he proposes to restore the name *Rhimamphus* as the generic title for *Dendrœca*. In this he is followed by Dr. Cabanis (Mus. Hein. Th. i. p. 19). Prof. Baird, however, doubts this identification, and restores *Dendrœca* (Review Amer. B. p. 182).

The following species cannot be included in the 'Key,' for the reasons stated below:—

1. Dendrœca carbonata.

Sylvia carbonata, *Audub. Orn. Biogr.* i. p. 308, pl. 60 (1831); *Nutt. Man.* i. p. 405 (1832); *Coues, Key N. Amer. B.* 2nd ed. p. 308 (1884).
Sylvicola carbonata, *Richards. Rep. Brit. Assoc.* 1836–37, p. 172.
Vermivora carbonata, *Bp. Comp. List B. Eur. & N. Amer.* p. 21 (1838).
Helinaia carbonata, *Audub. Syn.* p. 68 (1839); *id. B. Amer.* ii. p. 95, pl. 109 (1841).
Helmitheros carbonata, *Bp. Consp.* i. p. 315 (1850).
Mniotilta carbonata, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 241, no. 3493 (1869).
Dendroica carbonata, *Baird, B. N. Amer.* p. 287 (1858); *id. Rev. Amer. B.* p. 207 (1865).
Dendrœca carbonata, *Sundev. Öfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 618; *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 17 (1881).
Perissoglossa carbonata, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 214 (1874).
Helminthophaga (?) carbonata, *Coues, B. Color. Vall.* p. 237 (1878).

b''. Crown light chestnut or bay, forming a cap.
c''. The rufous streaks on the under surface continued on to the throat.
a[1]. Larger: duller olive-yellow above; wing-coverts edged with olive-yellow ..... *petechia*, p. 277. / *gundlachi*, p. 278.
b[1]. Smaller: brighter olive-yellow above; wing-coverts edged with bright golden yellow ..... *melanoptera*, p. 279.
d'''. Rufous streaks not continued on to the throat, which is bright golden yellow, unstriped ..... *aureola*, p. 282.
c''. Crown deep maroon or chestnut-brown. *capitalis*, p. 280.
b'. Throat chestnut or pale rufous, not yellow. *rufopileata*, p. 281.
d''. Nape chestnut as well as the crown.
e'''. Lower throat and fore neck chestnut; stripes on breast and flanks very broad ..... *vieilloti*, p. 283.
f'''. Chestnut confined to throat and not extending to the fore neck; stripes on breast and flanks narrow ..... *bryanti*, p. 284.
e''. Chestnut confined to the crown, the occiput and nape like the black.
g'''. Throat only washed with pale rufous; streaks on the chest very pale ..... *granadensis*, p. 284.
h'''. Throat dark chestnut, as also the streaks on the chest, which are very broad ..... *rufigula*, p. 285.

Upper part of the head black; fore part of the back, lesser wing-coverts, and sides dusky, spotted with black. Lower back dull yellowish green, as is the tail, of which the outer web of the outer feather is whitish; tips of the second row of coverts white, of the first row yellow; a line from the lores over the eye, sides of the neck, and the throat bright yellow; a dusky line behind the eye; the rest of the underparts dull yellow, excepting the sides. Bill brownish black above, light blue beneath; iris hazel; feet light flesh-colour. Length 4¾ inches, bill along the ridge $\frac{7}{10}$, tarsus $\frac{3}{4}$. (*Audubon.*)

This species has not been rediscovered since Audubon's time, and has been thought by some ornithologists to be a hybrid between *Perissoglossa tigrina* and *Dendræca striata*. [*Cf.* Coues, Key N. Amer. B. 2nd ed. p. 308 (1884).]

2. DENDRŒCA MONTANA.

Sylvia montana, *Wils. Amer. Orn.* v. p. 113, pl. 44. fig. 2 (1812); *Audub Orn. Biogr.* v. p. 294, pl. 434. fig. 3 (1839).

Sylvia tigrina, *Bp. Ann. Lyc. N. Y.* ii. p. 12 (1826); *Nutt. Man.* i. p. 393 (1832).

Sylvicola montana, *Jard. ed. Wils. Amer. Orn.* ii. p. 202 (1832); *Audub. Syn.* p. 62 (1839); *Nutt. Man.* 2nd ed. i. p. 442 (1840); *Audub. B. Amer.* ii. p. 69, pl. 98 (1841); *Bp. Consp.* i. p. 308 (1850).

Sylvicola tigrina, *Richards. Rep. Brit. Assoc.* 1836-37, p. 171; *Bp. Comp. List B. Eur. & N. Amer.* p. 23 (1838).

Mniotilta montana, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 241, no. 3490 (1869).

Dendroica montana, *Baird, B. N. Amer.* p. 278 (1858); *id. Review Amer. B.* p. 190 (1865); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 271 (1874).

b. Outer tail-feather for the most part white, the region of the shaft dusky brown, widening out towards the end of inner web, the outer web for the most part brown.
c'. Throat white.
f''. Head olive-yellow; ear-coverts white or ashy; no black streaks on the sides of the body; inner secondaries edged with olive-yellow.
i'''. Crown olive-yellow, contrasting with the back, which is olive-yellow broadly streaked with black; sides of breast chestnut.
*c*⁴. Lores, fore part of cheeks, and a stripe along the upper ear-coverts black; chestnut stripe extending from the sides of the throat down the sides of the breast to the flanks..... *pennsylvanica* ♂ ad., [p. 286.
*d*⁴. Lores, anterior cheeks, and stripe on the ear-coverts dusky; chestnut streak extending from the sides of the throat to the sides of the upper breast, or breast with a few lateral streaks of chestnut .. *pennsylvanica* ♀ ad., [p. 287.

Dendrœca montana, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 613; *Coues, B. Color. Vall.* p. 237 (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 18 (1881).

This species is four inches and three quarters in length; the upper parts a rich yellow-olive; front, cheeks, and chin yellow, also the sides of the neck; breast and belly pale yellow, streaked with black or dusky; vent plain pale yellow; wings black, first and second row of coverts broadly tipt with pale yellowish white; tertials the same; the rest of the quills edged with whitish; tail black, handsomely rounded, edged with pale olive; the two exterior feathers, on each side, white on the inner vanes from the middle to the tips, and edged on the outer side with white; bill dark brown; legs and feet purple-brown; soles yellow; eye dark hazel. (*Wilson.*)

Hab. Blue Mountains of Pennsylvania.

The identification of this species has puzzled ornithologists since the time of Wilson. Dr. Coues suggests that it may be the young of *Dendrœca virens* (*cf.* Key N. Amer. B. 2nd ed. p. 308, 1884).

3. Dendrœca eoa.

Sylvicola eoa, *Gosse, B. Jamaica*, p. 158 (1847); *id. Ill. B. Jam.* pl. 34 (1849); *Bp. Consp.* i. p. 309 (1850).
Mniotilta eoa, *Gray, Gen. B.* i. p. 196 (1848).
Dendroica eoa, *Baird, Rev. Amer. B.* p. 195 (1865); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 218 (1874).
Dendrœca eoa, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* iii. p. 609 (1869); *Coues, B. Color. Vall.* p. 256 (1878).

Male. Upper parts olive, approaching to yellow on the rump; sides of hea marked with a band of orange, extending from the ear to the beak, and meetin both on the forehead and on the chin; quills and coverts blackish, with yellowish edges; tail blackish olive, with yellow edges; the outermost two feathers, on each side, having the greatest portion of the inner webs pale yellow; under-parts pale yellow; crown, rump, tertials, belly, and under tail-coverts sparsely

e^4. Facial markings dusky, and with little or no trace of chestnut on the sides of the body ..... *pennsylvanica* ♂ ♀ ad. [hiem., p. 287.

k'''. Above uniform olive-yellow, with no black streaks; the head uniform olive-yellow like the back ..... *pennsylvanica* juv. hiem., [p. 287.

g''. Upper parts ashy grey, the head more or less streaked with black; inner secondaries edged with white; ear-coverts black, with a broad white streak above them; a supraloral spot of bright yellow; sides of body streaked with black ..... *nigrescens* ad. et juv. [hiem., pp. 292, 293.

d^3. Throat white, with a little yellow on the chin.

h''. Side of body uniform ashy white like the breast, or with only hair-like shaft-streaks of black; head yellow, spotted with black; nape blackish; mantle grey, largely mottled with black ..... *occidentalis* hiem., p. 295.

i''. Sides of body broadly streaked with black; head and mantle uniform dull olive-yellow; forehead like rest of crown, with indistinct hair-like shaft-lines of black ..... *chrysoparia* ♀, p. 296.

e^2. Throat orange or yellow, or washed with yellow or ochreous.

k''. Wing-coverts tipped with white or ashy white.

l'''. No concealed black on the throat.

f^3. Rump mottled, black with ashy-olive edges to the feathers; crown laterally black or dusky, with a central coronal patch of orange or yellow; ear-coverts black; sides

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marked with undefined patches of pale orange. Length 5 inches, wing $2\frac{7}{10}$, tail $1\frac{9}{10}$, tarsus $\frac{9}{10}$. (*Gosse.*)

Female. Nearly as the male, but the deep orange is spread over the whole cheeks, chin, throat, and breast; head and back dusky grey tinged with olive, and patched with the fulvous much more largely but irregularly, and as if *laid upon* the darker hue. (*Gosse.*)

The two typical specimens are in the British Museum, but from long exposure to the light in the gallery have become discoloured and faded; they have been carefully dismounted, like all other typical specimens, and placed in the series of skins; but the coloration is now so different to that described by Mr. Gosse that I have preferred to reproduce his original descriptions. I can scarcely believe that the male bird ever exhibited the rufous colour of the throat and chest to the extent shown by Mr. Gosse in his plate of *D. eoa*, wherein also, by representing the tail in a closed position, the affinities of the bird are hidden. The yellow on the outer tail-feathers is a character of the *Dendræca-æstiva* group, but the colour of the throat is only matched by *D. blackburniæ*; and I have no doubt that *D. eoa* is a hybrid between the last-named bird and *D. æstiva* or *D. petechia*.

Hab. Jamaica.

a, *b*. ♂ ♀ ad. sk. Jamaica. P. H. Gosse, Esq. [C.]. (Types of species.)

of body distinctly streaked with black.

a^5. Coronal patch (distinct), eyebrow, sides of neck, and entire throat fiery orange ..... *blackburniæ* ♂ ad., p. 289.

b^5. Coronal patch (more or less obscure), eyebrow, sides of neck, and throat bright yellow or orange-yellow, pervading the lower parts ..... *blackburniæ* ♀ et ad. hiem., pp. 290, 291.

g^4. Rump uniform.

c^5. Hind neck olive-yellowish or olive-brown.

a^6. Back olive-brown, with dusky blackish mesial streaks; upper tail-coverts black, with ashy-olive margins; head like the back, with a faintly indicated coronal patch of whity brown; ear-coverts dusky brown; flanks streaked with dusky ..... *blackburniæ* juv. hiem., p. 290.

b^6. Back uniform yellowish olive; head similar, but with narrow black shaft-streaks; upper tail-coverts olive-yellowish or ashy with dusky centres; ear-coverts dusky olive; eyebrow, throat, and breast bright yellow ..... *townsendi* ♀ juv. hiem., p. 301.

c^6. Back uniform yellowish olive; upper tail-coverts ashy grey, ear-coverts yellow ..... *virens* juv. hiem., p. 298.

d^6. Back ashy grey, washed with olive and mesially streaked with black; upper tail-coverts black, edged with ashy; forehead and crown bright yellow, tipped with black spots; eyebrow, sides of face, and throat bright yellow; breast and underparts white, with scarcely any indication of blackish shaft-lines on the sides ..... *occidentalis* hiem., p. 294.

d^5. Hind neck ashy grey like the head and back.

e^6. Ear-coverts black; throat yellow; chin white; sides of neck white; a broad white eyebrow, with sometimes a small yellow spot just above the fore part of the eye .... *dominica*, p. 301.

f^6. Ear-coverts grey; chin and entire throat yellow.

a^7. Superciliary streak yellow, ending in white above the ear-coverts ..... *graciæ*, p. 304.

Superciliary streak entirely yellow, not white above the ear-coverts.

a^8. Yellow on under surface not extending beyond the fore neck; breast and abdomen whitish ..... *decora*, p. 305.

b^8. Abdomen yellow like the breast ..... *adelaidæ*, p. 306. / *delicata*, p. 306.

m'''. Throat black, concealed by yellow tips to the feathers.

h^4. No yellow on breast, or at most a tinge (in winter); ear-coverts golden yellow.

e^5. Mantle ashy grey, streaked with black; forehead golden yellow; hinder crown yellow, spotted with black; sides of body uniform or with only hair-like brown shaft-streaks..... *occidentalis* ad. hiem., [p. 294.

f^5. Mantle uniform olive-yellow like the rest of the upper surface; sides of body broadly streaked with black.

g^6. Scapulars grey; no yellow on forehead ..... *chrysoparia* ad. hiem., [p. 296.

h^6. Scapulars olive-yellow like the back; forehead somewhat brighter yellow than the rest of the upper surface..... *virens* ad. hiem., p. 298.

i^4. Breast bright yellow; ear-coverts black; sides of body very distinctly striped with black ..... *townsendi* ad., p. 300.

l''. Wing-coverts tipped with yellow or olive, not with white.

n''. Entire under surface golden yellow, with broad black streaks on the sides of the body; eyebrow golden yellow; cheek-stripe black; upper surface olive-yellow, with the mantle light chestnut ..... *discolor*, p. 307.

o'''. Entire under surface pale yellow, lighter on throat and abdomen; sides of body streaked with dusky; sides of face ashy, whitish above and below the eye; cheeks dull ashy.. *discolor* juv. hiem., [p. 308.

f'. Throat black.

m''. Feathers round the eye and ear-coverts golden yellow.

p'''. Forehead and crown golden yellow spotted with black, the nape black; back ashy grey, mottled with black centres to the feathers; sides of body uniform or with only hair-like black shaft-lines ..... *occidentalis* ad., p. 294.

q'''. Forehead and crown black like the back; sides of body broadly streaked with black ..... *chrysoparia* ad., p. 296.

n''. Feathers round the eye and ear-coverts black.
r'''. No yellow on breast, which is white; a supraloral spot of yellow; above the ear-coverts a broad band of white; cheeks also white ..... *nigrescens* ad., p. 292.
s'''. Breast yellow, as also a broad eye-brow and cheek-stripe ..... *townsendi* ad., p. 300.
o''. Feathers round eye and ear-coverts golden yellow, with a dusky streak above the latter; forehead and back yellow, brighter than crown; eye-brow golden yellow; breast white .. *virens* ad., p. 297.
c. Outer tail-feather blackish like the rest of the tail, with a white spot near the *centre* of the inner web; a band of yellow across the rump.
g'. Breast streaked with black, as well as the sides of the body; mantle black.
p''. Black mantle uniform, not streaked with olive-yellow; a black patch on the fore neck; breast and sides broadly streaked with black ..... *maculosa* ♂ ad., p. 309.
q''. Black mantle streaked with olive-yellow; fore neck streaked with black like the breast and sides, but less broadly than in the male ..... *maculosa* ♀ ad., p. 310.
h'. Breast uniformly yellow, not streaked; sides of body streaked with black; head and ear-coverts ashy grey; back uniform olive-yellow..... *maculosa* juv. hiem., [p. 311.
d. Outer tail-feather blackish or dusky brown, with a large terminal or subterminal mark of white on the inner web.
i'. With a band of bright yellow across the rump.
r''. With a coronal patch of bright yellow; on sides of upper breast a large patch of bright yellow.
t'''. Throat white.
*k*⁴. Upper parts ashy grey, streaked with black..... *coronata* ♂ ad., p. 313.
*l*⁴. Upper parts ashy, washed with brown, streaked with dusky blackish ..... *coronata* ♀ ad., p. 314.
u'''. Throat yellow.
*m*⁴. Back ashy grey, streaked with black *audubóni* ♂ ad., p. 316.
*n*⁴. Back ashy, streaked with black, but washed with brown..... *audubóni* ♀ ad., p. 316.
s''. Coronal patch obscured or absent; upper surface brown, streaked with dusky centres to the feathers; no yellow on sides of breast; under surface brownish white, with dusky stripes on the flanks. [p. 314.
v'''. With the throat brownish white .. *coronata* juv. et hiem.,
w'''. With the throat yellow ..... *audubóni* juv. et hiem., [p. 316.

k'. With no yellow band across the rump.
  ''. With chestnut on the head.
    x''. Back olive; rump clearer olive-yellow; mesial streaks on back obsolete or only faintly indicated.
      o⁴. Underneath clear yellow; eyebrow bright yellow; chest and sides of breast streaked with chestnut, pronounced in the male, less distinct in the female ..... *palmarum* ♂ ♀ ad., [pp. 318, 319.
      p⁴. Underneath dull white with a yellow tinge, especially on the under tail-coverts; chest streaked with brown; upper surface brown, with a little chestnut on the head, and indistinct streaks of dusky on the back..... *palmarum* juv. hiem., [p. 319.
    y'''. Back brown, streaked with broad black centres to the feathers; rump and upper tail-coverts ashy grey; a large cream-coloured patch on the sides of the neck; throat and sides of body vinous chestnut .... *castanea* ad., p. 320.
  u''. With no chestnut on the head.
    z'''. Without a wing-bar or alar speculum; breast yellow, with blackish streaks..... *kirtlandi*, p. 322.
    aa'''. With a double wing-bar, caused by the white tips to the median and greater coverts; no alar speculum.
      q⁴. Crown of head plumbeous grey, with forehead, vertex, and lores olive-green ..... *pityophila*, p. 322.
      r⁴. Crown of head olive-yellow or greenish like the back.
        g⁵. Crown of head and back uniform.
          i⁵. Clear olive-yellowish above; brighter yellow on throat and breast, with dusky streaks on the latter and flanks; tail brown, edged with pale olive-brown ..... *pinus* ad., p. 323.
          k⁵. Greenish above, clear yellow below, with greenish streaks on the flanks; tail dusky, with dull bluish edges .... *cærulea* juv. hiem., [p. 329.
        h⁵. Crown of head and back streaked with blackish mesial lines.
          l⁵. A decided tinge of pure yellow on throat and breast; no sign of chestnut on sides; abdomen pure white ..... *striata* juv. hiem., [p. 326.
          m⁵. Under surface dull white, with a slight ochreous tinge on throat and sides, the latter with generally an indication of chestnut ..... [p. 321. *castanea* juv. hiem.,

s^4. Crown of head black; neck hoary, streaked with black; back ashy, streaked with black; sides of face and under surface white, streaked with black on the throat and sides of body ..... *striata* ad., p. 325.

t^4. Crown of head bluish like the back; underneath white, washed with blue on sides and streaked with black.

i^5. A black bar across the fore neck. *cærulea* ad. æstiv., p. 328.

k^5. No black bar on fore neck .... *cærulea* hiem., p. 328.

bb'''. No wing-bar; an alar speculum formed by white bases to primaries.

u^4. Throat and sides of body black; above bluish ..... *cærulescens* ad., p. 330.

v^4. Throat whitish; belly ochraceous yellow; sides of body olive-brown; above olive-brown ..... *cærulescens* juv. hiem., [p. 331

e. Outer tail-feather like the rest, brown or dusky blackish, with no more than a fringe or small indentation of white near the tip of the inner web.

l'. Streaked with black and white above; below white with triangular black spots. *pharetra* ad., p. 332.

m'. Uniform leaden grey above..... *plumbea* ad., p. 333.

n'. Olive above.

v''. Head streaked with olive-yellowish; rump and upper tail-coverts reddish brown ..... *pharetra* juv., p. 333.

w''. Head uniform greenish olive like the back; rump and upper tail-coverts the same ..... *plumbea* ♀ ad., p. 334.

Dendrœca æstiva and its allies.

The group of Golden Warblers has always presented difficulties to the ornithologist, and my studies have been hampered by the impossibility of procuring a sufficient series of adult birds for comparison. Young birds and specimens in winter plumage are of little assistance to the student, as they are all so much alike. The older literature is very much confused—as, for instance, when Brisson describes a Golden Warbler from S. Domingo, an island where, as far as we know, none has ever been found; and again, when he describes a "Figuier de Martinique," which is most certainly not the species met with in that island. Although I have had the advantage of comparing the specimens in the Museum with those in the collection of Messrs. Godman and Salvin, a much larger series of adult specimens is necessary for the correct discrimination of all the insular forms of Golden Warblers, and therefore some of my conclusions may have to be modified hereafter.

1. Dendrœca æstiva.

Yellow Titmouse, *Catesby, Nat. Hist. Carol.* p. 63, pl. 63 (1731).
Le Figuier de Canada, *Briss. Orn.* iii. p. 492, pl. 26. fig. 2 (1760); *Daubent. Pl. Enl.* vi. pl. 58. fig. 2.
Le Figuier tacheté, *Buff. Hist. Nat. Ois.* v. p. 285 (1778).
Figuier de la Caroline, *Daubent. Pl. Enl.* vi. pl. 58. fig. 1.
Yellow-poll Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 515 (1783); *Penn. Arctic Zool.* ii. p. 402 (1785).
Motacilla canadensis (*nec L.*), *Bodd. Tabl. Pl. Enl.* p. 4 (1783, *ex Daubent.*).
Olive Warbler, *Penn. Arctic Zool.* ii. p. 409 (1785).
Motacilla æstiva, *Gm. Syst. Nat.* i. p. 996 (1788).
Sylvia æstiva, *Lath. Ind. Orn.* ii. p. 551 (1790); *Vieill. Ois. Amér. Sept.* ii. p. 35, pl. 95 (1802); *Audub. B. Amer.* pl. 95; *id. Orn. Biogr.* i. p. 476 (1831).
Sylvia carolinensis, *Lath. Ind. Orn.* ii. p. 551 (1790).
Parus luteus, *Bartr. Trav. Florida*, p. 292 (1791).
Motacilla carolinensis, *Turton, Syst. Nat.* i. p. 615 (1806).
Sylvia flava, *Vieill. Ois. Amér. Sept.* ii. p. 31, pl. 89 (1807).
Sylvia citrinella, *Wils. Amer. Orn.* ii. p. 111, pl. 15. fig. 5 (1810).
Motacilla rubiginosa, *Pall. Zoogr. Rosso-Asiat.* i. p. 496 (1811).
? Rhimamphus æstivus, *Rafin. Journ. Phys.* lxxxviii. p. 417 (1819, *teste Hartl.*).
Sylvia childrenii, *Audub. B. Amer.* pl. 35; *id. Orn. Biogr.* i. p. 180 (1831).
Sylvia rathbonia, *Audub. B. Amer.* pl. 65; *id. Orn. Biogr.* i. p. 333 (1831).
Sylvicola æstiva, *Swains. & Richards. Faun. Bor.-Amer., Birds*, p. 211 (1831); *Jard. ed. Wils. Amer. Orn.* i. p. 258 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 23 (1838); *Audub. Syn.* p. 68 (1839); *id. B. Amer.* ii. p. 50, pl. 88 (1841); *Giraud, B. Long Isl.* i. p. 58 (1844); *Neuwied, J. f. O.* 1858, p. 114; *Finsch, P. Z. S.* 1870, p. 564.
Sylvicola rathbonia, *Richards. Rep. Brit. Assoc.* 1836–37, p. 172; *Bp. Comp. List B. Eur. & N. Amer.* p. 23 (1838).
Sylvia trochilus, *Nutt. Man. Orn.* 1832, p. 406.
Mniotilta æstiva, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 240, no. 3475 (1869).
Mniotilta ? carolinensis, *Gray, Gen. B.* i. p. 196 (1848).
Rhimamphus æstivus, *Cab. Mus. Hein.* Th. i. p. 19 (1850); *Bp. Consp.* i. p. 311 (1850); *Scl. P. Z. S.* 1855, p. 143, 1856, p. 141, 1857, p. 202.
Dendroica æstiva, *Baird, B. N. Amer.* p. 282 (1858); *Scl. & Salv. Ibis*, 1859, p. 11; *Baird, Review Amer. B.* p. 195 (1865); *Lawr. Ann. Lyc. N. Y.* viii. pp. 174–179 (1865), p. 284 (1866); *Dall & Bann. Trans. Chicago Acad.* i. p. 278 (1869); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 222, pl. 14. fig. 1 (1874).
Dendrœca æstiva, *Sclater, P. Z. S.* 1859, p. 363; *Lawr. Ann. Lyc. N. Y.* vii. p. 322 (1861); *Sclater, Cat. Amer. B.* p. 32 (1862); *Blakist. Ibis*, 1863, p. 63; *Scl. P. Z. S.* 1864, p. 172; *Scl. & Salv. t. c.* p. 347; *Taylor, Ibis*, 1864, p. 81; *Coues, Ibis*, 1865, p. 159; *Dresser, t. c.* p. 478; *Salv. P. Z. S.* 1867, p. 136; *Lawr. Ann. Lyc. N. Y.* ix. p. 94 (1868), p. 200 (1869); *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 606; *Cooper, B. Calif.* p. 87 (1870); *Scl. & Salv. P. Z. S.* 1870, p. 836; *Salv. t. c.* p. 138; *Pelz. Orn. Bras.* p. 71 (1871); *Wyatt, Ibis*, 1871, p. 322; *Coues, Key N. Amer. B.* p. 97 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Coues, B. N.-West*, pp. 54, 232 (1874); *Hensh. Rep Zool. Expl. W. 100th Merid.* p. 192 (1875); *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 15 (1876); *Ridgw. U.S. Geol. Expl. 40th Par.*

pt. 3, p. 431 (1877); *Boucard, P. Z. S.* 1878, p. 52; *Coues, B. Color. Vall.* p. 252 (1878); *id. Bull. U.S. Geol. Surv.* iv. p. 565 (1878); *Merrill, Proc. U.S. Nat. Mus.* i. p. 123 (1878); *Scl. & Salv. P. Z. S.* 1879, p. 494; *Salv. & Godm. Ibis*, 1880, p. 117; *iid. Biol. Centr.-Amer., Aves*, i. p. 124 (1880); *Cory, B. Bahamas*, p. 56 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 17 (1881); *Boucard, P. Z. S.* 1883, p. 334; *Nelson, Cruise R. S. 'Corwin,'* p. 63 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 298 (1884).

Adult male. General colour above greenish yellow, lighter on the rump; lesser wing-coverts like the back; median and greater coverts dusky blackish, edged and tipped with bright yellow; bastard-wing blackish brown, narrowly fringed with yellow; primary-coverts and quills brown, margined with yellow, broader on the secondaries; upper tail-coverts yellow, with dark-brown centres; tail-feathers dark brown, edged with yellow, all but the centre ones yellow, brown along the outer web and across the end of the inner one; crown of the head like the back; forehead golden yellow, extending on to the sinciput; lores, eyebrow and feathers round the eye, ear-coverts, and cheeks bright golden yellow, extending on the sides of the neck; throat and entire underparts bright golden yellow; the fore neck, chest, sides of body, and flanks streaked with chestnut; thighs and under tail-coverts golden yellow; under wing-coverts and axillaries bright golden yellow; quills dusky below, inner edges yellow: "bill dark blue, the lower mandible edged with yellow; feet and claws pale brown; iris brown" (*Audubon*). Total length 4 inches, culmen 0·4, wing 2·5, tail 1·7, tarsus 0·75.

Female. Duller coloured above than the male, only the base of the forehead brighter yellow; eyebrows, lores, sides of the face, and under surface of the body paler yellow than in the male, and without the chestnut streaks; only a few faint indications of rufous streaks on the sides of the breast and flanks. Total length 4·1 inches, culmen 0·45, wing 2·45, tail 1·7, tarsus 0·75.

Adult male in winter plumage. A little greener olive than in the summer dress, the colour of the breast extending further on to the head, and leaving a less extent of bright yellow on the forehead; the chestnut streaks on the under surface not nearly so pronounced.

Young in winter plumage. Resembling the old female, but duller in colour and more ashy olive above, with only a faint tinge of yellow on the forehead; the rump and upper tail-coverts a little brighter olive-yellow; the brown on the tail-feathers more extended, and the yellow more restricted; eyelid whitish; lores, sides of face, and ear-coverts pale yellowish; under surface of body pale yellow, whiter on the throat, and without a sign of any streaks.

Young males in winter plumage are much brighter than the female and have a few chestnut streaks on the chest and on the flanks.

Nestling. Dull ashy brown with a slight tinge of olive; wing-coverts and quills black, edged with olive-yellow, whiter at the end of the greater coverts; under surface of body ashy, whiter on the abdomen.

Hab. North America generally, wintering in Central America from Mexico to Panama, and occurring also in Guiana, Trinidad, Colombia, Ecuador, and Upper Amazonia. The specimens from the

continent of South America have more rufous on the head and may prove to belong to a distinct species.

a. Ad. st.	North America.	Purchased.
b. ♂ ; *c*. ♀ ad. sk.	Arctic America.	Dr. Rae [P.].
d, *e*. ♀ ad. sk.	Hudson's Bay Territory.	Capt. Herd [P.].
f. Ad. sk.	Canada.	G. Barnstone, Esq. [P.].
g. ♂ ad. sk.	Niagara Falls.	Gould Collection.
h, *i*. ♂ ad. sk.	Fort Simpson, June 5.	B. R. Ross, Esq. [P.].
k, *l*. ♂ ♀ ad. sk.	Fort Dufferin, Manitoba (*G. Dawson*).	N. A. Boundary Comm. [P.].
m. ♂ ad. sk.	Michigan.	Prof. Steere [P.].
n. ♀ ad. sk.	Colehour, Illinois, May (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
o. Pull. sk.	Colehour, Illinois, June 16 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
p. Pull. sk.	Chicago, Illinois, June 2 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
q, *r*. ♂; *s*, *t*, *u*. ♀ ad. sk.	Hyde Park, Illinois, May (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
v. Pull. sk.	Riverside, Illinois, July 4 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
w. Ad. sk.	Philadelphia (*E. Wilson*).	Sclater Collection.
x. ♂ ad. sk.	Wheatland, Indiana, April (*R. Ridgway*).	U.S. Nat. Museum [P.].
y. ♂; *z*, *a'*. ♀ ad. sk.	West side of Rocky Mts.	J. K. Lord, Esq. [P.].
b', *c'*. ♂ ad. sk.	British Columbia.	J. K. Lord, Esq. [C.].
d'. ♀ ad. sk.	Provo City, Utah, July 29 (*Henshaw*).	U.S. Nat. Museum [P.].
e', *f'*. Ad. sk.	Guatemala.	Gould Collection.
g'. ♂ ad. sk.	Panama (*McLeannan*).	Sclater Collection.
h'. Ad. sk.	Bogotá.	Gould Collection.
i'. Ad. sk.	Bogotá.	Purchased.
k'. Juv. sk.	Bogotá.	J. Purdie, Esq.
l'. Ad. sk.	Bogotá.	Sclater Collection.
m'. ♂ juv. sk.	Medellin.	T. K. Salmon, Esq. [C.].
n', *o'*. Ad. sk.	Trinidad.	Zoological Society.
p'. Ad. sk.	Trinidad.	Sclater Collection.
q'. Ad. sk.	Cayenne.	Sclater Collection.
r'. Ad. sk.	River Berbice.	Mrs. Atkins [P.].
s'. ♀ juv. sk.	Esmeraldas, Ecuador, Nov. (*L. Fraser*).	Sclater Collection.
t'. Ad. sk.	Guayaquil.	Captain Kellett and Lieut. Wood [P.].
u'. ♂ ad. sk.	Yquitos, Upper Amazon, March 11.	Henry Whitely, Esq. [C.].

2. Dendrœca ruficapilla.

? Chloris erithachorides, *Feuillée, Journ. Obs. Phys.* iii. p. 413 (1725).
Figuier de la Martinique, *Briss. Orn.* iii. p. 490, pl. 22. fig. 4 (1760)*.

It is almost impossible to make out this description: it may be *D. melanoptera* of Lawrence, and it certainly does not refer to the Golden Warbler of Martinique (*D. rufigula*, Baird). I retain the name of *Dendrœca ruficapilla* attached to the species by Messrs. Baird, Brewer, and Ridgway, and now in common use; but it is doubtful whether it is the *Motacilla ruficapilla* of Gmelin, founded on the description of Brisson.

Figuier à tête rousse, *Buff. Hist. Nat. Ois.* v. p. 306 (1778).
Bloody-side Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 489 (1783).
Motacilla ruficapilla, *Gm. Syst. Nat.* i. p. 971 (1788).
Sylvia ruficapilla, *Lath. Ind. Orn.* ii. p. 540 (1790).
Dendrœca æstiva (*nec Gm.*), *A. & E. Newton, Ibis*, 1859, p. 143.
Dendroica petechia (*nec L.*), *Cass. Proc. Philad. Acad.* 1860, pp. 192, 376.
Dendroica, sp., *Baird, Review Amer. B.* p. 201 (1865).
Mniotilta, sp., *Gray, Hand-l. B.* i. p. 241, no. 3497 (1869).
Dendrœca petechia, *a.* bartholemica, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 607.
Dendrœca petechia, *β.* cruciana, *Sundev. t. c.* p. 608.
Dendrœca petechia, var. ruficapilla, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 217 (1874); *Lawr. Proc. U.S. Nat. Mus.* i. pp. 454, 486 (1879).
Dendrœca petechia ruficapilla, *Coues, B. Color. Vall.* p. 256 (1878).

Adult male (S. Croix, May 6; A. & E. Newton). General colour above clear olive-yellow, brighter and more golden yellow on the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater coverts blackish, externally broadly edged with bright golden yellow, so broad as to hide the blackish bases to a great extent; bastard-wing blackish, more narrowly edged with golden yellow; primary-coverts and quills blackish, edged with olive-yellow, the quills more broadly with bright golden yellow, especially clear on the inner secondaries; tail-feathers dusky olive-brown, edged with olive-yellow, the outer feathers yellow on the inner web, olive-brown on the outer one and across the tip of the inner one, the yellow decreasing and the brown increasing towards the centre of the tail; crown of head like the back, but golden yellow towards the forehead, which, with the crown, is tinged with light chestnut or bay; lores, feathers round the eye, ear-coverts, and cheeks bright golden yellow; under surface of body bright golden yellow, striped with deep chestnut, these streaks commencing on the throat, becoming broader on the fore neck, breast, and sides of the body, and being indicated as narrow shaft-lines on the under tail-coverts; axillaries and under wing-coverts golden yellow; quills dusky below, golden yellow along the inner web. Total length 4·8 inches, culmen 0·5, wing 2·5, tail 2·05, tarsus 0·8.

A male from S. Croix (Newton), killed in July, and now in the Salvin-and-Godman collection, agrees with the bird described, and, like it, has the rufous streaks on the throat and under tail-coverts. It has yet to be shown that the species ever gets such a distinct rufous crown as *D. petechia* assumes. The latter does not seem to get the rufous streaks on the throat, but otherwise it so closely resembles *D. ruficapilla* that, when not in full plumage, the Jamaica bird can scarcely be distinguished from the specimens from S. Croix, as is shown by a specimen in the Salvin-and-Godman collection (Spanishtown, Jamaica, Aug.; W. T. Marsh).

D. ruficapilla is, in fact, a large race of *D. æstiva*; but the latter bird never has any rufous streaks on the throat or under tail-coverts.

Hab. West Indies: islands of S. Croix, S. Thomas, S. Bartholomew, Porto Rico, Antigua, Barbuda.

a. ♂ ad. sk.	S. Croix (*A. & E. Newton*).	Sclater Collection.
b. ♀ ad. sk.	S. Thomas (*Swift*).	Sclater Collection.
c. Juv. sk.	S. Bartholomew (*C. Walton*).	Sclater Collection.

3. Dendrœca petechia.

The Yellow Red-poll, *Edwards, Gleanings*, v. p. 99, pl. 256. fig. 1 (1758).

Le Figuier à teste rouge de Pensilvanie, *Briss. Orn.* iii. p. 448 (1760).

Motacilla petechia, *Linn. Syst. Nat.* i. p. 334 (1766, *ex Edwards* *); *Less. Traité*, i. p. 418 (1831).

Le Figuier à tête rouge de Pensylvanie, *Buff. Hist. Nat. Ois.* v. p. 286 (1778).

Red-headed Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 499 (1783).

Red-head Warbler, *Penn. Arctic Zool.* ii. p. 401 (1785).

Sylvia petechia, *Lath. Gen. Syn.* ii. p. 535 (1790); *Vieill. Ois. Amér. Sept.* ii. p. 32, pl. 91 (1807).

Sylvicola æstiva (*nec Gm.*), *Gosse, B. Jamaica*, p. 157 (1847).

Mniotilta petechia, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 241, no. 3496 (1869).

Dendrœca petechia, *Scl. P. Z. S.* 1861, p. 71; *id. Cat. Amer. B.* p. 32 (1862); *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Coues, B. Color. Vall.* p. 255 (1878); *Cory, B. Bahamas*, p. 57 (1880); *A. & E. Newt. Handb. Jamaica*, 1881, p. 106.

Dendroica petechia, *March, Proc. Philad. Acad.* 1863, p. 292; *Baird, Review Amer. B.* p. 190 (1865); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 216 (1874).

Dendrœca petechia, *c.* jamaicensis, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 607.

Adult male. General colour above olive-yellow, the long feathers at the side of the rump with subterminal marks of yellowish white; upper tail-coverts brighter yellow, with dusky-olive centres; lesser wing-coverts like the back; median and greater series dusky blackish, edged with olive-yellow, brighter yellow along the outer margins and tips of the feathers; bastard-wing, primary-coverts, and quills dusky brown, edged with olive-yellow, brighter yellow on the margins of the quills; tail-feathers dusky brown, edged with olive-yellow; the outer feathers yellow for the greater part of the inner web, of which the tip only is brown like the whole of the outer web, this yellow colour slightly diminishing and the brown somewhat extending towards the centre of the tail, the two middle feathers alone having no yellow markings; crown of head pale orange-rufous, the base of the forehead, eyebrow, eyelid, ear-coverts, cheeks, sides of face, and entire under surface of body golden yellow,

* Linnæus's name of *petechia* is now so universally adopted for the Jamaican bird, that I use it without hesitation, as there is no advantage in changing it: but I very much doubt if Edwards's figure, the foundation of *Motacilla petechia*, L., from an unknown locality, was really drawn from a Jamaican specimen; it represents rather, in my opinion, *D. aureola*, or may be *D. capitalis*. Should my view as to the incorrectness of the figure in the 'Gleanings' be upheld, an appropriate name is available in *Dendrœca jamaicensis*, Sundev.; but the descriptions and plates of all these old species of Golden Warblers are so vague, that it is doubtful whether any good would result from altering names generally accepted and understood by ornithologists on both sides of the Atlantic.

with a slight olive tinge on the sides of the body; the lower throat, fore neck, breast, and sides streaked with chestnut; thighs and under tail-coverts bright yellow; axillaries and under wing-coverts also bright yellow; quills dusky below, yellow along the inner web. Total length 4·6 inches, culmen 0·5, wing 2·5, tail 1·9, tarsus 0·8.

Adult male in winter plumage. Differs from the summer plumage in being duller and more olive-green, and in wanting the rufous on the crown: head like the back; eyelid, lores, and sides of face bright yellow, the ear-coverts posteriorly washed with olive-green like the sides of the neck; entire under surface of body bright golden yellow, the flanks washed with olive, with a few indications of rufous streaks on the sides of the breast. Total length 5 inches, culmen 0·5, wing 2·45, tail 2·1, tarsus 0·8.

Adult female. Greener than the male, slightly more yellow on the rump and upper tail-coverts; the wing-coverts and quills edged with dingy olive-yellow; no rufous on the head, which is like the back; lores, sides of face, cheeks, and under surface of body brighter yellow, but shaded with olive, especially on the flanks. Total length 5·3 inches, culmen 0·5, wing 2·4, tail 2·05, tarsus 0·75.

Young. Similar to the adult female, but whiter underneath especially on the throat; the upper surface olive-greenish, more distinctly yellow on the rump and upper tail-coverts, the ear-coverts, sides of neck, and hind neck washed with ashy grey.

Hab. Jamaica; Bahamas, not observed above Long Island (*Cory*).

a. ♂ ad. sk.	Jamaica.	Sclater Collection.
b. ♀ juv. sk.	Jamaica.	Sclater Collection.
c. ♂ ad. sk.	Jamaica (*Osburn*).	Sclater Collection.
d. Juv. sk.	Jamaica (*March*).	U.S. Nat. Museum [P.].
e. ♀ ad. sk.	Jamaica, Nov. 22.	Dr. Bryant [P.].
f. Sternum.	Jamaica.	P. H. Gosse, Esq. [P.].

4. Dendrœca gundlachi *.

Sylvia æstiva (*nec Gm.*), *Lembeye, Av. Cuba*, p. 31 (1850).
Rhimamphus æstivus (*nec Gm.*), *Gundl. J. f. O.* 1855, p. 472; *Cab. J. f. O.* 1860, p. 326; *Gundl. J. f. O.* 1861, p. 407.
Dendroica albicollis (*nec Gm.*), *Cass. Proc. Philad. Acad.* 1860,

* Some writers have suggested that Brisson's "Figuier de S. Domingue" is the present species. As I have never seen a specimen of *D. gundlachi*, I have not been able to institute a close comparison; but it seems to me very doubtful if the two birds are identical. In the first place, no Golden Warbler has been found in S. Domingo, so that the locality given is of no assistance in determining the exact species; and, secondly, the bird described is evidently a young one; and, as in the immature stages all the Golden Warblers are more or less alike, no identification seems possible. The following is the synonymy:—

Le Figuier de S. Domingue, *Briss. Orn.* iii. p. 494, pl. 26. fig. 5 (1760).
Petit Figuier de S. Domingue, *Briss. t. c.* p. 496.
Figuier à gorge blanche, *Buff. Hist. Nat. Ois.* v. p. 287 (1778).
S. Domingo Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 479 (1783).
Green and White Warbler, *Lath. t. c.* p. 480.
Motacilla albicollis, *Gm. Syst. Nat.* i. p. 983 (1788).
Motacilla chloroleuca, *Gm. t. c.* p. 984 (1788).
Sylvia albicollis, *Lath. Ind. Orn.* ii. p. 535 (1790).
Sylvia chloroleuca, *Lath. t. c.* p. 984 (1790).

p. 192; *Lawr. Ann. Lyc. N. Y.* vii. p. 264 (1860); *Gundl. J. f. O.* 1861, p. 326.
Dendroica gundlachi, *Baird, Review Amer. B.* p. 197 (1865).
Mniotilta gundlachi, *Gray, Hand-l. B.* i. p. 241, no. 3495 (1869).
Dendrœca petechia, *d.* cubana, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 608.
Dendroica petechia, var. gundlachi, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 216 (1874); *Cory, B. Bahamas*, p. 58 (1880).
Dendrœca petechia gundlachi, *Coues, B. Color. Vall.* p. 255 (1878).

Adult male. Upper parts dark yellowish green, scarcely white on the rump, the shaft of the feathers perhaps more dusky; top of the head more and more yellowish to the bill, especially towards the bases of the feathers, the central portions of the feathers tinged with reddish *; underparts bright yellow, the jugulum and sides streaked with reddish; wing-feathers dark brown; the quills and coverts edged externally with the dull olive of the back, which scarcely becomes more yellow on the margin of the coverts, as in *D. petechia*; the marginal colour of the primaries towards their ends passing into grey; the alula uniform brown; the quills margined nternally, but not sharply, with yellowish, which is almost a dull white towards the ends viewed from above. The upper surfaces of the tail-feathers are dark greenish brown, margined externally like the rump; the outer four feathers have rather poorly defined yellow patches on their inner webs towards the end, which, however, on the outer feather does not quite reach the shaft, and is separated on the others by a greater and greater interval of the ground-colour; the fifth has the inner margin above yellow; the bill is plumbeous, with pale edges; the feet apparently greenish. Total length 4·9 inches, wing 2·5, tail 2·2, tarsus 0·85. (*Baird.*)

A *female* bird is quite similar, but with the yellow patches on the tail still more restricted. A young bird with much worn plumage is ashy above, with patches of olive-green; the underparts creamy white, strongly tinged with yellow across the breast and on crissum; the yellow patches of the tail much restricted. A young male, further advanced, has the adult plumage, with only a few patches of light ashy on the nape and sides of neck and some whitish spots on the chin. (*Baird.*)

Hab. Cuba; Bahamas, not seen north of Long Island (*Cory*).

5. Dendrœca melanoptera.

Dendrœca petechia, *Lawr. Proc. U.S. Nat. Mus.* i. pp. 54 (1878), 232, 239 (1879).
Dendrœca petechia, var. melanoptera, *Lawr. Proc. U.S. Nat. Mus.* i. pp. 453, 486 (1879).

Adult male. General colour above clear olive-yellow, scarcely any ighter on the rump and upper tail-coverts, the latter having brighter ellow edges; lesser wing-coverts like the back; median and greater coverts as well as the bastard-wing feathers blackish, externally edged with bright golden yellow; primary-coverts and quills blackish,

* Mr. Lawrence speaks of a male bird having the whole crown of a deep orange colour.

edged with olive-yellow, brighter and more golden yellow on the quills and especially on the inner secondaries; tail-feathers dusky brown, washed with olive and edged with yellow, all but the centre feathers yellow on the inner web, dull olive-brown on the outer web and across the tip of the inner web, the brown colour increasing and the yellow diminishing towards the centre of the tail; crown of head light chestnut or bay, forming a cap which reaches as far as the nape; lores golden yellow, impinging on the base of the forehead; eyebrow, feathers round the eye, and cheeks golden yellow, extending on to the ear-coverts, the hinder portion of which part is olive-yellow like the sides of the neck and back, though slightly streaked with yellow; entire under surface of body golden yellow, washed with olive on the sides of the breast and flanks; the cheeks, throat, breast, and sides of body streaked with rich chestnut, more broadly and distinctly on the flanks; under wing-coverts and axillaries bright yellow; quills dusky below, yellow along the inner web. Total length 4·5 inches, culmen 0·45, wing 2·35, tail 1·95, tarsus 0·7.

The bird described is one from the Sclater collection marked "Antilles (Verreaux);" but, after comparison with Baird's 'Key' and the descriptions of the American authors, I believe it to be the full-plumaged adult of *D. melanoptera* of Lawrence, of which I have also examined two authentic specimens—one from Dominica, in the Sclater Collection, and one from Guadeloupe in the collection of Messrs. Salvin and Godman. Unfortunately these are both females in winter plumage, and therefore some doubt hangs about my identification of the adult male, as certainty in these matters can only be obtained by comparing full-plumaged adults of all this group of Warblers. The name of *melanoptera* conveys a wrong idea of the specific value of the dark wings, for specimens of *D. ruficapilla* and *D. petechia* have quite as black quills, especially in fresh-moulted individuals.

Adult female in winter plumage. More olive-green than the male and without any rufous on the head, which is only a little clearer yellow than the back, except on the forehead, lores, eyelid, sides of face, and cheeks, which are decidedly brighter yellow; wing-coverts and quills not so broadly edged with bright yellow as in the male; under surface of body bright yellow, olive on the flanks, with a few slight indications of chestnut streaks on the throat and breast. Total length 4·7 inches, culmen 0·5, wing 2·2, tail 1·9, tarsus 0·75.

Hab. West Indies: islands of Dominica and Guadeloupe.

a. ♀ ad. sk.	Dominica (*Ober*).	Sclater Collection.
b. ♂ ad. sk.	[Antilles.]	Sclater Collection.

6. Dendrœca capitalis.

Dendrœca ——, *Baird, Rev. Amer. B.* in text of p. 202 (1865).

Dendrœca petechia, *c.* barbadensis, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* iii. p. 608 (1869).

Dendroica capitalis, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 217 (1874).

Dendrœca capitalis, *Lawr. Proc. Philad. Acad.* 1868, p. 359; *Coues, B. Color. Vall.* p. 256 (1878).

Adult male. General colour above olive-yellow, a little brighter and clearer on the hind neck and on the rump and upper tail-coverts; lesser wing-coverts like the back, the median and greater series as well as the bastard-wing feathers blackish, edged with bright yellow; primary-coverts and quills blackish, edged with olive-yellow, a little brighter on the inner secondaries; centre tail-feathers dusky brown, edged with olive-yellow; the remainder of the feathers yellow on the inner web, dark olive-brown on the outer web and across the extreme tip of the inner one, the yellow somewhat decreasing and the brown increasing towards the centre of the tail; crown of head deep chestnut-brown or maroon, the nape olive-yellow like the hind neck; a broad golden-yellow eyebrow impinging on the base of the forehead, which is chestnut like the crown, but very narrow; lores, sides of face, cheeks, ear-coverts, and entire under surface of body golden yellow, with pale chestnut streaks on the fore neck, breast, and sides of body; under wing-coverts and axillaries also golden yellow; quills dusky below, yellow along the inner web. Total length 4·8 inches, culmen 0·55, wing 2·35, tail 1·85, tarsus 0·7.

Hab. Barbadoes.

a. ♂ ad. sk.	Barbadoes (*Briggs*).	Sclater Collection.
b. ♂ ad. sk.	Antilles.	Sclater Collection.

7. Dendrœca rufopileata.

Dendroica rufopileata, *Ridgw. Proc. U.S. Nat. Mus.* vii. p. 173 (1884).

Adult male. Forehead and crown uniform chestnut-rufous, abruptly defined all round; upper parts yellowish olive-green, the wings slate-dusky, with broad and distinct pure yellow edgings on greater wing-coverts and tertials, the outer webs of the former being almost wholly yellow; primaries and secondaries narrowly edged with olive-yellow; inner webs of rectrices (except middle pair) wholly clear primrose-yellow; outer webs dusky, edged, especially on lateral feather, with yellow; sides of head (including lores and superciliary region back to above auriculars) and entire lower parts pure gamboge-yellow, the jugulum and breast broadly, but not very sharply, streaked with rufous; bill black; legs and feet brownish. Wing 2·30 inches, tail 2·00, culmen 0·50, depth of bill 0·14, tarsus 0·75, middle toe 0·40. (*Ridgway.*)

Adult female. Differing from the male in lacking any trace of rufous on crown or streaks on breast; yellow beneath decidedly less pure; bill light brownish, the maxilla dusky. Wing 2·30 inches, tail 2·00, culmen 0·45, depth of bill 0·12, tarsus 0·75, middle toe 0·42. (*Ridgway.*)

The nearest ally of this species is *D. capitalis*, Lawr., of Barbadoes, which differs in having the pileum of a very dark rich chestnut, in having the entire sides and flanks, as well as the breast, sharply streaked with rich chestnut, the yellow of the lower parts and the olive-green of the upper surface much deeper, and the bill much stouter. (*Ridgway.*)

Hab. Island of Curaçoa, Venezuela.

8. Dendrœca aureola.

Sylvicola aureola, *Gould, Voy. 'Beagle,' Birds*, p. 86, pl. 28 (1841); *Bp. Consp.* i. p. 309.

Mniotilta aureola, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 241, no. 3488 (1869).

Dendroica aureola, *Cass. Proc. Philad. Acad.* 1860, p. 192; *Baird, Rev. Amer. B.* i. p. 194 (1865); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 217 (1874).

Dendrœca petechia, *f.* galapagensis, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* iii. p. 608 (1869).

Dendrœca aureola, *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Coues, B. Color. Vall.* p. 256 (1878); *Salvin, Trans. Z. S.* ix. p. 473 (1876); *Sharpe, P. Z. S.* 1877, p. 66; *Tacz. t. c.* p. 744; *id. Orn. Pérou*, p. 467 (1884).

Adult male. General colour above olive-yellow, a trifle brighter on the rump; lesser wing-coverts like the back; median and greater coverts blackish, margined and tipped with brighter yellow; bastard-wing blackish, fringed with golden yellow; primary-coverts and quills blackish, edged with olive-yellow, more golden on the primaries, broader and paler on the secondaries; upper tail-coverts rather duller than the back; tail-feathers blackish, washed with olive and edged with brighter yellow, all but the centre ones bright pale yellow, dark brown along the outer web and across the end of the inner one; crown of the head bright bay, with golden bases to the feathers; lores and base of the forehead orange-yellow; eyebrow, feathers round the eye, ear-coverts, and cheeks bright golden yellow, the ear-coverts washed with olive on the upper edge; throat and entire under surface brilliant golden yellow; fore neck and breast as well as the flanks streaked with rufous; thighs golden yellow, externally olive; under tail-coverts, under wing-coverts, and axillaries bright golden yellow; quills dusky below, inner edges bright yellow. Total length 4·8 inches, culmen 0·55, wing 2·6, tail 2, tarsus 0·85.

Adult female. Duller in colour than the male and much greener; head like the back, a little yellower on the forehead; lores and a narrow eyebrow, sides of face, and under surface of body clear pale eyebrow, a little washed with greenish on the sides of the body and the upper edge of the ear-coverts; edges of the wing-coverts and quills not nearly so bright as in the male; the brown colour on the inner web of the tail-feathers much more extended, so that the yellow on the inner web is not so distinct. Total length 4·7 inches, culmen 0·55, wing 2·5, tail 1·9, tarsus 0·85.

Young male. Like the old female but greyer, the hind neck and back washed with ashy; crown of head ashy, washed with yellow; lores ashy, washed with yellowish; eyelid ashy white; ear-coverts grey; wing-coverts and quills ashy brown, edged with light yellow the quills fringed with whitish at the ends; tail-feathers dusky brown, edged with olive-yellow, the inner webs also edged with yellow, increasing in extent towards the outer feathers, where it is very broad; cheeks and under surface of body white, faintly washed with yellow on the fore neck, flanks, and abdomen; the under tail-coverts washed with brighter yellow; sides of body and flanks ashy, washed with olive-yellow. Total length 4·4 inches, culmen 0·45, wing 2·4, tail 1·85, tarsus 0·75.

Hab. Most of the islands of the Galapagos archipelago; Ecuador and Peru.

a, b. ♂ ♀; *c.* ♂ juv. sk.	Indefatigable Island, August.	Dr. O. Habel [C.].
d. ♂ juv. sk.	Indefatigable Island, August (*Habel*).	Sclater Collection.
e, f. Juv.; *g.* Ad. sk.	Charles Island.	Commander Cookson [C.].
h. ♂ ad. sk.	Abingdon Island (*Habel*).	Sclater Collection.
i. Ad. sk.	Galapagos Islands (*C. Darwin*).	Voy. of H.M.S. 'Beagle.' (Type of species.)
k, l. Ad. sk.	Gorgona Island.	Capt. Kellett and Lieut. Wood [P.].

9. Dendrœca vieilloti.

Sylvia ruficapilla (*non Lath.*), *Vieill. Nouv. Dict. d'Hist. Nat.* xi. p. 228 (1817); *id. & Oud. Gal. Ois.* i. pl. 164 (1825)*.
Dendroica erithachorides, *Baird, B. N. Amer.* p. 283 (1858).
Dendroica vieilloti, *Cass. Proc. Philad. Acad.* 1860, p. 192; *Baird, Review Amer. B.* p. 203 (1865); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 217 (1874).
Rhimamphus ruficeps, *Cab. J. f. O.* 1860, p. 326 (*ex Vieill. & Oud.*).
Dendrœca vieilloti, *Sel. & Salv. Nomencl. Av. Neotr.* p. 9 (1873, pt.); *Coues, B. Color. Vall.* p. 256, note (1878); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 125 (1880, pt.).
Mniotilta vieilloti, *Gray, Hand-l. B.* i. p. 240, no. 3481 (1869).
Dendrœca petechia, *i.* panamensis, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 609.
Mniotilta ruficeps, *Giebel, Orn. Thes.* ii. p. 606 (1875).

Adult. General colour above dusky olive-yellow, a little brighter yellow round the hind neck and on the rump; mantle and upper back indistinctly streaked with blackish brown; lesser wing-coverts like the back, but washed with brighter yellow; median and greater coverts black, externally edged with bright yellow; bastard-wing, primary-coverts, and quills blackish, edged with olive-yellow, brighter yellow on the primaries; tail-feathers blackish, edged with olive-yellow, all but the centre ones yellow on the inner web except near the end of the shaft, where the brown colour of the outer web spreads on to the end of the inner web for a short distance, the yellow somewhat diminishing and the brown increasing towards the centre of the tail; entire crown of head chestnut-rufous, as also the sides of the face, ear-coverts, cheeks, and throat; loral plumes with yellow bases; remainder of under surface of body bright yellow, streaked with chestnut on the breast, sides of the body, and flanks; thighs, under tail-coverts, under wing-coverts, and axillaries golden yellow; quills dusky below, yellow along the inner web. Total length 4·4 inches, culmen 0·5, wing 2·55, tail 2·05, tarsus 0·8.

Hab. Panama and Veragua: probably extending into Northern Colombia.

a. Ad. sk.	Gorgona, Panama.	Capt. Kellett and Lieut. Wood [P.].

* The plate in the 'Galérie des Oiseaux' undoubtedly represents the Panama bird, which is also said to extend to Carthagena. Future research may confirm this range, but the only specimens examined by me from New Granada are different from true *D. vieilloti* and represent an allied form.

Subsp. *a*. Dendrœca bryanti.

Sylvicola vieilloti (*nec Cass.*), *Finsch, Abhandl. nat. Ver. Bremen*, ii. p. 329 (1870).

Dendrœca vieilloti, pt., *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Salvin & Godm. Biol. Centr.-Amer., Aves*, i. p. 125 (1880).

Dendrœca vieilloti, var. bryanti, *Ridgw. Amer. Nat.* vii. p. 606 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 218 (1874); *Coues, B. Color. Vall.* p. 256 (1878).

Dendrœca vieilloti (*nec Cass.*), *Boucard, P. Z. S.* 1883, p. 441.

Adult (British Honduras). Similar to *D. vieilloti*, but with the chestnut on the throat not extending over the fore neck, and the chestnut streaks on the breast and sides of the body much narrower. Total length 4·8 inches, culmen 0·55, wing 2·6, tail 1·95, tarsus 0·8. (*Mus. Salvin and Godman.*)

Winter plumage. Wanting the rufous on the head and throat; the wing-coverts and quills edged with dull olive-yellow; lores yellow, impinging on the forehead; feathers over the eye, eyelid, sides of face, and under surface of body bright yellow, washed with olive on the sides of the body and flanks. Total length 4·5 inches, culmen 0·55, wing 2·45, tail 2, tarsus 0·8. (*Mus. Salvin and Godman.*)

This seems to me a fairly distinct race; but it is doubtful whether it will not ultimately be found to merge gradually into true *D. vieilloti*, as the specimens in the Salvin-and-Godman collection from British Honduras and Costa Rica are more distinctly striped below than those from Yucatan; they preserve, however, the defined margin of the chestnut throat *.

Hab. From Mexico to Yucatan.

a. ♂ imm. sk. Nicaragua, March 1 (*C. C. Nutting*). R. B. Sharpe, Esq. [P.].

Subsp. *β*. Dendrœca granadensis.

Dendrœca vieilloti (*nec Cass.*), *Sclater, Cat. Amer. B.* p. 32 (1862).

Adult. General colour above dull olive-yellow, a trifle clearer on the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater series as well as bastard-wing feathers blackish, edged with olive-yellow, a little brighter towards the ends; primary-coverts blackish, fringed with olive; quills blackish, edged with olive-yellow, brighter on the secondaries; centre tail-feathers dull olive-brown, all the remainder yellow on the inner web, brown along the outer web and across the end of the inner one, the yellow decreasing and the brown increasing in extent towards the centre of the tail; crown of the head as far as the nape orange-chestnut, the hind neck olive like the back; lores and eyelid golden yellow; sides of hinder

* The present bird seems to me to afford a legitimate case for the employment of trinomial nomenclature, as the name *Dendrœca vieilloti bryanti* Mr. Ridgway indicates that it is a form of *D. vieilloti*, which it undoubtedly is; but supposing that a perfect gradation is found to exist, as will most probably turn out to be the case, between *D. bryanti* and *D. vieilloti*, one may ask—What name should be bestowed on those specimens which illustrate the last connecting links between the two forms? They are neither true *D. vieilloti* nor true *D. bryanti*; and therefore the plan adopted by Messrs. Salvin and Godman of uniting all the Central-American birds under the name of *D. vieilloti* will probably prove to be the best solution of the question.

crown golden yellow washed with chestnut; sides of face, ear-coverts, cheeks, and entire throat pale orange-rufous or fawn-colour; remainder of under surface of body golden yellow, olive on the flanks and sides of the body; under wing-coverts and axillaries golden yellow; quills dusky below, golden yellow along the inner web. Total length 4 inches, culmen 0·5, wing 2·1, tail 1·6, tarsus 0·75.

This is a very well-marked race, with the head and throat of a pale rufous or bay of about the same tint as in *D. petechia*, very different from the dark colour of the same parts in *D. vieilloti*.

Hab. Colombia.

a. ♂ ad. sk.	Colombia (*Verreaux*).	Sclater Collection.
b. ♂ ad. sk.	Colombia (*Verreaux*).	Sclater Collection.
c. Ad. sk.	Colombia (*Verreaux*).	Sclater Collection.

10. Dendrœca rufigula.

Dendroica rufigula, *Baird, Review Amer. B.* p. 204 (1865).
Mniotilta rufigula, *Gray, Hand-l. B.* i. p. 241, no. 3498 (1869).
Dendroica vielloti, var. rufigula, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 217 (1874).
Dendrœca vieilloti rufigula, *Coues, B. Color. Vall.* p. 256 (1878).
Dendrœca rufigula, *Lawr. Proc. U.S. Nat. Mus.* i. p. 486 (1879).
Dendrœca vieilloti (pt.), *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 125 (1880).

Adult. General colour above dark olive, a little clearer olive-yellow on the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater series, as well as the bastard-wing, primary-coverts, and quills, blackish edged with olive-yellow; four centre tail-feathers dull olive-brown, the remainder yellow on the inner web, dusky brown on the outer and across the tip of the inner web, the yellow decreasing extensively and the brown increasing towards the centre of the tail; crown of head light chestnut or bay, extending only to the occiput, the latter, as well as the sides of the hinder crown and nape, being dark olive like the back; sides of face and ear-coverts pale chestnut like the crown, with a streak of brighter yellow above the ear-coverts along the sides of the crown; lores slightly varied with yellow bases to the feathers; cheeks and entire throat light chestnut or bay, with yellow bases to the feathers, more evident when the latter are disturbed; remainder of under surface of body bright golden yellow, with broad streaks of chestnut on the fore neck, breast, and sides of the body, less distinct on the latter, which are washed with dull olive; axillaries and under wing-coverts bright yellow; quills dusky brown, yellow along the inner web. Total length 4·8 inches, culmen 0·5, wing 2·05, tail 1·75, tarsus 0·7.

Hab. Island of Martinique.

a. ♂ ad. sk.	Martinique, August (*Ober*).	Sclater Collection.

11. Dendrœca pennsylvanica.

The Red-throated Flycatcher, *Edw. Glean.* ii. p. 193, pl. 301 (1760).
Figuier à teste jaune de Canada, *Briss. Orn.* iii. p. 517, pl. 27. fig. 2 (1760).
Figuier à teste jaune de Pensilvanie, *Briss. Orn.* vi. App. 105 (1760).
Motacilla pensylvanica, *Linn. S. N.* i. p. 333 (1766).
Motacilla icterocephala, *id. t. c.* p. 334 (1766).

Figuier à tête jaune de Canada, *Buff. Hist. Nat. Ois.* v. p. 299 (1778).
Figuier à poitrine rouge, *Buff. Hist. Nat. Ois.* v. p. 308 (1778).
Red-throated Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 490 (1783).
Quebec Warbler (pt.), *Lath. Gen. Syn.* ii. pt. 2, p. 484 (1783); *Penn. Arctic Zool.* ii. p. 408 (1785).
Bloody-side Warbler, *Penn. Arctic Zool.* ii. p. 405 (1785, *nec Lath.*).
Motacilla pensilvanica, *Gm. Syst. Nat.* i. p. 971 (1788).
Sylvia pensylvanica, *Lath. Ind. Orn.* ii. p. 540 (1790).
Sylvia icterocephala, *id. t. c.* p. 538 (pt.); *Vieill. Ois. Amér. Sept.* ii. p. 31, pl. 90 (1807); *Audub. B. Amer.* pl. 59; *id. Orn. Biogr.* i. p. 306 (1832).
Sylvia pennsylvanica, *Wils. Amer. Orn.* ii. p. 99, pl. 14. fig. 5 (1810).
Sylvicola icterocephala, *Jard. ed. Wils. Amer. Orn.* i. p. 248 (1832); *Richards. Rep. Brit. Assoc.* 1836-37, p. 172; *Bp. Comp. List B. Eur. & N. Amer.* p. 22 (1838); *Audub. Syn.* p. 54 (1839); *id. B. Amer.* ii. p. 35, pl. 81 (1841); *Bp. Consp.* i. p. 308 (1850); *Bryant, Proc. Bost. Soc. N. H.* vi. p. 116 (1857), vii. p. 110 (1859).
Mniotilta pennsylvanica, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 241, no. 3485 (1869).
Dendroica pennsylvanica, *Baird, B. N. Amer.* p. 279 (1858); *id. Rev. Amer. B.* p. 191 (1865); *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1866); *Von Frantz. J. f. O.* 1869, p. 293; *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 245, pl. 13. figs. 7, 8 (1874).
Dendrœca icterocephala, *Scl. P. Z. S.* 1859, pp. 363; 374; *Cab. J. f. O.* 1860, p. 328; *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* iii. p. 612 (1869).
Dendrœca pennsylvanica, *Salv. & Scl. Ibis*, 1860, p. 273; *Lawr. Ann. Lyc. N. Y.* vii. p. 322 (1861); *Scl. Cat. Amer. B.* p. 31 (1862); *id. & Salv. P. Z. S.* 1864, p. 347; *Salv. P. Z. S.* 1867, p. 136; *Lawr. Ann. Lyc. N. Y.* ix. p. 94 (1868), ix. p. 200 (1869); *Salv. P. Z. S.* 1870, p. 182; *Scl. & Salv. P. Z. S.* 1870, p. 836; *Coues, Key N. Amer. B.* p. 102 (1872); *Allen, Bull. Mus. Comp. Zool. Cambr.* iii. p. 124 (1872); *Coues, B. N.-West*, p. 62 (1874); *id. B. Color. Vall.* p. 244 (1878); *Boucard, P. Z. S.* 1878, p. 52; *Sennett, Bull. U.S. Geol. Surv.* v. p. 387 (1878); *Merrill, Bull. U.S. Nat. Mus.* i. p. 124 (1878); *Coues, Bull. U.S. Geol. Surv.* iv. p. 566 (1878); *Cory, B. Bahamas*, p. 62 (1880); *Salv. & Godman, Biol. Centr.-Amer., Aves*, i. p. 131 (1881); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 17 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 304 (1884).

Adult male in breeding-plumage. General colour above black, streaked with olive-yellow, the hind neck more ashy; mantle and back black in the centre, olive-yellow on the margins of the feathers; rump ashy, washed with olive-yellow, the feathers centred with black; lesser wing-coverts ashy grey, with black bases to the feathers; the median series yellow or yellowish white with black bases; greater coverts black, externally yellow, paler at the tips; bastard-wing, primary-coverts, and quills blackish, edged with ashy grey, more distinct on the primaries; the secondaries edged with olive-yellow, broader and brighter on the inner ones; upper tail-coverts ashy grey, with black centres and slightly tinged with olive; tail-feathers black, edged with ashy grey, the outer feathers white, with the basal part of the inner web and the whole of the outer web black, extending across the tip of the inner one, the white gradually decreasing in extent towards the centre of the feather; crown of the head yellow, extending to the nape; hind neck blackish, with a

white spot in the centre; lores black, as well as a narrow eyebrow: base of forehead white, extending in a narrow line between the yellow crown and the black eyebrow; eyelid, feathers below the eye, and fore parts of the cheeks, as well as the sides of the throat, black; ear-coverts, hinder cheeks, and sides of neck white, as well as the adjacent hinder portion of the eyelid; throat and entire under surface of body white, with a broad band of chestnut extending from the black cheek-patch down the entire side of the body; the latter and the flanks white, with a tinge of yellow on the lower flanks; thighs ashy; under tail-coverts white; under wing-coverts and axillaries white, the edge of the wing mottled with small blackish bases to the feathers; quills dusky below, white along the inner edge: "bill light blue, blackish above; feet dusky; iris hazel" (*Audubon*). Total length 4·4 inches, culmen 0·45, wing 2·5, tail 1·8, tarsus 0·65.

Adult female. Differs from the male in being more olive-yellow above, less distinctly streaked with black: the head olive-yellow; the base of forehead, lores, and feathers above the eye pale ashy grey; the sides of the hinder crown ashy grey, streaked with black; sides of face and ear-coverts dull white, with a few black marks below the eye; no other black on the face; under surface of body white, with a few chestnut streaks on the sides of the body. Total length 4·6 inches, culmen 0·45, wing 2·4, tail 1·8, tarsus 0·75.

An adult female in the Salvin-and-Godman collection (Distr. Columbia, May 16) has a chestnut streak on the sides of the throat extending to the sides of the upper breast, but not reaching on to the flanks.

Young in first autumn. Resembles the adult female in wanting the black on the face, and has further no chestnut at all on the flanks; the upper surface is olive-yellow, including the head, the black mesial centres to the feathers of the back being mostly concealed; hind neck rather ashy like the sides of the neck; under surface of body dull white, ashy on the throat and chest; sides of body ashy brownish.

The young males may be distinguished from the young females by a slight appearance of black centres to the feathers of the upper surface, and sometimes, before leaving for their winter-quarters, the black on the lores and sides of hinder crown begins to make its appearance

Hab. Eastern province of North America, United States, and Canada: west only to the edge of the plains, and scarcely north of the United States: breeds abundantly in New England and doubtless also in the Middle States (*Coues*). Winters in Central America from Mexico to Panama (*S. & G.*). Bahamas.

a. Ad. st.	North America.	Purchased.
b. [♂] ad. sk.	North America.	Gould Collection.
c. ♂ ad. sk.	Pennsylvania (*Baird*).	Sclater Collection.
d, e, f. ♂: *g*. ♀ ad. sk.	Michigan.	Prof. J. B. Steere [P.].
h. ♀ juv. sk.	Mount Carmel, Illinois (*S. Turner*).	U.S. Nat. Museum [P.].

i. ♂ ad. sk.	Highwood, Illinois, May 23 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
k. Juv. sk.	Halfday, Illinois, Aug. 22 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
l. ♂ ad.; *m.* Juv. sk.	Colehour, Illinois, Sept. 18 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
n. Juv. sk.	Auburn, N.Y. (*F. S. Wright*).	R. B. Sharpe, Esq. [P.].
o. ♀ ad. sk.	Oyster Bay, Long Island, May 17 (*Roosevelt*).	U.S. Nat. Museum [P.].
p. ♂ ad. sk.	Cumberland County, Maine, May 22 (*N. C. Brown*).	R. B. Sharpe, Esq. [P.].
q. ♀ ad. sk.	District of Columbia, Sept. 6, 1858 (*E. Coues*).	Sclater Collection.
r. ♂ ad. sk.	Washington, D.C., May 19 (*Shoemaker*).	U.S. Nat. Museum [P.].
s. ♀ ad. sk.	St. Louis County, Missouri, May 21 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
t. ♂ juv. sk.	Panama (*McLeannan*).	Sclater Collection.
u. ♂ ad. sk.	Veragua (*Arcé*).	O. Salvin, Esq.]

12. Dendrœca blackburniæ *.

Blackburnian Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 461 (1783); *Penn. Arctic Zool.* ii. p. 412 (1785).
Motacilla blackburniæ, *Gm. Syst. Nat.* i. p. 977 (1788).
Sylvia blackburniæ, *Lath. Ind. Orn.* ii. p. 527 (1790); *Vieill. Ois. Amér. Sept.* ii. p. 36, pl. 96 (1807); *Wilson, Amer. Orn.* iii. p. 64, pl. 23. fig. 3 (1811); *Audub. B. Amer.* pls. 135, 399; *id. Orn. Biogr.* ii. p. 208 (1834), v. p. 73 (1839).
Sylvia parus, *Wils. Amer. Orn.* v. p. 114, pl. 44. fig. 3 (1812); *Audub. B. Amer.* pl. 134; *id. Orn. Biogr.* ii. p. 205 (1834).
Sylvia blackburni, *Vieill. N. Dict. d'Hist. Nat.* xi. p. 168 (1817).
Sylvia melanorrhoa, *Vieill. N. Dict. d'Hist. Nat.* xi. p. 180 (1817).
Sylvicola blackburniæ, *Jard. ed. Wils. Amer. Orn.* i. p. 354 (1832); *Richards. Rep. Brit. Assoc.* 1836–37, p. 172; *Bp. Comp. List B. Eur. & N. Amer.* p. 22 (1838); *Audub. Syn.* p. 57 (1839); *id. B. Amer.* ii. p. 48, pl. 87 (1841); *Bp. Consp.* i. p. 307 (1850); *Scl. P. Z. S.* 1854, p. 111.

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* The following names have been referred doubtfully to this species:—

1. Figuier étranger, *Daub. Pl. Enl.* vi. pl. 58. fig. 3.
Le Figuier orangé, *Buff. Hist. Nat. Ois.* v. p. 313.
Motacilla fusca, *P. L. S. Müll. Syst. Nat. Suppl.* p. 175 (1776).
Motacilla aurantia, *Bodd. Tabl. Pl. Enl.* p. 4 (1783).
Orange-headed Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 492.
Motacilla chrysocephala, *Gm. Syst. Nat.* i. p. 971 (1788).
Sylvia chrysocephala, *Lath. Ind. Orn.* ii. p. 541 (1790).
Mniotilta aurantia, *Gray, Gen. B.* i. p. 196 (1848).
Sylvicola chrysocephala, *Bp. Consp.* i. p. 309 (1850).

Founded on a bird from Guiana described by Buffon and figured in Daubenton's 'Planches Enluminées.' The latter plate, however, is too badly executed to determine the species with certainty, but it is probably *Dendrœca blackburniæ*.

2. Grey-poll Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 461 (1783); *Penn. Arctic Zool.* ii. p. 402 (1785).
Motacilla incana, *Gm. Syst. Nat.* i. p. 976 (1788).
Sylvia incana, *Lath. Ind. Orn.* ii. p. 527 (1790).
Mniotilta incana, *Gray, Gen. B.* i. p. 196 (1848).

Sylvicola parus, *Jard. ed. Wils. Amer. Orn.* ii. p. 209 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 22 (1838); *Audub. B. Amer.* ii. p. 40, pl. 83 (1841).
Mniotilta blackburniæ, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 240, no. 3472 (1869).
Mniotilta parus, *Gray, Gen. B.* i. p. 196 (1848); *Reinh. Ibis*, 1861, p. 6.
Mniotilta melanorrhoa, *Gray, Gen. B.* i. p. 196 (1848).
Rhimamphus parus, *Bp. Consp.* i. p. 311 (1850).
Rhimamphus blackburniæ, *Cab. Mus. Hein.* Th. i. p. 19 (1850); *Scl. P. Z. S.* 1855, p. 143, 1858, p. 64.
Dendroica blackburniæ, *Scl. & Salv. Ibis*, 1859, p. 11; *Baird, B. N. Amer.* p. 274 (1860); *Scl. P. Z. S.* 1864, pp. 64, 184; *Baird, Review Amer. B.* p. 189 (1865); *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1866); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 547 (1869); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 237, pl. 13. figs. 2, 3 (1874).
Dendrœca blackburniæ, *Sclater, P. Z. S.* 1859, p. 363; *Cab. J. f. O.* 1860, p. 328; *Lawr. Ann. Lyc. N. Y.* vii. p. 468 (1862); *Scl. Cat. Amer. B.* p. 30 (1862); *Blakist. Ibis*, 1863, p. 62; *Dresser, Ibis*, 1865, p. 478; *Salv. P. Z. S.* 1867, p. 136; *Lawr. Ann. Lyc. N. Y.* ix. p. 94 (1868); *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 611; *Von Frantz. J. f. O.* 1869, p. 293; *Salv. P. Z. S.* 1870, p. 183; *Scl. & Salv. t. c.* p. 780; *Wyatt, Ibis*, 1871, p. 322; *Salv. Ibis*, 1872, p. 314; *Coues, Key N. Amer. B.* p. 100 (1872); *Allen, Bull. Mus. Comp. Zool.* iii. pp. 124, 166, 175 (1873); *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Tacz. P. Z. S.* 1874, p. 508; *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 15 (1876); *Boucard, P. Z. S.* 1878, p. 52; *Coues, B. Color. Vall.* p. 284 (1878); *Merrill, Proc. U.S. Nat. Mus.* i. p. 123 (1878); *Scl. & Salv. P. Z. S.* 1879, p. 494; *Tacz. t. c.* p. 223; *Cory, B. Bahamas*, p. 60 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 17 (1881); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 133 (1881); *Tacz. P. Z. S.* 1882, p. 6; *id. Orn. Pérou*, p. 464 (1884); *Coues, Key N. Amer. B.* 2nd ed. p. 302 (1884).

Adult male. General colour black, streaked with white on the sides of the back and scapulars, the outer webs of which are white; rump uniform black like the centre of the back; lesser wing-coverts black; median coverts white; greater coverts black, edged with ashy olive and tipped with white, the inner ones white, black only in the centre or on the inner web; bastard-wing and primary-coverts black; quills black, edged with ashy olive, inner secondaries more broadly with white; upper tail-coverts black, the lateral ones edged with ashy; tail-feathers black, edged with ashy; outer tail-feathers white, with the external web black, extending across the tip of the inner web and increasing in extent towards the centre of the tail, the white becoming gradually reduced to a narrow edging; crown of the head, nape, and hind neck black, with a red sincipital streak of golden yellow; lores black, a broad arrow of golden yellow from the base of the nostrils and sides of the neck; upper and lower edges of the eyelid golden yellow, as also a patch below the eye; ear-coverts as well as the anterior and posterior margin of the eyelid black; sides of the neck pale yellow; cheeks, throat, and fore neck golden orange; breast, sides of the body, and flanks pale yellow, streaked with black; abdomen, thighs,

and under tail-coverts whiter, with only a faint tinge of yellow; under wing-coverts and axillaries white, the latter slightly tinged with yellow, the edge of the wing mottled with black bases to the feathers; quills dusky below, inner edges white: "bill and legs umber-brown, the former bluish at the base below; iris hazel" (*Audubon*). Total length 5 inches, culmen 0·45, wing 2·7, tail 2, tarsus 0·7.

Adult female in spring plumage. Similar to the male, but duller in colour, the orange of the throat and eyebrow less vivid, and the ear-coverts dusky brown. The upper surface of the body is much browner, being washed with ashy olive, and not deep black as in the male; the yellow frontal spot very pale and concealed, all the feathers being tipped with dusky blackish like the rest of the head; a double wing-bar formed by the white tips to the median and greater coverts; the white on the tail much less developed than in the male, the third feather having only a small spot of white near the end of the inner web. Total length 4·6 inches, culmen 0·7 wing 2·6, tail 2·0, tarsus 0·65. (*Mus. Salvin and Godman.*)

Young in first autumn plumage. More like the old female, b differing considerably from the adult plumage of either sex. Gener colour above olive-brown, the centre of the back streaked wit dusky brown, the feathers edged with dull ochre; the head like the back, with an obscure mark of ochreous on the fore part of the crown, indicating the yellow coronal patch of the adult; the hind neck not streaked at all; the rump and upper tail-coverts rather more ashy olive, more distinctly streaked with blackish; lesser wing-coverts like the back; the median and greater series blackish, edged with olive and tipped with white, forming a double wing-bar; quills blackish, margined with olive, the inner secondaries with whitish; tail-feathers dusky brown, margined with olive, the two outer feathers with an irregularly shaped patch of white near the end of the inner web; lores and ear-coverts dull olive-brown, with a yellowish spot below the eye, resembling the lower eyelid which adjoins it; eyebrow pale yellow, obscured somewhat with brown; sides of neck slightly mixed with yellow behind the ear-coverts; throat and fore neck clear olive-yellow; remainder of under surface paler yellow, becoming whiter on the abdomen and under tail-coverts, the latter, as well as the sides of the body and flanks, streaked with dusky; axillaries and under wing-coverts white, slightly tinged with yellow and mottled with dusky bases near the edge of the wing; quills dusky below, white along the edge of the inner web. Total length 4·2 inches, culmen 0·45, wing 2·5, tail 1·8, tarsus 0·7.

Adult male in winter plumage. Chiefly distinguished from summer plumage by the paler colour of the yellow eyebrow throat; the black facial markings present as in summer, but secured by olive; the whole of the black on the upper parts obscu by a wash of ashy olive, with which the feathers are broad edged and tipped; no wing-patch on the inner greater coverts, but a double wing-bar formed by the tips of the median and greater series; the fore neck gradually deepening into orange. Before

leaving their winter homes, the full plumage is assumed by a moult.

The *adult female in winter plumage* may be distinguished by the less amount of white on the tail and the dusky ear-coverts, as well as the generally browner plumage above; the throat is deep yellow.

The flanks are always strongly marked with black stripes in winter; but are more pronounced in the males than in the females. An interesting specimen from the Gould collection shows the assumption of the rich spring plumage by a complete moult.

Hab. United States, chiefly the eastern province, west to Utah and New Mexico. Breeds in the northern portions of the United States range and northward in the British provinces; doubtless also in elevated tracts of the Middle States (*Coues*). Winters in Central America from Mexico to Panama, and extends to Venezuela, Colombia, Ecuador, and Peru (*S. & G.*). Bahamas.

th; *b, c.* Ad. st.	North America.	Purchased.
pl ♂ ad. sk.	North America.	Gould Collection.
ad. sk.	Michigan.	Prof. J. Steere [P.].
ri. ♂ ad. sk.	Hyde Park, Illinois, May (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
♂ ad. hiem. sk.	Hindsdale, Illinois, Aug. 30 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
Juv. hiem. sk.	Chicago, Illinois, Sept. 21 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
. sk.	Wheatland, Indiana, May (*R. Ridgway*).	U.S. Nat. Museum [P.].
m. ♂ a sk.	San Francisco.	Capt. Kellett and Lieut. Wood [P.].
n. ♂ ad.	Mexico.	Purchased.
o. ♀ ad. st.	Guatemala.	Gould Collection.
p. [♂ ad.]; *q, r.* [♂ jun.] sk.		
s. ♀ ad. sk.	San José, Costa Rica (*Carmiol*).	U.S. Nat. Museum [P.].
t. ♀ hiem. sk.	Medellin.	T. K. Salmon, Esq. [C.].
u. ♂ ad. sk.	Venezuela.	Mr. Dyson [C.].
v, w. ♂ ad. sk.	Bogotá.	Gould Collection.
x, y. ♂ [♀] ad. sk.	Bogotá.	Sclater Collection.
z. [♀] ad. sk.	Bogotá.	J. Purdie, Esq. [P.].
a'. ♂ ad. sk.	Nanegal, Ecuador, Feb. (*L. Fraser*).	Sclater Collection.
b'. ♂ juv. sk.	Pallatanga, Nov. (*L. Fraser*).	Sclater Collection.

13. Dendrœca nigrescens.

W. lvia nigrescens, *Towns. Journ. Philad. Acad.* vii. p. 191 (1837), rec. iii. p. 153 (1839); *Audub. B. Amer.* pl. 395; *id. Orn. Biogr.* v. a. p. 57 (1839).

W. mivora nigrescens, *Bp. Comp. List B. Eur. & N. Amer.* p. 21 (1838).

Sylvicola nigrescens, *Audub. Syn.* p. 60 (1839); *id. B. Amer.* ii. p. 62, pl. 94 (1841); *Bp. Consp.* i. p. 308 (1850); *Dugès, La Nat.* i. p. 141 (1868).

? Sylvicola tristis, *Nutt. Man.* 1840, p. 472 (*teste Coues*).

Sylvia halseii, *Giraud, Sixteen B. Texas*, p. 11, pl. 3. fig. 1 (1841).

Mniotilta nigrescens, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 240, no. 3470 (1869).
Rhimamphus nigrescens, *Cab. Mus. Hein.* i. p. 20 (1850).
Sylvicola nigrescens, *Henry, Proc. Philad. Acad.* 1855, p. 309.
Dendroica nigrescens, *Baird, B. N. Amer.* p. 270 (1858); *Scl. P. Z. S.* 1858, pp. 295, 298, 1859, p. 374; *Baird, Rev. Amer. B.* p. 186 (1865); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 547 (1869); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 258, pl. 12. fig. 8 (1874).
Dendrœca nigrescens, *Scl. Cat. Amer. B.* p. 30 (1862); *Coues, Ibis*, 1865, p. 163; *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 610; *Coues, Key N. Amer. B.* p. 98 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Coues, B. N.-West*, pp. 55, 232 (1874); *id. B. Color. Vall.* p. 263 (1878); *Ridgw. Rep. U.S. Geol. Expl. 40th Par.* pt. iii. p. 433 (1877); *id. Bull. U.S. Nat. Mus.* no. 21, p. 17 (1881); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 136 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 300 (1884).

Adult male. General colour above clear slaty grey, the centre of the back with black centres to the feathers, not seen on the lo back and rump, but very distinct again on the upper tail-cove lesser wing-coverts grey like the back; median and greater co black, edged with slaty grey and broadly tipped with white, form a double white wing-bar; bastard-wing and primary-coverts bla the latter obsoletely fringed with ashy; quills black, externa edged with hoary grey, whiter on the primaries, the secondari narrowly tipped with white; tail-feathers black, washed with slate grey on the outer edges and fringed with white near the end of the inner web; the outer tail-feather for the most part white, with the oblique blackish base to the inner web, the shaft black, with an out towards the tip of the feather, the penultimate and the next widening feathers also for the most part white, which gradually decrease on the two latter as the black base on the inner web extends; head black, forming a cap; the lores, eyelid, feathers below the eye, and ear-coverts also black, produced to the sides of the neck; a supra-loral spot of golden yellow; from behind the eye a broad white streak, extending above the ear-coverts to the sides of the neck; the latter grey like the back; cheeks white, forming a broad moustache, which extends down the sides of the throat; entire throat black, slightly widening out on the sides of the fore neck; remainder of under surface of body white; the sides of the upper breast washed with slaty grey, the whole of the sides of the body broadly streaked with black in the form of long lines; thighs and under tail-coverts white, the long ones of the latter mesially streaked with black; under wing-coverts and axillaries white; quills dusky below, wh along the inner web; "bill and feet black; iris brown" (*Aud* Total length 4·9 inches, culmen 0·45, wing 2·65, tail 2·05, tars

Adult female. Like the male, but the black of the crown t with the ashy of the back, and that of the throat veiled w white tips of the feathers. (*Coues.*)

Adult male in winter plumage. Differs chiefly from the sum plumage in the more uniform upper surface, which does not show the black centres to the feathers of the mantle; the head is ashy like the back, the black crown being hidden by ashy grey tips to

the feathers, although more or less evident traces of the black may be traced on the forehead and along the sides of the crown; ear-coverts black, washed with ashy; the black throat entirely obscured by white ends to the feathers.

Young in autumn plumage. Resembles the winter plumage of the adults, having the head like the back; the mantle with no sign of black central streaks, but with a strong wash of brown on it and on the scapulars; the head also washed with brown, the black bases to the feathers being here and there perceptible; the white on the tail not quite so extensive as in fully adult birds; under surface of body white, through which may be traced the approaching black plumage of the adult stage, the yellow spot above the lores developed as in fully adult birds.

A young bird collected by A. Forrer at Presidio, in Mexico, on the 31st of December (*mus. Salvin and Godman*), has the under-parts entirely white, with a distinct yellowish tinge; on the lower throat, where the white tips are somewhat worn, the feathers show slight signs of black, and the flanks are obscurely streaked; the sides of the breast are distinctly marked with ashy.

Hab. United States, from the Rocky Mountains to the Pacific, breeding in suitable places throughout its U.S. range (*Coues*). Winters in Mexico.

a. Imm. sk.	Arizona (*Henshaw*).	R. B. Sharpe, Esq. [P.].
b, c. ♂ ♀ ad. sk.	Santa Rita Mountains, Arizona, June (*E. W. Nelson*).	U.S. Nat. Museum [P.].
d. ♂ ad. sk.	Northern California, June 24 (*C. H. Townsend*).	R. B. Sharpe, Esq. [P.].
e. ♂ ad. sk.	W. Mexico (*Dorman*).	Sclater Collection.
f. ♂ imm. sk.	Oaxaca, Mexico, March (*Boucard*).	Sclater Collection.
g, h. ♂ ♀ ad. sk.	La Parada, Mexico.	A. Boucard, Esq. [C.].
i. ♂ ad. sk.	Puebla, Mexico.	A. Boucard, Esq. [C.].
k. Ad. sk.	Mexico.	Gould Collection.

14. Dendrœca occidentalis.

Sylvia occidentalis, *Towns. Journ. Philad. Acad.* vii. p. 190 (1837), viii. p. 153 (1839); *Audub. B. Amer.* pl. 395. figs. 3 & 4; *id. Orn. Biogr.* v. p. 55 (1839).

Sylvicola occidentalis, *Bp. Comp. List B. Eur. & N. Amer.* p. 23 (1838); *Audub. Syn.* p. 60 (1839); *Nutt. Man.* 1840, p. 445; *Bp. Consp.* i. p. 308 (1850).

Mniotilta occidentalis, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 240, no. 3468 (1869).

Dendroica occidentalis, *Baird, B. N. Amer.* p. 268 (1858); *id. Rev. Amer. B.* p. 183 (1865); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 546 (1869); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 206, pl. 12. fig. 5 (1874); *Hensh. Zool. Expl. W. 100th Merid.* p. 201 (1876).

Dendrœca occidentalis, *Scl. Ibis*, 1865, p. 89; *Coues, t. c.* p. 103; *Salv. Ibis*, 1866, p. 191; *Coues, Proc. Philad. Acad.* 1866, p. 69; *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 611; *Cooper, B. Calif.* p. 92 (1870); *Coues, Key N. Amer. B.* p. 98 (1872); *Sel. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Ridgw. Rep. Geol. Expl. 40th Par.* pt. iii. p. 432 (1877); *Coues, B. Color. Vall.* p. 258

(1878); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 138 (1881); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 18 (1881); *Salv. Cat. Strickl. Coll.* p. 89 (1882); *Coues, Key N. Amer. B.* 2nd ed. p. 209 (1884).

Dendrœca peridentalis, *Cooper, Amer. Nat.* iii. p. 480 (1869).

Dendrœca chrysoparia (*nec Scl. & Salv.*), *Scl. & Salv. P. Z. S.* 1860, p. 298; *Scl. P. Z. S.* 1862, p. 19; *id. Cat. Amer. B.* p. 358 (1862).

Dendrœca niveiventris, *Salv. P. Z. S.* 1863, p. 187, pl. 24. fig. 2.

Adult male (La Parada, February). General colour above slaty grey, mottled with black centres to the feathers, a little less distinct on the rump, which is more hoary grey; upper tail-coverts black, edged with hoary grey; lesser wing-coverts slaty grey, with black bases to the feathers; median and greater coverts black, edged with slaty grey and tipped with white, forming a double wing-bar; bastard-wing and primary-coverts black, with obsolete ashy margins; quills black, margined with ashy grey, the first primary with whitish, the inner secondaries with a broad margin of hoary grey; tail-feathers black, edged with slaty grey, the outer feather almost entirely white, excepting the shaft-line, an oblique basal mark on the inner web, and a small elongated mark towards the end of the outer web, which are black; the penultimate feather similarly marked, but the white much reduced in size, and the oblique black mark extending much further up the inner web; the third feather with only a small white mark near the end; entire crown and sides of head, as well as the cheeks and malar line, golden yellow, with a few black tips to the feathers of the hinder crown and nape, the sides of the crown having also tiny black shaft-lines; throat and fore neck black; remainder of under surface of body white, including the under tail-coverts, axillaries, and under wing-coverts; quills blackish, edged with white on the inner web. Total length 4·7 inches, culmen 0·45, wing 2·65, tail 2, tarsus 0·7.

Adult female. Lighter ashy grey above, washed with olive-yellow, especially on the mantle, the black central streaks of the dorsal plumage much narrower and less pronounced; upper tail-coverts grey, with scarcely perceptible black centres; wings and tail as in the adult male; head golden yellow, but obscured with black tips to the feathers to a much greater extent than in the male, these black ends being much broader and extending over the crown, so that the forehead and sides of the crown are the only unspotted parts; entire sides of face, cheeks, and sides of neck golden yellow, washed with olive on the latter and on the ear-coverts; throat black, obscured by yellow on the upper part and the chin, and with hoary grey on the lower part; remainder of under surface of body dull white, including the thighs and under tail-coverts; the sides of the body washed with pale brown, darker and more ashy brown on the sides of the upper breast; under wing-coverts and axillaries white; quills dusky below, whitish along the inner web; "bill black; feet yellowish brown; iris brown" (*Audubon*). Total length 4·6 inches, culmen 0·5, wing 2·55, tail 2, tarsus 0·75.

A male in the Salvin-and-Godman collection (type of *D. niveiventris*, Salv.), from San Geronimo, Vera Paz, in Guatemala, differs

from the male described in having the hind neck up to the occiput uniform black. It was killed in January, but is evidently in full summer plumage.

The female described is an Oaxaca skin from the Sclater collection, and is apparently fully adult, though the overlying yellow on the black throat may be a sign of remains of winter plumage. One killed in January at La Parada, in Mexico, has the whole under surface creamy white, but the throat is washed with yellow like the cheeks. The black on the throat is distinctly traceable, the bases of all the feathers being visible beneath the white or yellow tips.

In a skin obtained by Mr. Salvin at Alotepeque, in Guatemala (*mus. Salvin and Godman*), the plumage is like that of the females above described, but the sides of the body are narrowly streaked with blackish. Dr. Coues speaks of these lateral streaks as being present in the young birds. In the specimen in question the black on the throat is nearly hidden by the whitish edges to the feathers, and the black mottlings on the back are beginning to show, so that the specimen is evidently commencing to acquire its full summer plumage. Another specimen in the Salvin-and-Godman collection, killed on the Volcan de Fuego, in Guatemala, on the 20th of November, is nearly full-plumaged, but has some yellow margins still discernible on the feathers of the throat. It would appear from this that, even if the full plumage is ultimately gained by a spring moult, the edges to the black feathers of the throat become abraded as early in the year as November, and many specimens must have the full plumage of the adults by December and January, as the bird above mentioned has also nearly lost the blackish tips to the feathers of the crown. The full sequence of plumage is not clear to me, as the series of skins examined has been somewhat limited.

Young. Upper parts olivaceous ash, and the yellow of the top of the head overlaid with olive; sides of the head pretty clear yellow, fading gradually into the white of the throat; no black on the latter; white of the underparts faintly brownish tinged, and sides with obsolete streaks. (*Coues.*)

Hab. In the United States, from the Rocky Mountains to the Pacific (*Coues*). Winters in Central America, from Mexico to Guatemala (*S. & G.*).

a. Juv. sk.	Big Trees, California, June 29 (*Henshaw*).	R. B. Sharpe, Esq. [P.].
b. ♀ ad. sk.	La Parada, Mexico, Jan.	A. Boucard, Esq. [C.].
c. ♂ ad. sk.	La Parada, Feb. (*Boucard*).	Sclater Collection.
d. ♀ ad. sk.	Oaxaca (*Boucard*).	Sclater Collection.

15. Dendrœca chrysoparia.

Dendrœca chrysoparia, *Scl. & Salv. P. Z. S.* 1860, p. 298; *id. Ibis*, 1860, p. 273; *Scl. Ibis*, 1865, pp. 89, 237; *Dresser, t. c.* p. 477; *Coues, Key N. Amer. B.* p. 98 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Salv. in Rowley's Orn. Misc.* i. p. 181, pl. 23 (1876); *Coues, B. Color. Vall.* p. 241 (1878); *Purdie, Bull. Nutt. Orn. Club*, iv. p. 60 (1879); *Brewster, t. c.* p. 77; *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 139 (1881); *Ridgw. Bull. U.S. Nat.*

Mus. no. 21, p. 17 (1881); *Brown, Bull. Nutt. Orn. Club*, 1882, p. 36; *Coues, Key N. Amer. B.* 2nd ed. p. 300 (1884).

Dendroica chrysopareia, *Baird, Rev. Amer. B.* pp. 183, 267 (1865); *Baird, Brewer, & Ridgw. Hist. N. A. Birds*, i. p. 260, pl. 12. fig. 6 (1874).

Dendrœca chrysopareia, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 610; *Cooper, B. Cal.* i. p. 93 (1870); *Coues, Key N. Amer. B.* p. 98 (1872).

Mniotilta chrysopareia, *Gray, Hand-l. B.* i. p. 241, no. 3494 (1869).

Adult (type of species). General colour above black, the head like the back, with a few narrow margins of olive-yellow to some of the feathers, a little more distinct on the back, the lower back and rump slightly more ashy; upper tail-coverts black; lesser wing-coverts black, edged with ashy; median and greater series black, margined with ashy and tipped with white, forming a double wing-bar; bastard-wing and primary-coverts uniform blackish brown; quills blackish, edged with ashy, a little more hoary on the inner secondaries and along the margin of the first primary; tail-feathers black, edged with ashy grey, the outer feathers white, with the shaft and nearly the whole of the outer web black; on the inner web an oblique black mark; on the penultimate feather the white much reduced, and on the third feather still further reduced to a wedge-shaped mark near the end of the inner web; head black; a broad band of golden yellow along the sides of the crown; the sides of face, cheeks, ear-coverts, and sides of neck golden yellow; in front of the eye a black spot and a streak behind the eye above the ear-coverts, widening out behind above the latter; anterior and posterior edge of eyelid black; entire throat black, extending down on to the sides of the neck; entire breast, from the fore neck downwards, and abdomen white; the under tail-coverts white, with black centres to the feathers; sides of the body and flanks white, thickly mottled with black centres to the feathers; thighs white; axillaries and under wing-coverts white, mottled with blackish bases to those near the edge of the wing; quills dusky below, ashy white along the edge of the inner web. Total length 4·5 inches, culmen 0·5, wing 2·5, tail 2·1, tarsus 0·75. (*Mus. Salvin and Godman.*)

Adult female. Differs from the male in being olive-yellow above, slightly mottled with blackish centres on the crown, lower back, and rump; upper tail-coverts ashy grey, with black centres; scapulars uniform ashy grey; wings as in the male, with two white wing-bars, the median series very broadly tipped with white, the ashy margins to the quills broader than in the male; tail as in the male; a broad eyebrow and entire sides of face golden yellow, the black line through the eye dusky blackish; base of cheeks and feathers below the eye whitish, as also the base of the chin; breast and abdomen white, and streaked with black on the flanks as in the male; throat yellow, the lower part and fore neck ashy whitish, overshading the black throat, which can be traced below; axillaries and under wing-coverts white; quills dusky below, white along the edge of the inner web. Total length 4·5 inches, culmen 0·5, wing 2·5, tail 2·05, tarsus 0·75. (*Mus. Salvin and Godman.*)

Hab. Texas; re-occurring in Guatemala.

16. Dendrœca virens.

The Black-throated Green Flycatcher, *Edw. Glean.* ii. p. 190, pl. 300 (1760).
Le Figuier à gorge noir de Pensilvanie, *Briss. Orn.* vi. App. p. 104 (1760).
Le Figuier à cravatte noire, *Buff. Hist. Nat. Ois.* v. p. 298 (1778).
Green Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 484 (1783); *Penn. Arct. Zool.* ii. p. 404 (1785).
Motacilla virens, *Gm. Syst. Nat.* i. p. 985 (1788).
Sylvia virens, *Lath. Ind. Orn.* ii. p. 537 (1790); *Vieill. Ois. Amér. Sept.* ii. p. 33, pl. 92 (1807); *Wils. Amer. Orn.* ii. p. 137, pl. 17. fig. 3 (1810); *Audub. B. Amer.* pl. 329. figs. 2, 4; *id. Orn. Biogr.* v. p. 70 (1838); *Gätke, Naum.* 1858, p. 423.
Parus viridis gutture nigro, *Bartr. Trav. Florida*, p. 292 (1791).
Sylvicola virens, *Jard. ed. Wils. Amer. Orn.* i. p. 279 (1832); *Richards. Rep. Brit. Assoc.* 1836-37, p. 172; *Bp. Comp. List B. Eur. & N. Amer.* p. 22 (1838); *Audub. Syn.* p. 55 (1839); *id. B. Amer.* ii. p. 42, pl. 84 (1841); *Bp. Consp.* i. p. 307 (1850); *Woodh. in Sitgr. Rep. Zuni River*, p. 70 (1853).
Mniotilta virens, *Gray, Gen. B.* i. p. 196 (1848); *Reinh. Ibis*, 1861, p. 5; *Gray, Hand-l. B.* i. p. 240, no. 3482 (1869).
Rhimamphus virens, *Cab. Mus. Hein.* i. p. 19 (1850); *Gundl. J. f. O.* 1855, p. 474; *Scl. P. Z. S.* 1856, p. 291.
Dendroica virens, *Baird, B. N. Amer.* p. 267 (1858); *Scl. P. Z. S.* 1858, p. 295, 1859, p. 373; *id. & Salv. Ibis*, 1859, p. 11; *Gundl. J. f. O.* 1861, p. 326; *Baird, Rev. Amer. B.* p. 182 (1865); *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1866); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 546 (1869); *Von Frantz. J. f. O.* 1869, p. 293; *Baird, Brewer, & Ridgw. Hist. N. A. B.* i. p. 261, pl. 12. fig. 4 (1874).
Dendrœca virens, *Scl. P. Z. S.* 1859, p. 363; *id. Cat. Amer. B.* p. 29 (1862); *Scl. & Salv. P. Z. S.* 1864, p. 347; *Scl. Ibis*, 1865, p. 89; *Dresser, t. c.* p. 477; *Lawr. Ann. Lyc. N. Y.* ix. p. 94 (1868); *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 611; *Salv. P. Z. S.* 1870, p. 182; *Coues, Key N. Amer. B.* p. 97 (1872); *Scl. & Salv. Nomenel. Av. Neotr.* p. 9 (1873); *Coues, B. N.-West*, p. 54 (1874); *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 15 (1876); *Gundl. Orn. Cuba*, p. 64 (1876); *Coues, B. Color. Vall.* p. 241 (1878); *Lawr. Pr. U.S. Nat. Mus.* i. pp. 54, 486 (1878); *Merrill, t. c.* p. 124 (1878); *Newt. P. Z. S.* 1879, p. 552; *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 137 (1881); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 17 (1881); *A. & E. Newt. Handb. Jamaica*, p. 106 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 298 (1884).

Adult male in summer plumage. General colour above olive-yellow, slightly streaked on the back with a few black centres to the feathers; the rump a little brighter yellow, with black centres to the feathers; scapulars ashy, washed with olive-yellow and centred with black; lesser wing-coverts ashy grey; median and greater series blackish, tipped with white, forming a double wing-bar; bastard-wing dusky, externally fringed with white; primary-coverts and quills dusky, externally edged with ashy grey, lighter on the primaries, the first of which is whitish along the outer web; upper tail-coverts ashy grey; tail-feathers dusky, edged with ashy grey externally and fringed with white along the inner web; the outer web white, excepting along the shaft and towards the end; the penultimate feather similarly marked, but also edged

with dusky brown towards the basal margin of the inner web; the third feather with a wedge-shaped mark of white near the end of the inner web; crown of head like the back, with dusky centres to the feathers, mostly concealed; the forehead more golden yellow, mottled with black; a broad superciliary band of golden yellow from the base of the bill to the sides of the nape; sides of neck also golden yellow; in front of the eye and behind the latter a dusky spot, the anterior and posterior edge of the eyelid also dusky; upper and lower margins of eyelid, sides of face, and cheeks golden yellow, the ear-coverts washed with dusky olive; throat and fore neck entirely black, descending on to the sides of the breast, where, however, the feathers are edged with ashy; breast, abdomen, and under tail-coverts white, the breast washed with yellow, as well as the sides of the vent; thighs ashy; sides of the body broadly streaked with black; axillaries and under wing-coverts white; quills dusky below, white along the edge of the inner web: "bill black; feet dusky; iris hazel" (*Audubon*). Total length 4·6 inches, culmen 0·5, wing 2·35, tail 2, tarsus 0·7.

Adult female. Much more dingy in colour than the male and without the black central streaks on the back; the frontal mark, eyebrow, and sides of face paler yellow; the throat yellow, obscuring the black with yellow edges to the feathers, the fore neck and sides of the breast having the black feathers tipped with ashy. Total length 4·4 inches, culmen 0·45, wing 2·3, tail 1·85, tarsus 0·7.

Some of the old females have the upper throat pure yellow, without any admixture of black bases (*ex. in mus. Salvin and Godman*).

The *adult male in winter* only differs from the summer plumage in having the small black centres to the feathers of the head and back more obscure, the secondaries more broadly edged with hoary white, and the black feathers of the throat fringed with yellow or ashy.

Many specimens appear to lose these marks of winter plumage before returning to their summer-quarters, and considerable variation is observable in a series in the extent and breadth of the black markings on the sides of the body.

In the Salvin-and-Godman collection is a specimen from Barranca, Costa Rica (*Carmiol*), shot in March, which has no patch of golden yellow on the forehead, the latter being dark olive-yellow like the head, with conspicuous black centres to the feathers. It has also a black auricular mark like *D. townsendi*, but the head is more like that of *D. virens*. It is perhaps a hybrid between the two.

Young. Resembles the adult female in general coloration, but has the black of the underparts entirely obscured by yellowish ashy tips to the feathers. In young males, before leaving for their winter-quarters in September, the black bases are more prominent than in the young females, not being thoroughly hidden by the pale ends of the feathers.

Hab. Eastern province of United States and temperate British America. West only to the edge of the plains (Missouri, Kansas, Indian Territory, and Texas). North casually to Greenland. Breeds in the higher portions of the Middle States and from New England

northwards. Migratory only in most parts of the United States (*Coues*). Occurs in winter throughout Central America from Mexico to Panama (*S. & G.*), as well as in Cuba, Jamaica, and Dominica. Has been met with in Heligoland in Europe.

a, b. ♂ ♀ ad. st.	North America.	Purchased.
c. ♂ juv. st.	North America.	J. Gould, Esq.
d. [♂] ad. sk.	North America.	Gould Collection.
e. ♂ ad. sk.	North America (*Bell*).	Sclater Collection.
f. [♀] ad. sk.	Niagara Falls (*J. G.*).	Gould Collection.
g. ♀ ad. sk.	Chicago, Illinois, May 18 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
h. ♂ juv. sk.	Chicago, Sept. 29 (*H. K. Coale*).	U.S. Nat. Museum [P.].
i. ♂ ad. sk.	Park Side, Illinois, May 1 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
k. [♀] ad. sk.	Highwood, Illinois, May 23 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
l. Juv. sk.	Halfday, Illinois, Sept. 13 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
m. ♀ ad. sk.	Lake Forest, Illinois, May 28 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
n. ♂ juv. sk.	Sheffield, Indiana, Sept. 25 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
o. ♂ ad. sk.	Wheatfield, Indiana, May 8 (*R. Ridgway*).	U.S. Nat. Museum [P.].
p. ♂ ad. sk.	Guatemala.	Gould Collection.
q. ♂ ad. sk.	Guatemala (*Constancia*).	Sclater Collection.
r. ♂ ad. sk.	Guatemala.	J. Gould, Esq.
s. ♂ ad. sk.	Veragua (*Arcé*).	O. Salvin, Esq.

17. Dendrœca townsendi.

Sylvia townsendi, *Nutt. MS.*; *Towns. Proc. Phil. Acad.* vii. p. 191 (1837), viii. p. 153 (1839); *Audub. B. Amer.* pl. 393. fig. 1; *id. Orn. Biogr.* v. p. 36 (1839).

Sylvicola townsendi, *Bp. Comp. List B. Eur. & N. Amer.* p. 23 (1838); *Audub. Syn.* p. 59 (1839); *Nutt. Man.* i. p. 446 (1840); *Audub. B. Amer.* p. 59, pl. 92 (1841); *Bp. Consp.* i. p. 308 (1850); *Finsch, Abh. nat. Ver. Brem.* iii. p. 35 (1872).

Sylvia melanocausta, "*Licht.*," *Brandt, Icon. Ined.* Taf. 1. fig. 5 (*teste Finsch*).

Mniotilta townsendi, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 240, no. 3469 (1869).

Dendroica townsendi, *Scl. P. Z. S.* 1858, pp. 295, 298; *Baird, B. N. Amer.* p. 269 (1858); *Scl. & Salv. Ibis*, 1859, p. 11; *Scl. P. Z. S.* 1859, p. 374; *Baird, Rev. Amer. B.* p. 185 (1865); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 245, pl. 12. fig. 5 (1874); *Hensh. B. Arizona*, p. 156 (1875); *id. Zool. Expl. W. 100th Merid.* p. 200 (1876); *Hartl. J. f. O.* 1883, p. 267.

Dendrœca townsendi, *Scl. Cat. Amer. B.* p. 29 (1862); *id. Ibis*, 1865, p. 89; *Coues, t. c.* p. 163; *Sundev. Öfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 610; *Cooper, B. Cal.* i. p. 91 (1870); *Coues, Key N. Amer. B.* p. 98 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Ridgw. Rep. Geol. Expl. 40th Par.* pt. iii. p. 432 (1877); *Coues, B. Color. Vall.* p. 260 (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 17 (1881); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 141 (1881); *Salv. Cat. Strickl. Coll.* p. 89 (1882); *Hartl. J. f. O.* 1883, p. 267; *Coues, Key N. Amer. B.* 2nd ed. p. 299 (1884).

Adult male in breeding-plumage. General colour above olive-greenish, with distinct centres of black to the feathers of the back, less distinctly indicated on the rump; scapulars and lesser wing-coverts ashy grey washed with olive, the feathers also centred with black; median and greater coverts blackish, edged externally with ashy grey and tipped with white, forming a double wing-bar; bastard-wing and primary-coverts dusky brown, the pale margins nearly obsolete; quills dusky brown, margined with ashy grey, purer grey on the primaries; upper tail-coverts and centre tail-feathers ashy grey, centred with dusky blackish; remainder of the tail-feathers dusky brown, edged with ashy grey, the two outer feathers white, brown along the shaft and towards the end of the outer web, and along the basal margin of the inner web, the third feather with a small subterminal white spot on the inner web; crown of head black, reaching to the base of the bill; from the nostril a broad band of golden yellow reaching to the sides of the neck; lores, anterior and posterior margin of eyelid, and ear-coverts black, extending in a broad band down the sides of the neck; sides of face also black, joining the ear-coverts; upper and lower margin of eyelid golden yellow, as also a conspicuous spot below the eye; cheeks golden yellow, forming a broad band, widening out on the sides of the neck, and surrounding the black auricular patch so as to join the yellow eyebrow; throat and fore neck black; breast golden yellow; sides of body broadly streaked with black centres to the feathers; the flanks white, similarly centred with black; abdomen and under tail-coverts white, the latter longitudinally centred with dusky black; thighs ashy brown; axillaries and under wing-coverts white, mottled with blackish bases along the edge of the wing; quills dusky below, white along the edge of the inner web. Total length 4·8 inches, culmen 0·45, wing 2·65, tail 2, tarsus 0·75.

A male bird in the Salvin-and-Godman collection (California, May; Belding) has the black stripes on the flanks more pronounced than in the bird described, and the yellow extends further down the breast; the third tail-feather also has a distinct wedge-shaped mark of white near the end of the inner web.

Adult male in winter plumage. More olive-yellow than in summer, and not so green on the upper surface; the black feathers of the crown, auricular stripe, and throat margined with olive-yellow; the ashy margins to the quills are also broader and more conspicuous.

The yellow edges to the black feathers do not seem to last very long, and many birds killed in the winter-haunts of this species are nearly as richly coloured as breeding birds.

Adult female in winter plumage. Although olive-yellow above like the winter-plumaged male, it has the black centres to the feathers of the upper surface less strongly indicated; the crown is not black but olive-yellow like the back, and is thickly mottled with black centres to the feathers; the facial markings are the same as in the male, but the black is replaced by dusky olive; the cheeks and the entire throat and fore neck are yellow, with longitudinal black streaks on the latter and on the sides of the upper breast; lower

breast and flanks white, the latter with blackish streaks. Total length 4·5 inches, culmen 0·5, wing 2·55, tail 2, tarsus 0·75.

A *young female*, evidently in *first winter plumage*, resembles the old female described above, but is nearly uniform on the upper surface, the head being like the back, with only a very faint indication of dusky centres to the feathers of the crown; eyebrow and cheeks very pale yellow; the auricular patch dingy olive; throat and breast entirely yellow; abdomen white; a few dusky streaks on the sides of the breast and flanks. (*Mus. Salvin & Godman.*)

Young males in winter plumage resemble the old female and have yellow throats; but the black bases to the latter are always prominent, and the same is the case with the crown and back; the eyebrow, cheeks, and breast are also bright golden yellow. (*Mus. Salvin & Godman.*)

Hab. Rocky Mountains to the Pacific, from Alaska to Guatemala; a stray specimen taken near Philadelphia (*Coues*). Winters in Central America from Mexico to Guatemala.

a. [♂] ad. sk.	Sitka.	Purchased.
b. ♂ ad. sk.	West side of Rocky Mountains, British Columbia.	J. K. Lord, Esq. [P.].
c. ♂ ad. sk.	California (*L. Belding*).	U.S. Nat. Museum [P.].
d. Juv. sk.	Santa Clara Co., Calif. (*J. G. Cooper*).	U.S. Nat. Museum [P.].
e. [♀] ad. sk.	Mexico.	Gould Collection.
f. ♂ ad. sk.	Oaxaca, Mexico (*Boucard*).	Sclater Collection.
g. ♂ ad. sk.	La Parada, Mexico.	A. Boucard, Esq. [C.].
h. ♀ ad. sk.	Dueñas, Guatemala (*O. Salvin*).	Sclater Collection.

18. Dendrœca dominica.

The Yellow-throated Creeper, *Catesby, N. Hist. Carol.* i. p. 62, pl. 62 (1731).
Le Figuier cendré de S. Domingue, *Briss. Orn.* iii. p. 520, pl. 27. fig. 3 (1760).
La Mésange grise de la Caroline, *Briss. Orn.* iii. p. 563 (1760).
Motacilla dominica, *Linn. S. N.* i. p. 334 (1766).
La Gorge-jaune de St. Domingue, *Daub. Pl. Enl.* 686. fig. 1.
Le Cou-jaune, *Buff. Hist. Nat. Ois.* v. p. 165 (1778).
La Mésange grise à gorge jaune, *Montb. Hist. Nat. Ois.* v. p. 454 (1778).
Yellow-throated Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 437 (1783).
Pensile Warbler, *Lath. t. c.* p. 441 (1783).
Jamaica Warbler, *Lath. t. c.* p. 485 (1783).
Motacilla superciliosa, *Bodd. Tabl. Pl. Enl.* p. 43 (1783).
Yellow-throat Warbler, *Penn. Arct. Zool.* ii. p. 400 (1785).
Motacilla flavicollis, *Gm. Syst. Nat.* i. p. 959 (1788).
Motacilla pensilis, *Gm. t. c.* p. 960 (1788); *Less. Traité*, p. 418 (1831).
Sylvia dominica, *Lath. Ind. Orn.* ii. p. 538 (1790).
Sylvia pensilis, *Lath. t. c.* p. 520 (1790); *Vieill. Ois. Amér. Sept.* ii. pl. 72 (1807); *Audub. B. Amer.* pl. 85; *id. Orn. Biogr.* i. p. 434 (1831); *D'Orbigny, in Ramon de la Sagra's Hist. Nat. Cuba*, p. 60 (1838).
Sylvia flavicollis, *Lath. t. c.* p. 518 (1790); *Vieill. Ois. Amér. Sept.*

ii. p. 45 (1807); *Wilson, Amer. Orn.* ii. p. 64, pl. 12. fig. 6 (1810).

Parus griseus gutture luteo, *Bartr. Trav. Florida*, p. 292 (1791).

Sylvicola flavicollis, *Jard. ed. Wils. Amer. Orn.* i. p. 213 (1832); *Hoy, Proc. Philad. Acad.* vi. p. 310 (1853).

Sylvicola pensilis, *Richards. Rep. Brit. Assoc.* 1836-37, p. 172; *Bp. Comp. List B. Eur. & N. Amer.* p. 22 (1838); *Audub. B. Amer.* ii. p. 32, pl. 79 (1841); *Gosse, B. Jamaica*, p. 156, pl. 32 (1847-49); *Bp. Consp.* i. p. 307 (1850); *Sallé, P. Z. S.* 1857, p. 231; *Bryant, Proc. Bost. Soc. N. H.* xi. p. 91 (1866).

Rhimamphus pensilis, *Cab. Mus. Hein.* i. p. 19 (1850).

Mniotilta dominica, *Gray, Gen. B.* i. p. 197 (1848); *id. Hand-l. B.* i. p. 240, no. 3478 (1869).

Mniotilta sperciliosa, *Gray, t. c.* p. 196.

Rhimamphus pensilis, *Gundl. J. f. O.* 1855, p. 474; *Scl. P. Z. S.* 1856, p. 291; *Gundl. J. f. O.* 1861, p. 408.

Dendroica pensilis, *Scl. P. Z. S.* 1858, p. 295.

Dendroica superciliosa, *Baird, B. N. Amer.* p. 289 (1858); *Scl. P. Z. S.* 1859, p. 374; *March, Proc. Phil. Acad.* xv. p. 293 (1863).

Dendrœca superciliosa, *Scl. P. Z. S.* 1859, p. 363; *id. & Salv. Ibis*, 1860, p. 274; *Scl. P. Z. S.* 1862, p. 368; *id. Cat. Amer. B.* p. 33 (1862); *Dresser, Ibis*, 1865, p. 478; *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Boucard, P. Z. S.* 1883, p. 441.

Dendroica dominica, *Baird, Rev. Amer. B.* p. 209 (1865); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 547 (1869); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 240, pl. 14. fig. 6 (1874).

Dendrœca dominica, *Coues, Proc. Essex Inst.* v. p. 270 (1868); *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 611; *Lawr. Ann. Lyc. N. Y.* ix. p. 200 (1869); *Allen, Bull. Mus. Comp. Zool. Cambr.* ii. p. 268 (1871); *Coues, Key N. Amer. B.* p. 104 (1872); *Maynard, B. Florida*, p. 60 (1873); *Coues, B. N.-West*, pp. 66, 233 (1874); *Gundl. Orn. Cuba*, p. 67 (1876); *Brewst. Bull. Nutt. Orn. Club*, ii. p. 102 (1877), iii. p. 43 (1878); *Coues, B. Color. Vall.* p 246 (1878); *Cory, B. Bahamas*, p. 65 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 17 (1881); *A. & E. Newt. Handb. Jamaica*, p. 106 (1881); *Cory, B. S. Domingo*, p. 27 (1884); *Coues, Key N. Amer. B.* 2nd ed. p. 304 (1884).

Dendroica dominica, var. albilora, *Ridgw. Amer. Nat.* vii. p. 606 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 241, pl. 14. fig. 7 (1874); *Merrill, Bull. U.S. Nat. Mus.* i. p. 123 (1878).

Dendrœca albilora, *Sennett, Bull. U.S. Geol. Surv.* iv. p. 13 (1878).

Dendrœca dominica, *β.* albilora, *Coues, B. Color. Vall.* p. 248 (1878).

Dendrœca dominica albilora, *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 17 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 306 (1884).

Dendrœca dominica, *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 134 (1881).

Adult male. General colour above light slaty grey, a little paler towards the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater coverts black, externally edged with light slaty grey and broadly tipped with white, forming a broad double wing-bar slightly tinged with brown; bastard-wing and primary-coverts blackish, edged with slaty grey, the quills externally slaty grey, rather more hoary grey on the primaries, the first primary margined with ashy white; upper tail-coverts like the back; two centre tail-feathers light slaty grey, blackish in the middle; remainder

of tail-feathers blackish, edged with slaty grey, the outer one with a large white patch towards the end of the inner web, decreasing in size on the penultimate feather, and reduced to a small spot on the third; head like the back, the forehead black, extending backwards above the eye, and followed by a broad white eyebrow, widening above the ear-coverts; a supraloral spot of yellow in the white eyebrow; upper and lower edge of eyelid and a spot below the eye white; lores, sides of face, and ear-coverts black, skirting the throat and fore neck; the ear-coverts slightly broken into by the white of the adjoining sides of the neck; cheeks, throat, and fore neck bright yellow, whitish on the base of the cheeks and chin; remainder of under surface of body dull white, the sides of the body broadly streaked with black; thighs and under tail-coverts white; axillaries and under wing-coverts white; quills dusky below, ashy white along the inner web: bill brownish black; feet yellowish brown; iris dark brown (*Audubon*). Total length 4·8 inches, culmen 0·65, wing 2·6, tail 2, tarsus 0·7. (*Mus. Salvin & Godman.*)

Hab. Atlantic States as far north as Washington in summer, and in winter to Cuba, San Domingo, and Jamaica (*Ridgway*).

The above description is from a typical *D. dominica*, and I think that the western bird, called by Mr. Ridgway *D. albilora*, ought not to be separated. Both forms occur in Jamaica, and a large series will probably show an intermediate gradation from one to the other.

The western race may be described as follows:—

Adult male. Similar to the male of *D. dominica*, but with the eyebrow white, without any supraloral yellow streak. Total length 5 inches, culmen 0·55, wing 2·6, tail 2, tarsus 0·65.

Adult female. Very similar to the male, but the black down the sides of the throat not quite so broad, and the sides of the body not so broadly streaked with black; forehead with less black upon it. Total length 5 inches, culmen 0·55, wing 2·5, tail 2, tarsus 0·65.

Young male in autumn. Resembling the adult female, but with the back slightly washed with brown; no black on the forehead; the white on the eyebrow and on the neck slightly shaded with brown; the sides of the body also washed with brown. (*Mus. Salvin & Godman.*)

Great variation is seen in this bird in respect to the amount of black on the head, this being sometimes confined to the forehead, and at other times spreading over the entire crown. The *winter plumage* of the adults, as far as the series examined enables me to judge, is similar to that of summer.

The descriptions given by Mr. Ridgway and Mr. Coues speak of the eyebrow as entirely white; but in many specimens I can trace a tiny shade of yellow, even in those sent to Messrs. Salvin and Godman as typical *D. albilora* by the U.S. Nat. Museum.

Hab. In summer, the Mississippi region of the United States, north to Lake Erie; common in South Illinois. In winter, and possibly all the year, in Mexico, south to Guatemala, Yucatan on the Atlantic, and Colima on the Pacific side (*Ridgway*). Winters in Central America, from Mexico to Guatemala (*Salvin & Godman*). Antilles.

a. D. albilora.

a. Ad. sk.	Rockport, Ohio (*Kirtland*).	Sclater Collection.
b, c. ♂ ♀ ad. sk.	Brookville, Indiana, April (*A. W. Butler*).	U.S. Nat. Museum [P.].
d. Ad. sk.	Guatemala.	Gould Collection.

β. D. dominica.

e. ♂ ad. sk.	Florida, Feb. 1.	R. B. Sharpe, Esq. [P.].
f. Ad. sk.	Jamaica.	Sclater Collection.
g. Ad. sk.	Jamaica.	Purchased.

19. Dendrœca graciæ.

Dendroica graciæ, *Coues, MS.*; *Baird, Rev. Amer. B.* p. 210 (1865); *Cooper, B. Cal.* i. p. 563 (1870); *Ridgw. Amer. Nat.* vii. p. 608 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 243, pl. 14. fig. 10 (1874); *Hensh. List B. Arizona*, p. 156 (1875); *id. Zool. Expl. W. 100th Merid.* p. 197 (1876).

Dendrœca graciæ, *Coues, Proc. Philad. Acad.* 1866, p. 67; *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 611; *Elliot, Illustr. B. N. Amer.* i. pl. 6 (1869); *Cooper, Amer. Nat.* iii. p. 479 (1869); *Coues, Key N. Amer. B.* p. 103 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Coues, B. Color. Vall.* p. 292 (1872); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 17 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 306 (1884).

Mniotilta graciæ, *Gray, Hand-l. B.* i. p. 241, no. 3489 (1869).

Adult male (Fort Whipple, Arizona, May 15; Dr. Coues). General colour above ashy grey, slightly washed with brown, the mantle and back streaked with black; rump uniform like the lower back; upper tail-coverts ashy grey, streaked with black centres to the feathers; lower wing-coverts like the back; median and greater series black, externally ashy grey, tipped with white, forming a double wing-bar, that of the median coverts the broader; bastard-wing and primary-coverts dark brown, fringed with lighter brown; quills dark brown, edged with ashy brown, greyer on the primaries, whitish on the margin of the first primary; tail-feathers dark brown, edged with ashy; the outermost feather white, excepting an oblique mark at the base of the inner web, the shaft, and a mark at the end of the outer web reaching slightly across the tip of the inner web; the penultimate feather similarly marked, but the white reduced in size, and diminished on the third feather to an ovate spot near the top of the inner web; head rather more slaty grey, with a few tiny black centres to the feathers of the crown, the sides of the latter having a black line; a distinct and broad yellow eyebrow reaching to above the eye and continued into a white streak above the ear-coverts; ear-coverts and sides of face ashy grey; lores and anterior and posterior edge of eyelid dusky blackish; upper and under edge of eyelid yellow; a spot below the eye of yellow and white; cheeks, throat, and fore neck yellow; remainder of under surface of body dull white, a little browner on the sides of the body, which are streaked with black; thighs ashy; under tail-coverts white; axillaries and under wing-coverts white, the former with ashy bases; quills dusky below, ashy white along the

edge of the inner web: "bill and feet black, the soles dirty yellowish; iris black" (*Coues*). Total length 4·9 inches, culmen 0·5, wing 2·55, tail 2, tarsus 0·65. (*Mus. Salvin and Godman.*)

Adult in winter plumage. Brown above instead of grey, and the black centres to the feathers of the back narrower and scarcely perceptible; the head brown like the back, the black on the forehead and sides of crown merely indicated by black bases to the feathers; the white wing-bars slightly shaded with brown; ear-coverts ashy, slightly washed with brown; under surface of body as in summer, but the breast and abdomen brownish white, the sides of the body strongly washed with brown.

Adult female. Quite similar to the male, and in fact scarcely distinguishable from the male in autumn, though the yellow is not quite so strong. (*Coues.*)

Young. The slate-grey of the upper parts much shaded with brownish olive, the black streaks wanting on the back, those on the crown obsolete. Yellow colour much as in the adult, but paler, and not bordered along the sides of the neck with black streaks; the black lores poorly defined; wing-bars greyish or obsolete; the white of the underparts having an ochry tinge, and the lateral streaks not so heavy in colour nor so well-defined. (*Coues.*)

Hab. Arizona and New Mexico, wintering in Mexico.

a. Ad. sk.	Arizona (*Coues*).	Sclater Collection.
b. Ad. sk.	N. Mexico.	Sclater Collection.

20. Dendrœca decora.

Dendrœca graciæ (*nec Baird*), *Salv. Ibis*, 1873, p. 428; *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 16 (1876).
Dendroica graciæ, var. decora, *Ridgw. Amer. Nat.* vii. p. 608 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 220 (1874).
Dendrœca graciæ, β. decora, *Coues, B. Color. Vall.* p. 292 (1878).
Dendrœca decora, *Salv. Cat. Strickl. Coll.* p. 92 (dated 1882); *id. & Godm. Biol. Centr.-Amer., Aves*, i. p. 136, pl. x. fig. 1 (1881).

Adult male. General colour above ashy grey, with faint shaft-streaks of blackish on the upper tail-coverts; lesser wing-coverts like the back, the median and greater series blackish, edged with ashy grey and tipped with dull ashy whitish, forming an indistinct double wing-bar; bastard-wing, primary-coverts, and quills dusky, edged with ashy, more hoary on the margins of the primaries; the inner secondaries externally broadly washed with brownish ashy; tail-feathers blackish, edged with ashy, the outer feathers for the most part white, excepting an oblique basal mark of blackish near the base of the inner web and along the shaft and the outer web, widening slightly towards the end of the feather; the white mark reduced in size on the penultimate feather and represented only by a longitudinal white streak on the third one; head like the back, with a few faintly indicated blackish shaft-lines on the forehead; extreme base of forehead and a broad superciliary streak bright yellow, as well as the upper and under edge of eyelid and a spot below the eye; ear-coverts and sides of neck ashy grey; lores,

anterior and posterior edges of eyelid blackish, extending in a line below the eye and on to the fore part of the ear-coverts; cheeks and entire throat and fore neck bright yellow, with a narrow line of black separating the throat from the sides of the neck, the grey colour of the latter descending on to the sides of the upper breast and along the sides of the body and flanks; breast and abdomen ashy white, as also the thighs and under tail-coverts, with a few narrow black streaks on the sides of the body; under wing-coverts and axillaries white with ashy bases; quills dusky below, whitish along the edge of the inner web. Total length 4·1 inches, culmen 0·45, wing 2·25, tail 1·7, tarsus 0·55. (*Mus. Cantabr.*)

Hab. Guatemala.

21. Dendrœca adelaidæ.

Dendroica adelaidæ, *Baird, Rev. Amer. B.* p. 212 (1865).
Dendrœca adelaidæ, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 615; *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Coues, B. Color. Vall.* p. 293 (1878); *Ridgw. Pr. U.S. Nat. Mus.* v. pp. 525, 526 (1883).
Mniotilta adelaidæ, *Gray, Hand-l. B.* i. p. 241, no. 3500 (1869).
Dendroica graciæ, var. adelaidæ, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 220 (1874).

Entire upper parts, and sides of neck as far forward as the eyes, uniform ash-grey. Beneath, including edge of bend of wing, bright yellow; lining of wings, axillaries, and crissum white. A broad yellow line from bill to eye, with the eyelids yellow; forehead and sides of vertex black; a black loral line. Wings with two conspicuous white bands; the quills and tail-feathers blackish, edged externally with whitish, internally with purer white; three lateral tail-feathers with a quadrate terminal white patch on inner web. Bill black; legs pale yellowish. Total length 4·7 inches, wing 2·1, tail 2·05, tarsus 0·65. (*Baird.*)

Hab. Porto Rico.

22. Dendrœca delicata.

Dendrœca adelaidæ (*nec Baird*), *Sclater, P. Z. S.* 1871, p. 269.
Dendrœca adelaidæ delicata, *Ridgw. Pr. U.S. Nat. Mus.* v. p. 525 (1883).

Adult. General colour above light slaty blue, the long silky feathers on the sides of the rump tipped with white; lesser wing-coverts like the back; median and greater coverts black, externally edged with slaty blue, broadly tipped with white, forming a double wing-bar, less distinct on the greater coverts, where only the outer ones have white tips; bastard-wing and primary-coverts black, obsoletely fringed with ashy; quills black, externally edged with slaty blue, more ashy on the secondaries; tail-feathers blackish, edged with ashy grey, the two outer ones with a large white spot near the end of the inner web, rather less on the penultimate one; centre of forehead black, extending backwards on the sides of the crown, the rest of the head slaty blue; a broad band of bright golden yellow reaching from the nostril to above the hinder part of the

eye; ear-coverts slaty blue, with a black spot in front of and behind the eye; cheeks and under surface of body bright yellow, paler on the lower abdomen; under tail-coverts white; thighs bluish grey; axillaries and under wing-coverts white; quills dusky below, white on the inner webs. Total length 4·5 inches, culmen 0·55, wing 2·15, tail 2, tarsus 0·7.

This species has been separated by Mr. Ridgway from *D. adelaidæ* of Porto Rico, which I have not seen. Mr. Ridgway states that the Santa Lucia bird differs "in having very much more intense yellow superciliaries and lower parts, the former being much broader (occupying the whole of the forehead except a central line), in the more decided plumbeous of the upper parts, the more distinct black mark on the sides and fore part of the crown, in the large size and other particulars."

Hab. Island of Santa Lucia.

a. Ad. sk. Santa Lucia (*Semper*). Sclater Collection.

23. Dendrœca discolor.

Sylvia discolor, *Vieill. Ois. Amér. Sept.* ii. p. 37, pl. 98 (1807); *Audub. B. Amer.* pl. 14; *id. Orn. Biogr.* i. p. 76 (1831).
Sylvia minuta, *Wils. Amer. Orn.* iii. p. 87, pl. 25. fig. 4 (1811).
Phyllopneuste minuta, *Boie, Isis*, 1828, p. 321.
Sylvicola discolor, *Jard. ed. Wils. Amer. Orn.* p. 375 (1832); *Bp. Comp. List. B. Eur. & N. Amer.* p. 23 (1838); *Audub. Syn.* p. 62 (1839); *id. B. Amer.* ii. p. 68, pl. 97 (1841); *Gosse, B. Jamaica*, p. 159 (1847); *Bp. Consp.* i. p. 308 (1850); *Bryant, Proc. Bost. Soc. N. H.* vii. p. 110 (1859), x. p. 251 (1866), xi. p. 91 (1867).
Sylvicola minuta, *Denny, P. Z. S.* 1847, p. 38.
Mniotilta discolor, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 241, no. 3486 (1869).
Rhimamphus discolor, *Gundl. J. f. O.* 1855, p. 474.
Dendroica discolor, *Baird, B. N. Amer.* p. 290 (1858); *March, Proc. Philad. Acad.* 1863, p. 293; *Baird. Rev. Amer. B.* p. 213 (1865); *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1866); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 276, pl. 14. fig. 9 (1874).
Dendrœca discolor, *A. & E. Newton, Ibis*, 1859, p. 144; *Sel. P. Z. S.* 1861, p. 71; *id. Cat. Amer. B.* p. 33 (1862); *Sund. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 615; *Allen, Bull. Mus. Comp. Zool. Cambr.* ii. p. 268 (1871), iii. p. 125 (1872); *Coues, Key N. Amer. B.* p. 103 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Maynard, B. Florida*, p. 58 (1873); *Coues, B. N.-West*, p. 63 (1874); *Gundl. Orn. Cuba*, p. 67 (1876); *Coues, B. Color. Vall.* p. 247 (1878); *Cory, B. Bahamas*, p. 64 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 18 (1881); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 142 (1881); *A. & E. Newt. Handb. Jamaica*, p. 106 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 305 (1884); *Cory, B. S. Domingo*, p. 31 (1884).

Adult male. General colour above dull olive-yellow, a little brighter on the lower back and rump; the mantle chestnut, all the feathers edged with olive-yellow, producing a mottled appearance; lesser wing-coverts like the back; median and greater coverts dusky, edged with olive-yellow and tipped with brighter yellow, forming a double wing-bar; bastard-wing and primary-coverts dark brown,

edged with dull olive; quills dusky brown, edged with olive, the primaries margined with ashy whitish; upper tail-coverts ashy olive; tail-feathers blackish, edged with olive, the outermost for the greater part white, with a base of dark brown to the inner web, the shaft brown, widening out towards the end of the outer web; the penultimate feather similarly marked, but the white more restricted, and the third feather with only a small patch near the end of the inner web; head and neck olive-yellow, the base of the forehead washed with golden yellow; ear-coverts and sides of neck olive-yellow; a band of golden yellow extending from the base of the nostrils to above the ear-coverts; a loral streak of black as well as a small spot behind the eye and the anterior and posterior edge of eyelid; upper and under edge of eyelid golden yellow, as well as a large patch below the eye; cheeks with a broad streak of black; the hinder cheeks and sides of neck and entire under surface of body brilliant golden yellow, paler on the under tail-coverts, which are whitish washed with yellow; the sides of the breast broadly streaked with black, forming long streaks, especially broad on the sides of the upper breast; thighs golden yellow; axillaries and under wing-coverts golden yellow, brighter along the edge of the wing; quills dusky, white along the edge of the inner web; bill brown, pale at the margin: "feet and claws dark brown; iris dark hazel" (*Audubon*). Total length 4·5 inches, culmen 0·45, wing 2·3, tail 1·85, tarsus 0·7.

Adult male in winter plumage. Brighter olive-yellow than in the summer plumage, the chestnut mantle entirely obscured with the olive-yellow of the back, which is therefore quite uniform; otherwise as in summer.

Adult female in breeding-plumage. Differs from the male in being less richly coloured and in having the sides of the body less broadly streaked with black, the chestnut mottling on the back less distinct than in the male. Total length 4·6 inches, culmen 0·5, wing 2·15, tail 1·8, tarsus 0·7.

Young in autumn plumage. Much duller than the adult female, to which there is a general resemblance; the centre of the back olive, with a faint rufous tinge on the feathers of the mantle; head dull olive-yellow, washed with ashy; supraloral streak ashy whitish; sides of face brighter yellow, the upper edge of the ear-coverts ashy grey; cheek-stripe dusky blackish; under surface of body dull yellow, the black stripes on the sides of the body indistinctly indicated; white on tail much less developed, the third feather showing merely a small spot on the inner web.

Hab. Eastern United States, north to southern New England, west to Kansas; breeding throughout its United-States range, winters in Florida (*Coues*), and probably in British Honduras, Antilles, Cuba, to Virgin Islands (*S. & G.*).

a. Ad. sk.	Pennsylvania (*Baird*).	Sclater Collection.
b. ♀ ad. sk.	St. Louis, Missouri, May 23 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
c. ♂ ad. sk.	Belmont, Mass., May 14 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].

d. ♀ ad. sk.	Washington, D.C., June 8 (*G. Shoemaker*).	U.S. Nat. Museum [P.].
e. ♂ ad. sk.	Rockwood, Tennessee, April 19 (*W. H. Fox*).	U.S. Nat. Museum [P.].
f. Ad. st.	[Mexico.]	Purchased.
g. ♂ ad. hiem. sk.	Jamaica, Feb. (*Bryant*).	Sclater Collection.
h. Juv. hiem. sk.	Jamaica.	Sclater Collection.
i. ♂ ad. hiem. sk.	Jamaica.	Purchased.
k. ♂ ad. sk.	Porto Rico.	Dr. Bryant [P.].

24. Dendrœca maculosa.

The Yellow-rumped Flycatcher, *Edw. Glean.* v. p. 97, pl. 255 (1758).
Le Figuier tacheté de Pensilvanie, *Briss. Orn.* iii. p. 502 (1760).
Le Figuier à tête cendrée, *Buff. Hist. Nat. Ois.* v. p. 291 (1778).
Yellow-rumped Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 481 (1783).
Yellow-rump Warbler, *Penn. Arct. Zool.* ii. p. 400 (1785).
Motacilla maculosa, *Gm. Syst. Nat.* i. p. 984 (1788).
Sylvia maculosa, *Lath. Ind. Orn.* ii. p. 536 (1790); *Vieill. Ois. Amér. Sept.* p. 33, pl. 93 (1807); *Audub. B. Amer.* pls. 50, 123; *id. Orn. Biogr.* i. p. 260 (1831), ii. p. 145 (1834), v. p. 458 (1839); *D'Orb. in Ramon de la Sagra's Hist. Nat. Cuba*, p. 64 (1838).
Sylvia magnolia, *Wils. Amer. Orn.* iii. p. 63, pl. 23 (1811).
Sylvicola maculosa, *Swains. & Rich. Faun. Bor.-Amer., Birds*, p. 213, pl. 40 (1831); *Jard. ed. Wils. Amer. Orn.* i. p. 353, pl. 23. fig. 2 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 22 (1838); *Audub. Syn.* p. 61 (1839); *id. B. Amer.* ii. p. 68, pl. 96 (1841); *Bp. Consp.* i. p. 307 (1850); *Bryant, Proc. Bost. Soc. N. H.* vii. p. 110 (1859).
Mniotilta maculosa, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 240, no. 3476 (1869).
Rhimamphus maculosus, *Cab. Mus. Hein.* i. p. 20 (1850); *Gundl. J. f. O.* 1855, p. 474.
Dendroica maculosa, *Baird, B. N. Amer.* p. 284 (1858); *Scl. & Salv. Ibis*, 1859, p. 11; *Baird, Rev. Amer. B.* p. 206 (1865); *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1866); *Gundl. J. f. O.* 1872, p. 415; *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 232, pl. 14. fig. 2 (1874); *Hensh. Rep. Zool. Expl. W. 100th Merid.* p. 196 (1875).
Dendrœca maculosa, *Scl. P. Z. S.* 1859, p. 363; *Lawr. Ann. Lyc. N. Y.* vii. p. 322 (1861); *Scl. P. Z. S.* 1862, p. 19; *id. Cat. Amer. B.* p. 32 (1862); *Blakist. Ibis*, 1863, p. 63; *Scl. & Salv. P. Z. S.* 1864, p. 347; *Dresser, Ibis*, 1865, p. 478; *Coues, Key N. Amer. B.* p. 102 (1872); *Maym. B. Florida*, p. 56 (1873); *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Coues, B. N.-West*, p. 62 (1874); *Gundl. Orn. Cuba*, p. 66 (1876); *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 16 (1876); *Brewst. Bull. Nutt. Orn. Club*, ii. p. 1 (1877); *Coues, B. Color. Vall.* p. 290 (1878); *id. Bull. U.S. Geol. Surv.* iv. p. 567 (1878); *Cory, B. Bahamas*, p. 62 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 17 (1881); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 129 (1881); *Cory, B. S. Domingo*, p. 29 (1884); *Coues, Key N. Amer. B.* 2nd ed. p. 304 (1884).

br fe *Adult male in summer plumage.* General colour above black, with a few yellowish or ashy margins to the feathers of the scapulars and lower back, the latter appearing yellow with broad black mesial streaks down the feathers; across the rump a band of bright yellow; lesser wing-coverts black, edged with ashy grey; median and inner greater coverts white with black bases, the outer greater coverts

black edged with ashy grey, whitish at tips; bastard-wing black, with a narrow fringe of white externally; primary-coverts and quills black, externally edged with ashy grey, the secondaries fringed with white at the tips; lower rump and upper tail-coverts black; two centre tail-feathers black, edged with hoary grey; all the remaining tail-feathers black, edged with hoary grey near the base, and having a broad band of white across the centre of the tail, formed by a large patch in the middle of the *inner* web; head and nape ashy grey; a narrow frontal band, lores, sides of face, anterior and posterior edge of eyelid, ear-coverts, and sides of neck black, uniting with the black of the mantle; upper and lower edge of eyelid and a broad streak above the ear-coverts white; cheeks and under surface of body bright yellow, the centre of the lower throat black; the fore neck and chest, as well as the sides of the breast and flanks, very broadly streaked with black; lower abdomen and under tail-coverts white; thighs white with ashy bases; axillaries and under wing-coverts white, with a very faint tinge of yellow; quills dusky black below, ashy white along the inner web: "bill black; feet dusky, the toes yellow beneath; iris brownish black" (*Audubon*). Total length 4·5 inches, culmen 0·45, wing 2·4, tail 1·95, tarsus 0·75.

Adult female in breeding-plumage. Slightly different from the male and wanting the uniform black back. General colour above olive-yellow, mottled with black centres to the feathers; the rump brighter yellow, slightly mottled with black; the upper tail-coverts black, margined with ashy grey, slightly washed with yellow; lesser wing-coverts ashy grey, mottled with blackish bases; median and greater series black, externally edged with ashy grey and tipped with white, forming a double wing-bar; bastard-wing and primary-coverts dusky brown, edged with ashy; quills dusky brown, edged with hoary grey; tail-feathers blackish, with hoary-grey margins, all but the centre feathers with a central mark of white above the middle of the inner web; crown of head and hind neck pale slaty grey, the extreme base of the forehead blackish; lores hoary grey, mottled with black bases to the feathers; over the eye a narrow line of dull white, widening above the ear-coverts; upper and under edge of eyelid white, as also a spot below the eye; anterior and posterior edge of eyelid, as well as the ear-coverts, black; sides of neck pale slaty grey; cheeks and under surface of body yellow, the fore neck, breast, and flanks broadly centred with black; abdomen and under tail-coverts white; thighs white with dusky bases; axillaries and under wing-coverts white; quills dusky below, white along the edge of the inner web. Total length 4·5 inches, culmen 0·45, wing 2·3, tail 2, tarsus 0·7.

A female collected by Dr. E. Coues on the 14th of May, and now in the Salvin-and-Godman collection, differs from the one described which was also shot in the spring, in having the back black, edged with olive-yellow, instead of being olive-yellow with black centres to the feathers. This causes the specimen in question to resemble the male rather closely; and in fact, excepting that the colours are

less bright, the black on the throat less pronounced, and the black stripes on the under surface less strongly marked, it might be said to be exactly like the male.

Young male in winter plumage. Uniform above, the back olive-yellow, beneath which may be found the black centres to the feathers on disturbing the plumage; across the rump a band of bright yellow; upper tail-coverts black, edged with grey; wings and tail as in the adult female, with a double wing-bar formed by the white tips to the median and greater coverts; head and neck entirely ashy grey, which colour also overspreads the mantle; the whitish eyebrow ill-defined and obscured with ashy; a distinct whitish eyelid; lores ashy whitish; ear-coverts pale ashy brown like the sides of the neck, slightly washed with olive; cheeks and throat bright yellow, the fore neck and lower throat more ashy; remainder of under surface of body bright yellow, the flanks with half-concealed streaks of black; abdomen, under tail-coverts, axillaries, and under wing-coverts white.

The great difference between the old and the young birds in this species consists in the uniform olive-yellow back and pale ashy-grey head and neck of the latter as well as in the absence of black streaks on the breast, these being confined to the sides of the body.

Hab. Eastern Province of North America, north to Hudson's Bay, Labrador, Great Slave Lake, &c.; west to the Rocky Mountains of Colorado: breeds from New England northwards, and probably further south in the elevated portions of the United States (*Coues*). Winters in Central America from Mexico to Panama (*S. & G.*). S. Domingo, Cuba, and the Bahamas.

a. Juv. st.	North America.	J. Gould, Esq.
b, c. ♂ ♀ ad. st.	North America.	Purchased.
d. ♂ ad. sk.	49th parallel (*G. Dawson*).	N. A. Boundary Commission [P.].
e, f, g, h. ♂ ad. sk.	Fort Simpson, June.	B. R. Ross, Esq. [P.].
i. ♀ juv. sk.	Albany River, Canada.	G. Barnstone, Esq. [P.].
k. ♂ ad. sk.	Niagara Falls (*J. G.*).	Gould Collection.
l. ♀ hiem. sk.	Pennsylvania (*Baird*).	Sclater Collection.
m. Ad. sk.	Philadelphia (*E. Wilson*).	Sclater Collection.
n. ♀ ad. sk.	Hyde Park, Illinois, spring (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
o. ♀ juv.; *p.* Juv. sk.	Chicago, Illinois, Sept. (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
q. ♂ juv. sk.	Illinois (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
r. ♀ juv. sk.	Cook Co., Illinois, autumn (*E. W. Nelson*).	U.S. Nat. Museum [P.].
s. ♂ ad. sk.	Knox Co., Indiana, May 1881 (*R. Ridgway*).	U.S. Nat. Museum [P.]
♂ ad.; *u, v, w.* Imm. sk.	Guatemala.	Gould Collection.
Juv. sk.	Coban, Vera Paz, Nov. (*O. Salvin*).	Sclater Collection.

25. Dendrœca coronata.

Yellow-rump, *Catesby, Nat. Hist. Carol.* p. 58, pl. 58 (1731).
Golden-crowned Flycatcher, *Edwards, Gleanings*, p. 187, pl. 298 (1760)

Le Figuier cendré de Canada, *Briss. Orn.* iii. p. 524, pl. 27. fig. 1 (1760).
La Mésange de Virginie, *Briss. t. c.* p. 505 (1760).
Le Figuier cendré tacheté de Pensilvanie, *Briss. Orn.* vi., *App.* p. 110 (1760).
Motacilla coronata, *Linn. Syst. Nat.* i. p. 333 (1766); *Bodd. Tabl. Pl. Enl.* p. 44 (1783).
Motacilla canadensis, *Linn. Syst. Nat.* i. p. 334 (1766, *nec Linn. Syst. Nat.* i. p. 336).
Parus virginianus, *Linn. Syst. Nat.* i. p. 342 (1766).
Fauvette ombrée de la Louisiane, *Buff. Hist. Nat. Ois.* v. p. 162 (1778).
Le Figuier à ceinture, *Buff. t. c.* p. 303 (1778).
Le Figuier couronnée d'or, *Buff. t. c.* p. 312 (1778).
Le Figuier grasset, *Buff. t. c.* p. 319 (1778).
La Mésange à croupion jaune, *Montb. t. c.* p. 453 (1778).
Fauvette tachetée de la Louisiane, *Daubent. Pl. Enl.* vi. pl. 709. fig. 1.
Figuier de Mississippi, *Daubent. t. c.* pl. 731. fig. 2.
Umbrose Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 437.
Golden-crowned Warbler, *Lath. t. c.* p. 486 (1783).
Belted Warbler, *Lath. t. c.* p. 487; *Penn. Arct. Zool.* ii. p. 408 (1785).
Quebec Warbler (pt.), *Lath. t. c.* p. 484 (1783); *Penn. t. c.* p. 408 (1785).
Virginian Titmouse, *Lath. t. c.* p. 546 (1783); *Penn. t. c.* p. 423 (1785).
Dusky Warbler, *Penn. t. c.* p. 410 (1785).
Grasset Warbler, *Penn. t. c.* p. 411.
Motacilla cincta, *Gm. Syst. Nat.* i. p. 980 (1788).
Motacilla umbria, *Gm. t. c.* p. 959 (1788).
Motacilla pinguis, *Gm. t. c.* p. 973.
Sylvia umbria, *Lath. Ind. Orn.* ii. p. 518 (1790).
Sylvia coronata, *Lath. t. c.* p. 538 (1790); *Vieill. Ois. Amér. Sept.* ii. p. 24, pls. 78, 79 (1807); *Wils. Amer. Orn.* ii. p. 138, pl. 17. fig. 4 (1810), v. p. 121, pl. 45. fig. 3 (1810); *Audub. B. Amer.* pl. 153; *id. Orn. Biogr.* ii. p. 303 (1834); *D'Orbigny in Ramon de la Sagra's Hist. Nat. de Cuba*, p. 56 (1839).
Sylvia cincta, *Lath. t. c.* p. 539 (1790).
Sylvia pinguis, *Lath. t. c.* p. 543 (1790).
Parus cedrus uropygio flavo, *Bartr. Trav. Florida*, p. 292 (1791).
Sylvia flavopygia, *Vieill. Ois. Amér. Sept.* ii. p. 24 (1807).
Sylvicola coronata, *Swains. Faun. Bor.-Amer., Birds*, p. 216 (1831); *Bp. Comp. List B. Eur. & N. Amer.* p. 22 (1838); *Vig. Zool. Voy. 'Blossom,'* p. 18 (1839); *Audub. Syn.* p. 51 (1839); *id. B. Amer.* ii. p. 23, pl. 76 (1841); *Gosse, B. Jamaica*, p. 155 (1847); *Bp. Consp.* i. p. 307 (1850); *Sallé, P. Z. S.* 1857, p. 231; *Bryant, Proc. Bost. Soc. N. H.* vii. p. 110 (1859), x. p. 251 (1866), xi. p. 91 (1867).
Dendroica coronata, *Gray, List Gen. B.* 1841, *App.* p. 8; *Baird, B. N. Amer.* p. 272 (1858); *Scl. P. Z. S.* 1858, p. 205; *Scl. & Salv. Ibis*, 1859, p. 11; *March, Proc. Philad. Acad.* 1863, p. 292; *Baird, Rev. Amer. B.* p. 187 (1865); *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1866); *Dall & Bann. Trans. Chicago Acad.* i. p. 278 (1869); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 547 (1869); *Von Frantz. J. f. O.* 1869, p. 293; *Gundl. J. f. O.* 1872, p. 413; *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* p. 227, figs. 9, 12 (1874); *Hensh. Expl. W. 100th Merid.* p. 193 (1876); *Hartl. J. f. O.* 1883, p. 267.
Mniotilta coronata, *Gray, Gen. B.* i. p. 196 (1848); *Reinh. Ibis*, 1861, p. 5; *Gray, Hand-l. B.* i. p. 240, no. 3466 (1869).

Rhimamphus coronatus, *Cab. Mus. Hein.* i. p. 19 (1850); *Gundl. J. f. O.* 1855, p. 473; *Scl. P. Z. S.* 1856, p. 291.

Dendrœca coronata, *Scl. P. Z. S.* 1859, p. 363; *id. Cat. Amer. B.* p. 30 (1862); *Lawr. Ann. Lyc. N. Y.* viii. p. 6 (1863); *Blakist. Ibis*, 1863, p. 62; *Scl. & Salv. P. Z. S.* 1864, p. 347; *Dresser, Ibis*, 1865, p. 478; *Brown, Ibis*, 1868, p. 420; *Dugès, La Natur.* i. p. 140 (1868); *Lawr. Ann. Lyc. N. Y.* ix. p. 94 (1868); *Scl. & Salv. P. Z. S.* 1870, p. 836; *Cooper, B. Calif.* p. 89 (1870); *Mayn. B. Florida*, p. 51 (1873); *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Coues, B. N.-West*, p. 57 (1874); *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 15 (1876); *Coues, B. Color. Vall.* p. 278 (1878); *Gundl. Orn. Cuba*, p. 65 (1876); *Coues, Bull. U.S. Geol. Surv.* iv. p. 565 (1878); *Merrill, Bull. U.S. Nat. Mus.* i. p. 123 (1878); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 127 (1880); *Cory, B. Bahamas*, p. 59 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 17 (1881); *A. & E. Newt. Handb. Jamaica*, p. 106 (1881); *Hartl. J. f. O.* 1883, p. 267; *Nelson, Cruise R. S. 'Corwin,'* p. 64 (1883); *Boucard, P. Z. S.* 1883, p. 440; *Cory, B. S. Domingo*, p. 30 (1884); *Coues, Key N. Amer. B.* 2nd ed. p. 301 (1884).

♀ *Adult male in summer plumage.* General colour above slaty grey, with longitudinal black centres to the feathers, less pronounced on the hind neck, which is consequently more uniform; rump clear bright yellow; some of the mantle-feathers margined with hoary white; lesser wing-coverts slaty grey, with black bases; median and greater series black, edged with slaty grey and tipped with white, forming a double wing-bar; bastard-wing black, fringed with white; primary-coverts and quills blackish, edged with ashy grey, browner on the secondaries; upper tail-coverts black, margined with slaty grey; tail-feathers black, edged with slaty grey, the three outer feathers with a large white patch near the end of the inner web, the extreme tip, however, being obliquely black, the white patch increasing in extent on the penultimate and outermost feathers, which are also fringed externally with white; head slaty grey like the back and streaked with black, with a large patch of golden yellow in the centre of the crown; lores, feathers below the eye, and ear-coverts black, with a narrow white line above the lores and just behind the upper part of the eye; upper and under margin of eyelid white; cheeks and throat white; fore neck and sides of breast black, the feathers of the latter margined with white; on the sides of the breast a large patch of golden yellow; centre of breast, abdomen, and under tail-coverts white; flanks white, streaked with black; thighs ashy white; axillaries white, with ashy bases; under wing-coverts white, mottled with black bases to the feathers along the edge of the wing; quills dusky below, ashy white along the edge of the inner web. Total length 5·3 inches, culmen 0·55, wing 2·95, tail 2·3, tarsus 0·7.

The amount of black on the breast varies greatly in a series of male specimens, and it is often obscured by the greyish-white edgings to the feathers. A specimen killed on the 3rd of May by Mr. H. K. Coale shows this strongly, although it might be supposed to be in full breeding-plumage by that date. It is probable, therefore, that those birds which are entirely black on the fore neck are very old,

and that those which have broad white edges, concealing the black to a greater or less extent, are the males of the preceding season.

In the Salvin-and-Godman collection is a large series of specimens killed in winter, which show that the adult birds are then brown like the young; but the original markings are much more strongly indicated, and the wing-bars are white, while the yellow coronal patch is bright; the black streaks on the sides of the breast and fore neck, though narrow, are yet distinctly indicated.

Full-plumaged birds from Panama are in the same collection, bearing no trace of winter plumage; and the species therefore is either resident there, or else puts on its full livery before leaving for its summer home. It certainly breeds in Mexico, as Mr. A. Forrer obtained a specimen at Ciudad Durango on July 27 (Mus. S. & G.) which is just moulting into the first autumn plumage. The nestling feathers appear to have been ashy brown, with blackish centres on the upper surface, brownish white below, with dusky streaks on the chest.

Adult female in breeding-plumage. Similar to the male, but differs in having the upper surface washed with brown and in being less distinctly streaked with black; the yellow bar on the rump paler and not so broad; the yellow coronal patch obscured with a wash of brown and the feathers tipped with black; the supraloral and postocular streaks not pure white, but dull greyish white; lores and feathers round the eye dusky blackish; under surface of body white, with a small yellow patch on the sides of the breast; the fore neck and sides of breast not uniform black, but mottled with black, the feathers of these parts broadly edged with white.

A female, shot by Mr. H. K. Coale on April 26, is acquiring the yellow coronal patch by a moult.

Young. Nearly uniform brown above, with slight indications of mesial black streaks on the dorsal feathers; the head like the back, the yellow coronal patch being entirely obscured by brown; rump-spot pure yellow and distinct; upper tail-coverts slaty grey, with black centres; wings and tail as in the adults, but the edges to the feathers broader and browner, the white wing-bars on the coverts pale brown; the white spot on the third tail-feather very small; the whitish supraloral and postocular streaks washed with brown; eyelid dull whitish; lores and feathers below the eye dusky; ear-coverts brown; under surface of body dull white, slightly washed with yellow on the abdomen; the sides of the body and flanks streaked with dusky blackish, with a slight indication of a saffron-yellow patch on the sides of the breast.

Young males resemble the young females, but have a little more yellow on the crown and sides of the breast, and the blackish streaks on the under surface are more distinct.

Hab. North America, but chiefly the Eastern Province. In the north-west it extends across the continent; thence some individuals straggle southwards along the Pacific side to Washington, and probably Oregon and California; north to the Arctic coast; Greenland; west to the Rocky Mountains in the latitude of Colorado, where

common; west in the Missouri region into Dakotah, and nearly across that territory in the Mouse-River area: breeds mostly north of the United States, but also in northern New England; and also in Jamaica; winters anywhere in the United States from the latitude of southern New England southward (*Coues*). Winters also in Central America from Mexico to Panama (*Salvin & Godman*). Jamaica, S. Domingo, Bahamas.

a. ♂ ad. st.	North America.	J. Gould, Esq.
b. ♂ ad.; *c*. ♀ juv. st.	North America.	Purchased.
d. ♂ ad. sk.	North America.	Gould Collection.
e. ♂ ad. sk.	Repulse Bay, Arctic America.	Dr. Rae [P.].
f. ♂ ad. sk.	Fort Simpson, May 19.	B. R. Ross, Esq. [P.].
g, h. ♂ ♀ ad. sk.	49th Parallel (*Dawson*).	N. A. Boundary Commission [P.].
i. ♂ ad. sk.	Pennsylvania (*Baird*).	Sclater Collection.
j. ♀ ad. sk.	Washington, D.C. (*J. C. McGuire*).	U.S. Nat. Museum [P.].
k. ♂ ad. sk.	Chicago, Illinois, May 3 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
l. Juv. sk.	Chicago, Illinois, Oct. 2 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
n, o. Juv. sk.	Jefferson, Illinois, Oct. 9 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
p. ♀ juv. sk.	Colehour, Illinois, Oct. 2 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
q. ♂ ad. sk.	Colehour, April 18 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
r, s. ♀ ad. sk.	Hyde Park, Illinois, April and May (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
t. ♂ ad. sk.	Wheatland, Indiana, April 27 (*R. Ridgway*).	U.S. Nat. Museum [P.].
u, v. ♂ ♀ ad. sk.	New Orleans, Louisiana, winter (*R. W. Shufeldt*).	U.S. Nat. Museum [P.].
w. Ad. sk.	Jamaica (*Osburn*).	Sclater Collection.
x. Juv. sk.	Jamaica.	Purchased.
y. Sternum.	Jamaica.	P. H. Gosse, Esq. [P.].

26. Dendrœca auduboni.

Sylvia auduboni, *Towns. Journ. Philad. Acad.* vii. p. 191 (1837), viii. p. 153 (1839); *Audub. B. Amer.* pl. 395; *id. Orn. Biogr.* v. p. 52 (1839).

Sylvicola auduboni, *Bp. Comp. List B. Eur. & N. Amer.* p. 21 (1838); *Audub. Syn.* p. 32 (1839); *id. B. Amer.* ii. p. 26, pl. 77 (1841); *Bp. Consp.* i. p. 307 (1853).

Mniotilta auduboni, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 240, no. 3467 (1869).

Dendroica auduboni, *Baird, B. N. Amer.* p. 273 (1858); *id. U.S. Mex. Bound. Surv.* ii. pt. 2, *Birds*, p. 10 (1859); *id. Review Amer. B.* p. 188 (1865); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 229, pl. 13. fig. 1 (1874); *Hensh. Zool. Expl. W. 100th Merid.* p. 174 (1876).

Dendrœca auduboni, *Scl. P. Z. S.* 1858, pp. 295, 298, 1860, p. 250; *Salv. & Scl. Ibis*, 1860, p. 273; *Scl. Cat. Amer. B.* p. 30 (1862); *id. P. Z. S.* 1862, p. 172; *Coues, Ibis*, 1865, p. 163; *Brown, Ibis*,

1868, p. 420; *Cooper, B. Calif.* p. 88 (1870); *Coues, Key N. Amer. B.* p. 100 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Coues, B. N.-West*, p. 232 (1874); *Ridgw. Rep. U.S. Geol. Expl. 40th Par.* p. 433 (1877); *Coues, B. Color Vall.* p. 271 (1878); *id. Bull. U.S. Geol. Surv.* iv. p. 566 (1878); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 128 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 17 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 302 (1884).
Dendroica audubonis, *Baird in Ives's Rep. Color.* pt. 6, p. 5 (1861).
Dendrœca coronata, var. auduboni, *Ridgw. Bull. Essex Inst.* v. p. 180 (1873).

Adult male in breeding-plumage. General colour above slaty blue, mottled with black centres to the feathers; the hind neck uniform; a band of bright yellow across the rump; lesser wing-coverts and scapulars like the back, with similar black centres to the feathers; median wing-coverts black, with broad white tips; greater coverts black, white along the outer web and at the ends; bastard-wing black, fringed with white; primary-coverts and quills black, edged with ashy grey, paler and more hoary white on all but the inne secondaries; upper tail-coverts black, with slaty-blue margin tail-feathers black, edged with slaty blue, the outer feathers wi white, all but the centre feathers with a large patch of white ne the end of the inner web; on the top of the crown a patch of bright yellow; the rest of the head slaty blue, with indistinct black centres to the feathers, forming a line along the yellow coronal patch; sides of face and ear-coverts slaty blue, the fore part of the latter shaded with black, which extends below the eye and on to the lores; cheeks slaty blue, with tiny black centres to the feathers; side of neck slaty blue; throat golden yellow; fore neck black, extending on to the sides of the breast, the feathers of which have hoary margins; flanks white, streaked with black; on each side of the upper breast a large patch of golden yellow; centre of breast, abdomen, and under tail-coverts white; thighs white, with dusky bases; axillaries dusky grey, with whitish edges; under wing-coverts white, mottled with dusky bases near the edge of the wing; quills blackish below, ashy white along the inner web; "bill and feet black; iris brown" (*Audubon*). Total length 5 inches, culmen 0·5, wing 3, tail 2·2, tarsus 0·75.

Adult in winter plumage. Brown above instead of slaty blue, the yellow coronal patch entirely obscured by brown, the back more narrowly centred with black; rump-band bright yellow; upper tail-coverts black, margined with slaty blue; wings and tail as in the summer plumage, but the margins to the quills browner and the white on the wing-coverts more or less obscured with brown; sides of face brown; lores ashy; eyelid white; chin whitish; throat yellow, the lower throat dull white, washed with brown; remainder of under surface dull white, obscurely mottled with black on the chest and sides of body; on the sides of the latter a patch of saffron-yellow.

In some of the specimens killed in winter the yellow extends over the chin as in summer, but the colour is always much paler.

Young in winter plumage. Browner than the winter plumage of the adults, even the upper tail-coverts being washed with brown,

and the wing-coverts distinctly pervaded with the latter colour; throat, breast, and sides of body pale brown, with no indication of the patch of yellow on the sides of the breast; the latter as well as the flanks mottled with blackish centres to the feathers.

Very young. No yellow anywhere; everywhere streaked—above with blackish and brownish ash, below with dusky and whitish; wings and tail much as in the autumnal plumage of the adult. (*Coues.*)

"The full breeding-dress of this species is worn but for a short time. The spring moult is usually not completed until some time in May, as early May and all April specimens show more or less evident traces of the dull-brown winter plumage mixed with the clear slate-colour. September and October specimens are much the same. The early-streaked condition is very brief, the distinctive marking of the species soon appearing. In comparing this species with *D. coronata*, its eastern representative, the very marked character of the restricted throat in contrast with the more extensively white throat of *D. coronata* has drawn attention from other equally good characters. In *D. coronata* in full plumage the whole sides of the head are pure black, bounded above by a white superciliary line; whereas this part is a little darker than the back in *D. auduboni*, and there is no white line. The breast of *D. coronata* does not appear to be ever continuously black, nor do the white bars on the wings fuse completely into a large white patch. Younger and autumnal or winter specimens are more similar; but the distinctive yellow throat of *auduboni* shows, at least in traces, at a very early age, and is always distinctive. In the very earliest stage the two species are indistinguishable." (*Coues, B. Color. Vall. l. c.*)

Hab. From the easternmost bases and outlying foot-hills of the Rocky Mountains to the Pacific, United States and British Columbia; probably also to Alaska; accidental in Massachusetts. Winters in Central America from Mexico to Guatemala (*S. & G.*).

a. ♂; *b*. [♀] ad. sk.	British Columbia.	J. K. Lord, Esq. [C.].
c, *d*. ♂ ad. sk.	West side of Rocky Mountains, British Columbia.	J. K. Lord, Esq. [P.].
f, *g*. Ad.; *h*. Juv. hiem. sk.	California.	Lord Walsingham [P.].
i. ♂ ad. hiem. sk.	Hayward's, California, Oct. 24 (*W. O. Emerson*).	R. B. Sharpe, Esq. [P.].
k. Ad. hiem. sk.	California.	Purchased.
l. Ad. hiem. sk.	California.	Sclater Collection.
m, *n*. ♂ ♀ ad. sk.	Tuezon, Arizona, April (*E. W. Nelson*).	U.S. Nat. Museum [P.].
o. Ad. hiem. sk.	Mexico.	Purchased.
p. Ad hiem. sk.	Mexico.	Gould Collection.
q. ♂ ad. sk.	Mexico (*De Saussure*).	Sclater Collection.
r. ♂ ad. sk.	La Parada, Mexico, Oct.	A. Boucard, Esq. [P.]
s. ♂ ad. sk.	Guatemala.	Gould Collection.

27. Dendrœca palmarum.

Le Bimbelé ou la Fausse Linote, *Buff. Hist. Nat. Ois.* v. p. 330 (1778).
Palm Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 498 (1783).

Motacilla palmarum, *Gm. S. N.* i. p. 951 (1788); *Less. Traité*, [illegible]r. p. 418 (1831).

Sylvia palmarum, *Lath. Ind. Orn.* ii. p. 544 (1790); *Vieill. O*[illegible]; *Amér. Sept.* ii. p. 21, pl. 73 (1807); *Bp. Amer. Orn.* ii. p. 1[illegible] pl. 10. fig. 2 (1828); *D'Orb. in Ramon de la Sagra's Hist. Nat. Cuba*, p. 57, pl. 8 (1838).

Sylvia petechia (*nec L.*), *Wils. Amer. Orn.* iv. p. 19, pl. 28. fig. 4 (1812); *Audub. B. Amer.* pls. 163, 164; *id. Orn. Biogr.* ii. pp. 259, 360 (1834).

Phyllopneuste petechia, *Boie, Isis*, 1828, p. 321.

Sylvicola petechia, *Sw. & Richards. Faun. Bor.-Amer., Birds*, p. 215, pl. 41 (1831); *Audub. Syn.* p. 58 (1839); *id. B. Amer.* ii. p. 55, pl. 90 (1841).

Sylvicola palmarum, *Jard. ed. Wils. Amer. Orn.* i. p. 373 (1832); *Richards. Rep. Brit. Assoc.* 1836–37, p. 172; *Sallé, P. Z. S.* 1857, p. 231; *Bryant, Proc. Bost. Soc. N. H.* vii. p. 110 (1859), xi. p. 91 (1867).

Sylvicola ruficapilla, *Bp. Comp. List B. Eur. & N Amer.* p. 22 (1838); *id. Consp.* i. p. 307 (1850).

Mniotilta petechia, *Gray, Gen. B.* i. p. 196 (1848, pt.).

Mniotilta palmarum, *Gray, t. c.* p. 196; *id. Hand-l. B.* i. p. 24[illegible] no. 3477 (1869).

Dendroica palmarum, *Baird, B. N. Amer.* p. 288 (1858); *id. Re[illegible] Amer. B.* p. 207 (1865); *Lawr. Ann. Lyc. N. Y.* viii. p. 28[illegible] (1866); *Gundl. J. f. O.* 1872, p. 415; *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 273, pl. 14. fig. 8 (1874).

Dendrœca palmarum, *Scl. P. Z. S.* 1861, p. 71; *id. Cat. Amer. B.* p. 33 (1862); *Blakist. Ibis*, 1863, p. 63; *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 616; *Coues, Key N. Amer. B.* p. 104 (1872); *Allen, Bull. Mus. Comp. Zool. Cambr.* ii. p. 268 (1871); *Maynard, B. Florida*, p. 52 (1873); *Scl. & Salv. Nomencl Av. Neotr.* p. 9 (1883); *Coues, B. N.-West*, p. 67 (1874); *id. B. Color. Vall.* p. 250 (1878); *Cory, B. Bahamas*, p. 68 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 18 (1881); *A. & E. Newt. Handb. Jamaica*, p. 106 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 307 (1884).

Dendrœca palmarum hypochrysæa, *Ridgw. Bull. Nutt. Orn. Club*, i. p. 84 (1876); *id. Bull. U.S. Nat. Mus.* no. 21, p. 18 (1881); *Boucard, P. Z. S.* 1883, p. 441; *Coues, Key N. Amer. B.* 2nd ed. p. 307 (1884); *Cory, B. S. Domingo*, p. 32 (1884).

Dendrœca palmarum, *β.* hypochrysæa, *Coues, B. Color. Vall.* p. 250 (1878).

Adult male. General colour above dull yellowish olive, streaked with dusky down the centres of the feathers; the rump and upper tail-coverts olive-yellow; lesser wing-coverts like the back; median and greater coverts dusky brown, edged with olive-brown, lighter and more whity brown at the ends, forming an indistinct double wing-bar; bastard-wing and primary-coverts dusky brown, narrowly fringed with olive; quills dusky brown, margined with yellowish olive, more broadly on the inner secondaries; tail-feathers blackish brown, edged with dull olive, the two outer ones with a white spot at the end of the inner web; crown of head rather bright chestnut, with a little yellow on the forehead; a broad eyebrow of bright yellow; eyelid and feathers below the eye also yellow; ear-coverts olive-brown, with yellow shaft-lines; lores and a streak behind the eye dusky blackish; cheeks and entire under surface of body golden

a[yellow], with a distinct dusky line separating the cheeks from the th[roat], the cheeks streaked with chestnut; the fore neck and breast th[reaked] with chestnut; sides of the body and flanks dusky olive with [chestnut] streaks; lower abdomen dull whitish; under wing-coverts and axillaries yellow, the greater series of coverts whitish, washed with yellow; quills dusky below, ashy along the edge of the inner web. Total length 5·2 inches, culmen 0·5, wing 2·7, tail 2·15, tarsus 0·75.

Adult male in winter plumage. Browner than in summer, the olive-yellow of the rump, upper tail-coverts, and margins of tail-feathers brighter; the chestnut crown overshaded with ashy brown; ear-coverts and sides of neck brown, the latter mixed with yellow; eyelid, eyebrow, and under surface of body pale bright yellow, streaked with chestnut on the fore neck, but not so plainly as in the summer dress, the chestnut being shaded with ashy; the wing-coverts edged with pale ochreous brown.

Adult female. Browner than the male and without the yellowish-olive tinge on the back; the chestnut on the crown paler and not so extended, reaching only to the occiput; rump and upper tail-coverts [brighter] olive-yellow; eyebrow and under surface of body paler [yellow] than the male, and more narrowly streaked with dusky, a [slight] tinge of chestnut; the white on the outer tail-feathers smaller. Total length 4·8 inches, culmen 0·5, wing 2·5, tail 2, tarsus 0·8.

Young in winter plumage. Brown above, the head brown like the back; under surface of body dull white, the throat yellowish, streaked with brown on the throat, fore neck, and sides of the body; the lower flanks and under tail-coverts saffron-yellow. The chestnut head is donned by some specimens before leaving their winter-quarters; but others arrive in their summer-quarters in the brown plumage, a female collected at Kenwood, Illinois, on the 8th of May, just commencing to moult the chestnut feathers on the head.

Hab. Mississippi valley during the migrations; breeding in the interior of British America, wintering in the Gulf States, from Texas to Western and Southern Florida and West Indies (Cuba, Jamaica, San Domingo, and the Bahamas); casual in certain Atlantic States (*Ridgway*). The race which Mr. Ridgway calls *D. hypochrysea* is found in "the Atlantic States from East Florida (in winter) to Nova Scotia, breeding in Maine and northward, and wintering in the south Atlantic States; apparently not found at all in the West Indies, nor in Southern and Western Florida."

a, *b*. ♂ ♀ ad. sk.	North America.	Purchased.
c. Ad. sk.	North America.	J. Gould, Esq.
d. ♂ ad. sk.	Pennsylvania (*E. Wilson*).	Sclater Collection.
e. ♂ ad. hiem. sk.	Washington, D.C. (*McGuire*).	Sclater Collection.
f. ♀ ad. sk.	Glenville, Maryland, April 24 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
g. ♂ ad. sk.	Michigan, May 15 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
h. ♂ juv. sk.	Colehour, Illinois, Oct. 2 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
i. ♂ ad. sk.	Wood Lawn, Illinois, April 30 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
k. ♀ ad. sk.	Kenwood, Illinois, May 8 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].

l, *m*. ♂ ♀ ad. sk.	Hyde Park, Illinois, May (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
n. Juv. sk.	Hyde Park, Illinois, Sept. (*H. K. Coale*).	U.S. Nat. Museum. [P.].
o. ♂ ad. sk.	Cambridge, Mass., April 12 (*H. M. Spelman*).	R. B. Sharpe, Esq. [P.].
p. ♂ ad. sk.	Indiana, April (*R. Ridgway*).	U.S. Nat. Museum [P.].
q. Juv.; *r*. ♀ juv. sk.	Jamaica (*Osburn*).	Sclater Collection.

28. Dendrœca castanea.

Sylvia castanea, *Wilson, Amer. Orn.* ii. p. 97, pl. 14. fig. 4 (1810); *Audub. B. Amer.* pl. 69; *id. Orn. Biogr.* i. p. 358 (1832).

Sylvia autumnalis, *Wilson, Amer. Orn.* iii. p. 65, pl. 23. fig. 3 (1811); *Audub. B. Amer.* pl. 88; *id. Orn. Biogr.* i. p. 449 (1832).

Sylvicola castanea, *Richards. Rep. Brit. Assoc.* 1836–37, p. 172; *Bp. Comp. List B. Eur. & N. Amer.* p. 22 (1838); *Audub. Syn.* p. 53 (1839); *id. B. Amer.* ii. p. 34, pl. 80 (1841); *Bp. Consp.* i. p. 308 (1850).

Mniotilta castanea, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.*, p. 241, no. 3483 (1869).

Rhimamphus castaneus, *Cab. Mus. Hein.* i. p. 19 (1850).

Dendroica castanea, *Baird, B. N. Amer.* p. 276 (1858); *Scl. & Sal Ibis*, 1859, p. 11; *Cass. Proc. Philad. Acad.* xii. p. 193 (1860); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 251, pl. 13. figs. 4, 5 (1874).

Dendrœca castanea, *Lawr. Ann. Lyc. N. Y.* vii. p. 322 (1861); *Scl. Cat. Amer. B.* p. 31 (1862); *Scl. & Salv. P. Z. S.* 1864, p. 347; *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 614; *Wyatt, Ibis*, 1871, p. 322; *Brewer, Ibis*, 1872, p. 334; *Coues, Key N. Amer. B.* p. 101 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *id. B. N.-West*, p. 61 (1874); *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 15 (1876); *Coues, B. Color. Vall.* p. 243 (1878); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 132 (1881); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 17 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 304 (1884).

Adult male in breeding-plumage. General colour above ochreous brown, distinctly streaked with black centres to the feathers; the scapulars more ashy grey, similarly streaked with black; lower back and rump ashy grey, not streaked; the upper tail-coverts ashy grey, with black centres to the feathers; lesser wing-coverts ashy grey, mottled with black bars; median and greater wing-coverts black, edged with ashy grey and broadly tipped with white, forming a double wing-bar; bastard-wing black, edged with white; primary-coverts and quills black, edged with ashy grey, the secondaries with olive, the first primary with hoary whitish, the inner secondaries broadly edged with ashy grey; tail-feathers blackish, edged with ashy grey, and fringed with white along the margin of the inner web, the two outer feathers with a large white spot near the end of the inner web; crown of head deep chestnut, the nape and hind neck clear ochreous, streaked with black; forehead and sides of crown black; lores, sides of face, cheeks, and ear-coverts black, slightly washed with ashy grey; sides of neck clear ochreous, forming a conspicuous patch; chin blackish; throat dark chest-

nut, extending down the sides of the neck, along the sides of the breast and flanks; fore neck, breast, abdomen, and under tail-coverts ochreous white, as also the thighs; axillaries and under wing-coverts ochreous white, mottled with blackish bases near the edge of the wing; quills dusky brown below, white along the edge of the inner web: "bill blackish above, greyish blue beneath; feet greyish blue; iris hazel" (*Audubon*). Total length 5·2 inches, culmen 0·45, wing 3·05, tail 2·15, tarsus 0·75.

Adult female in breeding-plumage. More ashy than the male on the upper surface, washed with olive and streaked with black centres to the feathers, except on the rump and lower back; coronal patch on the head much paler chestnut; forehead and sides of crown ashy olive, streaked with black centres to the feathers; sides of face dusky olive, mottled with bluish bases to the feathers; eyelid and an ill-defined eyebrow olive-yellow; sides of neck pale ochreous; under surface of body ochreous white, the throat pale chestnut, the sides of the breast and flanks also mixed with pale chestnut; wings and tail as in the male. Total length 5 inches, culmen 0·5, wing 2·8, tail 2·1, tarsus 0·75.

Young in winter plumage. Resembles the adult female, but is uniform olive above, without any blackish centres to the feathers, the rump and upper tail-coverts like the back; the white wing-bars tinged with olive-yellow, the inner secondaries broadly edged with ashy whitish; tail as in adults; an ill-defined eyebrow and eyelid olive-yellowish; cheeks and ear-coverts olive-yellowish, the latter dusky on the upper margin; under surface of body ochreous white, slightly olive on the throat and breast, browner on the sides of the body; under tail-coverts clearer ochreous buff; axillaries and under wing-coverts white, slightly tinged with yellow.

Adult males and females in winter plumage lose all trace of the chestnut on the crown, and are olive above, like the young birds, but they are always more or less striped, the males particularly so. It is evident that the birds of the year, after their first spring moult, fall very far short of the rich coloration of the full-plumaged males, the chestnut on the throat and flanks being very pale, and the chestnut on the head not more pronounced than in the adult females. It appears, therefore, that it takes some time before the fully adult plumage is assumed, at least two years. There is generally some rufous on the flanks in winter-killed specimens of adults, but this is replaced by a brownish shade in the young.

Hab. Eastern province of North America, north to Hudson's Bay (not Alaska nor Greenland): west only to the edge of the plains; migratory only in nearly all the United States; breeds from northern New England northward (*Coues*). Winters in Panama and Colombia. Of very rare occurrence in Guatemala (*Salvin and Godman*).

a, *b*. ♂ ♀ ad.; *c*. Juv. st.	North America.	Purchased.
d. ♂ ad. sk.	North America.	Sclater Collection.
e. ♂ ad.; *f*. Juv. sk.	Niagara Falls (*J. G.*).	Gould Collection.
g. ♂ ad. sk.	Wisconsin, May 15.	Dr. Brewer [P.].

h. ♂ ad. sk.	Chicago, Illinois, May 20 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
i. ♀ ad.; *k, t.* Juv. sk.	Chicago, Sept. (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
m, n. ♂; *o.* ♀ ad. sk.	Hyde Park, Illinois, May 21 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
p. ♀ ad. sk.	Lake Forest, Illinois, May 15 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
q. ♀ ad. sk.	Waukigan, Ill. (*E. W. Nelson*).	U.S. Nat. Museum [P.].
r. ♂ juv. sk.	Mt. Carmel, Ill., Sept. 15 (*R. Ridgway*).	U.S. Nat. Museum [P.].
s. ♂ ad. sk.	St. Louis Co., Missouri, May 2 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
t. ♂ ad. sk.	Wheatland, Indiana, May 10 (*R. Ridgway*).	U.S. Nat. Museum [P.].
u. ♀ ad. hiem. sk.	Panama (*McLeannan*).	Sclater Collection.
v. [♀] juv. hiem. sk.	Bucaramanga, Colombia.	Sclater Collection.
w. ♂ ad. sk.	Remedios, Antioquia (*Salmon*).	Sclater Collection.
x. ♂ imm. sk.	Medellin.	T. K. Salmon, Esq. [C.].

29. Dendrœca pityophila.

Sylvicola pityophila, *Gundl. Ann. Lyc. N. Y.* vi. p. 160 (1855).
Rhimamphus pityophilus, *Gundl. J. f. O.* 1857, p. 240.
Dendroica pityophila, *Baird, Rev. Amer. B.* p. 208 (1865); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 221 (1874).
Dendrœca pityophila, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 612; *Coues, B. Color. Vall.* p. 296, note (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 18 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 297 (1884).
Mniotilta pityophila, *Gray, Hand-l. B.* i. p. 241, no. 3499 (1869).

Above, including sides of head and neck, uniform plumbeous grey; the forehead, vertex, and loral region olive-green; chin and fore neck bright yellow, extending on the middle of the jugulum, and bordered by black streaks towards lower part of neck, most conspicuous on sides of breast; beneath dull white, the insides of wings more ashy, the flanks something like the back; two dull ashy-white bands across the wing-coverts; the quill- and tail-feathers edged with paler ash than the ground-colour; lateral tail-feathers with a whitish patch on the inner web, running forward to a point along the shaft, including the whole web at the end; second feather with a more restricted patch of the same. Total length 4·50 inches, wing 2·30, tail 2·20, culmen 0·45, bill from gape 0·55, tarsus 0·56. (*Baird.*)

Hab. Cuba.

30. Dendrœca kirtlandi.

Sylvicola kirtlandii, *Baird, Ann. Lyc. N. Y.* v. p. 217, pl. 6 (1852); *Zuchold, J. f. O.* 1854, p. 355; *Cassin, Ill. B. Calif. & Texas*, i. p. 278, pl. 47 (1855).
Dendroica kirtlandii, *Baird, B. N. Amer.* p. 286 (1858); *id. Rev. Amer. B.* p. 206 (1865); *Baird, Brew., & Ridgw. Hist. N. Amer. B.* i. p. 272, pl. 14. fig. 5 (1874).
Dendrœca kirtlandi, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869,

p. 617; *Coues, Key N. Amer. B.* p. 104 (1872); *id. B. Color. Vall.* p. 249 (1878); *Cory, B. Bahamas*, p. 66 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 18 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 306 (1884); *Ridgw. Auk*, i. p. 389 (1884).

Mniotilta kirtlandi, *Gray, Hand-l. B.* i. p. 241, no. 3492 (1869).

Above slate-blue, the feathers of the crown with a narrow, those of the middle of the back with a broader, streak of black; a narrow frontlet involving the lores, the anterior end of the eye, and the space beneath it (possibly the whole auriculars) black; the rest of the eyelids white. The underparts are clear yellow (almost white on the under tail-coverts); the breast with small spots, and sides of the body with short streaks, of black. The greater and middle wing-coverts, quills, and tail-feathers are edged with dull whitish; the two outer tail-feathers have a dull white spot near the end of the inner web, largest on the first. Length 5·50 inches, wing 2·80, tail 2·70. (*Baird, Brewer, and Ridgway.*)

Hab. Eastern United States.

31. Dendrœca pinus.

The Pine Creeper, *Catesby, H. N. Carol.* i. p. 61, pl. 61 (1771).

La Mésange d'Amérique, *Briss. Orn.* iii. p. 576 (1760).

Sylvia pinus, *Wils. Amer. Orn.* iii. p. 25, pl. 19. fig. 4 (1811); *Audub. B. Amer.* pl. 111; *id. Orn. Biogr.* ii. p. 232 (1834).

Thriothrurus (?) pinus, *Steph. Gen. Zool.* xiv. p. 194 (1826, pt.).

Sylvia vigorsi, *Audub. B. Amer.* pl. 30; *id. Orn. Biogr.* i. p. 153 (1832).

Vireo vigorsii, *Nutt. Man.* i. p. 318 (1832).

Sylvicola pinus, *Jard. ed. Wils. Amer. Orn.* i. p. 316, pl. 19. fig. 4 (1832); *Richards. Rep. Brit. Assoc.* 1836–37, p. 172; *Bp. Comp. List B. Eur. & N. Amer.* p. 22 (1838); *Audub. Syn.* p. 39 (1854); *id. B. Amer.* ii. p. 37, pl. 82 (1841); *Woodh. in Sitgr. Expl. Zuni R.* p. 70 (1853); *Jones, Nat. Berm.* p. 59 (1859).

Vermivora pinus, *Swains. Classif. B.* ii. p. 245 (1837).

Mniotilta pinus, *Gray, Gen. B.* i. p. 196 (1848, pt.).

Rhimamphus pinus, *Bp. Consp.* i. p. 311 (1850).

Dendroica pinus, *Baird, B. N. Amer.* p. 277 (1858); *id. Rev. Amer. B.* p. 190 (1865); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 268, pl. 13. fig. 6 (1874); *Brewst. Ann. Lyc. N. Y.* xi. p. 136 (1875).

Dendrœca pinus, *Sclater, Cat. Amer. B.* p. 31 (1862); *McIlwr. Proc. Essex Inst.* v. 1866, p. 86; *Allen, Bull. Mus. Comp. Zool. Cambr.* ii. p. 268 (1871); *Coues, Key N. Amer. B.* p. 105 (1872); *id. B. N.-West*, p. 69 (1874); *id. B. Color. Vall.* p. 251 (1878); *Cory, B. Bahamas*, p. 69 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 18 (1881); *Cory, B. S. Domingo*, p. 33 (1884); *Coues, Key N. Amer. B.* 2nd ed. p. 307 (1884).

Dendrœca pina, *Coues, Proc. Essex Inst.* v. p. 272 (1868) *Maynard, B. Florida*, p. 48 (1873).

Adult male. General colour above dark olive-yellow, rather duller on the mantle and back; lesser and median wing-coverts ashy grey, the former washed with olive-yellow, the latter tipped with greyish white, the greater coverts dusky blackish, edged with ashy grey, becoming greyish white at the ends, and thus forming a double wing-bar; bastard-wing blackish, narrowly margined with white;

primary-coverts and quills dusky brown, edged with ashy, the secondaries slightly washed with olive; upper tail-coverts ashy, slightly washed with olive-yellow; tail-feathers dusky brown, edged with ashy, the two outer feathers fringed with white on the outer and inner webs, and having a large wedge-shaped mark of white on the inner web near the end, this mark being much reduced in size on the penultimate feather; head like the back; lores dusky blackish; upper and lower edge of eyelid as well as a narrow superciliary line brighter yellow; ear-coverts olive-yellow, with a dusky blackish streak behind the eye, the ear-coverts streaked with dusky blackish; below the eye a small patch of bright yellow; cheeks, throat, and breast bright yellow, a little paler on the latter, mottled with blackish centres to the feathers on the side of the fore neck; sides of the breast a little more olive; abdomen and under tail-coverts white, slightly tinged with yellow, the lower flanks and thighs more ashy; axillaries and under wing-coverts dull white, the former with dusky bases; quills dark brown below, ashy whitish along the edge of the inner web: "bill brownish black; feet dusky; iris hazel" (*Audubon*). Total length 4·8 inches, culmen 0·5, wing 2·9, tail 2·15, tarsus 0·7.

Adult female. General colour very similar to that of the male, but a little duller and more ashy and not quite so yellow; underneath, the colour is paler and the yellow does not extend so far down, leaving the entire abdomen dull white; the spots on the sides of the upper breast are not so distinct, being much smaller and less pronounced. Total length 4·8 inches, culmen 0·5, wing 2·75, tail 2·1, tarsus 0·7. (*Mus. Salvin and Godman.*)

Autumnal males are much like spring individuals, but the yellow beneath is softer and somewhat richer, and the olive above overlaid with a reddish umber tint. (*Baird, Brewer, and Ridgway.*)

Young. Umber-brown above, and dingy pale ashy beneath, with a slight yellowish tinge on the abdomen; wing and tail much as in the autumnal adult. (*B., B., & R.*)

Hab. Eastern province of United States, Canada and New Brunswick, west only to the Lower Missouri and Kansas, &c.: breeds throughout its United-States range, wintering in the Southern States, Bermudas, and Bahamas (*Coues*).

a, b. Ad. st.	North America.	H.R.H. The Duke of Sussex [P.].
c. ♂ ad. sk.	North America.	Purchased.
d. ♂ ad. sk.	Niagara Falls (*J. G.*).	Gould Collection.
e. ♀ juv. sk.	Oyster Bay, Long Island, July 21 (*Roosevelt*).	U.S. Nat. Museum [P.].
f. ♂ ad. sk.	Hyde Park, Illinois, April 26 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
g. ♀ ad. sk.	Chicago, Illinois, May 2 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
h. ♂ ad. autumn. sk.	Massachusetts (*W. Brewster*).	U.S. Nat. Mus. [P.].
i. ♂ juv. sk.	Massachusetts (*Henshaw*).	U.S. Nat. Mus. [P.].
k. ♀ ad. sk.	Pennsylvania (*Baird*).	Sclater Collection.

32. Dendrœca striata.

Muscicapa striata, *Forster, Philos. Trans.* lxxii. pp. 406, 428 (1772).
Striped Flycatcher, *Lath. Gen. Syn.* ii. pt. 1, p. 349 (1783); *Penn. Arct. Zool.* ii. p. 390 (1785).
Black-poll Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 460 (1783); *Penn. Arct. Zool.* ii. p. 401 (1785).
Motacilla striata, *Gm. S. N.* i. p. 976 (1788).
Sylvia striata, *Lath. Ind. Orn.* ii. p. 527 (1790); *Vieill. Ois. Amér. Sept.* ii. p. 22, pls. 75, 76 (1817); *Wils. Amer. Orn.* iv. p. 40, pl. 30. fig. 4 (1811), vi. p. 101, pl. 54. fig. 3 (1812); *Audub. B. Amer.* pl. 133; *id. Orn. Biogr.* ii. p. 201 (1834).
Sylvicola striata, *Swains. & Richards. Faun. Bor.-Amer., Birds,* ii. p. 218 (1831); *Jard. ed. Wils. Amer. Orn.* ii. pp. 32, 303 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 22 (1838); *Audub. Syn.* p. 53 (1839); *id. B. Amer.* ii. p. 28, pl. 78. figs. 1, 2 (1841); *Bp. Consp.* i. p. 308 (1850); *Bryant, Proc. Bost. Soc. N. H.* vii. p. 110 (1859).
Mniotilta striata, *Gray, Gen. B.* i. p. 196 (1848); *Reinh. Ibis,* 1861, p. 6; *Gray, Hand-l. B.* i. p. 240, no. 3474 (1869).
Rhimamphus striatus, *Cab. Mus. Hein.* i. p. 20 (1850); *Scl. P. Z. S.* 1855, p. 143; *Gundl. J. f. O.* 1855, p. 475, 1861, p. 409.
Dendroica striata, *Baird, B. N. Amer.* p. 280 (1858); *Coues, Proc. Phil. Acad.* 1861, p. 220; *Blakist. Ibis,* 1862, p. 4; *Baird, Rev. Amer. B.* p. 192 (1865); *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1866); *Dall & Bann. Trans. Chicago Acad.* i. p. 278 (1869); *Hensh. Zool. Expl. W. 100th Merid.* p. 198 (1875).
Dendroica striatus, *Gundl. J. f. O.* 1861, p. 326.
Dendroica pinus, *Coues, Proc. Phil. Acad.* 1861, p. 220 (*err.*).
Dendrœca striata, *Scl. Cat. Amer. B.* p. 31 (1862); *Blakist. Ibis,* 1863, p. 62; *Sund. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 614; *Scl. & Salv. P. Z. S.* 1870, p. 780; *Coues, Key N. Amer. B.* p. 101, pl. 2. figs. 15, 16 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 93 (1873); *Coues, B. N.-West,* p. 60 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* p. 248, pl. 13. fig. 9 (1874); *Coues, B. Color. Vall.* p. 288 (1878); *id. Bull. U.S. Geol. Surv.* vol. iv. p. 566 (1878); *Merrill, Bull. U.S. Nat. Mus.* i. p. 124 (1878); *Cory, B. Bahamas,* p. 61 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 17 (1881); *Nelson, Cruise R.S. 'Corwin,'* p. 64 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 303 (1884).
Dendrœca atricapilla, *Landb. Arch. f. Naturg.* 1864, p. 56; *Scl. P. Z. S.* 1867, p. 337.
Anthus breviunguis, *Pelz. Orn. Bras.* pp. 69, 463 (1871); *Gray, Hand-l. B.* i. p. 250, no. 3631 (1869).

Adult male in breeding-plumage. General colour above dull ashy, broadly streaked with black centres to the feathers, the back washed with brown, the feathers being edged with ashy brown; the lower back, rump, and upper tail-coverts more decidedly ashy than the rest of the back, and just as broadly centred with black; wing-coverts black, edged with ashy grey, the median and greater series broadly tipped with white, forming a double wing-bar; bastard-wing, primary-coverts, and quills blackish, edged with olive, the inner secondaries broadly margined with ashy white; tail-feathers blackish brown, edged with ashy olive, the outer feather with a triangular patch of white near the end of the inner web, reduced to a broad fringe near the tip of the same web in the penultimate feather; crown of head black, forming a cap; the hind neck with a collar of white, broadly streaked with black; lores, sides of crown, and edge

of eyelid black, except the lower edge of the latter, which is white, like the sides of face, cheeks, and ear-coverts; throat and under surface of body white, with a broad line of black down the sides of the throat, widening on the lower throat, the sides of the neck and of the fore neck being thickly mottled with black streaks; entire sides of the body broadly streaked with black, the lower flanks washed with brown; thighs and under tail-coverts white; axillaries and under wing-coverts white, the edge of the wing washed with olive-yellow; quills dusky brown below, ashy along the edge of the inner web. Total length 5 inches, culmen 0·5, wing 2·8, tail 2·1, tarsus 0·7.

Adult female. Pipit-like, and different from the male. General colour above olive-greenish, streaked with black centres to the feathers; the head like the back; the hind neck more ashy, and the lower rump and upper tail-coverts inclining to ashy; lesser wing-coverts like the back; the median and greater series blackish, edged with olive, the white tips to the coverts forming the double wing-bar, slightly washed with olive; bastard-wing, primary-coverts, and quills blackish, edged with olive, the former obsoletely, the latter more distinctly, the inner secondaries with broader whitish margins; tail-feathers brown, edged with olive, the two outer ones with an ovate white spot near the end of the inner web; lores and eyelid pale olive-yellowish; cheeks and ear-coverts dull white, with a slight yellowish tinge, the latter mottled with small blackish spots; under surface of body dull white, washed with olive-yellow; the sides of the throat spotted with black, the sides of the breast and flanks narrowly streaked with black; the latter strongly washed with olive; axillaries and under wing-coverts ashy white, washed with olive; quills dusky, ashy whitish along the edge of the inner web. Total length 4·8 inches, culmen 0·45, wing 2·65, tail 1·85, tarsus 0·75.

Young male in autumn plumage. Similar to the adult female, but yellowish olive above and not so green; the eyebrow more distinctly olive-yellow, as also the throat, breast, and flanks, much brighter than in the adult female; abdomen and under tail-coverts pure white; on the sides of the body some dusky streaks; the white wing-bars very distinct, the quills narrowly but distinctly tipped with white.

This last character appears to be a constant and conspicuous mark of immaturity. The birds begin to moult as early as the 1st of November, as is proved by a specimen in the Salvin-and-Godman collection from Roraima (H. Whitely).

"The still earlier plumage of the bird when just from the nest is different again; for this species, like many other *Sylvicolidæ*, *Turdidæ*, &c., has at first a transient streaky or speckled plumage. In this condition, the upper parts are greyish, the lower white, the whole body marked with blackish in the form of a terminal spot or bar on each feather." (*Coues.*)

Hab. North America, excepting the western and most of the middle province; north to the Arctic Ocean and Greenland; north-west to Alaska in the Yukon Region, west to Nebraska and Colorado. Cuba; Bahamas (*Coues*). Winters in South America, Guiana, Amazonia, Colombia, extending even to Chili.

a, b. ♂ ♀ ad. st.	North America.	Purchased.
c, d. ♀ ad. sk.	North America.	J. J. Audubon, Esq. [P.].
e, f. ♂ ♀ ad. sk.	Repulse Bay, Arctic America.	Dr. Rae [P.].
g. ♂ ad. sk.	Albany River, Canada.	G. Barnstone, Esq. [P.].
h. ♂ ad. sk.	Bear Lake.	B. R. Ross, Esq. [P.].
i. ♀ ad. sk.	Fort Good Hope.	B. R. Ross, Esq. [P.].
k. ♂ ad. sk.	49th Parallel (*Dawson*).	N. Amer. Boundary Commission [P.].
l. ♂ ad. sk.	Niagara Falls (*J. G.*).	Gould Collection.
m. ♀ ad. sk.	Oyster Bay, Long Island, May 27 (*Roosevelt*).	U.S. Nat. Museum [P.].
n. ♂ ad. sk.	St. Louis Co., Missouri, May 21 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
o. ♀ juv. sk.	Sheffield, Indiana, Sept. 25 (*H. K. Coale*).	U.S. Nat. Museum [P.].
p. ♂ ad. sk.	Philadelphia (*E. Wilson*).	Sclater Collection.
q. ♀ ad. sk.	Washington, D.C., June 4 (*E. Coues*).	Sclater Collection.
r. ♂ ad. sk.	Washington (*Schufeldt*).	U.S. Nat. Museum [P.].
s. ♂ ad. sk.	Jamaica.	Sclater Collection.
t. ♂ ad. sk.	Bogotá.	Sclater Collection.
u. ♂ ad. sk.	Guiana (*Brown*).	Sclater Collection.
v. Jun. sk.	Rio Negro (*Natterer*).	Sclater Collection. [S. n. *Anthus breviunguis.*]
w. Imm. sk.	South America.	Gould Collection.

33. Dendrœca cærulea.

Sylvia cærulea, *Wils. Amer. Orn.* ii. p. 141, pl. 17. fig. 5 (1810); *Licht. Preis-Verz. mex. Vög.* p. 2; *Cab. J. f. O.* 1863, p. 57.

Sylvia rara, *Wils. op. cit.* iii. p. 119, pl. 27. fig. 2 (1811); *Audub. B. Amer.* pl. 49; *id. Orn. Biogr.* i. p. 258 (1832).

Sylvia azurea, *Steph. Gen. Zool.* x. p. 653 (1817); *Bp. Amer. Orn.* ii. p. 27, pl. 11. fig. 2 (1828); *Audub. Orn. Biogr.* i. p. 255, pl. 48 (1832).

Sylvia populorum, *Vieill. Enc. Méth.* ii. p. 449 (1823).

Sylvia bifasciata, *Say, in Long's Exped. Rocky Mts.* i. p. 170 (1823).

Phyllopneuste rara, *Boie, Isis*, 1828, p. 321.

Sylvicola cærulea, *Jard. ed. Wils. Amer. Orn.* i. p. 283 (1832); *id.* iii. p. 387; *Bp. Comp. List B. Eur. & N. Amer.* p. 23 (1838); *Audub. Syn.* p. 56 (1839); *id. B. Amer.* ii. p. 45, pl. 86 (1841); *Bp. Consp.* i. p. 308 (1850).

Vermivora rara, *Jard. ed. Wils. Amer. Orn.* i. p. 406 (1832).

Mniotilta rara, *Gray, Gen. B.* i. p. 196 (1848).

Rhimamphus cæruleus, *Scl. P. Z. S.* 1857, p. 18; 1858, p. 64; *Gundl. J. f. O.* 1862, p. 177.

Dendroica cærulea, *Baird, B. N. Amer.* p. 280 (1858); *Gundl. J. f. O.* 1861, p. 326; *Baird, Rev. Amer. B.* p. 191 (1865); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 235 (1874); *Hensh. Zool. Expl. W. 100th Merid.* p. 196 (1875).

Dendrœca cærulea, *Scl. Cat. Amer. B.* p. 31 (1862); *Scl. & Salv. P. Z. S.* 1864, p. 347; *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 614; *Salv. t. c.* p. 183; *Scl. & Salv. P. Z. S.* 1870, p. 836; *Coues, Key N. Amer. B.* p. 99 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Coues, B. N.-West*, pp. 56, 233 (1874); *Taez. P. Z. S.* 1874, p. 508; *Gundl. Orn. Cuba*, p. 65 (1876); *Coues, B. Color. Vall.* p. 268 (1878); *Allen, Bull. Nutt. Orn. Club*, p. 25 (1879); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 130 (1881);

Ridgw. Bull. U.S. Nat. Mus. no. 21, p. 17 (1881); *Tacz. P. Z.S.* 1882, p. 6; *id. Orn. Pérou*, p. 465 (1884); *Coues, Key N. Amer. B.* 2nd ed. p. 301 (1884).
Mniotilta cærulea, *Gray, Hand-l. B.* i. p. 240, no. 3473 (1869).

Adult male in summer plumage. General colour above greyish blue, the mantle and scapulars centred with black streaks, the hind neck and the rump uniform, the upper tail-coverts again broadly centred with black; lesser wing-coverts like the back; median and greater coverts black, externally edged with greyish blue and broadly tipped with white, forming a double wing-bar; bastard-wing and primary-coverts black, the latter fringed with greyish blue; quills blackish, edged with ashy bluish, somewhat tinged with olive on the secondaries, the inner ones rather broadly margined with white; tail-feathers black, edged externally with greyish blue, and with white near the end of the inner web, which has a large subterminal ovate spot of white on all but the centre feathers, increasing slightly in size towards the outer ones; crown of head rather brighter blue than the back, the base of the forehead somewhat blackish, and an indistinct blackish band along the sides of the crown; feathers above the eye brighter blue like the crown; lores and sides of face and ear-coverts ashy bluish, dusky along the upper edge of the latter; cheeks, throat, and under surface of the body white, with a broad band of black washed with greyish blue across the fore neck; sides of upper breast washed with greyish blue; sides of the body and flanks broadly streaked with black and washed with greyish blue; thighs dusky, edged with white; under tail-coverts white; under wing-coverts and axillaries white with dusky bases, washed with greyish blue along the edge of the wing; quills dusky, broadly edged with white along the inner web: "bill bluish black; feet blue; iris blackish brown" (*Audubon*). Total length 4 inches, culmen 0·5, wing 2·6, tail 1·05, tarsus 0·6. (*Mus. Salvin and Godman.*)

Adult male in winter plumage. Only differs from the summer plumage in being a little more ashy on the upper surface, which scarcely shows more than faint traces of the black streaks on the back; the entire under surface is white, with more or less distinct black streaks on the sides of the body, the band on the fore neck being hidden by white, and only perceptible on disarranging the feathers.

Adult female. Different from the male. Ashy olive above, without any mesial black streaks on the mantle; rump a little lighter ashy; upper tail-coverts more bluish grey; lesser wing-coverts bluish grey; median and greater coverts dusky, edged with bluish grey and tipped with white, forming a double wing-bar; bastard-wing and primary-coverts dusky blackish, the latter fringed with bluish grey; quills dusky, externally washed with light bluish grey, more or less tinged with olive, the inner secondaries edged with white; tail as in the male, with the white spots on the inner web rather smaller; crown of head pale greyish blue, contrasting with the back; a distinct eyebrow of dull white, slightly washed with olive-yellow; lores, feathers below the eye, and eyelid ashy whitish; ear-coverts pale ashy, with a faint tinge of olive; cheeks pale olive-yellowish

like the sides of the neck; under surface of body dull white, with a tinge of pale yellow; sides of the body with faint dusky streaks; thighs dusky; under tail-coverts white, with scarcely any tinge of yellow; under wing-coverts and axillaries white, mottled with dusky bases along the edge of the wing; quills dusky below, whitish along the edge of the inner web. Total length 4·7 inches, culmen 0·5, wing 2·4, tail 1·7, tarsus 0·55.

Young in autumn plumage. General colour above dull olive-brown, a little clearer greyish on the head; wing-bar obscured by a tinge of olive; quills margined with olive; entire under surface of body pale yellow, a little whiter on the lower abdomen and under tail-coverts; lower mandible pale.

From the above it will be seen that the winter plumage of the young birds more resembles that of the adult female. The males can, however, always be told from the females, even in the winter dress, by the more distinct stripes on the sides of the body, and generally by a tinge of blue on the head.

Hab. Eastern North America to the Rocky Mountains in the latitude of Colorado, and to the Lower Missouri; rare in the Atlantic States, but occurs in New England; Canada West (*Coues*). Cuba. Extends in winter throughout Central America from Mexico to Panama, and into Colombia, Ecuador, Peru, Bolivia; ? Brazil.

a. ♀ ad. sk.	Cahokie River, Illinois, May 24 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
b. ♀ ad. sk.	Halfday, Illinois, May 17 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
c. Juv. sk.	Halfday, Ill., Aug. 31 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
d. ♂ juv. sk.	Mt. Carmel, Ill., Aug. 15 (*R. Ridgway*).	U.S. Nat. Museum [P.].
e. ♀ ad. sk.	South Illinois, May 9 (*R. Kennicott*).	U.S. Nat. Museum [P.].
f. ♀ ad. sk.	St. Louis Co., Missouri, May 21 (*H. K. Coale*)	R. B. Sharpe, Esq. [P.].
g. ♂ ad. sk.	Brookville, Indiana, May 4 (*A. W. Butler*).	U.S. Nat. Museum [P.].
h, *i*. ♂ ♀ imm. sk.	Guatemala.	Gould Collection.
k. ♀ ad. hiem. sk.	Panama (*McLeannan*).	Sclater Collection.
l. ♂ ad.; *m*. ♀ imm. sk.	Bogotá.	Sclater Collection.
n. ♂ imm. sk.	Bogotá.	Purchased.

34. Dendrœca cærulescens.

Blue Flycatcher, *Edw. Glean.* p. 91, pl. 252. fig. 1 (1758).
Le Petit Figuier cendré de Canada, *Briss. Orn.* iii. p. 527, pl. 27. fig. 6 (1760).
Motacilla canadensis, *Linn. Syst. Nat.* i. p. 336 (1766, *nec Linn. op. cit.* p. 334).
Figuier cendré du Canada, *Daub. Pl. Enl.* pl. 685. fig. 2.
Le Figuier bleu, *Buff. Hist. Nat. Ois.* v. p. 304 (1778).
La Fauvette bleuâtre de S. Domingue, *Buff. Hist. Nat. Ois.* v. p. 164 (1778).
Blue-gray Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 440 (1783).

Black-throated Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 487 (1783); *Penn. Arct. Zool.* ii. p. 399 (1785).
Motacilla cærulescens, *Gm. Syst. Nat.* i. p. 960 (1788).
Sylvia canadensis, *Lath. Ind. Orn.* ii. p. 539 (1790); *Wils. Amer. Orn.* ii. p. 115, pl. 15. fig. 7 (1810); *Audub. B. Amer.* pls. 148, 155; *id. Orn. Biogr.* ii. p. 309 (1834).
Sylvia cærulescens, *Lath. Ind. Orn.* ii. p. 520 (1790); *Vieill. Ois. Amér. Sept.* ii. p. 25, pl. 80 (1807); *D'Orb. in Ramon de la Sagra's H. N. Cuba, Ois.* p. 59, pl. 9. figs. 1, 2 (1839).
Sylvia pusilla, *Wils. Amer. Orn.* v. p. 100, pl. 43. fig. 4 (1812, *nec op. cit.* iv. pl. 17. fig. 3).
Sylvia palustris, *Steph. Gen. Zool.* x. p. 722 (1817).
Sylvia leucoptera, *Wils. Index* (*teste Coues*).
Sylvia macropos, *Bonn. & Vieill. Enc. Méth.* ii. p. 451 (1823).
Sylvia sphagnosa, *Bp. Journ. Phil. Acad.* iv. p. 199 (1824); *Audub. Orn. Biogr.* ii. p. 279 (1834).
Phyllopneuste canadensis, *Boie, Isis*, 1828, p. 328.
Vireo sphagnosa, *Jard. ed. Wils. Amer. Orn.* ii. p. 193 (1832).
Sylvicola canadensis, *Richards. Rep. Brit. Assoc.* 1836-37, p. 172; *Bp. Comp. List B. Eur. & N. Amer.* p. 23 (1838); *Audub. Syn.* p. 61 (1839); *id. B. Amer.* ii. p. 63, pl. 95 (1841); *Gosse, B. Jamaica*, p. 160 (1847); *Bp. Consp.* i. p. 308 (1850); *Sallé, P. Z. S.* 1857, p. 231; *Bryant, Proc. Bost. Soc. Nat. Hist.* vii. p. 110 (1859), xi. p. 91 (1867).
Sylvicola sphagnosa, *Richards. Rep. Brit. Assoc.* 1836-37, p. 172.
Sylvicola pusilla, *Denny, P. Z. S.* 1847, p. 38.
Sylvicola pannosa, *Gosse, B. Jamaica*, p. 162, pl. 37 (1847-49).
Mniotilta canadensis, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 240, no. 3471.
Mniotilta macropus, *Gray, Gen. B.* i. p. 196 (1848).
Mniotilta pannosa, *Gray, l. c.*
Rhimamphus canadensis, *Gundl. J. f. O.* 1855, p. 473, 1861, p. 408.
Dendroica canadensis, *Baird, B. N. Amer.* p. 271 (1858); *March, Proc. Phil. Acad.* 1863, p. 293; *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1864).
Dendrœca —— ?, *Salv. & Scl. Ibis*, 1860, p. 273.
Dendrœca canadensis, *Scl. P. Z. S.* 1861, p. 70; *id. Cat. Amer. B.* p. 30 (1862); *Dresser, Ibis*, 1865, p. 478; *Salvin, Ibis*, 1866, p. 205.
Dendrœca pannosa, *Scl. P. Z. S.* 1861, p. 71.
Dendroica cærulescens, *Baird, Rev. Amer. B.* p. 186 (1865); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 254, pl. 10. figs. 10, 11 (1874).
Dendrœca cærulescens, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 610; *Coues, Key N. Amer. B.* p. 99 (1872); *Maynard, B. Florida*, p. 54 (1873); *Coues, B. N.-West*, p. 55 (1874); *Jones, Bull. Nutt. Orn. Club*, i. p. 11 (1876); *Coues, B. Color. Vall.* p. 242 (1878); *Gundl. Orn. Cuba*, p. 64; *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 126 (1880); *Cory, B. Bahamas*, p. 58 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 17 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 300 (1884); *Cory, B. S. Domingo*, p. 26 (1884).
Mniotilta cærulescens, *Giebel, Thes.* ii. p. 602 (1875).

Adult male in breeding-plumage. General colour above clear slaty blue, slightly mottled, with blackish centres to the feathers of the mantle and back, as well as the upper tail-coverts; lesser wing-coverts like the back; median and greater series black, externally edged with slaty blue; bastard-wing and primary-coverts black; quills black, externally edged with slaty blue, the bases to all the primaries but the first one white, forming an alar speculum;

tail-feathers black, margined with slaty blue, and fringed with white on the inner web, the three outer feathers with a large white mark near the end of the inner web; head like the back, a little brighter slaty blue on the fore part of the crown and over the eye; base of forehead, feathers above the eye, ear-coverts, sides of face, cheeks, and throat black, descending along the sides of the breast and down the flanks; sides of neck slaty blue; fore neck, breast, abdomen, and under tail-coverts white; the sides of the body washed with ashy grey; thighs ashy, with whitish margins; under wing-coverts and axillaries white, the edge of the wing slaty blue; quills blackish below, white along the edge of the inner web: "bill black; feet light brown; iris dark brown" (*Audubon*). Total length 5 inches, culmen 0·5, wing 2·65, tail 2·15, tarsus 0·75.

Adult female. General colour above ashy olive, with somewhat of a bluish-grey shade on the head and rump; lesser wing-coverts like the back; median and greater coverts bluish ashy, with dusky bands; bastard-wing and primary-coverts dusky brown; quills dusky brown, edged with ashy olive, with a speculum formed by the white bases to the outer primaries, much smaller than in the male; upper tail-coverts more bluish ashy than the back; tail-feathers dusky, washed externally with bluish ashy, the outer feathers with a light ashy patch near the end of the inner web, not white as in the male; lores dusky blackish, surmounted by a narrow line of yellowish white, extending a little beyond the eye; eyelid white above and below, dusky before and behind; ear-coverts dull ashy brown, washed with olive, rather dusky on the fore part and below the eye; under surface of body pale olive-yellow, whitish on the throat and malar line; sides of body inclining to olive-brown; thighs ashy brown; under tail-coverts dull white, slightly washed with yellow, the long ones with dusky centres; axillaries pale olive-yellow, with dusky ashy bases; under wing-coverts whitish, slightly washed with yellow and having dusky bases; quills dusky below, ashy whitish along the edge of the inner web. Total length 4·6 inches, culmen 0·5, wing 2·3, tail 2, tarsus 0·8.

Young birds in autumn plumage at first resemble the old female, but the males may even then be distinguished from the females by the larger white speculum on the base of the primaries, the darker ear-coverts, which are slaty blackish, and the richer and more ochreous colour of the underparts; the white on the tail also is apparent. From the olive plumage the male moults direct into the slaty-blue dress of the adult, but after once having become blue and black, the winter plumage of the second and subsequent years is remarkably like that of the summer; the slaty blue of the upper parts is slightly washed with brown, and the black on the face and throat and sides of the upper breast is a little varied with whitish edges to the feathers.

Hab. Eastern provinces of North America, including British North America; breeds from New England, and doubtless from higher portions of the Middle States northwards; migratory in most of the United States; winters in Southern Florida and in various West-India Islands, the Bahamas, Cuba, Jamaica, and St. Domingo (*Coues*). Occurs also in Guatemala (*Salvin & Godman*).

a, *b*. ♂ ♀ ad. st.	North America.	Purchased.
c, *d*. ♂ ♀ imm. sk.	[North America.]	Gould Collection.
e. ♂ ad. sk.	Pennsylvania (*E. Wilson*).	Sclater Collection.
f, *g*. ♂ ad. sk.	Michigan.	Prof. J. B. Steere [P.].
h, *i*. ♂ ♀ ad. sk.	Hyde Park, Illinois, May 1878 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
k. ♂ ad. sk.	Hyde Park, Ill., Sept. 10 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
l, *m*. ♂ ♀ ad. sk.	Colehour, Illinois, Sept. 18 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
n. ♂ ad. sk.	Chicago, Illinois, Sept. 22 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
o. Juv. sk.	Sheffield, Indiana, Sept. 25 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
p. ♀ ad. sk.	Bellona, New York, May 8 (*H. F. Banks*).	R. B. Sharpe, Esq. [P.].
q. ♂ ad. sk.	Oyster Bay, Long Island, Sept. 11 (*Roosevelt*).	U.S. Nat. Museum [P.].
r. ♀ juv. sk.	St. Regis Lake, New York, Aug. 4 (*Roosevelt*).	U.S. Nat. Museum [P.].
s. ♂ ad. sk.	District of Columbia, May 12 (*R. Ridgway*).	U.S. Nat. Museum [P.].
t. ♂; *u*, *v*. ♀ ad. sk.	Jamaica.	Sclater Collection.
w. ♀ ad. sk.	Jamaica.	P. H. Gosse, Esq. [C.]. (Type of *D. pannosa*.)
x. ♂ ad. sk.	St. Domingo.	Hugh Cuming, Esq. [C.].
y. Sternum.	Jamaica.	P. H. Gosse, Esq. [C.].

35. Dendrœca pharetra.

Sylvicola pharetra, *Gosse, B. Jamaica*, p. 163, pl. 38 (1847–48); *Bp. Consp.* i. p. 309 (1850); *Osburn, Zool.* 1859, p. 6660.

Mniotilta pharetra, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 241, no. 3487.

Dendrœca pharetra, *Scl. P. Z. S.* 1861, p. 71; *id. Cat. Amer. B.* p. 358 (1862); *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 617; *Coues, B. Color. Vall.* p. 296, note (1878); *A. & E. Newt. Handb. Jamaica*, p. 106 (1881).

Dendroica pharetra, *Baird, Rev. Amer. B.* p. 192 (1865); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 220 (1874).

Adult male. General colour above hoary white, streaked with black down the centres of the feathers; the crown of the head like the back, but paler and more narrowly streaked; the lower back uniform ashy, the rump and upper tail-coverts olive-brown; lesser wing-coverts ashy grey, mottled with black bases; median coverts black, edged with ashy grey and tipped with white, forming an inconspicuous wing-bar; greater coverts black, with a narrow margin of ashy grey, and narrowly tipped with white, scarcely sufficient to form a second wing-bar; bastard-wing and primary-coverts black; quills blackish, externally edged with hoary grey, white at the base of the outer web of the primaries, forming a small alar speculum, the edges of the secondaries washed with brown; tail-feathers dusky brown, edged with olive-brown, and narrowly edged with white near the ends of the inner web; the two outer feathers obliquely paler brown for the terminal half of the feather; lores ashy white, spotted with black; sides of the crown white, minutely streaked with black,

forming an inconspicuous eyebrow; sides of face and ear-coverts white, streaked with black, more thickly on the latter; cheeks and under surface of body white, spotted with triangular marks of black, larger and much more distinct on the breast; sides of the body longitudinally spotted with black; lower flanks washed with brown; abdomen white; thighs brown; under tail-coverts pale fawn-brown, with dusky centres to the feathers; under wing-coverts and axillaries white, mottled with dusky bases near the edge of the wing; quills dusky below, ashy whitish along the edge of the inner web: "bill black above, suture and lower mandible grey; feet purplish horn, with pale soles; irides hazel" (*Gosse*). Total length 4·8 inches, culmen 0·55, wing 2·6, tail 2·1, tarsus 0·7.

Adult female. Similar to the male, but rather duller in colour, and browner on the scapulars, lower back, and tail; the lower surface of the body less thickly spotted with black. Total length 4·7 inches, culmen 0·55, wing 2·5, tail 2, tarsus 0·75. (*Mus. E. Newton.*)

Young female. Different from the male. General colour above uniform dark olive, browner on the lower back, rump, and upper tail-coverts; lesser wing-coverts like the back, the median and greater series blackish, externally edged with olive and tipped with yellowish white, forming an ill-defined double wing-bar; bastard-wing dark brown, with olive-yellow margins; primary-coverts dark brown, washed with olive; quills dark brown, edged with olive, browner on the secondaries, the primaries pale yellow near the base of the outer web, forming a small speculum; tail-feathers dark brown, edged with olive-brown, and fringed with dull white near the end of the inner web; head a little more greenish olive than the back, and streaked with olive-yellow on the fore part of the crown; lores ashy; a narrow superciliary line and the eyelid yellowish white; ear-coverts greenish olive, varied with yellowish streaks; cheeks and under surface of body pale olive-yellow, mottled with dusky centres to the feathers of the throat and breast; centre of abdomen pale yellowish; lower flanks washed with pale reddish brown; thighs olive; under tail-coverts pale fawn-brown; under wing-coverts white, washed with pale olive-yellow; axillaries pale olive-yellow; quills dusky below, ashy whitish along the edge of the inner web. Total length 4·5 inches, culmen 0·5, wing 2·35, tail 2, tarsus 0·7. (*Mus. Salvin and Godman.*)

Hab. Jamaica.

a. ♂ ad. sk.	Jamaica.	P. H. Gosse, Esq. [C.]. (Type of species.)
b. ♂ ad.; *c.* ♀ ad. sk.	Jamaica (*Osburn*).	Sclater Collection.
d. ♂ ad. sk.	Jamaica.	Capt. Hamilton [P.].
e. ♂ ad. sk.	Jamaica, May 26.	Edward Newton, Esq. [P.].
f. ♀ ad. sk.	Jamaica, Oct. 1.	Edward Newton, Esq. [P.].

36. Dendrœca plumbea.

Dendrœca plumbea, *Lawr. Ann. N. Y. Acad. Sci.* i. p. 47 (1879); *id. Proc. U.S. Nat. Mus.* i. p. 55 (1878), p. 454 (1879), p. 486 (1879).

Adult male. General colour above leaden grey, the long feathers of

the rump subterminally silky white; lesser and median wing-coverts leaden grey like the back, the latter tipped with white; greater coverts dusky blackish, edged externally with leaden grey and tipped with white, forming a double wing-bar; quills blackish, edged with leaden grey, lighter and more ashy on the primaries, the first of which is margined with ashy white; upper tail-coverts like the back; tail-feathers blackish, washed with slaty grey externally, the centre ones leaden grey with black centres, all the others fringed with white near the end of the inner web, widening into a spot on the two outer feathers; head like the back, but a little darker; a rather narrow eyebrow of white; lores blackish; feathers below the eye and eyelid white; ear-coverts dark leaden grey, with paler shaft-streaks; cheeks and sides of neck leaden grey, the former mottled with whitish bases; under surface of body dull white, washed with ashy grey, with which colour the feathers are margined and tipped; sides of body entirely ashy grey; thighs, under tail-coverts, and under wing-coverts white; axillaries ashy, edged with white; quills dusky below, ashy along the inner web. Total length 4·9 inches, culmen 0·5, wing 2·5, tail 2·1, tarsus 0·8.

Adult female. Dark olive-green above, the head a little duller, the lesser wing-coverts like the back; median and greater coverts blackish, edged narrowly with olive and tipped with yellowish white; bastard-wing, primary-coverts, and quills dusky, edged with olive, ashy towards the ends of the primaries; tail-feathers dusky, edged with dark olive-green and fringed with white near the tip of the inner web, a little more expanded and forming a spot on the outer feather, but not to the same extent as in the male; a narrow eyebrow of pale yellowish; lores and sides of face and ear-coverts dark olive-green, with narrow yellow shaft-lines; feathers below the eye and eyelid pale olive-yellow; under surface of body dull ashy olive varied with olive-yellow, with which the feathers of the throat and chest are margined; centre of breast, abdomen, thighs, and under tail-coverts pale olive-yellow; sides of the breast and flanks dark olive-green, as also the thighs; axillaries ashy, edged with olive-yellow; under wing-coverts white, tinged with yellow; quills dusky, whitish along the edge of the inner web. Total length 5 inches, culmen 0·5, wing 2·25, tail 2, tarsus 0·75.

Hab. Islands of Dominica and Guadeloupe in the West Indies.

a. ♂ ad. sk.	Dominica (*F. A. Ober*).	Sclater Collection
b. ♀ ad. sk.	Guadeloupe (*F. A. Ober*).	Sclater Collection

8. PERISSOGLOSSA*.

Type

Dendrœca, pt., *auct.*
Perissoglossa, *Baird, Review Amer. B.* p. 180 (1865).... P. tigrina.

Range. From Lake Winnipeg and Hudson's Bay, throughout Eastern United States; Jamaica; S. Domingo; Bahamas.

* The difference in the tongue of this genus from that of *Dendrœca* is explained by Professor Baird in the 'Birds of North America' and in his Review.'

1. Perissoglossa tigrina.

Spotted Yellow Flycatcher, *Edw. Glean.* vi. p. 101, pl. 257. fig. 12 (1760).
Le Figuier brun de Canada, *Briss. Orn.* iii. p. 515, pl. 27. fig. 4 (1760).
Spotted Yellow Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 482 (1783).
Spotted Warbler, *Penn. Arct. Zool.* ii. p. 407 (1785).
Motacilla tigrina, *Gm. Syst. Nat.* i. p. 985 (1788).
Sylvia tigrina, *Lath. Ind. Orn.* ii. p. 537 (1790); *Vieill. Ois. Amér. Sept.* ii. p. 34, pl. 94 (1807).
Sylvia maritima, *Wils. Amer. Orn.* vi. p. 99, pl. 54. fig. 3 (1812); *Bp. Amer. Orn.* i. p. 32, pl. 3. fig. 3 (1825); *Audub. B. Amer.* pl. 414; *id. Orn. Biogr.* v. p. 156 (1839); *D'Orb. in Ramon de la Sagra's Hist. Nat. Cuba, Ois.* p. 63, pl. 10 (1838).
Sylvicola maritima, *Jard. ed. Wils. Amer. Orn.* ii. p. 301, iii. p. 291 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 22 (1838); *Audub. Syn.* p. 56 (1832); *id. B. Amer.* ii. p. 44, pl. 85 (1841); *Bp. Consp.* i. p. 307 (1850); *Bryant, Proc. Bost. Soc. N. H.* vii. p. 110 (1859).
Certhiola maritima, *Gosse, B. Jamaica*, p. 87, pl. 17 (1847).
Mniotilta maritima, *Gray, Gen. B.* i. p. 196 (1848).
Mniotilta tigrina, *Gray, Gen. B.* i. p. 196 (1848); *id. Hand-l. B.* i. p. 239, no. 3465 (1869).
Rhimamphus maritimus, *Gundl. J. f. O.* 1855, p. 474, 1861, p. 409.
Sylvicola tigrina, *Bp. Consp.* i. p. 308 (1850).
Dendroica tigrina, *Baird, B. N. Amer.* p. 286 (1858); *March, Proc. Philad. Acad.* 1863, p. 293; *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1866).
Dendrœca tigrina, *A. & E. Newton, Ibis*, 1859, p. 144.
Dendrœca tigrina, *Scl. P. Z. S.* 1861, p. 71; *id. Cat. Amer. B.* p. 33 (1862); *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 616; *Coues, Key N. Amer. B.* p. 103 (1872); *Mayn. B. Florida*, p. 55 (1873); *Coues, B. Color. Vall.* p. 245 (1878); *Cory, B. Bahamas*, p. 63 (1880); *id. B. S. Domingo*, p. 25 (1884); *Coues, Key N. Amer. B.* 2nd ed. p. 305 (1884).
Perissoglossa tigrina, *Baird, Review Amer. B.* p. 181 (1865); *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 212, pl. 12. figs. 1, 2 (1874); *Boucard, P. Z. S.* 1883, p. 440.
Sylvicola tigrina, *Bryant, Proc. Bost. Soc. N. H.* 1867, p. 91.

Adult male in summer plumage. General colour above olive-yellow, thickly mottled with black; the feathers of the entire mantle and back, as well as the hind neck, black, edged with olive-yellow; rump bright yellow, forming a broad band; upper tail-coverts black, edged with olive-yellow; lesser wing-coverts olive, with black centres to the feathers; median wing-coverts white, slightly washed with yellow; greater coverts black, externally edged with olive-yellow, the outer ones white, forming with the median coverts a large wing-patch; bastard-wing, primary-coverts, and quills black, edged with dull olive, brighter and more distinct on the quills; tail-feathers black, edged with olive-yellow and fringed with white near the end of the inner web, increasing and forming a large white patch on all but the centre feathers, till on the outer feather it occupies half of the tail, in each case being subterminal; crown of head black

forming a cap, narrowing on the forehead; a broad supraloral streak of golden yellow, passing into chestnut above the eye and extending above the ear-coverts; lores black, as well as a line above the ear-coverts; the latter as well as the sides of the face chestnut; eyelid golden yellow above and below; sides of neck golden yellow; cheeks and under surface of body golden yellow, with a slight wash of chestnut on the throat; the centre of the throat, fore neck, and breast broadly streaked with black, as also the sides of the body and flanks; thighs black, edged with white; axillaries and under wing-coverts bright yellow, with white bases; quills dusky below, ashy whitish along the inner web: "bill and feet black; iris brown" (*Audubon*). Total length 4·8 inches, culmen 0·5, wing 2·6, tail 1·9, tarsus 0·65.

Adult female in summer plumage. Different from the male, and having no black cap or chestnut ear-coverts. General colour above uniform olive, washed with ashy; the rump bright yellow, but not forming a distinct band as in the male; upper tail-coverts ashy, washed with olive; lesser wing-coverts like the back; median and greater coverts dark brown, narrowly edged with olive, whitish at the ends, forming an indistinct double wing-bar; bastard-wing and primary-coverts dull brown, obsoletely fringed with olive; quills dusky brown edged with olive, the inner secondaries externally ashy, the margins to the primaries paler; tail-coverts dusky, edged with olive-yellow, but only the two outer feathers with an ovate spot of white near the end of the inner web; head ashy, washed with bright yellow and slightly mottled with black bases to the feathers; a faintly indicated eyebrow of bright yellow, overshaded with ashy; lores ashy; behind the eye a dusky spot; eyelid yellow; ear-coverts dusky, washed with bright yellow; cheeks, throat, and breast bright yellow, streaked with black centres to the feathers; lower breast, abdomen, and under tail-coverts dull white, slightly tinged with yellow; flanks ashy, washed with olive and streaked with dusky blackish; thighs ashy; axillaries and under wing-coverts dull white, slightly washed with yellow, with dusky bases; quills dusky below, ashy whitish along the inner web. Total length 4·5 inches, culmen 0·45, wing 2·45, tail 1·8, tarsus 0·7.

Adult male in winter. Much more ashy than in summer, the black head and black mottling on the back overshaded with ashy; the bright-yellow rump-band very distinct; wings and tail as in the summer plumage, but the white wing-patch not so distinct, as the feathers are washed with olive-yellow; eyebrow and sides of face yellow, the ear-coverts washed with ashy olive, with a slight tinge of chestnut below the eye; sides of neck golden yellow, washed over with ashy; under surface of body not so brilliant yellow as in summer and less broadly streaked with black, the feathers having an overlying shade of ashy; under tail-coverts white, slightly washed with yellow.

The full plumage is apparently not acquired during the first year, or at least not till late in the season, as a male shot on the 16th of May has the black feathers of the crown still edged with olive-

yellow (and shows a spot of chestnut on the fore part of the crown): the ear-coverts and eyebrow are yellow, with only a faint trace of chestnut.

The females are certainly not always full-plumaged after the spring migration, some of them being white underneath, streaked with dusky, with a slight tinge of yellow on the throat, eyebrow, and sides of face.

Young in winter. Resembles the adult female, but is dull white below, very finely streaked with dusky on the fore neck, breast, and flanks.

Hab. Eastern province of United States and temperate British North America, north to Hudson's Bay and Lake Winnipeg; only known west to the Mississippi: a rather rare migrant in most of the United States, breeding from Northern New England northward; winters in various West-India Islands; resident in Jamaica (*Coues*). Bahamas.

a. ♂ ad. sk.	Rockport, Ohio.	Prof. Kirtland [P.].
b. ♀ ad. sk.	Racine, Wisconsin (*Baird*).	Sclater Collection.
c, *d*. ♂; *e*. ♀ ad. sk.	Hyde Park, Illinois, May (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
f. ♀ imm. sk.	Lake Forest, Illinois, May 16 (*H.K. Coale*).	R. B. Sharpe, Esq. [P.].
g. ♀ ad. sk.	Englewood, Illinois, May 29 (*H.K. Coale*).	R. B. Sharpe, Esq. [P.].
h. ♀ ad. sk.	Evanston, Illinois, May 14 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
i. ♂ ad. sk.	Wheatland, Indiana, May 9 (*R. Ridgway*).	U.S. Nat. Museum [P.].
k. ♂ ad. sk.	Long Hill, S. Elizabeth, Jamaica, March 12 (*Osburn*).	Sclater Collection.
l. ♀ ad. sk.	Portland, Jamaica, April 1 (*Osburn*).	Sclater Collection.
m, *n*. ♂; *o*. ♀ ad. sk.	Jamaica.	P. H. Gosse, Esq. [C.].
p. Ad.; *q*. Juv. sk.	Jamaica.	Purchased.
r. Imm. sk.	Tobago (*Kirk*).	Sclater Collection.
s. Sternum.	Jamaica.	P. H. Gosse, Esq. [C.].

9. PEUCEDRAMUS.

Type.

Peucedramus, *Coues, in Hensh. Zool. Expl. W. 100th Merid.* p. 201 (1875) ..... P. olivaceus.



Bill of *Peucedramus olivaceus*.

Range. From Arizona and Texas into Mexico and Guatemala.

1. Peucedramus olivaceus.

Sylvia olivacea, *Giraud, Sixteen Birds Texas*, p. 29, pl. 7. fig. 2 (1841); *Sclater, P. Z. S.* 1855, p. 66.

Sylvia tæniata, *Dubus, Bull. Acad. Bruxelles*, xiv. p. 104 (1847); *id. Rev. Zool.* 1848, p. 245.
Mniotilta tæniata, *Gray, Gen. B.* i. p. 196 (1848).
Sylvicola tæniata, *Bp. Consp.* i. p. 309 (1850).
Sylvicola olivacea, *Baird, in Stansb. Rep. Exped. Great Slave Lake*, p. 328 (1852); *Cass. Ill. B. Calif.* p. 283, pl. 48 (1855).
Rhimamphus olivaceus, *Sclater, P. Z. S.* 1856, p. 291.
Dendroica olivacea, *Baird, B. N. Amer.* p. 305 (1858); *Sclater, P. Z. S.* 1858, pp. 295, 298; *Baird, Review Amer. B.* p. 205 (1865); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 546 (1869); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 258, pl. 14. fig. 4 (1874); *Hensh. Amer. Sportsm.* 1875, p. 328.
Dendrœca olivacea, *Sclater, P. Z. S.* 1859, p. 363; *id. Cat. Amer. B.* p. 31 (1862); *Salvin, Ibis*, 1866, p. 191; *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 610; *Coues, Key N. Amer. B.* p. 99 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873).
Mniotilta olivacea, *Gray, Hand-l. B.* i. p. 240, no. 3479 (1869).
Peucedramus olivaceus, *Coues, in Hensh. Zool. Expl. W. 100th Merid.* p. 201 (1876); *Hensh. t. c.* p. 202; *id. List B. Ariz.* 1875, p. 155; *Coues, B. Color. Vall.* p. 233 (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 17 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 296 (1884).
Peucedromus olivaceus, *Salvin & Godm. Biol. Centr.-Amer., Aves*, i. p. 142 (1881).

Adult male. General colour above dark ashy, with a slight olive shade, especially on the rump; the mantle dusky and washed with dingy olive-green; lesser wing-coverts black, edged with ashy; median and greater coverts black, narrowly edged with olive-yellow and tipped broadly with white, forming a double wing-bar; bastard-wing and primary-coverts uniform black; quills black, edged with olive-yellow, whitish at the base and at the ends of the feathers, the inner primaries white at base, forming a small alar speculum; upper tail-coverts dull ashy; tail-feathers black, edged with olive-yellow or pale ashy, the outer feather for the most part white, excepting an oblique mark at the base of the inner web and a dark ending to the outer web, extending a little across the tip of the inner one; the white on the penultimate feather more restricted, and consisting of a white shaft and a large ovate patch on the inner web, widening out towards the end of the inner web; head and hind neck deep saffron-yellow, rather more orange on the crown; the middle of the hind neck washed with dull olive-green; lores, feathers below the eye, and ear-coverts black; sides of neck, cheeks, throat, and fore neck deep saffron-yellow; centre of breast and abdomen white, as well as the under tail-coverts; thighs ashy externally, white internally; sides of the body and flanks dull ashy, slightly tinged with olive; axillaries and under wing-coverts white, with blackish bases; quills black, white along the edge of the inner web. Total length 5·3 inches, culmen 0·55, wing 2·85, tail 2·1, tarsus 0·75.

Adult female. Differs from the male in being rather lighter ashy; head olive-yellow, greener on the nape and hind neck; a broad line over the eye and sides of neck bright yellow; lores, feathers below the eye, and ear-coverts blackish, rather broadly streaked with pale olive-yellow shaft-lines; cheeks and throat and fore neck bright

yellow, with a shade of ashy on the upper throat; centre of breast and abdomen dull white, the sides of the body dull ashy grey; thighs and under tail-coverts dull white; axillaries and under wing-coverts white; quills dusky below, white along the edge of the inner web. Total length 5 inches, culmen 0·5, wing 2·7, tail 2, tarsus 0·7.

Young. Greyish olive above, the head dull olive-greenish; lores and feathers round the eye white; ear-coverts smoky brown; throat and fore neck pale lemon-yellow, whiter on the upper throat; remainder of plumage as in the old female, excepting that the wing-bars are much less distinct, and the white on the tail-feathers more restricted. (*Mus. Salvin and Godman.*)

Hab. Guatemala to Mexico, probably remaining in the uplands all the year (*S. & G.*); occurring also in Arizona, and probably in Texas and New Mexico.

a. Ad. sk.	Popocatepetl, Mexico (*De Saussure*).	Sclater Collection.
b. ♀ ad sk.	Jalapa, Mexico (*De Oca*).	Sclater Collection.
c. ♂ ad. sk.	La Parada, S. Mexico.	A. Sallé, Esq. [C.]. Purchased.
d, *e*. St.	Mexico.	
f, *g*. ♂ ♀ ad. sk.	Volcan de Fuego, Guatemala, Nov. 20 (*O. Salvin*).	Sclater Collection.

10. SIURUS.

	Type.
Seiurus, *Swains. Zool. Journ.* iii. p. 171 (1827)	S. auricapillus.
Enicocichla, *Gray, List Gen. B.* p. 22 (1840)	S. auricapillus.
Siurus, *Strickl. Ann. & Mag. Nat. Hist.* vi. p. 422 (1841)	S. auricapillus.
Exochocichla, *Van der Hoeven.*	

Range. The whole of North America, ranging in winter through Central America, Guiana, Colombia, and Ecuador, as well as throughout the Antilles.

Key to the Species.

a. Crown with a distinct band of ochreous buff, bordered on each side by a band of black; superciliary streak ochreous buff; no stripes on under surface of body ..... *auricapillus*, p. 339.

b. No coronal streak; sometimes a few frontal feathers with light bases; eyebrow either absent or, when present, white or pale rufescent; breast streaked.

a'. Flanks and under tail-coverts ochreous buff or pale fawn-colour, not yellow; axillaries pale fulvous ..... *motacilla*, p. 342.

b'. Flanks and under tail-coverts strongly washed with yellow, like the whole of the under surface; axillaries dark brown ..... *nævius*, p. 343. *notabilis*, p. 346.

1. Siurus auricapillus.

The Golden-crowned Thrush, *Edwards, Gleanings*, v. p. 91, pl. 252, fig. 2 (1758); *Lath. Gen. Syn.* ii. pt. 1, p. 21 (1783); *Penn. Arctic Zool.* ii. p. 339 (1785).

Le Figuier à teste d'or de Pensilvanie, *Briss. Orn.* iii. p. 504 (1760).

Motacilla aurocapilla, *Linn. Syst. Nat.* i. p. 334 (1766).
Petite Grive de St. Domingue, *Daubent. Pl. Enl.* 398. fig. 2.
La Grivelette de St. Domingue, *Montb. Hist. Nat. Ois.* iii. p. 317 (1775).
Turdus citreus, *P. L. S. Müll. Syst. Nat. Suppl.* p. 141 (1776); *Cass. Proc. Philad. Acad.* 1864, p. 249.
Motacilla canadensis (*nec L.*), *Bodd. Tabl. Pl. Enl.* p. 24 (1783).
Turdus aurocapillus, *Lath. Ind. Orn.* i. p. 328 (1790); *Wils. Amer. Orn.* ii. p. 88, pl. 14. fig. 2 (1810); *Audub. B. Amer.* pl. 143; *id. Orn. Biogr.* ii. p. 253 (1834), v. p. 447 (1839); *Nutt. Man.* i. p. 404 (1840); *Licht. Preis-Verz. mex. Vög.* p. 2 (1830); *Cab. J. f. O.* 1863, p. 57.
Turdus minimus (*nec auct.*), *Bartr. Trav. Florida*, p. 290 (1791).
Turdus coronatus, *Vieill. Ois. Amér. Sept.* iv. p. 8, pl. 64 (1807).
Sylvia aurocapilla, *Bp. Journ. Philad. Acad.* iv. p. 35 (1824).
Seiurus aurocapillus, *Swains. Zool. Journ.* iii. p. 171 (1827); *id. & Richards. Faun. Bor.-Amer., Birds*, p. 227 (1831); *Jard. ed. Wils. Amer. Orn.* i. p. 238 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 21 (1838); *Audub. Syn.* p. 93 (1839); *id. B. Amer.* iii. p. 35, pl. 148 (1841); *Gosse, B. Jamaica*, p. 152 (1847); *Bp. Consp.* i. p. 306 (1850); *Sallé, P. Z. S.* 1857, p. 231; *Newwied, J. f. O.* 1858, p. 177; *Baird, B. N. Amer.* p. 260 (1858); *Blakist. Ibis*, 1863, p. 62; *March, Proc. Philad. Acad.* 1863, p. 294; *Baird, Review Amer. B.* pp. 214, 266 (1865); *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1866); *Bryant, Proc. Bost. Soc. N. H.* xi. p. 91 (1867); *Lawr. Ann. Lyc. N. Y.* ix. p. 94 (1868), p. 200 (1869); *Dall & Bann. Trans. Chicago Acad.* i. p. 268 (1869); *Von Frantz. J. f. O.* 1869, p. 293; *Sumichr. Mem. Bost. Soc. N. H.* i. p. 547 (1869); *Allen, Bull. Mus. Comp. Zool. Cambr.* ii. p. 269 (1871), iii. p. 175 (1872); *Coues, Key N. Amer. B.* p. 106 (1872); *Mayn. B. Florida*, p. 12 (1872); *Gundl. J. f. O.* 1872, p. 416; *Coues, B. N.-West*, p. 70 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 280, pl. 14. fig. 11 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 269 (1874); *Brewst. Ann. Lyc. N. Y.* xi. p. 136 (1875); *Gundl. Orn. Cuba*, p. 68 (1876); *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 14 (1876); *Cory, B. Bahamas*, p. 70 (1880); *id. B. S. Domingo*, p. 34 (1884).
Curruca aurocapillus, *Less. Traité*, i. p. 418 (1831).
Accentor auricapillus, *Richards. Rep. Brit. Assoc.* 1836–37, p. 172.
Seiurus aurocapillus, *d'Orb. in Ramon de la Sagra's Cuba*, p. 84 (1839).
Enicocichla aurocapilla, *Gray, List Gen. B.* 1841, p. 31; *id. Gen. B.* i. p. 188 (1848); *id. Hand-l. B.* i. p. 249, no. 3612 (1869).
Henicocichla auricapilla, *Cab. Mus. Hein.* Th. i. p. 15 (1850); *Gundl. J. f. O.* 1855, p. 471; *Scl. P. Z. S.* 1856, p. 293, 1861, p. 70; *Cab. J. f. O.* 1861, p. 84; *Gundl. t. c.* pp. 326, 407; *Scl. Cat. Amer. B.* p. 25 (1862); *Lawr. Ann. Lyc. N. Y.* viii. p. 179 (1865); *Salv. P. Z. S.* 1870, p. 183; *Scl. & Salv. t. c.* p. 836.
Anthus coronatus, *Gerhardt, Naum.* 1853, p. 38.
Siurus auricapillus, *Scl. & Salv. Ibis*, 1852, p. 9; *A. & E. Newt. t. c.* p. 142; *Moore, P. Z. S.* 1859, p. 55; *Scl. & Salv. Nomencl. Av. Neotr.* p. 8 (1873); *Coues, Bull. Nutt. Orn. Club*, ii. p. 31 (1877); *id. B. Color. Vall.* p. 297 (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 18 (1881); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 144 (1881); *A. & E. Newt. Handb. Jamaica*, 1881, p. 105; *Salv. P. Z. S.* 1883, p. 420; *Boucard, t. c.* p. 440; *Coues, Key N. Amer. B.* 2nd ed. p. 308 (1884).

Adult female. General colour above dull olive from the nape to

the tail; lesser wing-coverts like the back; median and greater coverts a little lighter olive with paler tips; bastard-wing and primary-coverts dusky, washed externally with olive; quills dusky, externally olive, the first primary edged with whitish; centre tail-feathers like the back, the remainder dusky brown, externally olive like the back, the outer ones fringed at the tip with white; centre of crown dull orange washed with olive, with a broad streak of black along either side of the orange patch, extending as far as the nape; lores ashy white; sides of crown ashy olive, forming a broad eyebrow; feathers round the eye dull whitish; ear-coverts and hinder part of cheeks ashy olive; fore part of cheeks white, with a dusky blackish line above and below, the moustachial line more distinct; sides of neck olive; throat and under surface of body white, with distinct triangular spots of black on the lower throat, fore neck, and breast, more longitudinal on the sides of the body and flanks, which are washed with brown; thighs ashy brown; abdomen and under tail-coverts white; under wing-coverts and axillaries pale olive with dusky bases; quills dusky below, ashy along the inner edge: "bill dusky above, flesh-coloured beneath; feet very light flesh-coloured; iris brown" (*Audubon*). Total length 5·7 inches, culmen 0·5, wing 3·05, tail 2·3, tarsus 0·9.

Adult male. Similar to the adult female, but having the black spots on the breast rather more plentiful and distinct. Total length 5·6 inches, culmen 0·55, wing 2·95, tail 2·25, tarsus 0·85.

The winter plumage is very similar to the summer plumage, but is rather warmer olive. As the breeding-season progresses the upper surface gets worn and becomes more ashy and the orange of the head paler.

"This species exhibits a remarkable constancy of coloration with age, sex, and season. The sexes are indistinguishable, and the young are scarcely to be told from the adults. Fall specimens are ordinarily quite as clearly coloured as those of the spring; and the orange-brown crown-spot, though it may be more or less bright, is acquired by the young with their first full feathering. There is doubtless a very early streaky stage." (*Coues.*)

Hab. Eastern North America to the Rocky Mountains (Denver, Colorado), the Yellowstone, and Alaska; breeds indifferently in its North-American range; winters from the Bermudas and Florida southward (*Coues*). Throughout Central America from Mexico to Panama. Bermuda and West-India Islands.

a. Ad. sk.	North America.	Sclater Collection.
b. Ad. sk.	Niagara Falls (*J. G.*).	Gould Collection.
c. Ad. sk.	Michigan.	Prof. Steere [P.].
d. ♂ ad. sk.	Mount Carmel, Illinois, April 15 (*J. L. Ridgway*).	R. B. Sharpe, Esq. [P.].
e. Ad. sk.	Mount Carmel, Illinois (*S. Turner*).	U.S. Nat. Museum [P.].
f. ♀ ad. sk.	Hyde Park, Illinois, May 7 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
g. ♂ juv. sk.	Sheffield, Indiana, Sept. 25 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].

h. ♀ ad. sk.	Oyster Bay, Long Island, May 14 (*Roosevelt*).	U.S. Nat. Museum [P.].
i. Ad. sk.	Orizaba, Mexico (*Botteri*).	Sclater Collection.
k, *l*, *m*. Ad. sk.	Guatemala.	Gould Collection.
n. ♀ ad. sk.	Barranco Hondo, Guatemala (*O. Salvin*).	Sclater Collection.
o. Ad. sk.	Jamaica (*Osburn*).	Sclater Collection.
p. Ad. sk.	Jamaica.	Sclater Collection.

2. Siurus motacilla.

Turdus motacilla, *Vieill. Ois. Amér. Sept.* ii. p. 9, pl. 65 (1807).
Turdus ludovicianus, *Audub. B. Amer.* pl. 19; *id. Orn. Biogr.* i. p. 99 (1834).
Seiurus ludovicianus, *Bp. Comp. List B. Eur. & N. Amer.* p. 21 (1838); *Baird, B. N. Amer.* p. 262 (1858); *id. op. cit.* 1860, pl. 80. fig. 2; *id. Review Amer. B.* p. 217 (1865); *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1866), ix. p. 94 (1868); *Von Frantz. J. f. O.* 1869, p. 293; *Gundl. J. f. O.* 1872, p. 417; *Coues, Key N. Amer. B.* p. 106 (1872); *id. B. N.-West*, p. 72 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 287, pl. 14. fig. 13 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 269 (1874); *id. Bull. U.S. Nat. Mus.* no. 4, p. 15 (1876); *Brewst. Ann. Lyc. N. Y.* xi. p. 136 (1875); *Gundl. Orn. Cuba*, p. 68 (1876).
Seiurus motacilla, *Bp. Consp.* i. p. 306 (1850); *Cory, B. S. Domingo*, p. 35 (1884).
Henicocichla major, *Cab. Mus. Hein.* Th. i. p. 16 (1850); *id. J. f. O.* 1857, p. 240.
Henicocichla motacilla, *Cab. Mus. Hein.* Th. i. p. 16, note (1850); *id. J. f. O.* 1857, p. 240; *Gundl. J. f. O.* 1861, p. 326.
Siurus ludovicianus, *Scl. P. Z. S.* 1859, pp. 363, 373; *id. Ibis*, 1860, p. 273; *id. Nomencl. Av. Neotr.* p. 8 (1873); *Boucard, P. Z. S.* 1883, p. 440.
Enicocichla major, *Brewer, Proc. Bost. Soc. N. H.* vii. p. 306 (1860).
Henicocichla ludoviciana, *Scl. P. Z. S.* 1861, p. 70; *id. Cat. Amer. B.* p. 25 (1862); *Salv. P. Z. S.* 1870, p. 183.
Enicocichla ludoviciana, *Gray, Hand-l. B.* i. p. 249, no. 3613 (1869).
Siurus motacilla, *Coues, Bull. Nutt. Orn. Club*, ii. p. 33 (1877); *id. B. Color. Vall.* p. 299 (1878); *Sennett, Bull. U.S. Geol. Surv.* iv. p. 13 (1878); *Merrill, Proc. U.S. Nat. Mus.* i. p. 124 (1878); *Lawr. Pr. U.S. Nat. Mus.* i. pp. 232, 486 (1879); *A. & E. Newt. Handb. Jamaica*, 1881, p. 105; *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 18 (1881); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 147 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 309 (1884).

Adult male. General colour above uniform dark brown, with a slight olive tinge, the long feathers of the rump subterminally ashy white; lesser and median wing-coverts like the back; greater coverts dusky brown, externally washed with dark olive-brown; bastard-wing, primary-coverts, and quills dark brown, the first primary margined with ashy white; tail-feathers dark brown, the outer ones narrowly fringed with whitish along the end of the inner web; head uniform dark brown like the back, with a few concealed whitish bases to the feathers on the fore part of the crown; a streak of white commencing at the base of the nostrils, wider and forming a distinct eyebrow above the ear-coverts; lores dusky blackish; eyelid and a spot below the fore part of the eye

dull white; feathers below the eye and ear-coverts yellowish buff, obscured by dusky tips of dull olive-brown, the upper margin of the ear-coverts dark olive-brown, forming a streak; cheeks white tinged with yellow, separated from the throat by a moustachial streak of dark olive-brown; sides of neck dull white, obscured by dusky-brown tips to the feathers; under surface of body white, washed with pale ochreous buff on the fore neck and breast and deepening into ochreous buff on the flanks and under tail-coverts, the latter uniform; sides of breast, flanks, and thighs browner; fore neck and chest distinctly spotted with triangular marks of black, becoming duller and more longitudinal on the sides of the body and flanks; axillaries and under wing-coverts pale brown, whiter near the edge of the wing, the former slightly washed with olive-yellow; quills dusky below, more ashy along the edge of the inner web: "bill deep brown above, black at the tip, flesh-coloured beneath; feet and claws brown, tinged with blue; iris deep brown" (*Audubon*). Total length 5·5 inches, culmen 0·6, wing 3·35, tail 2, tarsus 0·9.

The winter plumage scarcely differs at all from that of summer, though the concealed coronal mark is more obscured and has to be searched for. The amount of striping on the breast varies greatly both in the number and in the intensity of the black spots.

Hab. Eastern United States, north to Massachusetts and Michigan, west to Kansas, the Indian Territory, and Texas; breeds in its United-States range at large; abundant in many of the Southern and Western States, rare towards the northern limits of its range (*Coues*). Winters throughout Central America from Mexico to Panama (*S. & G.*). Jamaica; Cuba; Antigua.

a. ♂ ad. sk.	Lake George, N. Y. (*O. B. Lockhart*).	R. B. Sharpe, Esq.	[P.]
b. ♂ ad. sk.	Warsaw, Illinois, May 11 (*H. K. Coale*).	R. B. Sharpe, Esq.	[P.]
c. ♀ ad. sk.	Knox Co., Indiana, April 22 (*R. Ridgway*).	U.S. Nat. Museum	[P.]
d. Ad. sk.	Orizaba, Mexico (*Botteri*).	Sclater Collection.	
e. Ad. sk.	Guatemala.	Gould Collection.	
f. Ad. sk.	Guatemala.	Gould Collection.	
g. Ad. sk.	Jamaica.	Sclater Collection.	

3. Siurus nævius.

Figuier brun de S. Domingue, *Briss. Orn.* iii. p. 513, pl. 28. fig. 5 (1760).

Fauvette tachetée de la Louisiane, *Daubent. Pl. Enl.* vi. pl. 752. fig. 1; *Buff. Hist. Nat. Ois.* v. p. 161 (1778).

Motacilla nævia, *Bodd. Tabl. Pl. Enl.* p. 47 (1783).

New York Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 426 (1783); *Penn. Arctic Zool.* ii. p. 409 (1785).

Spotted Yellow Warbler, var. *a*, *Lath. Gen. Syn.* ii. pt. 2, p. 483 (1783).

Motacilla noveboracensis, *Gm. Syst. Nat.* i. p. 958 (1788).

Motacilla tigrina, var. *β*, *Gm. Syst. Nat.* i. p. 985 (1788).

Sylvia noveboracensis, *Lath. Ind. Orn.* ii. p. 518 (1790); *Vieill. Ois. Amér. Sept.* ii. p. 26, pl. 82 (1807).

Sylvia tigrina, var. *b*, *Lath. Ind. Orn.* ii. p. 537 (1790).

Motacilla fluviatilis, *Bartr. Trav. Florida*, p. 291 (1791).
Turdus aquaticus, *Wils. Amer. Orn.* iii. p. 66, pl. 23. fig. 5 (1811); *Audub. B. Amer.* pl. 433; *id. Orn. Biogr.* v. p. 284 (1839).
Turdus motacilla (*nec V.*), *Bp. Journ. Philad. Acad.* iv. p. 35 (1824).
Seiurus tenuirostris, *Swains. Philos. Mag.* i. p. 369 (1827).
Curruca noveboracensis, *Less. Traité*, i. p. 418 (1831).
Curruca anthoides, *Less. Traité*, i. p. 418 (1831).
Seiurus aquaticus, *Swains. & Richards. Faun. Bor.-Amer., Birds*, p. 229, pl. 43 (1831); *Jard. ed. Wils. Amer. Orn.* i. p. 356 (1832).
Turdus (Seiurus) noveboracensis, *Nuttall, Man.* i. p. 358 (1832).
Turdus noveboracensis, *Peabody, Rep. Orn. Mass.* 1839, p. 306.
Seiurus noveboracensis, *Bp. Comp. List B. Eur. & N. Amer.* p. 21 (1838); *Audub. Syn.* p. 93 (1839); *id. B. Amer.* iii. p. 37, pl. 49 (1841, pt.); *Gosse, B. Jamaica*, p. 151 (1847); *Bp. Consp.* i. p. 306 (1850); *Neuwied, J. f. O.* 1858, p. 124; *Baird, B. N. Amer.* p. 261 (1858); *Cass. Proc. Philad. Acad.* 1860, p. 191; *Lawr. Ann. Lyc. N. Y.* vii. p. 322 (1861); *Blakist. Ibis*, 1862, p. 4, 1863, p. 62; *March, Proc. Philad. Acad.* 1863, p. 294; *Baird, Review Amer. B.* p. 215 (1865); *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1866); *Bryant, Proc. Bost. Soc. N. H.* xi. p. 21 (1866); *Lawr. Ann. Lyc. N. Y.* ix. p. 94 (1868), p. 200 (1869); *Von Frantz. J. f. O.* 1869, p. 223; *Sumichr. Mem. Bost. Soc. N. H.* i. p. 547 (1869); *Gundl. J. f. O.* 1872, p. 416; *Coues, Key N. Amer. B.* p. 106 (1872); *Mayn. B. Florida*, p. 14 (1872); *Coues, Key N. Amer. B.* p. 71 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 283, pl. 14. fig. 12 (1874); *Brewst. Ann. Lyc. N. Y.* ix. p. 136 (1875); *Hensh. List B. Ariz.* p. 156 (1875); *id. Zool. Expl. W. 100th Merid.* p. 204 (1876); *Lawr. Bull. U.S. Nat. Mus.* iv. p. 14 (1876); *Gundl. Orn. Cuba*, p. 68 (1876); *Lawr. Proc. U.S. Nat. Mus.* pp. 54 (1878), 232, 453 (1879).
Seiurus sulphurascens, *D'Orb. in Ramon de la Sagra's Hist. Nat. Cuba*, p. 57, pl. 6 (1839).
Anthus herminieri, *Less. Rev. Zool.* 1839, p. 101.
Enicocichla sulphurascens, *Gray, Gen. B.* i. p. 188 (1848).
Henicocichla noveboracensis, *Cab. in Schomb. Reis. Guian.* iii. p. 606 (1848); *id. Mus. Hein.* Th. i. p. 16 (1850); *Gundl. J. f. O.* 1855, p. 471; *Cab. J. f. O.* 1860, p. 324; *Gundl. J. f. O.* 1861, pp. 326, 407; *Scl. P. Z. S.* 1861, p. 70; *id. Cat. Amer. B.* p. 25 (1862); *id. & Salv. P. Z. S.* 1864, p. 346, 1868, p. 627, 1869, p. 251, 1870, p. 836; *Salv. P. Z. S.* 1870, p. 183.
Seiurus sulphurascens, *Bp. Consp.* i. p. 306 (1850).
Seiurus gossei, *Bp. Consp.* i. p. 306 (1850).
Henicocichla sulphurascens, *Gundl. J. f. O.* 1855, p. 471, 1861, p. 407.
Enicocichla noveboracensis, *Kneeland, Proc. Zool. Soc.* 1857, p. 233; *Gray, Hand-l. B.* i. p. 249, no. 3610 (1869).
Siurus noveboracensis, *Scl. & Salv. Ibis*, 1859, p. 10; *A. & E. Newt. t. c.* p. 142; *Scl. P. Z. S.* 1859, p. 363; *Dresser, Ibis*, 1865, p. 477; *Scl. & Salv. Nomencl. Av. Neotr.* p. 8 (1873); *Salv. & Godm. Ibis*, 1880, p. 117; *iid. Biol. Centr.-Amer., Aves*, i. p. 145 (1881); *A. & E. Newt. Handb. Jamaica*, 1881, p. 105.
Enicocichla gossei, *Gray, Hand-l. B.* i. p. 249, no. 3611 (1869).
Siurus nævius, *Coues, Bull. Nutt. Orn. Club*, ii. p. 32 (1877); *id. B. Color. Vall.* p. 209 (1878); *id. Bull. U.S. Geol. Surv.* iv. p. 567 (1878); *Merrill, Pr. U.S. Nat. Mus.* i. p. 124 (1878); *Lawr. Proc. U.S. Nat. Mus.* i. p. 54 (1878), pp. 232, 453, 486 (1879); *Ridgw. Bull. U.S. Nat. Mus* no. 21. p. 18 (1881); *Brewst. Bull. Nutt. Orn. Club*, vii. p. 138 (1882); *Boucard, P. Z. S.* 1883, p. 440;

Nelson, Cruise R.S. 'Corwin,' p. 64 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 309 (1884).

Adult male. General colour above uniform dark olive-brown, the wing-coverts like the back; bastard-wing, primary-coverts, and quills uniform dark brown, the latter edged with dark olive-brown, rather more ashy on the primaries, especially the first one; tail-feathers dark brown, slightly washed with olive-brown on the outer webs; crown of head like the back, some of the coronal feathers having yellowish-buff bases, forming a concealed patch, the frontal plumes slightly mottled with blackish bases; a streak of buffy whitish from the base of the nostrils above the eye, purer white above the ear-coverts, where it forms a distinct eye-brow; ear-coverts dull olive-brown, with a blackish streak along the upper part; lores also blackish, forming a continuous streak through the eye; feathers below the eye dull white, mottled with dusky tips to the feathers; cheeks yellowish white, separated from the throat by a line of dusky blackish, forming a distinct moustache; throat whitish, with tiny spots of black; remainder of under surface of body dull yellowish, clearer on the abdomen and under tail-coverts, which are unspotted, the latter having concealed dusky bases; the throat, breast, and sides of body thickly spotted with black, the spots smaller and triangular on the fore neck and breast, longer on the sides of the body, which is also washed with olive-brown; thighs dusky brown; axillaries and under wing-coverts brown, those along the margin of the wing being edged with white; quills dusky below, browner along the edge of the inner web: "bill dark brown, flesh-coloured on the lower mandible, the tip of which is brownish; feet and claws flesh-coloured; iris deep brown" (*Audubon*). Total length 5·2 inches, culmen 0·55, wing 2·95, tail 2·05, tarsus 0·85.

Adult female. Only differs from the adult male in being less fully and distinctly streaked on the under surface. Total length 4·9 inches, culmen 0·55, wing 2·8, tail 2·05, tarsus 0·85.

In winter the only change perceptible in the plumage is the greater amount of yellow on the under surface. This no doubt gets extinguished gradually during the breeding-season, and the spots on the throat, always very small, become abraded and are sometimes absent.

Young. Sooty blackish, each feather of the upper parts with a terminal bar of ochreous; the wing-coverts tipped with the same, forming two bars; the streaks below as in the adult, but broader and not so sharply defined. (*Ridgway.*)

"The sexes do not differ appreciably. The shade of the upper parts varies from a decidedly olivaceous brown to a purer, darker bistre brown, and that of the underparts from sulphur-yellow to nearly white, but it is never of the buffy white of *S. motacilla*. The streaking varies in amount and intensity, but always has the sharp distinct character of the species in comparison with *S. motacilla*, and is rarely, if ever, absent from the throat. I have never seen a bill over half an inch long, and this member lacks the peculiar shape, as well as size, characteristic of *S. motacilla*." (*Coues.*)

Hab. North America at large; breeding in the greater part, if not all, of its North-American range; winters from Florida and the Gulf Coast southwards (*Coues*); and throughout Central America from Mexico to Panama, extending to Guiana, Colombia, and Ecuador (*S. & G.*) West Indies: Jamaica, Cuba, Dominica, Guadeloupe, Antigua.

a. Ad. sk.	North America.	Sclater Collection.
b. ♂ ad. sk.	Repulse Bay, June 8.	Dr. Rae [P.].
c. Ad. sk.	Albany River, Canada.	G. Barnstone, Esq. [P.].
d, e. ♂ ♀ ad. sk.	Fort Simpson, May.	B. R. Ross, Esq. [P.].
f. Ad. sk.	New York (*Lawrence*).	Sclater Collection.
g. ♀ ad. sk.	Garrisons, N. Y. (*Roosevelt*).	U.S. Nat. Museum [P.].
h. Ad. sk.	Washington, D.C. (*C. Drexler*).	U.S. Nat. Museum [P.].
i, k. ♂; *l*. ♀ ad. sk.	Hyde Park, Illinois, May (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
m. Ad. sk.	Guatemala.	J. Gould, Esq.
n. Ad. sk.	Guatemala (*Skinner*).	Sclater Collection.
o, p. Ad. sk.	Guatemala.	Gould Collection.
q. ♀ ad. sk.	Guadeloupe (*Ober*).	Sclater Collection.
r. Ad. sk.	Jamaica.	Sclater Collection.
s. Ad. sk.	Jamaica.	Purchased.
t. Ad. sk.	Tobago (*Kirk*).	Sclater Collection.
u. ♀ ad. sk.	Medellin, Antioquia (*Salmon*).	Sclater Collection.
v. ♀ ad. sk.	Medellin.	T. K. Salmon, Esq. [P.].

Subsp. *α*. Siurus notabilis.

Siurus nævius notabilis, *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 12 (1880); *id. Bull. U.S. Nat. Mus.* no. 21, p. 18 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 309 (1884).
Siurus notabilis, *Brewst. Bull. Nutt. Orn. Club*, vii. p. 138 (1882).

Dr. Coues considers this to be very doubtfully distinct from *S. nævius*. It is said to be identical in coloration with the latter, but is larger, with the wing 3·25 inches, tail 2·5; bill from nostril 0·50, its depth at base 0·25; tarsus 0·83; middle toe without claw 0·56.

Hab. Wyoming. (One specimen only known.)

11. OPORORNIS.

Type.
Oporornis, *Baird, B. N. Amer.* p. 246 (1858) ..... O. agilis.

Range. Eastern United States, ranging as high as Quebec, and southward throughout Central America to Panama; Cuba.

Key to the Species.

a. Throat bright yellow, like the rest of the under surface; a bright yellow eyebrow.
a'. Crown of head black; posterior feathers tipped with slaty grey; back olive-green.. *formosa* æstiv., p. 348.

b'. Crown of head slaty grey, with black bases to the feathers; back olive-green ..... *formosa* hiem., p. 349.
c'. Crown of head olive or ashy brown; back olive-green ..... *formosa* juv., p. 349.
b. Throat ashy grey; breast pale yellow ..... *agilis* ad., p. 347.
c. Throat pale rufescent brown; breast pale yellow *agilis* juv., p. 347.

1. Oporornis agilis.

Sylvia agilis, *Wils. Amer. Orn.* v. p. 64, pl. 39. fig. 2 (1812); *Audub. B. Amer.* pl. 138; *id. Orn. Biogr.* ii. p. 227 (1834).
Sylvicola agilis, *Jard. ed. Wils. Amer. Orn.* i. p. 159 (1832); *Richards. Rep. Brit. Assoc.* 1836–37, p. 172; *Audub. Syn.* p. 63; *id. B. Amer.* ii. p. 71, pl. 99 (1841).
Trichas agilis, *Nutt. Man.* 1840, p. 463.
? Trichas tephrocotis, *Nutt. t. c.* p. 462.
Oporornis agilis, *Baird, B. N. Amer.* 1858, p. 246; *id. op. cit.* 1860, pl. 79. fig. 2; *id. Review Amer B.* p. 218 (1865); *Lawr. Ann. Lyc. N. Y.* viii. p. 283 (1866); *Gray, Hand-l. B.* i. p. 243, no. 3502 (1869); *Coues, Key N. Amer. B.* p. 106 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 290, pl. 15. figs. 1, 2 (1874); *Coues, B. Color. Vall.* p. 308 (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 18 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 309 (1884).
? Geothlypis tephrocotis, *Barn. Smiths. Rep.* 1860–61, p. 435.
? Oporornis varius, *Blakist. Ibis*, 1863, p. 61.
Geothlypis agilis, *Gregg, Proc. Elmira Acad.* 1870, p. 7 (*teste Coues*).

Adult male. General colour above dull olive-green, slightly yellower towards the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater coverts, bastard-wing, and primary-coverts dusky, edged with olive-green; quills dusky brown, margined externally with lighter olive; tail-feathers dusky brown, washed externally with olive; crown of head dull ashy grey, the occiput and nape olive-green like the back, the crown even slightly washed with the same colour; eyelid white, forming a conspicuous ring; lores ashy grey; in front of and below the eye a line of dusky blackish, somewhat overshading the anterior portion of the ear-coverts, which are otherwise slaty grey; cheeks and entire throat slaty grey; fore neck and under surface of body pale sulphur-yellow, including the under tail-coverts; sides of body olive-greenish, as also the thighs; axillaries olive-yellow; under wing-coverts dull olive, brighter yellow on the edge of the wing; quills dusky below, ashy along the edge of the inner web: "bill light brown on the ridge and at the tip, flesh-coloured beneath; legs pale flesh-colour; iris hazel" (*Audubon*). Total length 5·4 inches, culmen 0·5, wing 3, tail 2·05, tarsus 0·85.

In the spring birds the ash of the head and throat is quite pure and very dark, almost black on the breast; then the resemblance to *Geothlypis philadelphia* is very close, but in the latter the wings are little, if any, longer than the tail. (*Coues.*)

Adult male in winter plumage. Differs from the spring plumage in having the head olive like the back, the ear-coverts olive-brown, and the cheeks and throat pale reddish brown, deeper and more olive-brown on the fore neck; otherwise as in spring. (*Mus. Salvin and Godman.*)

Young in winter plumage. Resembles the winter plumage of the adult.

Hab. Eastern United States, not commonly observed in the spring; abounding in the fall in some localities. Distribution, migration, and breeding still imperfectly known. (*Coues.*)

a. ♂ ad. sk.	Chicago, Illinois, May 11 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
b. ♀ ad. sk.	Chicago, May 20 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
c. ♀ juv.	Grand Crossing, Illinois, Sept. 9 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
d. ♂ ad. sk.	St. Louis Co., Missouri, May 22 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
e. ♀ juv. sk.	Massachusetts (*H. W. Henshaw*).	U.S. Nat. Museum [P.].

2. Oporornis formosa.

Sylvia formosa, *Wils. Amer. Orn.* iii. p. 85, pl. 25. fig. 3 (1811); *Audub. B. Amer.* pl. 38; *id. Orn. Biogr.* i. p. 196 (1831).

Sylvicola formosa, *Jard. ed. Wils. Amer. Orn.* i. p. 373 (1832); *Neuwied, J. f. O.* 1858, p. 113.

Myiodioctes formosus, *Audub. Syn.* p. 50 (1839); *id. B. Amer.* ii. p. 19, pl. 74 (1841); *Lembeye, Av. Cuba*, p. 37 (1850); *Bp. Consp.* i. p. 315 (1850); *Gundl. J. f. O.* 1861, p. 326.

Mniotilta formosa, *Gray, Gen. B.* i. p. 196 (1848).

Sylvania formosa, *Woodh. in Sitgreaves' Rep. Zuni and Color. R.* p. 70 (1853).

Myioctonus formosus, *Gundl. J. f. O.* 1855, p. 473.

Oporornis formosa, *Baird, B. N. Amer.* p. 247 (1858); *Scl. & Salv. Ibis*, 1859, p. 10; *Scl. P. Z. S.* 1862, p. 19; *id. Cat. Amer. B.* p. 28 (1862); *Lawr. Ann. Lyc. N. Y.* vii. p. 408 (1862); *Scl. & Salv. P. Z. S.* 1864, p. 347; *Baird, Review Amer. B.* p. 218 (1865); *Dresser, Ibis*, 1865, p. 477; *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1866); *Salv. P. Z. S.* 1867, p. 136; *Lawr. Ann. Lyc. N. Y.* ix. p. 94 (1868); *Von Frantz. J. f. O.* 1869, p. 293; *Gray, Hand-l. B.* i. p. 242, no. 3501 (1869); *Gundl. J. f. O.* 1872, p. 417; *Allen, Bull. Mus. Comp. Zool.* iii. pp. 122, 175 (1872); *Coues, Key N. Amer. B.* p. 107 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Coues, B. N.-West*, p. 73 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 293, pl. 15. fig. 3 (1874); *Brewster, Ann. Lyc. N. Y.* xi. p. 137 (1875); *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 16 (1876); *Gundl. Orn. Cuba*, p. 68 (1876); *Coues, B. Color. Vall.* p. 309 (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 18 (1881); *Coues, Key N. Amer. B.* p. 310 (1884).

Adult. General colour above olive-greenish; lesser wing-coverts like the back, the median and greater series dusky, externally olive, a trifle yellower than the back; bastard-wing and primary-coverts dusky, with obsolete narrow margins of olive; quills pale dusky brown, externally olive; tail-feathers pale dusky brown, washed with olive on the outer web; crown of head black, forming a cap, the posterior feathers of which are tipped with slaty grey; occiput and nape olive-greenish like the back; the sides of the neck a little yellower olive; a streak of bright yellow from the nostril to behind the eye, forming a distinct eyebrow; eyelid yellow, except in front, where it is coloured black like the lores; feathers below the eye and ear-coverts black, descending in a streak down the sides of the

fore neck; cheeks and under surface of body bright yellow, including the thighs and under tail-coverts; sides of the breast and flanks olive; axillaries olive like the sides of the breast; under wing-coverts yellow, mottled with dusky bases near the edge of the wing; quills pale dusky brown below, pale ashy brown along the inner web: "bill pale brownish black above, lighter beneath; feet flesh-colour; iris hazel" (*Audubon*). Total length 5 inches, culmen 0·5, wing 2·7, tail 2, tarsus 0·9.

Adult male in winter. Duller in colour than in summer, darker olive-green above, and having the entire head slaty grey with concealed black bases to the feathers. The summer plumage is gained by the wearing away of these grey tips to the feathers, the black facial markings being affected in the same manner as the crown.

In the Salvin-and-Godman collection is a female from Chepo, Panama, which is quite as brightly coloured as the male, showing no difference in the sexual colouring.

Young birds resemble the adult excepting in the colour of the head, which is like the back, but is a little browner olive; the yellow eyebrow and eyelid are well indicated, but the black lores and ear-coverts are dingy and obscured with olive. Specimens killed in the winter-home of the species in Central America show the black coronal patch concealed by the olive-brown tips to the feathers, and in the following spring the full plumage of the adult is gained by the wearing off of the above-mentioned tips, just as in the fully adult bird.

Hab. Eastern United States north to the Connecticut valley; also known to occur near Quebec; not abundant, but common in certain sections, as in Illinois, Kansas, and other portions of the Mississippi valley (*Coues*). Winters throughout Central America from Mexico to Panama (*S. & G.*); Cuba.

a. Ad. sk.	Cleveland, Ohio.	Prof. Kirtland [P.].
b. ♀ juv. sk.	Mount Carmel, Aug. 9 (*S. Turner*).	U.S. Nat. Museum [P.].
c. ♀ ad. sk.	Cahokie River, Illinois, May 24 (*H. K. Coale*).	R. B. Sharpe, Esq.
d. ♂ ad. sk.	Rockwood, Tennessee, April 24 (*W. H. Fox*).	U.S. Nat. Museum [P.].
e. Ad. sk.	Pennsylvania (*Baird*).	Sclater Collection.
f. ♂ ad. hiem. sk.	Dueñas, Guatemala.	O. Salvin, Esq. [P.].
g. Ad.; *h*, *i*. Juv. hiem. sk.	Guatemala.	Gould Collection.
k. Ad. hiem. sk.	Panama (*MacLeannan*).	Sclater Collection.

12. LIGIA.

Type.

Ligea, *Cory*, *Auk*, i. p. 1 (1884)..... L. palustris.

Range. Island of S. Domingo.

1. Ligia palustris.

Ligea palustris, *Cory*, *Auk*, i. p. 1, pl. 1 (1884); *id. B. S. Domingo*, i. p. 38, pl. iii. (1884).

Male. Crown, nape, and upper portion of back slaty plumbeous; rest of back and upper surface of wings and tail yellowish green; throat, breast, and sides greyish plumbeous, showing a dull olive

tinge, and the middle of the belly showing distinctly white; outer webs of primaries and most of the secondaries yellowish green, giving the wing a general greenish appearance; inner web of primaries dark brown, apparently slate-colour in some lights; under surface of tail dull green; eyelids white. Total length 5·50 inches, wing 2·50, tail 2·50, tarsus 0·75, bill 0·50, mid toe 0·40. (*Cory.*)

Female. General appearance of the male, but differs from it by the underparts being tinged with olive, mixing with the grey, and the top of the head green, showing the slate-colour faintly. (*Cory.*)

Hab. S. Domingo.

13. GEOTHLYPIS *.

Type.

Trichas, *Swains. Zool. Journ.* iii. p. 167 (1827, *nec Glog.* 1827) G. trichas.
Geothlypis, *Cab. Arch. f. Naturg.* 1847, pp. 316, 349..... G. trichas.



Tail of *Geothlypis trichas*, to show rounded outline.

Range. North America, Central America, and the whole of South America, excepting Chili and Patagonia.

Key to the Species.

a. With a broad frontal band of black, succeeded by a pale band of bluish white or yellow across the crown.
  a'. Band across the crown bluish white or pale grey, skirting the black ear-coverts to the sides of the neck.
    a''. Band across the crown pale grey, not 0·2 inch broad; upper surface dull olive .... *trichas*, p. 351.
    b''. Band across the crown broader and whiter, about 0·3 inch broad; upper surface of body olive-yellowish..... *rostrata*, p. 355.
  b'. Band across the crown bright yellow ..... *melanops*, p. 355.
b. With no pale bar across the crown.
  c'. Forehead black; hinder head olive like the back.
    c''. Upper surface of body yellowish green; wings externally like the back; sides of *beldingi*, p. 356.

* I have not identified the following reference:—

Trichas formosa, "*Sclater*," *Gray, Hand-l. B.* i. p. 242, no. 3512 (1869).

This may be intended for *Oporornis formosa*, but I cannot find that Dr. Sclater ever placed the latter species in *Trichas* or *Geothlypis*.

body and flanks pale greenish; under surface of body bright yellow, but with no tint of saffron ..... *semiflava*, p. 357.

d''. Upper surface of body dark olive; wings browner than the back; under surface of body deep golden yellow, tinged with saffron on the breast, and contrasting with the flanks, which are reddish brown washed with ashy ..... *speciosa*, p. 358.

d'. Head grey, contrasting with the back, which is olive.

e''. Throat yellow.

a'''. Nape grey, like rest of head; black of lores not reaching behind the eye .... *poliocephala*, p. 359.

b'''. Grey of head not continued to the nape, but forming a cap and not reaching beyond the occiput.

*a*⁴. Sides of hinder crown and hinder ear-coverts olive-yellow like sides of neck.

*a*⁵. Larger: fore part of ear-coverts black; frontal band narrow..... *æquinoctialis*, p. 360.

*b*⁵. Smaller: fore part of ear-coverts olive-yellow; black not reaching behind the eye, but broader on forehead *auricularis*, p. 361.

*b*⁴. Sides of hinder crown and hinder ear-coverts grey.

*c*⁵. A broad black band on the forehead *chiriquensis*, p. 362.

*d*⁵. A narrow black band on forehead.. *velata*, p. 363.

f''. Throat grey; the fore neck blackish.

c'''. Lores black; upper and under edge of eyelid white ..... *macgillivrayi*, p. 364.

d'''. Lores grey; no white on the eyelid .. *philadelphia*, p. 366.

1. Geothlypis trichas *. (Plate IX. fig. 1.)

Maryland Yellow-throat, *Edwards, Gleanings*, v. p. 56, pl. 237. fig. 2 (1758).

Le Figuier de Mariland, *Briss. Orn.* iii. p. 506 (1760).

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* The following race has been recently separated by Dr. Brewster:—

GEOTHLYPIS OCCIDENTALIS.

Geothlypis trichas occidentalis, *Brewster, Bull. Nutt. Orn. Club*, viii. p. 159 (1883).

Adult male. Upper parts nearly uniform pale yellowish olive, with a tinge of brown on the occiput; throat, jugulum, breast, anterior portion of abdomen, and under tail-coverts rich pure yellow; sides of body warm ochraceous brown, strongly tinged with yellow; middle of abdomen anteriorly creamy white; a black mark on the front and sides of the head bordered behind by a broad band of creamy white, slightly tinged with bluish; much concealed yellow on the feathers of the crown. Wing 2·32 inches, tail 2·30, culmen 0·55.

The differences which distinguish this race from *G. trichas* proper, although somewhat difficult of description, are readily appreciable upon a comparison of specimens. They may be briefly summed up as follows:—*G. occidentalis* is somewhat larger than *G. trichas*, and its tail is disproportionately longer; its upper parts are always paler and usually yellower; the yellow of the underparts is decidedly richer and purer, and extends much further down on the abdomen, frequently tinging nearly all of the body beneath; the flanks are paler and more ochraceous; the white of the head purer and generally broader. (*Brewster.*)

Hab. Pacific and Middle Provinces of the United States.

Turdus trichas, *Linn. Syst. Nat.* i. p. 293 (1766).
Fauvette à poitrine jaune de Louisiane, *Daubent. Pl. Enl.* vi. pl. 709. fig. 2; *Buff. Hist. Nat. Ois.* v. p. 162 (1778).
Le Figuier aux joues noires, *Buff. Hist. Nat. Ois.* v. p. 292 (1778).
Yellow-breasted Warbler and var. *a*, *Lath. Gen. Syn.* ii. pt. 2, pp. 438, 439 (1783).
Motacilla chrysoptera, *Bodd. Tabl. Pl. Enl.* p. 44 (1783); *Bartr. Trav. Florida*, p. 292 (1791).
Yellow-breast Warbler, *Penn. Arctic Zool.* ii. p. 399 (1785).
Orange-thighed Warbler, *Penn. t. c.* p. 399 (1785).
Sylvia trichas, *Lath. Ind. Orn.* ii. p. 519 (1790); *Vieill. Ois. Amér. Sept.* ii. p. 28, pls. 85, 86 (1807); *Audub. B. Amer.* pl. 23; *id. Orn. Biogr.* i. p. 121 (1831), v. p. 463 (1839); *D'Orb. in Ramon de la Sagra's Hist. Nat. Cuba*, p. 61 (1838).
Sylvia trichas, var. β, *Lath. Ind. Orn.* ii. p. 519 (1790).
Motacilla trichias, *Turton, Syst. Nat.* i. p. 590 (1806); *Nutt. Man.* 1840, p. 457.
Sylvia marylandica, *Wils. Amer. Orn.* i. p. 88, pl. 6. fig. 1 (1808); *id. op. cit.* ii. p. 163, pl. 18. fig. 4 (1810).
Regulus? mystaceus, *Steph. Gen. Zool.* xiii. p. 232 (1826).
Trichas personatus, *Swains. Zool. Journ.* iii. p. 167 (1827); *Vig. Voy. 'Blossom,' Zool.* p. 18 (1839); *Jard. ed. Wils. Amer. Orn.* i. pp. 88, 303 (1832).
Sylvia roscoe, *Audub. B. Amer.* pl. 24; *id. Orn. Biogr.* i. p. 124 (1832).
Trichas brachydactylus, *Swains. An. in Menag.* p. 295 (1837); *Gray, Gen. B.* i. p. 197 (1848).
Trichas marylandica, *Bp. Comp. List B. Eur. & N. Amer.* p. 20 (1838); *Audub. Syn.* p. 65 (1839); *id. B. Amer.* ii. p. 78, pl. 102 (1841); *Gosse, B. Jamaica*, p. 148 (1847); *Gray, Gen. B.* i. p. 197, (1848); *Bp. Consp.* i. p. 310 (1850); *Scl. P. Z. S.* 1856, p. 292; *Neuwied, J. f. O.* 1858, p. 118; *Bryant, Proc. Bost. Soc. N. H.* vi. p. 116 (1857), vii. p. 110 (1859); *Gray, Hand-l. B.* i. p. 242, no. 3503 (1869).
Geothlypis trichas, *Cab. Mus. Hein.* Th. i. p. 16 (1850); *Gundl. J. f. O.* 1855, p. 472; *Baird, B. N. Amer.* p. 241 (1858); *id. U.S. Bound. Surv.* ii. pt. 2, *Birds*, p. 10 (1859); *Scl. & Salv. Ibis*, 1859, p. 10; *Scl. P. Z. S.* 1859, pp. 363, 373; *Cab. J. f. O.* 1861, p. 84; *Gundl. t. c.* p. 326; *Scl. P. Z. S.* 1861, p. 70; *id. Cat. Amer. B.* p. 27 (1862); *March, Proc. Philad. Acad.* 1863, p. 293; *Lord, Proc. R. A. Inst.* iv. p. 115 (1864); *Baird, Review Amer. B.* p. 220 (1865); *Dresser, Ibis*, 1865, p. 476; *Coues, t. c.* p. 163; *Lawr. Ann. Lyc. N. Y.* viii. p. 283 (1866); *Brown, Ibis*, 1868, p. 420; *Dugès, La Natur.* i. p. 140 (1868); *Lawr. Ann. Lyc. N. Y.* ix. p. 94 (1868), p. 200 (1869); *Von Frantz. J. f. O.* 1869, p. 293; *Sumichr. Mem. Bost. Soc. N. H.* i. p. 547 (1869); *Scl. & Salv. P. Z. S.* 1870, p. 836; *Cooper, B. Calif.* p. 95 (1870); *Allen, Bull. Mus. Comp. Zool.* ii. p. 269 (1871), iii. p. 175 (1872); *Coues, Key N. Amer. B.* p. 107 (1872); *Salvin, Ibis*, 1872, p. 149; *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 269 (1874); *Coues, B. N.-West*, p. 74 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 297, pl. 15. figs. 7, 8 (1874); *Gundl. Orn. Cuba*, p. 69 (1876); *Hensh. Zool. Expl. W. 100th Merid.* p. 204 (1876); *Merrill, Proc. U.S. Nat. Mus.* i. p. 124 (1878); *Coues, B. Color. Vall.* p. 309 (1878); *id. Bull. U.S. Geol. Surv.* iv. p. 567 (1878); *Cory, B. Bahamas*, p. 72 (1880); *A. & E. Newt. Handb. Jamaica*, 1881, p. 106; *Ridgw. Bull. U.S. Nat. Mus.*

no. 21, p. 19 (1881); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 151 (1881); *Boucard, P. Z. S.* 1883, p. 441; *Coues, Key N. Amer. B.* 2nd ed. p. 310 (1884); *Cory, B. S. Domingo*, p. 36 (1884).

Adult male. General colour above dull olivaceous, browner towards the head and brighter olive towards the rump and upper tail-coverts, especially the latter; lesser wing-coverts like the back; median and greater series dusky brown with dull olive margins; bastard-wing dusky brown, externally paler brown; primary-coverts and quills dusky brown, edged with brighter and more yellowish olive, the first primary margined with ashy whitish; tail-feathers yellowish olive, browner on the inner webs; a broad frontal band of black, as well as the feathers round the eye, lores, cheeks, and ear-coverts, forming a large black patch which extends a little way down the sides of the neck, and which is separated from the crown and neck by a broad band of bluish white, which skirts the black from the side of the neck, behind the ear-coverts, along the side of the crown, and crosses the latter so as to form a band separating the black forehead from the top of the crown, which is dull brown tinged with olive, as also are the occiput and nape; entire throat and breast golden yellow, gradually paling on the latter towards the abdomen, which is ashy white tinged with yellowish; sides of the body pale earthy brown with a slight olive tinge, the thighs being of the same colour; under tail-coverts bright yellow like the breast; axillaries pale ashy, washed on the margins with yellow; under wing-coverts white, washed with pale brown on the edges and tinged with yellow near the edge of the wing, which is bright yellow; quills dusky below, ashy along the inner web: "bill dark brown; feet flesh-coloured; iris dark hazel" (*Audubon*). Total length 5 inches, culmen 0·5, wing 2·2, tail 2·15, tarsus 0·8.

Adult female. Distinguished from the male by the absence of black on the forehead and sides of face, and wanting also the bluish-white band behind the black forehead. General colour above ashy brown, washed with olive, and with a shade of reddish brown across the fore part of the crown, which is otherwise like the back; wings and tail like the adult male; lores and feathers round the eye ashy isabelline; ear-coverts ashy brown, tinged with rufous-brown on the hinder part of the latter; throat and fore neck pale saffron-yellow; remainder of the underparts light ashy, washed with olive or reddish brown on the sides of the body; under tail-coverts olive-yellow. Total length 4·5 inches, culmen 0·45, wing 2·05, tail 1·85, tarsus 0·8.

Winter plumage (Plate IX. fig. 1). Both sexes assume a dull garb in winter, being olivaceous above, with the head a little browner; ear-coverts and sides of face like the upper surface, with the lores slightly paler, and a distinct ring of dull whitish feathers round the eye; fore part of cheeks also slightly mottled with whitish plumes; throat and breast saffron-yellow, overshaded with brown; abdomen yellowish-white; sides of body and flanks pale earthy or olivaceous brown; under tail-coverts saffron-yellow.

Even in winter the males can be distinguished from the females,

for on lifting the feathers of the forehead and sides of the head, the black of the next summer plumage can be seen below, showing that these Warblers, like the Redstarts of the Old World, gain their adult plumage by the shedding of the tips of their winter plumage, instead of by a direct spring moult. Whether this is the case with the yellow plumage of the breast I am unable to say from lack of specimens, but I fancy that no moult takes place on the under surface.

Young. Similar to the adult female, but the olive of the upper parts with much of a brownish tinge; the yellow parts and, in fact, most of the underparts, quite buffy. (*Coues.*)

A nestling, from Mr. H. K. Coale's collection, is much browner than the adult female, and shows olive only on the wings and tail, the head being more dusky than the back; wing-coverts brown like the back, the greater coverts with reddish-brown tips forming a bar; throat and chest dull ochreous-buff, the abdomen light buffy yellow, the sides of the body browner.

Hab. The United States at large, and south through Mexico and Central America; several of the West Indies, as Cuba, Jamaica, and the Bahamas; breeds throughout its United-States range, and winters from the southern border southward (*Coues*). Throughout Central America from Mexico to Panama (*S. & G.*).

a. ♂ ad. st.	North America.	Purchased.
b. ♀ ad. sk.	49th parallel, Aug. 9 (*G. Dawson*).	N. A. Boundary Commission.
c. ♂; *d*. ♀ ad. sk.	Michigan.	Dr. Steere [P.].
e. Juv.; *f*. ♀ ad. sk.	Indiana, July (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
g, *h*. ♂ ♀ ad. sk.	Hyde Park, Illinois, May (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
i. ♂ imm. sk.	Colehour, Ill., Sept. (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
k. ♂ ad. sk.	Colehour, Ill., May 19 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
l. ♂ ad. sk.	Maryland, May (*E. Coues*).	U.S. Nat. Museum [P.].
m. ♀ juv. sk.	St. Regis Lake, N.Y., Aug. 21 (*Roosevelt*).	U.S. Nat. Museum [P.].
n. ♂ ad. sk.	Rock Creek, D.C., April 29 (*E. Coues*).	Salvin-Godman Coll.
o. ♀ ad. sk.	Washington, D.C., May 5 (*E. Coues*).	Salvin-Godman Coll.
p. *q*. ♂ ♀ ad. sk.	British Columbia.	J. K. Lord, Esq. [C.].
r, *s*. ♂; *t*, *u*. ♀ ad. sk.	West side of Rocky Mountains.	J. K. Lord, Esq. [P.].
v, *w*, *x*. [♂]; *y*. [♀] hiem. sk.	California.	Lord Walsingham [P.].
z. ♀ ad. sk.	Presidio, Mexico, Jan. 5 (*A. Forrer*).	Salvin-Godman Coll.
a'. ♂ ad. sk.	Presidio, Mexico, March 22 (*A. Forrer*).	Salvin-Godman Coll.
b'. ♀ ad. hiem. sk.	South Mexico (*De Oca*).	Sclater Collection.
c', *d'*. ♂ ad. hiem. sk.	N. Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.

♂ ad. sk.	Progress, N. Yucatan, Dec. (*E. C. Devis*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Dueñas, Guatemala, Feb. 3 (*O. S.*)	Salvin-Godman Coll.
g'. ♂ hiem. sk.	Coban, Vera Paz, Nov. (*O. S.*).	Salvin-Godman Coll.
h'. ♂ ad. sk.	Choctum, Vera Paz, Feb. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
i'. ♂ ad. hiem. sk.	Vera Paz (*O. S. & F. D. G.*).	Salvin-Godman Coll.
k'. ♂ ad. hiem. sk.	Guatemala.	Sclater Collection.
l', *m*'. ♂ ; *n*'. ♀ ad. hiem. sk.	Guatemala.	Gould Collection.
o'. ♂ ad. sk.	Nicaragua, May 8 (*C. C. Nutting*).	R. B. Sharpe, Esq. [P.].
p'. ♂ ad. sk.	Volcan de Chiriqui, Veragua (*E. Arcé*).	Salvin-Godman Coll.
q'. ♂ ad. sk.	Jamaica	Salvin-Godman Coll.
r'. ♂ ad. hiem. sk.	Jamaica.	Sclater Collection.
s'. ♂ ad. hiem. sk.	Tobago (*Kirk*).	Sclater Collection.

2. Geothlypis rostrata.

Geothlypis rostrata, *Bryant, Proc. Bost. Soc. N. H.* xi. p. 67 (1867 *Cory, B. Bahamas*, p. 73 (1880).
Trichas rostrata, *Gray, Hand-l. B.* i. p. 242, no. 3513 (1869).
Geothlypis trichas, var. rostrata, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 296 (1874).

Adult male in winter plumage. Above bright olive-green, a broad band of black passing from the sides of the neck over the forehead, including the eye, and extending to the nostril, just touching the lower mandible, the black bordered posteriorly with pearl-grey, becoming deeper grey upon the crown; underparts bright yellow, the flanks shaded with olive; quills brown, with the outer webs olive-green, third primary longest. Length 5·50 inches, wing 2·70, tail 2·36, tarsus 0·92, bill 0·72. (*Cory.*)

Adult female in winter plumage. The black band wanting; plumage slightly paler; a pale ash-coloured line from over the eye to sides of the neck; crown showing a trace of brown; otherwise resembles the male. (*Cory.*)

Hab. Bahama Islands.

3. Geothlypis melanops. (Plate IX. fig. 2.)

Geothlypis melanops, *Baird, Review Amer. B.* p. 222 (1865); *Scl. & Salv. P. Z. S.* 1870, p. 551; *Salv. Ibis*, 1872, p. 149; *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 151 (1881).
Trichas melanops, *Gray, Hand-l. B.* i. p. 242, no. 3508 (1869).

Adult male. General colour above dull yellowish olive, a little brighter on the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater series dusky brown, edged with ashy olive, as well as the bastard-wing and primary-coverts; quills brown, externally olive like the back; tail-feathers olive-brown, lighter olive on the edges of the feathers; a broad frontal band;

lores, feathers above and round the eye, ear-coverts, and cheeks black, forming a patch which extends a little way down the sides of the neck; the black forehead succeeded by a broad band of bluish white, occupying the top of the head and skirting the black ear-coverts to the sides of the neck; hinder crown, occiput, and nape rather browner than the rest of the back; entire under surface of body bright yellow, becoming paler and whiter on the lower abdomen, the vent being tinged with saffron; under tail-coverts bright yellow; sides of body and flanks olive-greenish washed with ashy; thighs olive-greenish externally, ashy whitish on their inner aspect; axillaries and under wing-coverts yellow, with ashy white bases; edge of wing bright yellow; quills ashy brown below, paler ashy along the edge of the inner web. Total length 4·8 inches, culmen 0·5, wing 2·25, tail 2·15, tarsus 0·85.

Adult female. General colour above dull olive-brown, slightly more olive-yellow on the rump and upper tail-coverts; wing-coverts like the back, the bastard-wing and primary-coverts dull brown; quills dark brown, externally edged with olive, the first primary whitish along the edge of the outer web; tail-feathers dull yellowish olive, lighter on the edges; head decidedly browner than the back, and somewhat rufous-brown on the crown; lores ashy white; eyelid clearer whitish; ear-coverts olive-brown, yellowish near the lower edge, and with pale yellowish-brown shaft-lines; cheeks and under surface of body pale yellow, becoming whiter on the abdomen, the sides of the neck and breast washed with pale reddish brown; flanks and sides of the body and thighs light earthy brown; under tail-coverts bright yellow, pale reddish brown near the vent; under wing-coverts and axillaries pale yellow, brighter along the edge of the wing; quills dusky below, ashy along the edge of the inner web. Total length 5·2 inches, culmen 0·5, wing 2·25, tail 2·3, tarsus 0·8.

Hab. Mexico.

a. ♂ ad. sk.	Mexico (*Becker*).	Sclater Collection.
b. ♂ ad. sk.	Mexico (*Boucard*).	Sclater Collection.
c. Ad. sk.	Mexico.	Sclater Collection.
d, *e*. ♂ ♀ ad. sk.	Mexico.	Salvin-Godman Coll.
f. ♂ ad. sk.	Near city of Mexico (*Angelo*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Jalapa, Mexico (*Höge*).	Salvin-Godman Coll.

4. Geothlypis beldingi.

Geothlypis beldingi, *Ridgw. Proc. U.S. Nat. Mus.* v. p. 344 (1882).

Adult male. General colour above dull yellowish olive, rather brighter towards the rump and upper tail-coverts; lesser and median wing-coverts like the back; greater series ashy brown, externally like the back; bastard-wing, primary-coverts, and quills light or ashy brown, externally edged with yellowish olive, the first primary margined with ashy white; tail-feathers olive-brown, more yellowish olive on the outer edges, the external feathers narrowly fringed with whity-brown at the tips; a broad frontal band of

black; the feathers above and around the eye, lores, ear-coverts, and cheeks black, forming a patch which extends some little way down the sides of the neck; hinder crown and nape dusky olive-brown, separated from the black forehead and side face by a distinct line of yellow, which skirts the black ear-coverts also, and joins the sides of the neck, which are also bright yellow; under surface of body bright golden yellow, a little paler towards the abdomen; sides of the body olive-brown, tinged with saffron-yellow on the sides of the breast; thighs externally olive, more ashy on their inner aspect; under tail-coverts deep yellow; axillaries and under wing-coverts yellow, with whitish bases; edge of wing bright yellow; quills dusky below, ashy along the edge of the inner web. Total length 5·5 inches, culmen 0·65, wing 2·45, tail 2·4, tarsus 0·9.

Hab. Lower California.

a. ♂ ad. sk. San José del Cabo, Lower California, Jan. 23 (*Belding*). Sclater Collection.

5. Geothlypis semiflava.

Geothlypis semiflava, *Sclater, P. Z. S.* 1860, pp. 273, 291; *id. Cat. Amer. B.* p. 27 (1862); *Baird, Review Amer. B.* p. 223, note (1865); *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Berlepsch & Taez. P. Z. S.* 1883, p. 541.
Trichas semiflava, *Gray, Hand-l. B.* i. p. 242, no. 3506 (1869).
Geothlypis bairdi, *Nutting, Proc. U.S. Nat. Mus.* vi. p. 398 (1844).

Adult male (type of species). General colour above dark olive-greenish, a little brighter towards the rump and upper tail-coverts; lesser and median wing-coverts like the back; greater series, bastard-wing, primary-coverts, and quills pale brown, externally like the back, the first primary margined with ashy white; tail-feathers olive-brown, a little brighter olive on the edges of the feathers; forehead and sinciput black, forming a broad frontal band, which contrasts strongly with the rest of the crown, which is like the back; lores, feathers round the eye, ear-coverts, and cheeks black, extending a little way down the sides of the neck, the latter being a little yellower than the back; entire under surface of body bright yellow, a little duller on the abdomen, thighs, and under tail-coverts; sides of the body olive-greenish; axillaries and under wing-coverts yellow, with white bases, the edge of the wing bright yellow; quills dusky brown below, whitish along the edge of the inner web. Total length 5 inches, culmen 0·6, wing 2·35, tail 2·15, tarsus 0·9.

Adult female. Rather duller than the male, and wanting the black on the forehead and sides of face; the head like the back; lores and feathers round the eye yellow; ear-coverts and cheeks dull olive-yellow; under surface of body yellow, but not so bright as in the male, the breast washed with saffron. Total length 5·2 inches, culmen 0·6, wing 2·35, tail 1·95, tarsus 0·9.

Hab. Ecuador, extending northwards into Costa Rica, where it has been renamed *G. bairdi* by Mr. Nutting. Mr. Salvin, however,

who has seen the type of the latter species, tells me that he cannot distinguish it from Ecuador examples.

a. ♂ ad. sk.	Esmeraldas, Ecuador (*L. Fraser*).	Sclater Collection (Type of species.)
b. [♀] ad. sk.	Esmeraldas (*L. Fraser*).	Sclater Collection.
c. Ad. sk.	Ecuador.	Gould Collection.
d. Ad. sk.	Quito.	Gould Collection.
e. ♂ ad. sk.	Babahoyo, Ecuador, July (*L. Fraser*).	Salvin-Godman Coll.
f. Ad. sk.	Intaj, Ecuador (*C. Buckley*).	Salvin-Godman Coll.

6. Geothlypis speciosa. (Plate X.)

Geothlypis speciosa, *Sclater, P. Z. S.* 1858, p. 447; *id. Cat. Amer. B.* p. 27 (1862); *Baird, Review Amer. B.* p. 223, note (1865); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 546 (1869); *Salv. Ibis*, 1872, p. 149; *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 152 (1881).

Trichas speciosa, *Gray, Hand-l. B.* i. p. 242, no. 3510 (1869).

Adult male (type of species). General colour above dark olive-yellow, rather brighter towards the rump and upper tail-coverts; lesser and median wing-coverts like the back; greater coverts dusky brown, edged with olive-yellow; bastard-wing, primary-coverts, and quills dusky brown, obscurely edged with olive; tail-feathers dark olive, crossed with dusky bars under certain lights, the edges of the feathers more yellowish olive externally; forehead and crown black, the feathers of the vertex shaded with dull ashy; the occiput and nape dull olive; lores, sides of face, ear-coverts, and cheeks black, forming a patch which extends down the sides of the neck for some distance; sides of neck otherwise like the back; under surface of body bright yellow, tinged with saffron on the breast and near the sides of the abdomen; sides of breast and flanks light reddish brown, shaded with ashy; thighs like the flanks; under tail-coverts deep yellow; under wing-coverts and axillaries deep olive-yellow, the edge of the wing golden yellow; quills dusky brown below, ashy along the edge of the inner web. Total length 5·5 inches, culmen 0·55, wing 2·35, tail 2·25, tarsus 0·8.

Adult female. Greener than the male above, and without any black on the head and face; the head a little more ashy olive than the back; wings and tail as in the male; sides of face and ear-coverts olive-brown, mottled with pale yellow spots on the lores and below the eye; upper and lower edge of eyelid pale yellow; under surface of body light fulvous yellow, tinged with saffron on the breast; the sides of the body light reddish brown, shaded with ashy; under tail-coverts brighter yellow. Total length 4·8 inches, culmen 0·55, wing 2·05, tail 1·9, tarsus 0·8.

Hab. Mexico.

a, *b*. ♂ ♀ ad. sk.	Mexico (*De Saussure*).	Sclater Collection. (Types of species.)
c. ♀ ad. sk.	Mexico (*Bouvier*).	Salvin-Godman Coll.

7. Geothlypis poliocephala. (Plate IX. figs. 3, 4.)

Trichas delafieldi (*nec Audub.*), *Sclater, P. Z. S.* 1856, p. 293.
Geothlypis æquinoctialis (*nec Gm.*), *Scl. & Salv. Ibis*, 1860, p. 273.
Geothlypis poliocephala, *Baird, Review Amer. B.* p. 225 (1865); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 546 (1869); *Salv. Ibis*, 1870, p. 114, et 1872, p. 149; *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 296 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 269 (1874); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 154, pl. 9. fig. 3 (1881).
Trichas poliocephala, *Gray, Hand-l. B.* i. p. 242, no. 3507 (1869).
Geothlypis poliocephala, var. caninucha, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 296 (1874).
Geothlypis caninucha, *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 153, pl. 9. fig. 2 (1881).

Adult. General colour above dull olive-brown, decidedly brighter towards the rump and upper tail-coverts; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills dusky brown, externally edged with olive-yellow, the first primary margined with ashy white; tail-feathers olive-brown, externally brighter olive; crown of head and nape dark slaty grey, the base of the forehead, lores, and feathers below the eye, as well as the lower eyelid, black; upper edge of eyelid white; ear-coverts slaty grey, washed with olive-yellow on the lower parts; cheeks and entire under surface of body bright yellow, a little paler on the lower abdomen; sides of body olive-greenish; thighs ashy washed with olive; under tail-coverts bright yellow; axillaries and under wing-coverts bright yellow, the former with white bases; edge of wing very bright yellow; quills below dull brown, ashy along the edge of the inner web. Total length 5·3 inches, culmen 0·55, wing 2·1, tail 2·25, tarsus 0·85.

The specimen described (Plate IX. fig. 4) appears to have been breeding, from the worn condition of the plumage. A Mexican example (Plate IX. fig. 3) is apparently in winter plumage, being altogether browner, and having the grey head obscured by brown edges to the feathers underneath; below, the yellow is much paler, and the flanks clear fulvous-brown, a saffron tinge being distinguishable on the breast; the eyelid also is for the most part white. In this stage of plumage the species has been described as *G. caninucha*; but I feel convinced that it is only the winter plumage of *G. poliocephala*, corresponding to the winter dress of *G. trichas*. Figures of both winter and summer dress will be found in the Plate, side by side with the head of adult *G. trichas* in winter plumage, when the latter species *also has a white eyelid*.

Adult female. Much duller in colour than the adult male. Dingy olive-brown above, the head and nape dusky slaty grey; lores and a streak below the eye black; upper and under edge of eyelid dull white; ear-coverts dull ashy grey, with whitish shaft-lines; under surface of body bright yellow on the throat and breast, becoming paler on the abdomen; the flanks and sides of the body olive-brown. Total length 5 inches, culmen 0·55, wing 2·15, tail 2·3, tarsus 0·85.

Hab. Central America, from Mexico to Guatemala and Costa Rica.

α. G. poliocephala.

a. Ad. sk.	Mexico.	Purchased.
b. ♀ ad. sk.	Presidio, Mexico, June 16 (*A. Forrer*).	Salvin-Godman Coll.

β. G. caninucha.

a. Ad. sk.	British Honduras (*Blancaneaux*).	Salvin-Godman Coll.
b. Ad. sk.	Retalhuleu, Guatemala (*O. Salvin*).	Sclater Collection.
c. [♀] ad. sk.	Retalhuleu, Sept. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
d. [♂] ad. sk.	San Geronimo, Jan. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Dueñas, Sept. 5 (*O. S.*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Costa Rica (*J. Carmiol*).	Salvin-Godman Coll.

8. Geothlypis æquinoctialis. (Plate IX. fig. 7.)

Le Figuier olive de Cayenne, *Daubent. Pl. Enl.* vi. pl. 685. fig. 1; *Buff. Hist. Nat. Ois.* v. p. 315 (1778).
Equatorial Warbler, *Lath. Gen. Syn.* ii. part 2, p. 493 (1783).
Motacilla æquinoctialis, *Gm. Syst. Nat.* i. p. 972 (1788).
Sylvia delafieldii, *Audub. Orn. Biogr.* v. p. 307 (1839).
Trichas delafieldi, *Audub. Syn.* p. 65 (1839); *id. B. Amer.* ii. p. 81, pl. 103 (1841).
Trichas æquinoctialis, *Gray, Gen. B.* i. p. 197 (1848); *Bp. Consp.* i. p. 310 (1850); *Gray, Hand-l. B.* i. p. 242, no. 3511 (1869); *Finsch, P. Z. S.* 1870, p. 565.
Geothlypis æquinoctialis, *Cab. Mus. Hein.* Th. i. p. 16 (1850); *Sclater, Cat. Amer. B.* p. 27 (1862); *Baird, Review Amer. B.* p. 224 (1865); *Taylor, Ibis*, 1864, p. 81; *Scl. Ibis*, 1867, p. 107; *id. P. Z. S.* 1867, p. 340; *Scl. & Salv. t. c.* pp. 509, 594; *iid. P. Z. S.* 1868, p. 627, 1869, p. 252; *Salv. Ibis*, 1872, p. 149; *Scl. & Salv. Nomencl. Av. Neotr.* p. 9 (1873); *Tacz. P. Z. S.* 1880, p. 191; *id. P. Z. S.* 1882, p. 6; *id. Orn. Pérou*, p. 469 (1884).
Geothlypis velatus, *Baird, B. N. Amer.* p. 243 (1858).
Trichas velata (*nec V.*), *Lcot. Ois. Trinid.* p. 183 (1866).

Adult male. General colour above yellowish green, rather paler on the rump and upper tail-coverts; lesser and median wing-coverts like the back; bastard-wing, primary-coverts, and quills dusky brown, externally like the back, rather more yellow on the primaries, the first primary decidedly paler yellow on the outer margin; tail-feathers olive-brown, clearer olive on the edge of the feathers; crown of head bluish grey as far as the vertex, the occiput, nape, and sides of hinder crown yellowish green like the back, the sides of the neck decidedly brighter yellow; a line across the base of the forehead, lores, eyelid, feathers round the eye, and anterior portion of ear-coverts black; hinder part of ear-coverts yellowish green like the sides of the neck; cheeks and under surface of body bright yellow, the sides of the breast and flanks yellowish green; thighs olive-yellow; under tail-coverts bright yellow; axillaries and under wing-coverts yellow, with ashy bases to the feathers, the edge of the

wing bright yellow; quills dusky below, ashy brown along the edge of the inner web: "bill blackish, yellowish on lower mandible; feet yellowish; iris brown" (*Léotaud*). Total length 5·2 inches, culmen 0·5, wing 2·4, tail 2·3, tarsus 0·8.

Adult female. Wants the black on the face, the head being pale slaty grey washed with olive, and rather yellower on the forehead; lores rather brighter yellow; upper part of ear-coverts dull olive-greenish, with scarcely perceptible streaks of brighter yellow, the lower part of the ear-coverts plainly streaked with bright yellow; rest of plumage as in the male. Total length 5·2 inches, culmen 0·5, wing 2·1, tail 2·1, tarsus 0·8.

Another *adult female*, from the island of Mexiana (Wallace), is apparently in fuller plumage. General colour above dull olive-brown, slightly more olive-yellow on the rump and upper tail-coverts; wing-coverts like the back, a little yellower on the greater series; bastard-wing feathers externally pale olive-brown; quills brown, externally olive-yellow, a little lighter on the primaries; tail-feathers dull olive-yellow, lighter on the edges; head a little duller olive-brown than the back; lores and feathers above the eye, as well as the eyelid, pale olive-yellow; ear-coverts darker olive-yellow, browner on the upper edge; cheeks and under surface of body bright yellow, including the thighs and under tail-coverts; flanks and sides of body olive-brown; axillaries and under wing-coverts bright yellow, more brilliant on the edge of the wing; quills dusky below, ashy along the edge of the inner web. Total length 5·5 inches, culmen 0·5, wing 2·4, tail 2·3, tarsus 0·85.

Hab. Amazonia, Guiana, Venezuela, Colombia, and Peru.

a, b. ♂ ♀ ad. sk.	Island of Mexiana, R. Amazon, Dec. & Jan. (*A. R. Wallace*).	Salvin-Godman Coll.
c. ♂ ad. sk.	Yuruani River, British Guiana, May 14 (*H. Whitely*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Demerara (*Eyton Collection*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Cayenne.	Sclater Collection.
f. ♀ ad. sk.	Caracas, Venezuela, Nov. (*A. Goering*).	Salvin-Godman Coll.
g. ♀ ad. sk.	Trinidad.	Sclater Collection.
h. ♀ ad. sk.	Bogotá.	J. Purdie, Esq. [P.].
i, k. ♂ ad. sk.	Bogotá.	Salvin-Godman Coll.

9. Geothlypis auricularis. (Plate IX. fig. 8.)

Geothlypis poliocephala, *Tacz. P. Z. S.* 1877, p. 319.
Geothlypis auricularis, *Salvin, P. Z. S.* 1883, p. 420; *Tacz. Orn. Pérou*, p. 470 (1884).
Geothlypis æquinoctialis peruviana, *Tacz. Orn. Pérou*, p. 471 (1884).

Adult male (type of *G. peruviana*, Tacz.). General colour above dull olive-yellow, a shade brighter on the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater coverts dusky, externally like the back; bastard-wing and primary-coverts dusky brown, externally fringed with olive; quills dusky brown, edged with olive-yellow, the inner secondaries washed with

the same colour; tail-feathers dull olive, edged with bright olive-yellow; crown of head as far as the vertex clear slaty grey; the hinder crown, occiput, and nape like the back; a broad line of black across the forehead; lores, feathers above and round the eye, and a large patch below the latter extending on to the fore part of the ear-coverts black; sides of hinder crown and ear-coverts a little brighter olive-yellow than the back; the sides of the neck also washed with a little brighter yellow; cheeks and under surface of body clear bright yellow, including the thighs and under tail-coverts; the sides of the body washed with olive; under wing-coverts and axillaries bright yellow, the latter washed with olive; quills dusky below, ashy along the inner web. Total length 4·7 inches, culmen 0·55, wing 2·55, tail 2·25, tarsus 0·9. (*Mus. Varsov.*)

Not being able to distinguish the points in which Dr. Taczanowski's *G. peruviana* differed materially from *G. auricularis*, Salv., I compared his type with that of Mr. Salvin's species, and have come to the conclusion that both are identical. It is true that the latter is a little smaller (wing 2·25 inches, tarsus 0·85), but that is all; and this difference may be due to the fact that the skin of *G. auricularis* is indifferently prepared, whereas that of *G. peruviana* is a fine specimen in full plumage. The preparation of the skins will also account for the difference in the extent of the black in the region of the eye, which is unduly extended on the base of the ear-coverts in the skin of *G. auricularis*.

Hab. Peru.

a. ♂ ad. sk.	Callao, Peru, Dec. (*A. H. Markham*).	Salvin-Godman Coll. (Type of species.)

10. Geothlypis chiriquensis. (Plate IX. fig. 6.)

Geothlypis chiriquensis, *Salvin, Ibis*, 1872, p. 148; *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 152, pl. 9. fig. 1 (1881).

Adult male (type of species). General colour above olive-yellow, a shade lighter on the rump and upper tail-coverts; lesser and median wing-coverts like the back; greater coverts, primary-coverts, and quills dusky brown, externally like the back, the primaries decidedly brighter yellow along the outer web, greyish towards their ends, the first primary margined with pale olive-yellow; bastard-wing feathers dusky brown, narrowly edged with olive-yellow, bright yellow along the edge of the outer one, like the edge of the wing; tail-feathers olive-yellowish; crown of head bluish grey, the occiput and nape like the back; a broad band of black across the forehead; feathers above and round the eye, cheeks, and ear-coverts black; the grey of the head skirting the ear-coverts at the sides of the neck; entire under surface of body brilliant yellow, a little paler on the under tail-coverts; sides of body and flanks, as well as the thighs, olive-green; under wing-coverts brilliant yellow, the axillaries more olive-yellow; edge of wing bright yellow; quills

dusky below, ashy along the edge of the inner web. Total length 5 inches, culmen 0·6, wing 2·4, tail 2, tarsus 0·9.

Hab. Veragua.

a, *b*. ♂ ad. sk.	Volcan de Chiriqui, Veragua (*E. Arcé*).	Salvin-Godman Coll. (Types of species.)

11. Geothlypis velata. (Plate IX. fig. 5.)

Sylvia velata, *Vieill. Ois. Amér. Sept.* ii. p. 22, pl. lxxiv. (1807); *D'Orb. Voy. Amér. Mérid.* iv. p. 217 (1835–44).
Sylvia cucullata, *Lath. Ind. Orn.* ii. p. 528 (1790).
Contramaestre verde pecho de oro, *Azara, Apunt.* ii. p. 54 (1807).
Tanagra canicapilla, *Swains. Zool. Illustr.* 1st ser. iii. pl. 174 (1822–23).
Sylvia canicapilla, *Neuwied, Beitr. Naturg. Bras.* iii. p. 701 (1831).
Trichas canicapilla, *Hartl. Ind. Azara*, p. 11 (1847).
Trichas velata, *Gray, Gen. B.* i. p. 197 (1848); *Bp. Consp.* i. p. 310 (1850); *Burm. Th. Bras.* iii. p. 115 (1856); *Gray, Hand-l. B.* i. p. 242, no. 3504 (1869); *Pelz. Orn. Bras.* p. 71 (1871).
Geothlypis velata, *Cab. Mus. Hein.* Th. i. p. 16 (1850); *Scl. Cat. Amer. B.* p. 27 (1862); *Baird, Review Amer. B.* p. 223 (1865); *Scl. & Salv. P. Z. S.* 1867, p. 594, 1868, pp. 138, 139; *Salv. Ibis*, 1872, p. 149; *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873); *iid. P. Z. S.* 1876, p. 16; *White, P. Z. S.* 1882, p. 594; *Barrows, Bull. Nutt. Orn. Club*, viii. p. 87 (1883); *Tacz. Orn. Pérou*, p. 469 (1884).

Adult male. General colour above yellowish green, the wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills dusky brown, externally edged with olive-yellow, a little lighter than the back, the first primary with a distinctly paler margin than the rest; tail-feathers dull olive-green, rather lighter on the outer edge of the feathers, the outer ones having a pale fringe near the end of the inner web; crown of head to the occiput clear blue-grey, the nape and hind neck being like the back; across the base of the forehead a narrow black band joining the lores, feathers round and below the eye, and fore part of ear-coverts, all of which are black; hinder ear-coverts grey, washed with yellow; sides of neck like the back; cheeks and under surface of body bright yellow, including the under tail-coverts, but a little duller on the thighs; sides of breast and flanks darker and more olive-greenish; axillaries and under wing-coverts bright yellow, especially vivid on the edge of the wing; quills dusky below, ashy along the edge of the inner web: "upper mandible blackish, the lower one reddish white; feet brownish flesh-colour" (*Neuwied*); "iris brown" (*Burmeister*). Total length 5·6 inches, culmen 0·55, wing 2·4, tail 2·4, tarsus 0·85.

In winter the plumage of the male is duller, the grey of the head being obscured by brown tips to the feathers; the back is also slightly greener.

Adult female. Differs from the male in wanting the black on the face, and in having the head only a little browner than the back;

ear-coverts ashy brown, streaked with yellow shaft-lines; lores and feathers below the eye ashy, mottled with whitish spots; under surface of body bright yellow, the sides olive-greenish. Total length 5 inches, culmen 0·55, wing 2·15, tail 2·15, tarsus 0·85.

Young. Resembling the old female, but more ashy olive above, the head dull olive-yellowish; lores and under surface of body very pale yellow, more ashy brown on the sides.

Hab. Brazil and the Argentine Republic and Peru; ? Chili.

a. Ad. st.	Brazil.	Lord Stuart de Rothesay [P.].
b, *c*. ♂ ♀ ad. sk.	Brazil.	Sclater Collection.
d, *e*, ♂ ad.; *f*. ♂ jun. sk.	Brazil.	Gould Collection.
g, *h*. ♂ ad. sk.	Bahia (*Wucherer*).	Salvin-Godman Coll.
i. Juv. sk.	Bahia.	Sclater Collection.
k. ♂ ad. sk.	Rio Lujan, Buenos Aires, March 12 (*E. W. White*).	Sclater Collection.
l. Ad. sk.	Rio.	R. H. Wood, Esq. [P.
m. ♂ ad. sk.	Rio (*J. Youds*).	Salvin-Godman Coll.
n. ♂ ad. sk.	Pelotas, Rio Grande do Sul (*Joyner*).	Salvin-Godman Coll.
o, *p*. ♂; *q*. ♀ ad. sk.	Pampas Argentinas (*Leybold*).	Salvin-Godman Coll.
r. ♂ ad. sk.	Huiro, valley of Urubomba, Peru (*J. Orton*).	Salvin-Godman Coll.
s. Ad. sk.	[Chili.]	Gould Collection.
t. Ad. sk.	[Chili.]	Zoological Society.

12. Geothlypis macgillivrayi.

Sylvia macgillivrayi, *Audub. B. Amer.* pl. 399. figs. 4, 5; *id. Orn. Biogr.* v. p. 75 (1839).

Sylvia tolmiei, *Towns. Journ. Philad. Acad.* 1839, pp. 149, 153, 159.

Trichas macgillivrayi, *Audub. Syn.* p. 64 (1839); *id. B. Amer.* ii. p. 74, pl. 100 (1841); *Gray, Gen. B.* i. p. 197 (1848); *Bp. Consp.* i. p. 310 (1850); *Neuwied, J. f. O.* 1858, p. 118; *Gray, Hand-l. B.* i. p. 242, no. 3505 (1869).

Trichas tolmiæi, *Towns. Narr.* p. 64 (1839); *Nutt. Man.* 1840, p. 460.

Geothlypis macgillivrayi, *Baird, B. N. Amer.* p. 244 (1858); *id. op. cit.* pl. 79. fig. 4 (1860); *Scl. P. Z. S.* 1859, pp. 363, 373; *id. & Salv. Ibis*, 1859, p. 10; *Cab. J. f. O.* 1861, p. 84; *Scl. Cat. Amer. B.* p. 27 (1862); *Coues, Ibis*, 1865, p. 163; *Baird, Review Amer. B.* p. 227 (1865); *Brown, Ibis*, 1868, p. 429; *Lawr. Ann. Lyc. N. Y.* ix. p. 94 (1868); *Von Frantz. J. f. O.* 1869, p. 294; *Cooper, B. Calif.* p. 96 (1870); *Coues, Key N. Amer. B.* p. 108 (1872); *Salv. Ibis*, 1872, p. 149; *Scl. & Salv. Nomenel. Ac. Neotr.* p. 10 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 303, pl. 15. figs. 4, 5 (1874); *Hensh. Rep. Zool. Expl. W. 100th Merid.* p. 205 (1875); *Coues, B. Color. Vall.* p. 312 (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 18 (1881); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 155 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 311 (1884).

Geothlypis philadelphia, var. macgillivrayi, *Allen, Bull. Mus. Comp. Zool. Cambr.* iii. p. 175 (1872).

Geothlypis philadelphia, β. macgillivrayi, *Coues, B. N.-West*, p. 75 (1874).

Geothlypis philadelphia macgillivrayi, *Coues, Bull. U.S. Geol. Surv.* iv. p. 568 (1878).

Adult male. General colour above dark greenish olive, lighter and more clearly olive towards the rump and upper tail-coverts; lesser and median wing-coverts like the back; greater series dusky brown, externally olive like the back; bastard-wing pale brown, lighter externally; primary-coverts and quills dusky brown, margined with clear olive, the first primary edged with ashy white; tail-feathers olive, a little lighter on the edges; head and neck all round dark slaty grey; the lores, fore part of the cheeks, feathers below the eye, and a shade on the ear-coverts black; upper and under edge of eyelid white; throat and fore neck dark slaty grey, all the feathers edged with hoary grey; the lower throat and fore neck blacker, the feathers being black with hoary margins; remainder of under surface bright yellow, including the under tail-coverts; thighs rather pale yellow; sides of body and flanks greenish olive; axillaries olive-yellow; under wing-coverts ashy washed with yellow, the edge of the wing brighter yellow; quills dusky brown below, ashy along the edge of the inner web: "upper mandible brownish black, its edges in their whole length pale yellowish flesh-colour, as is the lower mandible, which, however, is a little dusky at the end; feet and claws flesh-coloured; iris hazel" (*Audubon*). Total length 5 inches, culmen 0·5, wing 2·35, tail 2·15, tarsus 0·8.

Adult female. Different from the male. Dull olive-brown above, duller brown on the head and neck; wings and tail as in the male; lores and a ring round the eye isabelline; a shade of ashy on the sides of the hinder crown; ear-coverts ashy olive; throat and chest isabelline brown; rest of under surface of body bright yellow, the sides olive-greenish with a brownish shade. Total length 4·8 inches, culmen 0·5, wing 2·2, tail 2·1, tarsus 0·8.

The young males in winter have a grey throat with no black on it or on the lores, but they are still distinguished from *G. philadelphia* by the white eyelid.

Hab. Middle and Western provinces of the United States and British Columbia; east to the limit of arboreal vegetation along the Rocky Mountains; breeds throughout its United-States range (*Coues*). Winters in Central America from Mexico to Panama (*S. & G.*). Colombia.

a. ♀ ad. sk.	49th Parallel (*G. Dawson*).	N. A. Boundary Commission [P.].
b. ♀ ad. sk.	Wolf-lake, Indiana, June 1 (*H. K. Coale*).	R.B. Sharpe, Esq. [P.].
c. ♂ ad. sk.	Fort Bridger, Utah, June 4 (*C. Drexler*).	Salvin-Godman Coll.
d. ♂ ad. sk.	British Columbia.	J. K. Lord, Esq. [C.].
e. ♂ ad. sk.	Cypress Island, June.	Dr. Lyall [P.].
f, g. ♂ ♀ ad. sk.	West side of Rocky Mountains.	J. K. Lord, Esq. [P.].
h. ♂ ad. sk.	Colorado (*Strickland*).	R.B. Sharpe, Esq. [P.].

i. ♂ ad. sk.	Denver, Colorado, May 14 (*H. W. Henshaw*).	U.S.Nat. Museum[P.].
k. ♀ ad. sk.	Willow Springs, Arizona, July 12 (*H.W. Henshaw*).	U.S.Nat. Museum[P.].
l. ♀ ad. sk.	Nicasio, California, Aug. 4 (*C. A. Allen*).	R.B. Sharpe, Esq.[P.].
m. ♀ ad. sk.	Nevada, California (*E. W. Nelson*).	R.B. Sharpe, Esq.[P.].
n, o. ♂ juv. hiem. sk.	Orizaba, Mexico (*Botteri*).	Sclater Collection.
p. ♀ juv. sk.	Presidio, Mexico, Dec. (*A. Forrer*).	Salvin-Godman Coll.
q. ♂ ad. sk.	Jalapa, Mexico (*C.F. Höge*).	Salvin-Godman Coll.
r. ♂ juv. hiem. sk.	Jalapa, Mexico (*De Oca*).	Sclater Collection.
s. ♂ ad. sk.	Guatemala (*O. S.*).	Salvin-Godman Coll.
t, u. ♂ ♀ juv. sk.	Dueñas, Guatemala, Sept. (*O. S.*).	Salvin-Godman Coll.
v. ♂ ad. hiem. sk.	Guatemala (*Constancia*).	Sclater Collection.
w. ♂ ad.; *x, y.* ♀ juv. sk.	Chiriqui, Veragua (*E. Arcé*).	Salvin-Godman Coll.
z. ♂ imm. sk.	Bogotá.	Salvin-Godman Coll.
a'. ♀ juv. hiem. sk.	Santa Elena, Antioquia (*Salmon*).	Sclater Collection.

13. Geothlypis philadelphia.

Sylvia philadelphia, *Wils. Amer. Orn.* ii. p. 101, pl. 14. fig. 6 (1810); *Audub. B. Amer.*; *id. Orn. Biogr.* v. p. 79 (1839).

Trichas philadelphia, *Jard. ed. Wils. Amer. Orn.* i. p. 249 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 20 (1838); *Audub. Syn.* p. 65 (1839); *id. B. Amer.* ii. p. 76, pl. 101 (1841); *Nutt. Man.* 1840, p. 459; *Gray, Gen. B.* i. p. 197 (1848); *Bp. Consp.* i. p. 310 (1850); *Reinh. Ibis*, 1861, p. 6; *Gray, Hand-l. B.* i. p. 242, no. 3509 (1869).

Geothlypis philadelphia, *Baird, B. N. Amer.* p. 243 (1858); *id. op. cit.* pl. 79. fig. 3 (1860); *Lawr. Ann. Lyc. N.Y.* vii. p. 322 (1861); *Scl. Cat. Amer. B.* p. 27 (1862); *Baird, Review Amer. B.* p. 226 (1865); *Dresser, Ibis*, 1865, p. 76; *Lawr. Ann. Lyc. N. Y.* viii. p. 283 (1866), ix. p. 94 (1868); *Von Frantz. J. f. O.* 1869, p. 294; *Wyatt, Ibis*, 1871, p. 322; *Allen, Bull. Mus. Comp. Zool.* iii. p. 175 (1872); *Salv. Ibis*, 1872, p. 149; *Coues, Key N. Amer. B.* p. 107 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 269 (1874); *Coues, B. N.-West*, p. 75 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 301, pl. 15. fig. 6 (1874); *Coues, B. Color. Vall.* p. 313 (1878); *id. Bull. U.S. Geol. Surv.* iv. p. 568 (1878); *Merrill, Proc. U.S. Nat. Mus.* no. 1, p. 124 (1878); *Scl. & Salv. P.Z.S.* 1879, p. 494; *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 18 (1881); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 154 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 311 (1884).

Adult male. General colour above dark olive-green, slightly paler on the rump and upper tail-coverts; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills dusky brown, externally olive-green like the back, the first primary margined with ashy white; tail-feathers olive-green, lighter olive externally, and fringed with dull white at the tips of the outer feathers; head and nape slaty grey, somewhat shaded with brown

on the tips of the feathers; lores, sides of face, ear-coverts, sides of neck, throat, and fore neck clearer slaty grey; the throat and fore neck mottled with black bases to the feathers; in front of the eye a small spot of dusky black; remainder of under surface of body bright yellow, rather paler on the thighs and under tail-coverts; sides of body and flanks olive-green; axillaries and under wing-coverts yellow, with dull ashy bases; edge of wing bright yellow; quills dusky below, ashy along the edge of the inner web: "upper mandible brownish black, its edges in their whole length pale yellowish flesh-colour; lower mandible pale yellowish flesh-colour, a little dusky at the end; feet and claws flesh-colour; iris hazel" (*Audubon*). Total length 5 inches, culmen 0·45, wing 2·55, tail 2·2, tarsus 0·85.

In the summer plumage the olive-brown tips become worn off and the head is purer grey, while the abrasion of the tips to the feathers of the throat and fore neck cause the black on these parts to be more distinct.

Hab. Eastern province of the United States and British America, casually to Greenland: west to Kansas, Missouri, and Dakota; south to Costa Rica and New Granada, but no Mexican nor West-Indian quotations; no United-States wintering record: breeds in the northern portions of its habitat, as New England, and very abundantly in Minnesota and Eastern Dakota: common in the Mississippi valley, but rare along the Atlantic States. (*Coues.*) Winters in Central America, Costa Rica, and Panama, and extends into the Magdalena and Cauca valleys in Colombia (*S. & G.*).

a. ♀ juv. sk.	North America.	U.S. Nat. Museum [P.].
b. ♂ ad sk.	Pembina, Dakota, June (*E. Coues*).	Salvin-Godman Coll.
c. ♂ ad. sk.	Lake Forest, Ill., May 23 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
d. ♂ ad. sk.	Warsaw, Illinois, May 19 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
e. ♂ ad. sk.	Williamsport, Penn. (*Roosevelt*).	U.S. Nat. Museum [P.].
f, g. ♂ ad sk.	Angostura, Costa Rica, Feb. and March (*J. Carmiol*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Chiriqui, Veragua (*E. Arcé*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Bogotá.	Salvin-Godman Coll.
k. Ad. sk.	Bogotá (*Chesterton*).	Sclater Collection.
l. ♂ ad. sk.	Medellin, U. S. Colombia (*T. K. Salmon*).	Salvin-Godman Coll.
♂ juv. sk.	Santa Elena, Antioquia (*T. K. S.*).	Salvin-Godman Coll.

14. TERETISTRIS.

Type.

Teretistris, *Cab. J. f. O.* 1855, p. 475 ..... T. fernandinæ.

Range. Island of Cuba, West Indies.

Key to the Species.

a. Yellow colour underneath restricted to the throat; head grey like back ..... *fernandinæ*, p. 368.
b. Yellow of the throat extending also down the breast to the abdomen; head yellow; back grey ..... *fornsi*, p. 368.

1. Teretistris fernandinæ. (Plate XII. fig. 1.)

Anabates fernandinæ, *Lembeye, Aves de Cuba*, p. 66, lam. 5. fig. 2 (1850); *Gundl. Journ. Bost. Soc. N. H.* vi. p. 317 (1853).
Helmitherus blanda, *Bp. Consp.* i. p. 314 (1850, *nec Licht.*).
Teretistris fernandinæ, *Cab. J. f. O.* 1855, p. 475; *Gundl. J. f. O.* 1861, p. 326.
Teretristis fernandinæ, *Baird, Review Amer. B.* p. 234 (1865); *Scl. & Salv. Nomencl. Av. Neotr.* p. 11 (1873).
Icteria fernandinæ, *Gray, Hand-l. B.* i. p. 384, no. 5825 (1869).

Adult. General colour above brownish ash-colour, the wing-coverts like the back; bastard-wing and primary-coverts dusky, externally ashy; quills and tail-feathers dusky, externally washed with ashy; head and hind neck dull olive-yellow, the lores, feathers above and around the eye, ear-coverts, and cheeks, as well as the entire throat, brighter yellow; centre of breast and abdomen ashy whitish with a slight tinge of yellow, brownish ashy on the sides of the body and flanks; thighs and under tail-coverts, axillaries, and under wing-coverts white, edged with yellow; quills dusky, whitish along the edge of the inner web: "bill greyish brown; feet blue-grey; iris dark brown" (*Gundlach*). Total length 4·7 inches, culmen 0·55, wing 2·2, tail 1·9, tarsus 0·75.

Hab. Western portion of the island of Cuba.

a. Ad. sk.	Cuba.	
b. Ad. sk.	Cuba (*C. Wright*).	Salvin-Godman Coll.
c. ♂ ad. sk.	Cuba (*Mus. Lawr.*).	Salvin-Godman Coll.
d. Ad. sk.	San Cristobal, Cuba (*G. F. Gaumer*).	Salvin-Godman Coll.

2. Teretistris fornsi. (Plate XII. fig. 2.)

Teretistris fornsi, *Gundl. Ann. Lyc. N.Y.* vi. p. 275 (1857); *id. J. f. O.* 1861, p. 326.
Teretristis fornsi, *Baird, Review Amer. B.* p. 235 (1865); *Scl. & Salv. Nomencl. Av. Neotr.* p. 11 (1873).
Icteria fornsi, *Gray, Hand-l. B.* i. p. 384, no. 5826 (1869).

Adult male. General colour above light ashy grey, with a slight tinge of brown on the lower back and rump; scapulars and wing-coverts rather more ashy brown than the back; bastard-wing and primary-coverts dusky, externally washed with ashy; quills broadly edged with ashy, more hoary on the outer edge of the primaries; tail-feathers dusky brown, narrowly edged with ashy grey; head like the back, the sides of the neck also ashy grey, rather lighter than the head; lores, feathers round the eye, eyelid, sides of face, cheeks, and ear-coverts lemon-yellow, slightly greenish on the ear-

coverts; throat and breast lemon-yellow; the abdomen whiter, slightly washed with yellow; sides of lower breast, flanks, and thighs ashy grey, as also the under tail-coverts; axillaries and under wing-coverts white, the edge of the wing tinged with yellow; quills dusky below, white along the edge of the inner web: "upper mandible and terminal half of the lower one black, basal half of the latter lead-coloured; iris dark hazel; legs and feet plumbeous" (*Gundlach*). Total length 4·8 inches, culmen 0·55, wing 2·25, tail 2·05, tarsus 0·7.

Hab. Eastern portion of the island of Cuba.

a. ♂ ad. sk.	Cuba.	Sclater Collection.
b. ♂ ad. sk.	Monte Verde, Cuba (*C. Wright*).	Salvin-Godman Coll.
c. ♀ ad. sk.	Cuba (*Mus. Lawr.*).	Salvin-Godman Coll.

15. GRANATELLUS.

Type.

Granatellus, *Bp. Consp.* i. p. 312 (1850, *ex DuBus MSS.*). G. venustus.



Head of *Granatellus sallæi*.

Range. Mexico and the Tres-Marias Islands; Guatemala; Guiana and Upper Amazonia.

Key to the Species.

a. Throat white.
  a'. With a black pectoral collar.
    a''. Lateral tail-feathers tipped with white, top of head like the back; forehead black ..... *venustus*, p. 369.
    b''. No white on the tail; top of head black .... *pelzelni*, p. 370.
  b'. With no black pectoral collar; outer tail-feathers nearly entirely white ..... *francescæ*, p. 370.
b. Throat grey ..... *sallæi*, p. 371.

1. Granatellus venustus.

Granatellus venustus, *Bp. Consp.* i. p. 312 (*ex Dubus MSS. et Icon. ined. Esq. Orn.*); *Sel. P. Z. S.* 1864, p. 607, pl. 37. fig. 2; *Baird, Review Amer. B.* p. 231 (1865); *Sel. & Salv. Nomencl. Av. Neotr.* p. 11 (1873); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 270 (1874); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 160 (1881).
Icteria venustus, *Gray, Hand-l. B.* i. p. 384, no. 5821 (1869).

Adult male. Above bluish slate-colour; forehead, sides of head and neck, including edge of vertex and a narrow pectoral collar, continuous black; a broad triangular patch of white behind the eye in the black of the neck; median portion of underparts, from the

black pectoral band to and including crissum, vermilion-red; axillaries, lining of wings, flanks, chin, and throat (which are bordered by black, as described) white; sides of breast plumbeous; outer web and terminal half of inner web of first tail-feather, terminal fifth of second, and a slight tip of third all white; rest of tail black; quills dark brown, edged externally like the back, internally with whitish; bill dark plumbeous, paler on the tomia and gonys; legs rather dusky; iris white. Length 5·4 inches, wing 2·45, tail 2·9, tarsus 0·75. (*Baird.*)

Hab. Mexico, between Colima and Tehuantepec on the Pacific side.

2. Granatellus pelzelni.

Granatellus venustus (*nec Bp.*), *Scl. P. Z. S.* 1859, p. 375.
Granatellus pelzelni, *Scl. P. Z. S.* 1864, p. 607, pl. 37. fig. 1; *Baird, Review Amer. B.* p. 23 (1865); *Pelz. Orn. Bras.* p. 216 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 11 (1873); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 160 (1881).
Icteria pelzelni, *Gray, Hand-l. B.* i. p. 384, no. 5823 (1869).

Adult male. General colour above slaty blue; wing-coverts like the back, the median and greater series black internally; bastard-wing and primary-coverts blackish; quills also blackish, slightly edged with slaty blue, the secondaries much more broadly; upper tail-coverts like the back; tail-feathers black; forehead and vertex black, the occiput and nape slaty blue like the back; lores black; above the eye a broad streak of white; upper margin of eyelid white; lower edge of eyelid, ear-coverts, and cheeks black; throat white; fore neck, breast, and centre of abdomen rosy pink, as well as the under tail-coverts; sides of body washed with slaty grey, separated from the pink breast and abdomen by a broad patch of creamy white extending down the sides of the breast and sides of abdomen; thighs slaty grey; axillaries and under wing-coverts white, mottled with slaty grey near the edge of the wing; quills dusky below, ashy along the edge of the inner web. Total length 4·6 inches, culmen 0·45, wing 1·95, tail 2, tarsus 0·65.

Hab. River Madeira, Amazonia; interior of British Guiana.

a. ♂ ad. sk.	Rio Madeira, Sept. 19 (*Natterer*).	Sclater Collection. (Type of species.)
b. Ad. sk.	South America.	Purchased.
c. ♂ ad. sk.	Camacusa, British Guiana, May 13 (*H. Whitely*).	Salvin-Godman Coll.
d. ♂ juv. sk.	Camacusa, March 17 (*H. W.*).	Salvin-Godman Coll.

3. Granatellus francescæ.

Granatellus francescæ, *Baird, Review Amer. B.* p. 232 (1865); *Grayson, Proc. Bost. Soc. N. H.* xiv. p. 278 (1871); *Salvin, Ibis*, 1874, p. 307, pl. 11; *Lawr. Mem. Bost. Soc. N. H.* ii. p. 270 (1874); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 160 (1881).
Icteria francescæ, *Gray, Hand-l. B.* i. p. 384, no. 5824 (1869).

Adult male. General colour above slaty grey, the long feathers on

the side of the rump with silky white tips; lesser wing-coverts like the back; median and greater series slaty grey with black bases, and narrowly fringed with white; bastard-wing black, narrowly edged with slaty grey; primary-coverts and quills black, externally slaty grey, the primaries edged with paler and more ashy grey; upper tail-coverts like the back; tail-feathers black, the four outer ones with a white spot at the tip, gradually increasing in extent towards the outermost, which has the terminal half white as well as the greater part of the outer web; crown of head slaty grey like the back; across the forehead a broad band of black, continued in a broad band of black down the sides of the crown; lores, feathers round and below the eye, cheeks, and ear-coverts black; a broad streak of white from above the eye to the sides of the neck; the latter slaty grey mixed with black; entire throat white, with narrow dusky shaft-lines; fore neck and chest with a broad band of pale rose-colour, joined to a band of the same colour which extends down the centre of the breast and abdomen on to the under tail-coverts; sides of the body and flanks white; thighs also dull white; axillaries and under wing-coverts white, the edge of the wing ashy grey, and a patch of the same colour on the lower coverts; quills blackish below, white along the edge of the inner web. Total length 5·8 inches, culmen 0·5, wing 2·65, tail 3, tarsus 0·9.

Adult female. General colour above dull ashy grey, washed with ochreous brown; wing-coverts like the back, with ashy-whitish ends to the feathers; quills dusky brown, edged with ashy and washed with ochreous brown; tail as in the male, but browner instead of black; forehead, a broad eyebrow, sides of face, ear-coverts, and sides of neck ochreous buff, whiter on the lores and eyelid; under surface ochreous buff, rather whiter on the throat and abdomen, and tinged with ochreous on the thighs and under tail-coverts; axillaries and under wing-coverts white; quills dusky below, white along the edge of the inner web. Total length 5·9 inches, culmen 0·6, wing 2·45, tail 2·8, tarsus 0·85.

Young male. Duller grey than the old male, and having the ear-coverts dark ochreous brown; the white band along the sides of the hinder crown tinged with ochreous; under surface of body almost entirely white, with a certain amount of pale rose-colour on the centre of the breast and abdomen; under tail-coverts entirely rose-colour.

Hab. Tres Marias Islands.

a. ♂ ad. sk.	Tres Marias Islands, May 9 (*A. Forrer*).	Salvin-Godman Coll.
b. ♂ juv. sk.	Tres Marias, April 26 (*A. F.*).	Salvin-Godman Coll
c. ♀ ad. sk.	Tres Marias, Feb. 24 (*A. F.*).	Salvin-Godman Coll.

4. Granatellus sallæi.

Granatellus sallæi, *Scl. P. Z. S.* 1856, p. 292, *Aves*, pl. 120, 1858, p. 97, 1859, p. 374; *Scl. & Salv. Ibis*, 1860, p. 397; *Scl. P. Z. S.* 1864, p. 607; *Baird, Review Amer. B.* p. 232 (1865); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 546 (1869); *Scl. & Salv. Nomencl. Av.*

Neotr. p. 11 (1873); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 161 (1881); *Boucard, P. Z. S.* 1883, p. 441.
Setophaga sallæi, *Bp. C. R.* xlii. p. 957 (1856).
Icteria sallæi, *Gray, Hand-l. B.* i. p. 384, no. 5822 (1869).

Adult male (type of species). General colour above dark slaty blue; wing-coverts like the back, the median and greater series black internally; bastard-wing and primary-coverts black, the latter edged with slaty blue; quills blackish, edged with slaty blue, the inner secondaries more broadly; upper tail-coverts slaty blue like the back; tail-feathers black, edged with slaty blue, the outer ones rather browner; crown of head slaty blue like the back; above the ear-coverts a broad line of white, above which is a well-defined streak of black along the sides of the crown; feathers above the eye and lores dull ashy; cheeks, ear-coverts, and throat dull slaty blue, the chin-feathers tipped with hoary grey; centre of breast, abdomen, and under tail-coverts beautiful rosy pink; sides of upper breast and flanks slaty blue; a broad patch of creamy-white feathers along the sides of the lower breast and abdomen; thighs slaty blue; under tail-coverts rosy pink, the longer ones broadly edged with blackish and slightly tipped with white; axillaries and under wing-coverts creamy white, slaty blue near the edge of the wing; quills dusky, ashy along the edge of the inner web: "bill lead-colour; feet dusky" (*Salvin*). Total length 5·4 inches, wing 2·35, tail 2·25, tarsus 0·75.

Adult female. Different from the male. Above slaty blue, the long feathers of the rump slightly mottled with a subterminal shade of paler grey; wing-coverts like the back, but with a slight shade of brown; bastard-wing and primary-coverts blackish brown; quills blackish brown, edged with pale slaty blue, the secondaries margined with rusty brown; upper tail-coverts slaty blue tinged with brown; tail-feathers blackish, edged with slaty blue, the two outer feathers white along the end of the shaft and at the tip, the external feather with a broad edging of white for the middle half of the outer web; crown of head slaty blue like the back; the forehead and feathers over the eye rusty brown, with a pale fawn-coloured streak above the ear-coverts, replacing the white streak of the male; lores whitish, washed with rusty brown, the feathers below the eye of the same colour; ear-coverts slaty grey washed with brown; cheeks and under surface of body pale fawn-colour, whiter on the abdomen, and deeper in colour on the breast and under tail-coverts; axillaries and under wing-coverts white, with a slight tinge of fawn-colour; quills dusky below, ashy white along the edge of the inner web. Total length 4·6 inches, culmen 0·45, wing 2·15, tail 2·2, tarsus 0·7.

Hab. Central America, from Mexico to Yucatan and Guatemala.

a. ♂ ad. st.	Cordova, Mexico.	M. A. Sallé [C.].	
b. ♂ ad. sk.	Cordova.	M. A. Sallé [C.].	
c. ♂ ad. sk.	Cordova (*A. Sallé*).	Sclater Collection.	(Type of species.)

d. ♂ ad. sk.	Northern Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Guatemala (*McLeannan*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Cajabon, Guatemala, Feb. (*O. S.*).	Salvin-Godman Coll.
g. ♀ ad. sk.	Vera Paz, Guatemala (*Hague*).	Salvin-Godman Coll.
h. ♀ ad. sk.	Vera Paz (*O. Salvin*).	Sclater Collection.

16. ICTERIA.

Type.

Icteria, *Vieill. Ois. Amér. Sept.* i. pp. iii, 85 (1807) ..... I. viridis.



Bill of *Icteria viridis*.

Range. Northern and Central America.

1. Icteria viridis.

Yellow-breasted Chat, *Catesby, Nat. Hist. Carol.* i. p. 50, pl. 50 (1731); *Wils. Amer. Orn.* i. p. 90, pl. 6. fig. 1 (1808).

Merle verd de la Caroline, *Briss. Orn.* ii. p. 315 (1760); *Montb. Hist. Nat. Ois.* iii. p. 396 (1775).

Turdus virens, *Linn. Syst. Nat.* 10th ed. i. p. 171 (1758, *nec* Muscicapa virens, *Linn. S. N.* 12th ed. p. 327).

Chattering Flycatcher, *Lath. Gen. Syn.* ii. pt. 1, p. 350 (1783); *Penn. Arctic Zool.* ii. p. 385 (1785).

Ampelis luteus, *Sparrm. Mus. Carls.* i. fasc. 3, pl. 70 (1788).

Muscicapa viridis, *Gm. Syst. Nat.* i. p. 936 (1788).

Garrulus australis, *Bartr. Trav. Flor.* p. 290 (1791).

Motacilla trochilus, *Bartr. t. c.* p. 302.

Icteria dumicola, *Vieill. Ois. Amér. Sept.* i. p. 85, pl. 55 (1807); *id. & Oud. Gal. Ois.* i. pl. 85 (1834).

Icteria viridis, *Bp. Journ. Phil. Acad.* iv. p. 252 (1825); *Audub. B. Amer.* pl. 137; *id. Orn. Biogr.* ii. p. 223 (1834), v. p. 433 (1839); *Jard. et Wils. Amer. Orn.* i. p. 92 (1832); *Bp. P. Z. S.* 1837, p. 111; *id. Comp. List B. Eur. & N. Amer.* p. 25 (1838); *Audub. Syn.* p. 163 (1839); *id. B. Amer.* iv. p. 160, pl. 244 (1842); *Nutt. Man. Orn.* p. 339 (1840); *Gray, Gen. B.* i. p. 229 (1846); *Bp. Consp.* i. p. 331 (1850); *Cab. Mus. Hein.* i. p. 63 (1850); *Baird, B. N. Amer.* p. 248 (1860); *Cab. J. f. O.* 1860, p. 403; *Scl. Cat. Amer. B.* p. 41 (1862); *Scl. P. Z. S.* 1864, p. 173; *Lawr. Ann. Lyc. N. Y.* viii. p. 285 (1866); *Dugès, La Natur.* i. p. 140 (1868); *Scl. & Salv. P. Z. S.* 1870, p. 836; *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 157 (1881); *Boucard, P. Z. S.* 1883, p. 441.

Icteria velasquezi, *Bp. P. Z. S.* 1837, p. 117; *Gray, Gen. B.* i. p. 229 (1846); *Bp. Consp.* i. p. 331 (1850); *Scl. & Salv. P. Z. S.* 1856, p. 298, 1859, pp. 363, 375; *iid. Ibis*, 1859, p. 12; *Salv. Ibis*, 1866, p. 202.

Icteria auricollis, *Bp. Consp.* i. p. 331 (1850, *ex Licht. Mus. Berol.*).

Tanagra auricollis, *Licht. Preis-Verz. mex. Vög.* p. 2 (*cf. Cab. J. f. O.* 1863, p. 57).

Icteria virens, *Baird, Rev. Amer. B.* p. 228 (1865); *Lawr. Ann. Lyc. N. Y.* ix. p. 95 (1868); *id. t. c.* p. 200 (1869); *Frantz. J. f. O.* 1869, p. 294; *Gray, Hand-l. B.* i. p. 384, no. 5819 (1869); *Allen, Bull. Harv. Coll.* iii. p. 175 (1872); *Coues, Key N. Amer. B.* p. 108 (1872); *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 17 (1876); *Sumichr. Mem. Bost. Soc. N. H.* ii. p. 547 (1869); *Sel. & Salv. Nomencl. Av. Neotr.* p. 11 (1873); *Coues, B. N.-West*, p. 77 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 307, pl. 15. fig. 12 (1874); *Coues, B. Color. Vall.* p. 320 (1878); *id. Bull. U.S. Geol. Surv.* iv. p. 569 (1878); *Merrill, Proc. U.S. Nat. Mus.* i. p. 124 (1871); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 18 (1881); *Coues, N. Amer. B.* 2nd ed. p. 312 (1884).

Adult. General colour above dark olive-green, rather more ashy on the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater coverts dusky ashy brown, externally washed with olive-greenish; bastard-wing dusky brown; primary-coverts and quills dusky, edged with dark olive, more ashy on the primaries, the first primary whitish along the outer margin; tail-feathers light ashy brown, edged with olive, the outer ones fringed with white along the tip of the inner web; head greyer than the back, ashy washed with olive-green; lores black, extending below the eye, and surmounted by a broad streak of white from the base of the bill to above the eye; eyelid white; ear-coverts slaty grey, washed with olive; cheeks, throat, and entire breast bright yellow; entire abdomen, thighs, and under tail-coverts white; sides of breast washed with olive-green; flanks pale brown; axillaries and under wing-coverts pale lemon-yellow; quills dusky below, ashy white along the inner web: "bill black, the base of the lower mandible blue; feet greyish blue; iris hazel" (*Audubon*). Total length 7·5 inches, culmen 0·65, wing 3·15, tail 3·2, tarsus 1·05.

Winter plumage. Seems to differ from the summer dress only in having the head and ear-coverts as distinctly olive as the back, without any ashy grey; the flanks and under tail-coverts more distinctly washed with pale brown, as well as the thighs.

"There is very little difference with sex, age, or season in this bird, excepting in the purity and intensity of the tints. The yellow of the breast is sometimes heightened to orange, or may show golden as usual, with stains of intense orange here and there. Immature specimens have the under mandible light plumbeous or plumbeous white. In very young birds the yellow may appear as slashing in the white, and the peculiar markings of the sides of the head are defective." (*Coues.*)

Hab. Eastern United States, north to Massachusetts, abundant, migratory; breeds throughout its range (*Coues*). Winters in Mexico and Guatemala.

a. Ad. st.	North America.	
b. Ad. sk.	North America.	Purchased.
c. ♂ ad. sk.	Knox Co., Indiana, May 25 (*R. Ridgway*).	U.S. Nat. Museum [P.].
d. ♀ ad. sk.	Rock Creek, District of Columbia, April 27 (*D. W. Prentiss*).	U.S. Nat. Museum [P.].

e. Ad. sk.	Washington, D. C. (*C. Drexler*).	Salvin-Godman Coll.
f. ♂ ad. sk.	District Columbia, May 14 (*D. W. Prentiss*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Haw's Branch, D. C., May 7 (*E. Coues*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Presidio, Mexico, Feb. (*A. Forrer*).	Salvin-Godman Coll.
i. ♀ ad. sk.	Presidio, March 7 (*A. F.*).	Salvin-Godman Coll.
k. Ad. sk.	Orizaba (*Botteri*).	Sclater Collection.
l. Ad. sk.	Guatemala.	Purchased.
m. Imm. sk.	Guatemala.	Gould Collection.
n. Ad. sk.	Choctum, Vera Paz (*Salvin*).	Sclater Collection.

Subsp. *a*. **Icteria longicauda.**

Icteria viridis (*nec L.*), *Towns. Journ. Philad. Acad.* viii. p. 153 (1839).

Icteria velasquezii, *Baird in Stansb. Rep. Great Slave Lake*, p. 328 (1852).

Icteria longicauda, *Lawr. Ann. Lyc. N. Y.* vi. p. 4 (1853); *Newb. Pacific Rail. Rep.* vi. p. 81 (1857); *Baird, B. N. Amer.* p. 249 (1858); *id. op. cit.* 1860, pl. 34. fig. 2; *Scl. Cat. Amer. B.* p. 42 (1862); *Baird, Review Amer. B.* p. 230 (1865); *Coues, Ibis*, 1865, p. 163; *Gray, Hand-l. B.* i. p. 384, no. 5820 (1869); *Cooper, B. Calif.* p. 98 (1870); *Merrill, Proc. U.S. Geol. Surv.* 1872–73, pp. 674, 713 (1876).

Icteria virens, var. longicauda, *Coues, Key N. Amer. B.* p. 108 (1872); *Baird, Brewer, & Ridgway, Hist. N. Amer. B.* i. p. 309 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 271 (1874); *Hensh. Rep. Zool. Expl. W. 100th Merid.* p. 206 (1876).

Icteria longicaudata, *Finsch, Abhandl. nat. Ver. Bremen*, ii. p. 331 (1870).

Icteria virens, β. longicauda, *Coues, B. N.-West*, p. 77 (1874).

Icteria virens longicauda, *Coues, B. Color. Vall.* p. 320 (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 18 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 312 (1884).

Differs from *I. viridis* in its greyish upper surface and longer tail. In winter plumage also it appears to be olive-brown, and not so green as *I. viridis*. At the same time I have seen some specimens which are so difficult to determine, that I have not been able to satisfy myself that the two races are fully distinct. I have therefore contented myself with separating the synonymy, as given by the American writers, and prefer to wait for further evidence on the question. Tail about 3·5 inches.

Hab. Middle and Western provinces of the United States, Lower California (*Coues*). Winters in Mexico and Guatemala.

a. ♂ ad. sk.	Fort Rice, June 24 (*Smiths. Inst.*).	Salvin-Godman Coll.
b. Ad. sk.	Nebraska (*Smiths. Inst.*).	Sclater Collection.
c. ♂ ad. sk.	Tucson, Arizona, May 10 (*E. W. Nelson*).	U.S. Nat. Museum [P.].
d. Ad. sk.	California.	Purchased.

e. Ad. sk.	Mexico (*De Saussure*).	Sclater Collection.
f. Ad. sk.	City of Mexico.	Salvin-Godman Coll.
g. Ad. sk.	San Pedro, British Honduras (*G. M. Whitely*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Retalhuleu, Guatemala, Sept. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
i. Ad. sk.	Coban, Vera Paz, Nov. (*O. S.*).	Salvin-Godman Coll.
k. Ad. sk.	Choctum, Vera Paz (*O. S.*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Volcan de Fuego, Guatemala, Oct. 10 (*O. S.*).	Salvin-Godman Coll.
m. Imm. sk.	Guatemala.	Gould Collection.

17. BASILEUTERUS.

	Type.
Basileuterus, *Cab. in Schomb. Reis. Guian.* ii. p. 666 (1848)	B. vermivorus.
Myiothlypis, *Cab. Mus. Hein.* i. p. 17 (1850)	B. nigricristatus.
Idiotes, *Baird, Review Amer. B.* p. 247 (1865)	B. rufifrons.



Bill of *Basileuterus vermivorus*.

Range. Central America, and the whole of South America excepting Chili and Patagonia.

Key to the Species.

a. Head of the same colour as the back.
  a'. Lower mandible black; upper edge of ear-coverts dusky blackish, darker than the head ..... *luteoviridis*, p. 379.
  b'. Lower mandible dark horn-brown; upper edge of ear-coverts olive like the head.. *flaveolus*, p. 380.
b. Head particoloured and contrasting with the back.
  c'. Tail uniform throughout, without any fawn-coloured or white basal half.
    a''. Centre of crown black; a broad yellow eyebrow.
      a'''. With a long glossy black crest, ending in a point on the nape; no black streak on the ear-coverts ..... *nigricristatus*, p. 380.
      b'''. Black ending on the centre of the crown; occiput and nape dark olive, a little deeper in shade than the back; a black streak along the upper edge of the ear-coverts ..... *euophrys*, p. 382.
    b''. Centre of crown with a more or less distinct mesial band (yellow, rufous, or ashy), bordered on each side by a broad band of black or dusky, joining on the forehead; eyebrow not white.

c'''. Coronal streak pure yellow, without any admixture of rufous or orange.
  a^4. Throat grey; remainder of under surface of body yellow ..... *cinereicollis*, p. 382.
  b^4. Throat yellowish white or yellow, like the rest of the under surface of body.
    a^5. A streak above the lores and the eyelid yellow; ear-coverts dark olive ..... *culicivorus*, p. 383.
    b^5. A streak above the lores and the eyelid white.
      a^6. Ear-coverts pale ashy grey .. *cabanisi*, p. 384.
      b^6. Ear-coverts black ..... *tristriatus*, p. 385.
d'''. Coronal patch very pale ochreous, *pale orange-rufous* *, or ashy.
  c^4. Ear-coverts black, forming a conspicuous auricular patch.
    c^5. Supraloral streak white or buffy white; crown pale ochreous, shaded with ashy; upper surface dark olive-yellowish ..... *auricularis*, p. 386.
    d^5. Supraloral streak ashy fulvous; crown pale orange-rufous; colour above dull olive-green ..... *melanotis*, p. 386.
  d^4. Ear-coverts not entirely black, but with a streak of black along the upper margin; crown of head ashy grey, with yellow bases to the feathers of the forehead.
    e^5. Sides of neck and hind neck ashy grey, as also the ear-coverts; eyebrow pale ashy; throat white; fore neck and breast bright yellow, much richer on the abdomen and under tail-coverts ..... *trifasciatus*, p. 388.
    f^5. Sides of neck and hind neck dark olive, like the back; ear-coverts and eyebrow pale ashy with a yellowish tinge; entire under surface pale ochreous buff or light yellow, deepening somewhat on the abdomen ..... *meridanus*, p. 387.
e'''. Coronal patch dark or light chestnut or orange-rufous, with concealed yellow bases to the feathers.
  e^4. Throat whitish, like the rest of the under surface ..... *hypoleucus*, p. 388.

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* *B. melanotis* is the species which has the crown orange-rufous, whereby it ought, strictly speaking, to be placed in section c'''; but it is clearly only a race of *B. auricularis*. All the birds included under section d''' might well be ranked as subspecies, but the differences, though slight, are constant, and I give them full specific rank until intermediate links are found to connect them more closely together.

f^4. Throat white; rest of under surface of body yellow ..... *conspicillatus*, p. 389.
g^4. Throat grey.
g^5. Chest and flanks grey; abdomen whitish ..... *castaneiceps*, p. 389.
h^5. Chest and under surface of body olive-yellow, a little brighter on the abdomen ..... *coronatus*, p. 390.
h^4. Throat yellow, like the rest of the under surface.
i^5. Ear-coverts olive or ashy grey.
c^6. Supraloral streak olive-yellow; nape olive-yellow.
a^7. Smaller: wing 2·25 inches; bill black; upper surface olive-green, with the ear-coverts dingy olive-green . *bivittatus*, p. 391.
b^7. Larger: wing 2·7 inches; bill brown, the lower mandible pale; upper surface olive-yellow, the ear-coverts also olive-yellow ..... *roraimæ*, p. 392.
d^6. Supraloral streak ashy white; nape ashy.
c^7. Entire back olive ..... *auricapillus*, 393.
d^7. Hind neck and upper mantle and scapulars slaty grey; remainder of back olive .. *fraseri*, p. 394.
k^5. Ear-coverts chestnut like the crown; a broad golden-yellow eyebrow ..... *belli*, p. 395.
f''. Crown of head chestnut; a broad white eyebrow.
i^4. Ear-coverts chestnut.
l^5. Entire under surface of body yellow.
e^6. Hind neck olive-greenish like the back ..... *delattrii*, p. 396.
f^6. Hind neck with an ashy-grey collar..... *mesochrysus*, p. 396.
m^5. Throat and breast yellow; abdomen ashy white; flanks ochreous brown ..... *rufifrons*, p. 397.
k^4. Ear-coverts black ..... *melanogenys*, p. 398.
g'''. Crown dark slaty grey, contrasting with the olive-green back, with occasionally an indication of blackish bands along the sides of the crown.
l^4. Throat yellow like the breast .... *griseiceps*, p. 399.
m^4. Throat white; sides of body olive-green; under tail-coverts yellow or ochraceous ..... *leucoblepharus*, p. 400. / *leucophrys*, p. 400.
n^4. Throat white; breast and sides of body brown; under tail-coverts white, washed with brown.
n^5. Eyebrow and sides of face dull white ..... *stragulatus*, p. 401.

o^5. Eyebrow and sides of face rufous.
g^6. Wing-coverts edged with rufous ..... *mesoleucus*, p. 402.
h^6. No rufous edgings to the wing-coverts ..... *bolivianus*, p. 402
d''. Basal portion of tail buff or creamy white, as well as the rump and upper tail-coverts.
c''. Terminal band on tail dark brown or black.
h'''. Rump and base of tail white; terminal band on tail broad (1 inch); eyebrow white..... *leucopygius*, p. 402.
i'''. Rump and base of tail pale fawn-colour; terminal band on tail narrower (0·9 inch); eyebrow dull whitish ..... *veraguensis*, p. 403.
k'''. Rump and base of tail deep fawn-colour or pale ferruginous; terminal band on tail narrow (0·7 inch); eyebrow rufous ..... *semicervinus*, p. 404.
d''. Terminal band on tail olive like the back (0·8 inch); eyebrow rufous .... *uropygialis*, p. 405.

1. Basileuterus luteoviridis.

Trichas luteoviridis, "*Bp. Atti Sci. Ital.*" 1844, p. 405 (*teste Scl.*).
Myiothlypis luteoviridis, *Bp. Consp.* i. p. 311 (1850); *Tacz. P. Z. S.* 1874, p. 509.
Chlorospingus xanthophrys, *Scl. P. Z. S.* 1856, pp. 30, 93; *id. Cat. Amer. B.* p. 90 (1862).
Basileuterus luteoviridis, *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873); *Tacz. Orn. Pérou*, p. 477 (1874).
Basileuterus luteoviridis ♀ (*err.*), *Gray et auct.*

Adult (type of *Chlorospingus xanthophrys*, Sclater). General colour above olive-green, the lesser wing-coverts like the back; median and greater series dusky brown, externally rather yellower than the back; bastard-wing, primary-coverts, and quills dusky brown, externally edged with olive-green, the first primary margined with ashy olive; tail-feathers olive-brown, externally lighter olive-greenish; crown of head like the back, with an ill-defined line of dusky blackish from the base of the bill along the sides of the crown, succeeded by a superciliary streak of bright yellow, extending to above the eye, the hinder part of this streak light yellowish olive above the ear-coverts; lores, eyelid, and a streak along the top of the ear-coverts dusky blackish; lower edge of eyelid yellow; feathers below the eye yellow, with dusky bases; ear-coverts olive, streaked with yellowish-white shaft-lines; cheeks and under surface of body rich yellow, deeper on the fore neck; sides of breast and flanks dark olive; thighs ashy; under tail-coverts yellow, with dusky olive bases; under wing-coverts and axillaries dull olive-yellow, with dusky ashy-brown bases; quills dusky below, ashy along the edge of the inner web; "bill black; feet

brownish; iris dark brown" (*Jelski*). Total length 4·8 inches, culmen 0·5, wing 2·45, tail 2·25, tarsus 0·8.

Hab. From Colombia to Peru.

a, b. Ad. sk.	Bogotá.	Sclater Collection.
c. Ad. sk.	Bogotá.	Sclater Collection. (Type of *Chlorospingus xanthophrys*, Scl.)
d, e. Ad. sk.	Bogotá.	Salvin-Godman Collection.
f. Ad. st.	S. America.	J. Gould, Esq.

2. Basileuterus flaveolus.

Basileuterus flaveolus, *Baird, Rev. Amer. B.* p. 252 (1865); *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873).
Myiothlypis flaveolus, *Pelz. Orn. Bras.* p. 72 (1871).

Adult male. General colour above yellowish green, a little lighter on the rump and upper tail-coverts, the long feathers of the former with a concealed subterminal white bar; wing-coverts like the back, the greater series rather more yellow at the ends; primary-coverts and quills dusky brown, externally like the back, the bastard-wing feathers rather more ashy olive on their outer webs, the first primary margined with olive-brown; tail-feathers dusky olive, with cross bars under certain lights, the feathers externally olive like the back; head like the back, with an ill-defined streak of dusky blackish from the base of the bill to the sides of the nape, followed by an eyebrow of rather bright yellow extending above the ear-coverts; lores and upper and under edge of eyelid yellow; anterior edge of eyelid and a spot behind the eye dusky blackish; feathers below the eye and anterior portion of ear-coverts yellow, the hinder part of the latter yellowish green like the sides of the neck; cheeks and entire under surface of body bright yellow, the sides of the breast and flanks yellowish green; thighs olive-yellow; under tail-coverts bright yellow; axillaries and under wing-coverts yellow, with ashy bases to the feathers, the edge of the wing bright yellow; quills dusky below, ashy along the edge of the inner web. Total length 5·4 inches, culmen 0·55, wing 2·65, tail 2·35, tarsus 0·9.

Hab. Brazil.

a. Ad. sk.	South America.	Sclater Collection.
b. Ad. sk.	Brazil.	Sclater Collection.
c. Ad. sk.	Bahia.	Sclater Collection.
d, e. Ad. sk.	Bahia (*Wucherer*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Goiaz, Brazil (*Natterer*).	Sclater Collection.

3. Basileuterus nigricristatus.

Trichas nigricristatus, *Lafr. Rev. Zool.* 1840, p. 230; *Gray, Gen. B.* i. p. 197 (1846).
Myiothlypis nigrocristatus, *Cab. Mus. Hein.* Th. i. p. 17 (1850); *Bp. Consp.* i. p. 311 (1850); *Scl. P. Z. S.* 1855, p. 143.
Basileuterus nigricristatus, *Scl. P. Z. S.* 1859, p. 440; *id. Cat. Amer. B.* p. 36 (1862); *Baird, Rev. Amer. B.* p. 251 (1865); *Scl. & Salv.*

Exot. Orn. p. 10 (1873); *id. Nomencl. Av. Neotr.* p. 10 (1873); *Tacz. P. Z. S.* 1879, p. 223, 1880, p. 191; *id. Orn. Pérou*, p. 477 (1884).
Basileuterus nigricapillus, *Scl. P. Z. S.* 1860, p. 74.
Setophaga flaveola, *Gray, Hand-l. B.* i. p. 245, no. 3560 (1869, *nec Baird*).
Setophaga nigricristata, *Gray, t. c.* p. 245, no. 3561 (1869).

Adult. General colour above dull yellowish olive, slightly more yellow towards the rump and upper tail-coverts; wing-coverts like the back; primary-coverts and bastard-wing dark brown, the latter more olive-brown externally; quills dark brown, externally edged with the same colour as the back, a little brighter yellow on the primaries, the first of which is margined with yellowish white; tail-feathers olive-brown, yellowish olive along the outer webs, and having a tiny spot of pale yellow at the tips; crown of head glossy black, forming a cap, which tapers to a point on the nape; sides of crown, ear-coverts, and sides of neck dull yellowish olive like the back; a broad streak of bright yellow extending from the base of the bill just beyond the eye; a loral spot of dusky black; upper and lower edge of the eyelid bright yellow; cheeks and under surface of body bright yellow; the sides of the body and flanks dull olive-yellowish; thighs olive externally, brighter yellow on the inner side; under tail-coverts yellow; under wing-coverts and axillaries yellow, brighter along the edge of the wing; quills dusky below, ashy along the edge of the inner web: "bill blackish; feet greyish yellow; iris dark brown" (*Stolzmann*); "iris clear brown" (*Goering*). Total length 5·5 inches, culmen 0·5, wing 2·55, tail 2·45, tarsus 0·85.

The sexes are alike in coloration. A female in the Salvin-and-Godman collection measures as follows:—

	Total length.	Wing.	Tail.	Tarsus.
	in.	in.	in.	in.
♀. Santa Elena, Colombia (*Salmon*)..	5·5	2·4	2·35	0·9

Young male (Guapolo; Fraser). Differs from the adult only in having the black of the crown less extended, and not reaching beyond the sinciput, the hinder part of the crown being blackish brown mixed with olive.

Messrs. Salvin and Godman have an adult bird from Bogotá, in which the black feathers of the crown are tipped with yellowish olive. This is probably the *winter plumage* of the adult male.

Hab. From Venezuela and Colombia to Ecuador and Peru.

a. ♂ ad. sk.	South America.	Sclater Collection.
b. ♂ ad. sk.	Merida, Venezuela (*A. Goering*).	Salvin-Godman Coll.
c. Ad. sk.	Medellin, U.S. Colombia (*T. K. Salmon*).	Salvin-Godman Coll.
d. ♀ ad. sk.	Santa Elena, U.S. Colombia, Sept. (*T. K. Salmon*).	Salvin-Godman Coll.
e, f. Ad. sk.	Bogotá (*Crowther*).	Salvin-Godman Coll.
g. Ad. sk.	Bogotá.	J. Purdie, Esq. [P.].
h. Ad. sk.	Bogotá.	Sclater Collection.

i. ♂ ad. sk.	Guapulo, Ecuador (*L. Fraser*).	Purchased.
k. Ad. sk.	Ecuador.	Gould Collection.
l, m. ♂ ♀ ad. sk.	Intaj, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
n. Ad. sk.	Quito, Ecuador (*Bruce*).	Salvin-Godman Coll.

4. Basileuterus euophrys.

Basileuterus euophrys, *Sel. & Salv. P. Z. S.* 1876, p. 352, 1879, p. 594.

Adult (type of species). General colour above olive-brown or dull yellowish olive; wing-coverts like the back; primary-coverts and bastard-wing darker brown, externally dull olive-brownish; quills dark brown, externally edged with yellowish olive, brighter on the primaries, the first of which is margined with very pale olive-yellow; tail-feathers dull olive-brown, clearer yellowish olive on the edges, the tips of the feathers with a tiny spot of pale yellow at the end of the shaft; forehead black, occupying the centre of the crown; the rest of the head dusky olive-brown; a broad streak of bright yellow extending from the base of the nostril to behind the level of the eye, and forming a conspicuous eyebrow; lores, feathers round the eye, and a large spot behind the latter black; ear-coverts olive-yellow, with brighter yellow shaft-lines, the upper edge duller olive; cheeks and under surface of body bright pale yellow; the sides of the body darker olive, as also the thighs; under tail-coverts bright yellow, with darker olive bases; axillaries and under wing-coverts dark olive like the flanks, those near the edge of the wing brighter yellow; quills dusky below, ashy olive along the edge of the inner web. Total length 5·5 inches, culmen 0·55, wing 2·75, tail 2·5, tarsus 0·95. (*Mus. Salvin and Godman.*)

A second specimen in the Salvin-and-Godman collection appears to be somewhat immature, if it is not the adult female. It is more distinctly olive-brown above, especially on the head, which has the base of the forehead dusky black as well as a line above the yellow eyebrow, the rest of the head being dull olive-brown.

Hab. Bolivia.

a, b. Ad. sk.	Bolivia.	Mr. Bridges.
c, d. [♂ ♀] ad. sk.	Bolivia (*C. Buckley*).	Salvin-Godman Collection. (Types of species.)

5. Basileuterus cinereicollis.

Basileuterus cinereicollis, *Sclater, P. Z. S.* 1864, p. 166, 1865, p. 285, pl. 9. fig. 2; *Baird, Review Amer. B.* p. 244 (1865); *Sel. & Salv. Nomencl. Av. Neotr.* p. 10 (1873).
Setophaga cinereicollis, *Gray, Hand-l. B.* i. p. 245, no. 3550 (1869).

Adult (type of species). General colour above olive-green, slightly yellower towards the rump and upper tail-coverts; wing-coverts like the back, the greater series rather yellower at the ends; bastard-wing dusky brown, externally ashy olive; primary-coverts and quills dusky brown, narrowly margined with olive-green; tail-feathers dusky brown, externally olive, the two centre ones entirely olive;

crown of head with a patch of yellow, obscured by olive-green tips to the feathers; the sides of the crown with a broad black bar accompanying the yellow coronal patch from the base of the bill, and extending down the sides of the hind neck, but not so pronounced in this direction; a superciliary line of ashy grey extending from the lores to the sides of the neck, which are also ashy grey like the hind neck and nape; lores ashy whitish; sides of face, cheeks, and ear-coverts ashy grey, mottled with white spots on the fore part of the cheeks and below the eye; upper margin of ear-coverts blackish; throat white, washed with ashy, the fore neck and sides of neck more decided ashy grey; centre of breast, abdomen, and under tail-coverts bright yellow, the sides of the body and flanks olive-green; thighs a little more ashy; axillaries olive-yellow, with dusky bases; under wing-coverts also dull olive-yellow, with dusky bases; quills dusky below, ashy along the edge of the inner web. Total length 4·7 inches, culmen 0·55, wing 2·5, tail 2·3, tarsus 0·85.

Hab. Colombia.

a, *b*. Ad. sk.	Bogotá.	Sclater Collection. (Types of species.)
c. Ad. sk.	Bogotá.	Salvin-Godman Collection.

6. **Basileuterus culicivorus.**

Sylvia culicivora, *Licht. Preis-Verz. mex. Vög.* p. 2 (1830); *Cab. J. f. O.* 1853, p. 67.

Muscicapa brasieri, *Giraud, Sixteen B. Texas*, pl. 6. fig. 2 (1841).

Basileuterus culicivorus, *Cab. Mus. Hein.* Th. i. p. 17 (1850); *Bp. Consp.* i. p. 313 (1850); *Baird, Rev. Amer. B.* p. 245; *Lawr. Ann. Lyc. N. Y.* ix. p. 95 (1868); *Sumichr. Mem. Bost. Soc. Nat. Hist.* i. p. 546 (1869); *Salv. P. Z. S.* 1870, p. 183; *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 312 (1874); *Coues, B. Color. Vall.* p. 335 (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 19 (1881); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 171 (1881).

Basileuterus brasieri, *Scl. P. Z. S.* 1855, p. 66, 1856, p. 292, 1859, p. 374; *Salv. & Scl. Ibis*, 1860, p. 274; *Scl. Cat. Amer. B.* p. 34 (1862); *Scl. P. Z. S.* 1865, p. 283.

Setophaga culicivora, *Gray, Hand-l. B.* i. p. 244, no. 3544 (1869).

Adult male. General colour above dull ashy grey, washed with olive; lesser and median wing-coverts like the back; greater wing-coverts dusky brown, with narrow margins of ashy grey; bastard-wing and primary-coverts light brown, very narrowly fringed with ashy; quills brown, edged with ashy grey, the first primary margined with ashy white; tail-feathers brown, externally edged with ashy grey, with a narrow fringe of white along the end of the inner web of the outer feathers; centre of crown bright sulphur-yellow, the occiput and nape ashy olive; a broad band of black extending from above the lores to the sides of the nape; base of forehead ashy mixed with yellow; over the eye a band of ashy grey washed with olive; lores pale yellow; in front of the eye a blackish spot; upper and lower edge of eyelid pale yellow, as well as the feathers below the eye; ear-coverts ashy grey slightly tinged with olive; a line

of dusky blackish along the upper edge of the cheek; cheeks and under surface of body bright pale yellow; sides of body, flanks, and thighs yellowish olive; axillaries and under wing-coverts very pale yellow; quills dusky brown below, ashy white along the edge of the inner web. Total length 4·8 inches, culmen 0·5, wing 2·4, tail 2·15, tarsus 0·65.

Mexican specimens are remarkable for their grey backs and yellow crowns, very few examples showing more than a subterminal indication of chestnut on the crest-feathers. Specimens from Veragua, in the Salvin-and-Godman collection, are not only much greener above, but one adult bird has the crown orange-chestnut with ashy-olive tips to the feathers. Costa-Rican examples, however, are strictly intermediate, being a little greener than Mexican ones, and having the crown more chestnut, with olive-yellow tips to the feathers; these tips may be only an indication of winter plumage.

Hab. Central America from Mexico to Veragua.

a. ♂ ad sk.	Mexico, April.	A. Boucard, Esq. [C.].
b. Ad. sk.	Oaxaca, Mexico (*Boucard*).	Sclater Collection.
c. Ad. sk.	Jalapa, Mexico (*Höge*).	Salvin-Godman Coll.
d. Ad. sk.	Volcan de Agua, Guatemala (*O. Salvin*).	Sclater Collection.
e. Ad. sk.	Near Coban, Vera Paz, Jan. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
f, g. ♂ ad. sk.	Volcan de Agua, Guatemala, Nov. (*O. S.*).	Salvin-Godman Coll.
h. Ad. sk.	Volcan de Fuego, Nov. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
i. Ad. sk.	Choctum, Feb. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
k. ♂ ad. sk.	Guatil, Costa Rica, April (*J. Carmiol*).	Salvin-Godman Coll.
l. Ad. sk.	Costa Rica (*Endrès*).	Salvin-Godman Coll.
m. Ad. sk.	Chiriqui, Veragua (*Arcé*).	Sclater Collection.
n. Ad. sk.	Veragua.	M. E. Arcé [C.].
o, p, q. ♀ ad. sk.	Volcan de Chiriqui, Veragua (*E. Arcé*).	Salvin-Godman Coll.
r, s. ♂ ad. sk.	Calovevora, Veragua (*E. Arcé*).	Salvin-Godman Coll.

7. Basileuterus cabanisi.

Basileuterus cabanisi, *Berlepsch, Orn. Centralbl.* p. 63; *Salv. & Godm. Ibis*, 1880, p. 117.

Adult male (Minca, U.S. Colombia, March 30, 1879; F. A. A. Simons). General colour above pale bluish grey with a slight tinge of olive; wing-coverts like the back; greater coverts and quills dusky, edged with pale bluish grey; bastard-wing and primary-coverts dusky brown; tail-feathers slaty brown, edged with pale bluish grey; centre of crown pale yellow, obscured by ashy tips to the feathers, and bordered by a broad line of black on each side of the crown, the feathers of this black band also tipped with slaty grey; a streak from the base of the nostrils to above the eye, and

the upper and under margin of the eyelid white; lores dusky blackish, as well as the anterior and posterior margins of the eyelid and the upper edge of the ear-coverts; the latter bluish grey, more silvery grey on the lower parts; cheeks and under surface of body bright pale yellow, a little more olive on the sides of the body and thighs; under tail-coverts white, slightly washed with yellow; under wing-coverts and axillaries white, the edge of the wing yellower; quills dusky below, ashy white along the edge of the inner web. Total length 4·8 inches, culmen 0·5, wing 2·25, tail 2·05, tarsus 0·75.

Hab. Colombia.

a. ♂ ad. sk. Minca, Sierra Nevada of Santa Marta, March (*F. Simons*). Salvin-Godman Collection.

8. Basileuterus tristriatus.

Myiodioctes tristriatus, *Tschudi, Faun. Peruan.* p. 193, Taf. 14. fig. 1 (1855).

Basileuterus tristriatus, *Bp. Consp.* i. p. 314 (1850); *Tacz. Orn. Pérou*, p. 472 (1884).

Adult male. General colour above dull olive-green, a little clearer on the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater coverts dusky, edged with the same colour as the back and slightly tipped with yellowish white; bastard-wing and primary-coverts dusky brown, with obsolete fringes of dull olive-yellow; quills dusky, externally edged with the same colour as the back, a little brighter olive-yellow on the primaries, the first one of which is whity brown along the outer web; tail-feathers dusky, edged with olive; centre of crown pale ochre shaded with ashy olive, and with brighter yellow bases, this central streak bordered by a broad band of black, reaching from the base of the bill, where it narrows, to the sides of the hind neck, and enclosing the occiput, nape, and hind neck, which are ashy olive; a narrow eyebrow of ashy olive skirting the black band from the base of the bill to the hind neck and becoming dull whitish above the lores; feathers below the eye and eyelid dull whitish; lores and ear-coverts dusky blackish; cheeks and throat pale yellow; the chin white, washed with yellow, which gradually deepens on the lower throat and centre of the body, becoming brighter yellow on the abdomen and again a little paler on the under tail-coverts; sides of body olive-greenish; axillaries and under wing-coverts pale yellow, with ashy bases; quills dusky below, ashy whitish along the edge of the inner web. Total length 4·9 inches, culmen 0·45, wing 2·45, tail 2·1, tarsus 0·75.

Adult female. Similar to the male, but the coronal streak brighter yellow, the lateral stripes on the crown and the ear-coverts deeper black; a few dusky spots on the sides of the throat, almost obsolete in the male. Total length 4·9 inches, culmen 0·6, wing 2·45, tail 2, tarsus 0·8.

The differences of plumage mentioned above exist in a pair of specimens in the Museum; but the sexes are practically similar in all respects, and I believe that the variation is due to the female being in more complete summer plumage than the male.

Hab. Peru and Ecuador.

a. ♂ ad. sk.	Mapoto, Ecuador, Jan. 22 (*Stolzmann*).	Warsaw Museum [P.].
b. ♀ ad. sk.	Machay, Ecuador, Nov. 18 (*Stolzmann*).	Warsaw Museum [P.].
c. Ad. sk.	Machay, Ecuador, Dec. 6 (*Stolzmann*).	Sclater Collection.

9. Basileuterus auricularis.

Basileuterus bivittatus (*nec D'Orb.*), *Scl. P. Z. S.* 1859, p. 137, 1860, p. 85; *id. P. Z. S.* 1865, p. 285; *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873, pt.); *iid. P. Z. S.* 1879, p. 594.

Adult male. General colour above dull olive; the wing-coverts like the back; median and greater coverts dusky brown, edged with olive, a little yellower than the back; bastard-wing feathers dusky, externally ashy olive; primary-coverts and quills dusky, edged with olive, paler and more yellow on the primaries; tail-feathers dusky brown, externally olive, the outer feathers with a pale ashy fringe near the end of the inner web; centre of crown with a pale ochreous patch, the feathers concealed by ashy tips; on each side of the crown a broad band of black, succeeded by a narrower superciliary streak of pale ochreous brown tinged with olive; lores ashy; a spot in front of and behind the eye black, as well as the anterior and posterior edges of the eyelid; upper and under edges of eyelid pale ochreous, as well as a small spot below the eye; cheeks pale ochreous; ear-coverts black, extending downwards below the eye; throat pale ochreous; centre of breast and abdomen pale olive-yellow, the sides of breast and flanks dull olive; thighs dark ashy washed with olive; under tail-coverts pale olive-yellow; under wing-coverts and axillaries pale olive, a little lighter than the sides of the body; quills dusky brown below, ashy along the edge of the inner web. Total length 5 inches, culmen 0·5, wing 2·5, tail 2·15, tarsus 0·8.

Hab. Colombia and Ecuador, and extending into Bolivia.

a. Ad. sk.	Bogotá.	Sclater Collection.
b. Ad. sk.	Bogotá.	Salvin-Godman Coll.
c, *d*. ♂ ad. sk.	Pallatanga, Ecuador (*Fraser*).	Sclater Collection.
e. Ad. sk.	Pallatanga, Sept. (*Fraser*).	Salvin-Godman Coll.
f, *g*. Ad. sk.	Simacu, Bolivia (*C. Buckley*).	Salvin-Godman Coll.

10. Basileuterus melanotis.

Basileuterus melanotis, *Laver. Ann. Lyc. N. Y.* ix. p. 95 (1868); *Salv. Ibis*, 1869, p. 313; *Von Frantz. J. f. O.* 1869, p. 183.

Basileuterus bivittatus (*nec D'Orb.*), *Salvin, Ibis*, 1870, p. 108; *id. P. Z. S.* 1870, p. 183; *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 170 (1881).

Adult (Cordillera del Chucu, Veragua; Arcé). General colour above dark olive-green, rather browner on the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater coverts dusky, edged with dull olive, rather lighter at the ends of the greater series; bastard-wing and primary-coverts dusky, fringed with olive; quills dusky blackish, edged with brownish olive, the primaries margined with dull olive-greenish; tail-feathers dusky brown, margined with olive-brown; centre of crown pale orange-rufous, washed with ashy olive, and bordered on each side with a broad band of black from the base of the bill to the sides of the neck, enclosing the occiput, nape, and hind neck, which are ashy olive; a tolerably distinct eyebrow ashy olive or pale brownish, rather whiter above the lores; the latter as well as the ear-coverts black, extending below the eye; eyelid and feathers below the eye dull whitish; cheeks, throat, and breast pale yellow, or whitish flushed with yellow, the abdomen brighter yellow, and the under tail-coverts again paler yellow; a shade of olive-green over the chest; sides of body and thighs olive-greenish; axillaries and under wing-coverts pale olive-yellow, with dull ashy bases; quills dusky below, ashy whitish along the edge of the inner web. Total length 4·4 inches, culmen 0·45, wing 2·35, tail 2, tarsus 0·8.

Hab. Central America: Costa Rica to Veragua.

a. Ad. sk.	Costa Rica (*Van Patten*).	Salvin-Godman Coll.
b. Ad. sk.	Cordillera del Chucu, Veragua (*E. Arcé*).	Salvin-Godman Coll.

11. Basileuterus meridanus.

Basileuterus bivittatus (*nec D'Orb.*), *Scl. & Salv. P. Z. S.* 1870, p. 780.

Adult male (Merida, July 1869; Goering). General colour above olive-green, a little duller on the mantle and back; lesser wing-coverts like the back; median and greater coverts, bastard-wing, primary-coverts, and quills dusky brown, edged externally with olive-green, rather brighter on the edge of the greater coverts and primaries; tail-feathers dusky brown, washed externally with olive-green; crown of head pale ochre-yellow, entirely overshaded with ashy olive; a broad black band on each side of the crown from the base of the bill to the hind neck, enclosing the occiput, nape, and hind neck, all of which are ashy olive; a broad eyebrow of ashy, with a slight ochreous tinge above the ear-coverts, and whiter above the lores; sides of face and ear-coverts ashy with a slight ochreous tinge, and a black line running along the upper edge of the ear-coverts; cheeks and under surface of body pale yellow, rather whiter on the throat, the chest somewhat shaded with brown; flanks and sides of body olive-brownish; under wing-coverts and axillaries pale yellow, with dusky olive bases; quills dusky below, ashy white along

the edge of the inner web: "iris brown" (*Goering*). Total length 4·8 inches, culmen 0·5, wing 2·4, tail 2, tarsus 0·8.

Hab. Sierra Nevada of Merida.

a. ♂ ad. sk. Merida, Venezuela, July (*A. Goering*). Salvin-Godman Coll.

12. Basileuterus trifasciatus.

Basileuterus trifasciatus, *Tacz. P. Z. S.* 1880, p. 191 (*ex Stolzmann, MSS.*); *id. Orn. Pérou*, p. 473 (1884).

Adult. General colour above ashy olive on the mantle and back; the lower back, rump, and upper tail-coverts olive-yellow; lesser and median wing-coverts like the back; greater coverts dusky, washed externally with olive-yellow; bastard-wing and primary-coverts dusky, narrowly edged with olive; quills dusky, edged with yellowish olive, brighter on the margins of the primaries, more ashy towards the ends of the latter; tail-feathers dusky, margined with olive-yellow; centre of the crown ashy from the base of the bill to the nape, the fore part of the central stripe with concealed bases ochre-yellow; on each side of the crown a broad black band over the eye, extending down the sides of the nape; lores and a superciliary streak ashy grey, like the sides of the neck; feathers below the eye dull ashy grey; eyelids whitish; ear-coverts ashy grey, with a black band along the upper edge behind the eye; cheeks and throat ashy whitish, with a narrow dusky malar line, separating the two; lower throat and remainder of under surface of body yellow, becoming brighter and richer on the breast and abdomen and under tail-coverts; thighs ashy white; flanks slightly washed with olive, darker and more ashy olive on the sides of the upper breast; axillaries and under wing-coverts pale yellow, with whitish bases; quills dusky below, whitish along the edge of the inner web. Total length 4·4 inches, culmen 0·45, wing 2·15, tail 1·9, tarsus 0·7.

Hab. Ecuador and Peru.

I am indebted to Dr. Taczanowski for the loan of the type of his *B. trifasciatus*, which is identical with the Jima bird described by me.

a. Ad. sk. Jima, Ecuador (*C. Buckley*). Salvin-Godman Coll.

13. Basileuterus hypoleucus.

Basileuterus hypoleucus, *Cab. Mus. Berol., undè Bp. Consp.* i. p. 313 (1850); *Burm. Th. Bras.* ii. p. 113 (1856); *Pelz. Orn. Bras.* p. 72 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873).
Setophaga hypoleuca, *Gray, Hand-l. B.* i. p. 245, no. 3549 (1869).

Adult male. General colour above yellowish olive, somewhat ashy on the back; wing-coverts dull yellowish olive; bastard-wing, primary-coverts, and quills light brown, edged narrowly with yellowish olive like the back, as also the greater coverts; tail-feathers light brown, with yellowish-olive edges; centre of crown pale orange-

rufous, obscured with ashy-grey tips to the feathers; base of forehead ashy brown; sides of crown brownish black, forming a broad band alongside of the rufous crown, and succeeded by a second broad band of ashy, inclining to ashy whitish above the ear-coverts; eyelid ashy; lores and ear-coverts pale ashy brown; cheeks and under surface of body dull white, washed with pale brown on the fore neck and breast, and slightly tinged with yellow on the latter; sides of body and flanks pale brown washed with olive; thighs yellowish olive; under tail-coverts pale yellow; axillaries and under wing-coverts pale olive-yellow; quills dusky brown below, ashy white along the edge of the inner web. Total length 5 inches, culmen 0·5, wing 2·35, tail 2·25, tarsus 0·75.

Hab. Brazil.

a. ♂ ad.	Lagoa Santa, June 13 (*Lund*).	Sclater Collection.
b. Ad. ♀ sk.	Ypanema (*Natterer*).	Sclater Collection.

14. Basileuterus conspicillatus.

Basileuterus conspicillatus, *Salv. & Godm. Ibis*, 1880, p. 117.

Adult female (type of species: San José, U.S. Colombia; F. A. A. Simons). General colour above olive-green, the wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills dusky, edged with the same colour as the back; tail-feathers olive-brown, edged with yellowish olive; centre of crown orange, with yellow bases to the feathers; the coronal patch extending to the nape, which is ashy grey like the hind neck; on each side of the orange crown a broad band of black; base of forehead, sides of crown, ear-coverts, and sides of face ashy grey; ear-coverts with minute white shaft-lines; a streak of white from the base of the nostrils and above the eye; lores, as well as anterior and posterior margins of eyelid, black; upper and lower edge of eyelid white; throat dull white, shaded with ashy-grey edges to the feathers; remainder of under surface of body rich yellow, the sides of the body and thighs olive; under tail-coverts deep yellow; under wing-coverts and axillaries olive-yellow, brighter yellow on the edge of the wing; quills dusky brown below, ashy along the edge of the inner web; "iris brown" (*Simons*). Total length 5·4 inches, culmen 0·5, wing 2·4, tail 2·25, tarsus 0·2.

A second example, killed on the same day as the above (June 5th), has the crown obscured with ashy tips to the feathers.

Hab. Colombia.

a, *b*. ♀ ad. sk.	San José, Sierra Nevada of Santa Marta, June (*F. Simons*).	Salvin-Godman Coll.

15. Basileuterus castaneiceps.

Basileuterus castaneiceps, *Scl. & Salv. P. Z. S.* 1877, p. 521; *Tacz. P. Z. S.* 1879, p. 223, 1882, p. 3; *id. Orn. Pérou*, p. 474 (1884).

Adult. General colour above dull yellowish olive, lighter toward

the rump and upper tail-coverts; wing-coverts like the back, the edges of the median and greater series rather lighter olive-yellow; bastard-wing and primary-coverts dusky brown, edged with yellowish olive; quills dusky brown, externally yellowish olive, clearer on the primaries; tail-feathers olive-brown, with yellowish-olive edges; crown of head orange-chestnut, forming a distinct cap, which is edged with a line of black from the base of the bill to the nape, which is tinged with grey; this is followed by a broad superciliary band of clear grey along the sides of the crown; lores black; ear-coverts clear grey, with a blackish band across the upper part; sides of face grey, mottled with a few white spots; cheeks and under surface of body light ashy grey, whitish on the centre of the breast and abdomen, which are slightly tinged with yellow; sides of body olive-brown; thighs ashy; under tail-coverts pale ochreous yellow; axillaries and under wing-coverts whitish, washed with pale yellow; quills dusky below, ashy white along the edge of the inner web. Total length 5·4 inches, culmen 0·55, wing 2·75, tail 2·55, tarsus 0·95.

Hab. Peru and Ecuador.

a. Ad. sk.	Tambillo, Peru (*Stolzmann*).	Sclater Collection.
b. Ad. sk.	Sical, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
c. Ad. sk.	Jima, Ecuador (*C. Buckley*).	Salvin-Godman Coll.

16. Basileuterus coronatus.

Myiodioctes coronatus, *Tschudi, Arch. f. Naturg.* 1844, p. 283; *id. Faun. Peruan.* p. 193 (1844–46).

Basileuterus coronatus, *Bp. Consp.* i. p. 314 (1850); *Scl. P. Z. S.* 1855, p. 144, 1859, p. 137; *id. Cat. Amer. B.* p. 34 (1862); *id. P. Z. S.* 1865, p. 285; *Baird, Rev. Amer. B.* p. 244 (1865); *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873); *Tacz. P. Z. S.* 1874, p. 509, 1882, p. 6; *id. Orn. Pérou*, p. 476 (1884).

Adult male. General colour above olive-greenish, rather lighter and more of an olive-yellow towards the rump and upper tail-coverts; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills dark brown, externally edged with olive-greenish, a little yellower on the outer greater coverts and primaries; tail-feathers dusky brown, with darker cross bars under certain lights, all the feathers externally olive-yellowish; forehead and top of crown bright chestnut; the hinder crown, occiput, and nape slaty grey, both skirted by a distinct line of black from the base of the bill to the sides of the hind neck; this is followed by a broad eyebrow of slaty grey, expanding on to the sides of the neck; lores somewhat whitish; in front of the eye a black spot; eyelid mottled with whitish; ear-coverts slaty grey, with ashy whitish shaft-lines, and separated from the eyebrow by a line of black running from behind the eye above the ear-coverts; hinder cheeks slaty grey, with narrow shaft-lines of ashy white; fore part of cheeks and feathers below the eye mottled with ashy-whitish spots; throat ashy white, with grey bases to the feathers; fore neck

and centre of breast and abdomen bright yellow, more brilliant on the latter and a little duller on the under tail-coverts; sides of breast and flanks washed with olive-green; thighs ashy olive; axillaries and under wing-coverts dull olive-yellow, ashy at the bases, the edge of the wing bright yellow; quills dusky below, ashy along the edge of the inner web: "bill black; feet pale brownish; iris dark brown" (*Jelski*). Total length 6·2 inches, culmen 0·55, wing 2·75, tail 2·6, tarsus 1.

Adult female. Similar to the male, but rather more olive-brown on the upper tail-coverts and tail. Total length 5·5 inches, culmen 0·55, wing 2·75, tail 2·5, tarsus 0·95.

The specimens from Ecuador and Peru have the under tail-coverts deeper coloured and washed with saffron-yellow.

In one specimen from Bogotá the coronal chestnut feathers are tipped with ashy, probably remains of winter plumage.

Hab. From Colombia to Ecuador and Peru.

a. Ad. sk.	Bogotá.	Salvin-Godman Coll.
b, *c*, Ad. sk.	Bogotá.	Sclater Collection.
d. Ad. sk.	Medellin (*T. K. Salmon*).	Salvin-Godman Coll.
e. ♀ ad. sk.	Santa Elena, Antioquia (*T. K. S.*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Antioquia (*T. K. S.*).	Sclater Collection.
g. ♀ ad. sk.	Antioquia.	T. K. Salmon, Esq. [C.].
h. Ad. sk.	Ecuador (*C. Buckley*).	Salvin-Godman Coll.
i, *k*. Ad. sk.	Jima, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Pallatanga, Ecuador, Sept. (*Fraser*).	Sclater Collection.
m. Ad. sk.	Auquimarcha, Peru, March 20 (*Jelski*).	Sclater Collection.

17. Basileuterus bivittatus.

Muscicapa bivittata, *D'Orb., Lafr. Syn. Av.* p. 51 (1857).
Muscicapara bivittata, *D'Orb. Voy. Amér. Mérid., Ois.* p. 324 (1835–1844).
Setophaga chrysogastra, *Tschudi, Arch. f. Naturg.* 1844, p. 276; *Gray, Gen. B.* i. p. 265 (1846); *Bp. Consp.* i. p. 313 (1850); *Tschudi, Faun. Peruan.* p. 192 (1855); *Gray, Hand-l. B.* i. p. 245, no. 3548 (1869).
Trichas bivittatus, *Gray, Gen. B.* i. p. 197 (1846).
Setophaga bivittata, *Gray, Hand-l. B.* i. p. 244, no. 3542 (1869).
Basileuterus diachlorus, *Cab. J. f. O.* 1873, p. 316; *Tacz. P. Z. S.* 1874, p. 509; *Sel. & Salv. P. Z. S.* 1879, p. 594.
Basileuterus bivittatus, *Tacz. Orn. Pérou*, p. 473 (1884).

Adult (Monterico, Peru; Stolzmann). General colour above dark olive-yellow, a trifle clearer on the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater wing-coverts, bastard-wing, primary-coverts, and quills externally washed with the same colour as the back, the margins to the primaries brighter olive-yellow; tail-feathers dusky ash-brown, edged with olive-yellow; crown of head pale orange-rufous, obscured by a wash of olive, the bases of the feathers yellow, especially distinct on the forehead; on

each side of the crown a broad band of black extending from the base of the bill to the sides of the hind neck, and enclosing the occiput, nape, and hind neck, which are olive-yellow, of the same tint as the superciliary streak, and somewhat contrasting with the back; a narrow but distinct yellow eyebrow, running from the base of the nostrils to the sides of the neck, and skirting the black band of the crown; the fore part of this eyebrow brighter yellow, the hinder part tinged with olive like the back; lores and ear-coverts dusky olive, the latter with faintly defined yellow shaft-lines; cheeks, throat, and under surface of body generally bright yellow, washed with olive on the fore neck and chest; the sides of the body and thighs olive-greenish; under tail-coverts bright yellow; axillaries and under wing-coverts yellow with ashy bases; quills dusky below, whitish along the edge of the inner web. Total length 4·5 inches, culmen 0·45, wing 2·25, tail 1·8, tarsus 0·8. (*Mus. Varsov.*)

I have described a specimen lent to me by Dr. Taczanowski from Peru, as the latter is the typical locality, and the Bolivian specimens are not in such good condition as the Peruvian one.

Examples from Bolivia in the Salvin-and-Godman collection also have the entire bill black. Total length 5 inches, culmen 0·55, wing 2·7, tail 2·4, tarsus 0·85.

Hab. Peru and Bolivia.

a. Ad. sk.	Simacu, Bolivia (*C. Buckley*).	Sclater Collection.
b. Ad. sk.	Simacu, Bolivia (*C. Buckley*).	Salvin-Godman Coll.
c. Ad. sk.	Consata, Bolivia (*C. Buckley*).	Salvin-Godman Coll.

18. Basileuterus roraimæ.

Adult male. General colour above dark yellowish olive, darker olive towards the upper tail-coverts; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills dull brown, edged with the same colour as the back, the first primary ashy white along the outer web; tail-feathers brown, externally dull olive; top of head orange-rufous; the nape clear greenish olive and bordered by a broad band of black, which extends from the base of the forehead along the sides of the crown to the hind neck; below this black streak a second superciliary line of pale olive-yellow; lores and upper and under edge of eyelid also pale yellow; in front of the eye a black spot; feathers below the eye and ear-coverts dark olive, with olive-yellow shaft-lines; anterior and posterior edge of eyelid and a narrow streak along the upper edge of the ear-coverts dusky blackish; cheeks and under surface of body bright yellow; the sides of the body and flanks dark yellowish olive, as also the thighs; axillaries and under wing-coverts dark yellowish olive, brighter yellow near the edge of the wing; quills dusky below, ashy whitish along the edge of the inner web. Total length 5·4 inches, culmen 0·55, wing 2·7, tail 2·45, tarsus 0·8.

Adult female. Scarcely to be distinguished from the male; the rufous coronal feathers lighter and tipped with pale olive-yellow, and the olive-yellow superciliary streak not quite so pronounced.

Total length 5 inches, culmen 0·55, wing 2·5, tail 2·25, tarsus 0·85.

Hab. British Guiana.

a, b. ♂ ♀ ad. sk.	Roraima, December (*H. Whitely*).	Sclater Collection.
c, d. ♂ ad. sk.	Roraima, Dec. (*H. W.*).	Salvin-Godman Coll.
e, f. ♂ ♀ ad. sk.	Roraima, Jan. (*H. W.*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Roraima, Aug. 10 (*H. W.*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Merume Mountains, July 5 (*H. W.*).	Salvin-Godman Coll.

19. Basileuterus auricapillus.

Contramaestre coronado, *Azara, Apunt.* ii. p. 414 (1802).
Sylvia vermivora, *Vieill. N. Dict. d'Hist. Nat.* xi. p. 278 (1817, pt.).
Muscicapa vermivora, *Lafr. & D'Orb. Syn. Av.* p. 51 (1837).
Setophaga aurocapilla, *Swains. An. in Menag.* p. 293 (1837); *Gray, Gen. B.* i. p. 265 (1846).
Muscicapara vermivora, *D'Orb. Voy. Amér. Mérid., Ois.* p. 324 (1835–44).
Helinæa vermivora, *Hartl. Ind. Azar.* p. 10 (1847).
Basileuterus vermivorus, *Cab. in. Schomb. Reis. Guian.* iii. p. 667 (1848); *id. Mus. Hein.* i. p. 17 (1850); *Bp. Consp.* i. p. 313 (1850); *Burm. Thiere Bras.* iii. p. 113 (1856); *Scl. P. Z. S.* 1855, p. 144; *id. Cat. Amer. B.* p. 34 (1862); *id. P. Z. S.* 1865, p. 283; *Baird, Review Amer. B.* p. 243 (1865); *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873); *White, P. Z. S.* 1882, p. 594.
Setophaga vermivora, *Gray, Hand-l. B.* i. p. 244, no. 3540 (1869).

Adult. General colour above olive-yellow, a little lighter yellow on the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater coverts dusky, margined with olive-yellow; bastard-wing dusky, externally ashy olive; primary-coverts and quills dusky, edged with olive-yellow, more ashy on the margins of the primaries; tail-feathers ashy brown, with olive-yellowish margins; crown of head light orange-chestnut, obscured by ashy-grey tips to the feathers, the nape and hind neck pale ashy grey; on each side of the crown a broad stripe of black from the base of the bill to the hind neck; a distinct streak of ashy whitish above the eye; lores, anterior and posterior margins of eyelid, and upper edge of ear-coverts dusky blackish; upper and under edge of eyelid white; sides of face and ear-coverts ashy grey; base of chin and cheeks ashy whitish, margined above by a line of dusky blackish; under surface of body brilliant yellow; sides of body olive-green; axillaries and under wing-coverts white, those near the edge of the wing yellow; quills dusky below, ashy whitish along the edge of the inner web: "bill brownish; legs fleshy brown" (*Burmeister*). Total length 4·5 inches, culmen 0·5, wing 2·2, tail 2·05, tarsus 0·7.

Obs. With the exception that the birds from the northern part of the South-American continent are rather darker and more olive-brown, I cannot see any reason for their separation from Brazilian *B. auricapillus*. The specimens from Trinidad are again a little more ashy.

Hab. Brazil, Guiana, Venezuela, and Colombia.

a. Ad. sk.	Brazil.	Lord Stuart de Rothesay [P.].
b, c. Ad. sk.	Brazil.	M. Claussen [P.].
d. Ad. sk.	Brazil.	Gould Collection.
e. Ad. st.	Brazil.	J. Gould, Esq. [P.].
f. ♀ ad. sk.	Pernambuco (*W. A. Forbes*).	Sclater Collection.
g. Ad. sk.	Mattodentro (*Natterer*).	Sclater Collection.
h. ♀ ad. sk.	Roraima, British Guiana (*H. Whitely*).	Sclater Collection.
i. ♀ ad. sk.	Roraima, Oct. 2 (*H. W.*).	Salvin-Godman Coll.
k, l. ♂ ♀ ad. sk.	Roraima, Nov. (*H. W.*).	Salvin-Godman Coll.
m. ♂ ad. sk.	Roraima, Dec. 18 (*H. W.*).	Salvin-Godman Coll.
n. Ad. sk.	Trinidad.	Sclater Collection.
o. Ad. sk.	Trinidad.	Zoological Society.
p. Ad. sk.	Bogotá.	Sclater Collection.
q, r. Ad. sk.	Bogotá.	Salvin-Godman Coll.
s. Ad. sk.	Interior of Colombia.	Salvin-Godman Coll.

20. Basileuterus fraseri.

Basileuterus chrysogaster, *Sclater, P. Z. S.* 1859, p. 137 (*nec Tschudi*, 1860, p. 273; *id. Cat. Amer. B.* p. 35 (1862); *id. P. Z. S.* 1865, p. 284; *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873).
Basileuterus fraseri, *Sclater, P. Z. S.* 1883, p. 653; *Berlepsch & Taez. t. c.* p. 541 (*ex Scl. MS.*).

Adult male (type of species). General colour above olive-green; the hind neck, scapulars, lower back, rump, and upper tail-coverts slaty grey, slightly washed with olive; lesser wing-coverts slaty grey; median and greater coverts and bastard-wing slaty grey, paler at the ends; primary-coverts black, narrowly margined with slaty grey; quills dusky blackish, externally slaty grey, paler on the primaries; tail-feathers blackish, washed externally with slaty grey; in the centre of the head a patch of bright yellow, bordered on each side by a broad band of black; over the lores a small streak of white, succeeded by a broad band of slaty grey like the ear-coverts and hind neck; lores and feathers below and around the eye black; cheeks and under surface of body bright yellow, the flanks rather more olive; thighs pale yellow externally, ashy internally; under tail-coverts yellowish white; axillaries and under wing-coverts ashy white, washed with pale yellow; quills dusky below, white along the inner web. Total length 5 inches, culmen 0·55, wing 2·6, tail 2·05, tarsus 0·85.

Hab. Ecuador.

a. ♂ ad. sk.	Babahoyo, Ecuador, Aug. 1859 (*L. Fraser*).	Sclater Collection.
b. ♂ ad. sk.	Pallatanga, Ecuador, Sept. 1858 (*L. Fraser*).	Sclater Collection. (Type of species.)
c. Ad. sk.	Santa Rita Mountains, Ecuador (*Villagomez*).	Salvin-Godman Coll.
d, e. Ad. sk.	Balzar Mountains, Ecuador (*Illingworth*).	Salvin-Godman Coll.

21. Basileuterus belli.

Muscicapa belli, *Giraud, Sixteen B. Texas*, t. 4. fig. 1 (1841).
Basileuterus chrysophrys, *Bp. Consp.* i. p. 314 (1850, *ex Licht. MS.*); *Scl. P. Z. S.* 1857, p. 202.
Basileuterus belli, *Scl. P. Z. S.* 1855, p. 65, 1859, p. 374; *Salv. & Scl. Ibis*, 1860, p. 31; *Scl. Cat. Amer. B.* p. 35 (1862); *Baird, Review Amer. B.* p. 250 (1865); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 546 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 19 (1881); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 174 (1881).
Setophaga bellii, *Gray, Hand-l. B.* i. p. 245, no. 3556 (1869).

Adult male. General colour above dull green, the long feathers of the rump with a subterminal bar of white; the lesser wing-coverts like the back; median and greater coverts dusky brown, externally yellowish green, paler than the back; bastard-wing feathers dusky brown, externally greenish grey; primary-coverts and quills dusky brown, externally margined with green, rather yellower on the primaries, the first primary edged with ashy white; tail-feathers ashy brown, externally green like the back; crown of head deep chestnut, bordered on each side by a stripe of black from the base of the bill to the nape, and succeeded by a broad eyebrow of golden yellow; lores, feathers above and below the eye, and ear-coverts deep chestnut; in front of the eye a blackish spot; cheeks and entire under surface of body bright yellow; sides of breast and flanks pale greenish, as also the thighs; under tail-coverts bright yellow; axillaries and under wing-coverts yellow, with ashy bases; quills dusky below, ashy along the edge of the inner web: "bill dull horn-colour; feet pale flesh-colour" (*Salvin*). Total length 4·8 inches, culmen 0·45, wing 2·35, tail 2, tarsus 0·8.

Adult female. Similar to the male, but the facial markings not so pronounced, the chestnut paler, and the black lateral streaks on the crown less strongly marked. Total length 5·3 inches, culmen 0·45, wing 2·35, tail 2·2, tarsus 0·8.

Hab. Central America from Mexico to Guatemala.

a. Ad. st.	Mexico.	Purchased.
b. Ad. sk.	Near the City of Mexico.	Salvin-Godman Coll.
c. Ad. sk.	Jalapa, Mexico (*C. F. Höge*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Llano Verde, Mexico, Nov.	M. A. Sallé [C.].
e. Ad. sk.	Orizaba (*Botteri*).	Sclater Collection.
f. Ad. sk.	Volcan de Fuego, Guatemala, Nov. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
g, *h*. ♂ ♀ ad. sk.	Volcan de Fuego, Sept. (*O. S.*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Volcan de Fuego, Sept. (*O. S.*).	Sclater Collection.
k. ♀ ad. sk.	Volcan de Agua, above San Diego, Guatemala, Nov. 4 (*O. S.*).	Sclater Collection.
l. Ad. sk.	Vera Paz, Guatemala (*Boucard*).	Sclater Collection.
m. Ad. sk.	Dueñas, Guatemala (*O. S.*).	Salvin-Godman Coll.

22. Basileuterus delattrii.

Basileuterus delattrii, *Bp. C. R.* xxxviii. p. 383 (1854); *Scl. P. Z. S.* 1860, p. 250; *Scl. & Salv. Ibis*, 1860, p. 274; *Scl. Cat. Amer. B.* p. 35 (1862); *Baird, Review Amer. B.* p. 249 (1865); *Scl. P. Z. S.* 1865, p. 284; *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 176 (1881).
Basileuterus rufifrons (*nec Sw.*), *Salv. P. Z. S.* 1865, p. 284.
Setophaga delattrii, *Gray, Hand-l. B.* i. p. 245, no. 3555 (1869).

Adult. General colour above olive-greenish, rather yellower towards the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater coverts and quills dusky, externally edged with yellowish olive, the first primary narrowly margined with ashy whitish; bastard-wing and primary-coverts dusky, with very narrow margins of olive-yellow; tail-feathers dusky brown, edged with olive-yellow and fringed with whity brown towards the end of the inner web; crown of head deep chestnut, with a broad superciliary line of white from the base of the bill to the sides of the nape; lores and a line above and below the eye, along the upper part of the ear-coverts, black; below the eye a white spot; ear-coverts chestnut; fore part of cheeks and base of chin white; remainder of cheeks and under surface of body bright yellow, a little paler on the abdomen and under tail-coverts; thighs ashy olive; sides of body and flanks olive-green; axillaries ashy, washed with yellow; under wing-coverts brighter yellow; quills dusky below, ashy along the edge of the inner web. Total length 5·2 inches, culmen 0·5, wing 2·3, tail 2·4, tarsus 0·8.

Hab. Guatemala.

a.	Ad. sk.	Guatemala.	Gould Collection.
b.	♀ ad. sk.	Coban, Vera Paz.	Osbert Salvin, Esq. [C.].
c.	Ad. sk.	Calderas, Volcan de Fuego, Sept. (*O. Salvin*).	Sclater Collection.
d.	♀ ad. sk.	La Trinidad, Volcan de Fuego, Oct. 30 (*O. S.*).	Salvin-Godman Coll.
e.	♂ ad. sk.	Volcan de Agua, above S. Diego, Nov. (*O. S.*).	Salvin-Godman Coll.

Subsp. *a.* Basileuterus mesochrysus.

Basileuterus brunneiceps (*nec D'Orb. & Lafr.*), *Bp. Consp.* i. p. 314 (1850).
Basileuterus delattrii (*nec Bp.*). *Cab. J. f. O.* 1860, p. 325; *Lawr. Ann. Lyc. N. Y.* vii. p. 322 (1861).
Basileuterus mesochrysus, *Scl. P. Z. S.* 1860, p. 251; *id. Cat. Amer. B.* p. 35 (1862); *Baird, Review Amer. B.* p. 250 (1865); *Salv. P. Z. S.* 1867, p. 136; *Lawr. Ann. Lyc. N. Y.* ix. p. 95 (1868); *Von Frantz. J. f. O.* 1869, p. 294; *Salv. P. Z. S.* 1870, p. 183; *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873); *Salv. & Godm. Ibis*, 1879, p. 148; *iid. Biol. Centr.-Amer., Aves*, i. p. 176 (1881).
Setophaga mesochrysa, *Gray, Hand-l. B.* i. p. 246, no. 3558 (1869).

Adult (type of species). General colour above yellowish olive, the

lesser wing-coverts like the back; median and greater coverts as well as the quills dusky brown, externally yellowish olive, lighter yellow on the primaries, which are ashy towards the ends of the outer webs; bastard-wing dusky brown, externally ashy grey; primary-coverts dusky brown, narrowly margined with olive; tail-feathers ashy brown, externally washed with yellow; entire crown of head deep chestnut or bay, with slight traces of ashy margins to the feathers; crown separated from the back by a distinct collar of pale ashy grey; a line of black across the forehead extending to the eye; from the base of the nostrils to the sides of the nape a distinct band of white; upper and under edge of the eyelid white; lores and the anterior and posterior edge of eyelid, extending a little behind the eye, black; ear-coverts chestnut; behind the ear-coverts a white spot mixed with chestnut; fore part of cheeks and feathers below the eye ashy white; hinder part of cheeks and under surface of body bright yellow; base of chin ashy white; sides of breast and flanks olive-green, deeper on the former; thighs olive-green; under tail-coverts yellow; axillaries and under wing-coverts yellow, with ashy bases, the edge of the wing bright yellow; quills dusky below, ashy along the edge of the inner web. Total length 4·5 inches, culmen 0·55, wing 2·35, tail 2·2, tarsus 0·8.

The characters of this species are not very well marked, and I expect that intermediate links will be found to connect it with *B. delattrii*.

Hab. From Costa Rica to Panama, extending into Colombia.

a. Ad. sk.	Costa Rica (*Carmiol*).	Sclater Collection.
b. ♂ ad. sk.	Grecia, Costa Rica, Nov. 31 (*Carmiol*).	Salvin-Godman Coll.
c. Ad. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
d. Ad. sk.	Veragua (*Arcé*).	Sclater Collection.
e. ♀ ad. sk.	Calobre, Veragua (*Arcé*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Chitra, Veragua (*Arcé*).	Salvin-Godman Coll.
g. ♀ ad. sk.	Santa Fé, Veragua (*Arcé*).	Salvin-Godman Coll.
h. Ad. sk.	Chiriqui, Veragua (*Arcé*).	Salvin-Godman Coll.
i. Ad. sk.	Paraiso, Panama (*Hughes*).	Salvin-Godman Coll.
k. Ad. sk.	New Granada.	Sclater Collection. (Type of species.)
l. Ad.; *m*. Juv. sk.	Bogotá.	Salvin-Godman Coll.
n. ♂ ad. sk.	Alto, Magdalena Valley (*Wyatt*).	Salvin-Godman Coll.
o. ♀ ad. sk.	Manaure, Sierra Nevada of Santa Marta, May 7 (*F. Simons*).	Salvin-Godman Coll.

23. Basileuterus rufifrons.

Setophaga rufifrons, *Swains. An. in Menag.* p. 249 (1837); *Gray, Gen. B.* i. p. 265 (1846); *id. Hand-l. B.* i. p. 245, no. 3554 (1869).

Sylvia aurigula, *Licht., teste Bp. Consp.* i. p. 314 (1850).

Basileuterus rufifrons, *Bp. Consp.* i. p. 314 (1850); *Scl. P. Z. S.* 1856, p. 291, 1858, p. 299; *id. Cat. Amer. B.* p. 35 (1862); *id.*

P. Z. S. 1865, p. 284; *Baird, Review Amer. B.* p. 248 (1865); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 549 (1866); *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 270 (1874); *id. Bull. U.S. Nat. Mus.* no. 4, p. 16 (1876); *Salv. & Godm. Biol. Centr.-Amer., Aves.* i. p. 175 (1881).
Basileuterus delattrii (*nec Bp.*), *Scl. P. Z. S.* 1860, p. 250.

Adult. General colour olive-yellowish, the wing-coverts rather lighter yellow than the back; bastard-wing feathers dusky brown, ashy olive on the outer web; primary-coverts dusky, edged with dull olive-green; quills dusky brown, edged with olive-yellow, lighter on the primaries, the first primary margined with ashy white; tail-feathers light ashy brown, externally olive-yellow, the outer ones fringed with ashy whitish near the tip of the inner web; entire crown bright bay, bordered by a distinct line of white from the base of the bill to the sides of the occiput; lores and a line above and below the eye black; sides of face and cheeks pale ashy grey, the latter minutely mottled with dusky bases to the feathers; ear-coverts bright bay, behind them a white patch; sides of neck ashy washed with olive; base of cheeks and base of chin white; remainder of under surface of body bright yellow; the abdomen ashy white with a slight tinge of yellow; flanks olive-brown washed with yellow; thighs ashy, posteriorly green; under tail-coverts very pale olive-yellow, with dusky bases to the feathers; axillaries and under wing-coverts yellow, the latter a little more olive; quills dusky below, whitish along the inner web: "bill black; feet hazel-brown" (*Salvin*). Total length 5 inches, culmen 0·55, wing 2·1, tail 2·2, tarsus 0·85.

Hab. Mexico to Guatemala.

a. Ad. st.	Mexico.	Purchased.
b. Ad. sk.	Mexico.	Sclater Collection.
c. Ad. sk.	Mexico (*Sallé*).	Sclater Collection.
d. Ad. sk.	S. Mexico (*De Oca*).	Sclater Collection.
e. Ad. sk.	Jalapa (*De Oca*).	Salvin-Godman Coll.
f. Ad. sk.	Jalapa (*C. F. Höge*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Cinco Senores, Feb. (*A. Boucard*).	Salvin-Godman Coll.
h, i. ♂ ad. sk.	Dueñas, Guatemala (*O. S.*).	Salvin-Godman Coll.
k. Ad. sk.	Coban, Vera Paz, Nov. (*O. S.*).	Salvin-Godman Coll.
l. Ad. sk.	Coban, Jan. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
m. Ad. sk.	Cajabon, Vera Paz, Jan. (*O. S.*).	Salvin-Godman Coll.

24. Basileuterus melanogenys.

Basileuterus melanogenys, *Baird, Review Amer. B.* p. 248 (1865); *Lawr. Ann. Lyc. N. Y.* ix. p. 95 (1868); *Salv. P. Z. S.* 1870, p. 183; *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 174, pl. 10. fig. 3 (1881).
Setophaga melanogenys, *Gray, Hand-l. B.* i. p. 245, no. 3557 (1869).

Adult. General colour above dull olive with a greyish shade, particularly on the hind neck; lesser wing-coverts like the back; median wing-coverts blackish, tipped with greenish grey, the greater

coverts blackish, externally olive like the back; bastard-wing dusky brown, externally ashy grey; primary-coverts dusky brown, narrowly edged with olive; quills dusky, edged externally with yellowish olive, brighter on the primaries, which are ashy towards their ends; tail-feathers ashy brown, externally washed with yellowish olive; crown of head rich chestnut as far as the nape, the latter being like the back and bordered on each side by a tolerably broad line of black, which extends from the base of the forehead to the hind neck; this is again succeeded by a broad superciliary streak of white, running from the base of the bill to the sides of the neck; lores, feathers round the eye, sides of face, cheeks, and ear-coverts black; the feathers below the eye and the cheeks slightly varied with white bases; throat and abdomen white, the latter washed with pale yellow; fore neck and sides of breast light ashy grey, as also the sides of the neck; flanks somewhat more olive; thighs slaty grey; under tail-coverts white with a slight tinge of yellow; axillaries and under wing-coverts dull white, with dusky bases; quills dusky below, ashy along the edge of the inner web. Total length 4·6 inches, culmen 0·5, wing 2·45, tail 2·3, tarsus 0·9.

Hab. Costa Rica to Panama.

a, b. Ad. sk.	Chiriqui, Veragua (*Arcé*).	Sclater Collection.
c. ♂ ad. sk.	Chiriqui (*Arcé*).	Salvin-Godman Coll.
d. Ad. sk.	Chiriqui (*Arcé*).	Salvin-Godman Coll.
e. Ad. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.

25. Basileuterus griseiceps.

Basileuterus griseiceps, *Scl. & Salv. P. Z. S.* 1868, p. 170; *iid. Nomencl. Av. Neotr.* p. 10 (1873).
Setophaga griseiceps, *Gray, Hand-l. B.* i. p. 245, no. 3559 (1869).

Adult male (type of species). General colour above clear yellowish olive, the lesser wing-coverts like the back; greater and median coverts dusky brown, externally yellowish olive, brighter towards the ends of the feathers; bastard-wing and primary-coverts dusky brown, narrowly edged with yellowish olive; quills dusky brown, externally yellowish olive, brighter on the primaries, which are somewhat ashy towards the ends; tail-feathers light ashy brown, externally yellowish olive; head and hind neck clear slaty grey, the fore part of the crown black, with slaty-grey edges to the feathers; a white stripe running from the base of the bill to above the eye; lores and feathers around the eye dull slaty black; sides of face, cheeks, and ear-coverts dark slaty grey, with a few whitish shaft-lines; base of chin ashy white; malar line and entire under surface of body bright yellow; under tail-coverts dull yellow, with dusky centres to the feathers; sides of body and flanks slightly greener olive; axillaries and under wing-coverts dusky olive, edged with yellow, especially near the edge of the wing; tail-feathers dusky brown below, ashy along the edge of the inner web: "iris reddish

brown" (*Goering*). Total length 5·4 inches, culmen 0·55, wing 2·55, tail 2·3, tarsus 0·8.

Hab. Venezuela.

a. ♂ ad. sk.	Venezuela (*Goering*).	Sclater Collection. (Type of species.)

26. Basileuterus leucoblepharus.

El Contramaestre, *Azara, Apunt.* ii. p. 40 (1802).
Sylvia leucoblephara, *Vieill. N. Dict. d'Hist. Nat.* xi. p. 206 (1817); *D'Orb. Voy. Amér. Mérid.* p. 216, pl. 12. fig. 2 (1835–44).
Trichas superciliosus, *Swains. An. in Menag.* p. 295 (1837); *Gray Gen. B.* i. p. 197 (1846).
Trichas leucoblepharus, *Lafr. Rev. Zool.* 1840, p. 230; *Gray, Gen. B.* i. p. 197 (1846); *Hartl. Ind. Azara*, p. 10 (1847); *Bp. Consp* i. p. 310 (1850); *Burm. Th. Bras.* iii. p. 114 (1855).
Geothlypis leucoblephara, *Cab. Mus. Hein.* Th. i. p. 17 (1850).
Basileuterus leucoblepharus, *Scl. Cat. Amer. B.* p. 36 (1862); *Baird, Review Amer. B.* p. 244 (1865); *Scl. P. Z. S.* 1865, p. 285; *Pelz. Orn. Bras.* p. 72 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873).
Setophaga leucoblepharum, *Gray, Hand-l. B.* i. p. 244, no. 3541 (1869).

Adult. General colour above dark olive-green, the wing-coverts like the back; bastard-wing dusky, externally ashy olive-green; primary-coverts and quills dusky brown, externally olive-green, the primaries more yellow externally; tail-feathers entirely olive, rather more yellow on the outer web; crown of head slaty grey, with a broad black streak from the base of the forehead to the sides of the nape, followed by a superciliary band of dull ashy; upper and under edge of eyelid white; lores and upper part of ear-coverts blackish, as well as the feathers below the eye; ear-coverts slaty grey, slightly mottled with white spots below the eye; cheeks and under surface of body whitish, obscured with ashy grey; abdomen purer white; sides of neck and sides of body darker ashy grey; the flanks olive-green, with which colour also the sides of the upper breast are washed; thighs and under tail-coverts pale olive-yellow, the latter with dusky bases; axillaries pale olive-yellow; under wing-coverts duller olive-yellow; quills dusky below, ashy brown along the edge of the inner web. Total length 5·7 inches, culmen 0·55, wing 2·55, tail 2·35, tarsus 1.

Hab. Brazil.

a. Ad. sk.	Tropical America.	Sclater Collection.
b. Ad. sk.	Brazil.	Gould Collection.
c, *d*. Ad. sk.	Brazil.	Sclater Collection.
e. Ad. st.	Brazil.	Edwin Wilson, Esq. [P.].
f, *g*. ♂ ♀ ad. sk.	Pelotas, Rio Grande do Sul (*Joyner*).	Salvin-Godman Coll.

27. Basileuterus leucophrys.

Basileuterus leucophrys, *Pelz. Orn. Bras.* pp. 72, 137 (1871).
Setophaga leucophrys, *Gray, Hand-l. B.* i. p. 245, no. 3553 (1869).

Adult. Head slate-colour, obsoletely margined with black on both

sides; a broad white eyebrow; upper surface olivaceous; underneath white; the abdomen washed with ochraceous; sides of breast and of upper abdomen ashy, the sides of the lower abdomen ochraceous; under tail-coverts ochraceous: "bill black; feet ochre-yellow; iris dark brown" (*Natterer*). Total length 6″ 7‴–9‴, wing 2″ 8½‴–10‴, tail 2″ 10‴, bill from forehead 5‴, tarsus 12½‴–13‴. (*Pelzeln.*)

Similar to *B. leucoblepharus*, but much larger, with the streaks on the sides of the crown obsolete, the eyebrow white and very broad, the upper surface more olivaceous. (*Pelzeln.*)

Hab. Brazil.

28. Basileuterus stragulatus.

Muscicapa stragulata, *Licht. Verz. Doubl.* p. 55 (1823).
Muscicapa rivularis, *Neuwied, Beitr. Naturg. Bras.* iii. p. 789 (1831).
Geothlypis stragulata, *Cab. Mus. Hein.* Th. i. p. 17 (1850).
Trichas stragulata, *Burm. Th. Bras.* ii. p. 815 (1856).
Basileuterus stragulatus, *Scl. Cat. Amer. B.* p. 35 (1862); *Baird, Review Amer. B.* p. 244 (1865); *Scl. P. Z. S.* 1865, p. 285; *Pelz. Orn. Bras.* p. 72 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873).
Setophaga stragulata, *Gray, Hand-l. B.* i. p. 244, no. 3547 (1869).

Adult. General colour above dull olive-green, clearer olive on the rump and upper tail-coverts; wing-coverts like the back; quills dusky brown, externally like the back, yellower on the primaries; tail-feathers dull olive, rather more yellowish olive on the edges; crown of head slaty grey, with a broad band of dusky black from the base of the bill to the nape, which is ashy grey like the hinder neck; a broad superciliary streak ashy white; lores and feathers below the eye black; upper and under edge of eyelid white; ear-coverts dull ashy tinged with olive, and with a black streak along the upper edge, slightly mottled with white near the eye; sides of neck olive-brown washed with ashy; cheeks and throat dull white; remainder of under surface of body pale brown, whiter on the abdomen; the sides of the body darker and more earthy brown, inclining to pale tawny buff on the thighs and under tail-coverts; axillaries and under wing-coverts olive; quills dusky below, pale brown along the edge of the inner web: "iris greyish brown; bill black; feet clear yellowish flesh-brown" (*Neuwied*). Total length 5·8 inches, culmen 0·6, wing 2·65, tail 2·45, tarsus 0·95.

Hab. Brazil.

a. Ad. sk.	Brazil.	Sclater Collection.
b. Ad. sk.	S.E. Brazil.	Sclater Collection.
c. Ad. sk.	Brazil.	Salvin-Godman Coll.
d. ♂ ad.; *e.* Ad. sk.	San Paulo (*Joyner*).	Salvin-Godman Coll.
f. ♀ ad. sk.	Lagos dos Patos, Rio Grande do Sul (*H. Rogers*).	Salvin-Godman Coll.

29. Basileuterus mesoleucus.

Basileuterus mesoleucus, *Scl. P. Z. S.* 1865, p. 286, pl. 9. fig. 1; *id.* & *Salv. Nomencl. Av. Neotr.* p. 10 (1873).
Setophaga mesoleuca, *Gray, Hand-l. B.* i. p. 245, no. 3551 (1869).

Adult (type of species). General colour above olive-green, clearer towards the rump and upper tail-coverts, the latter having obsolete paler tips; wing-coverts like the back, the greater series edged with dull rufous, scarcely perceptible on the median coverts; bastard-wing, primary-coverts, and quills dusky brown, externally edged with olive-greenish, a little tinged with rusty on the secondaries; tail-feathers olive, clearer on the margins of the feathers, which have slightly paler tips; crown of head slaty grey, extending to the occiput; a distinct superciliary streak of deep fawn-colour extending from the base of the nostrils to beyond the ear-coverts; lores, anterior and posterior margins of eyelid, as well as a streak along the upper edge of the ear-coverts, dusky black; ear-coverts, cheeks, and sides of face fawn-colour, the ear-coverts washed with brown; throat and under surface of body white, the fore neck slightly shaded with fulvous; sides of body and flanks as well as the thighs pale fulvous-brown; under tail-coverts white, slightly washed with fawn-colour; under wing-coverts and axillaries pale olive-brown; quills dusky brown below, ashy along the edge of the inner web. Total length 5·4 inches, culmen 0·6, wing 2·4, tail 2·1, tarsus 0·85.

Hab. Guiana.

a. Ad. sk.	Demerara (*Wilkins*).	Sclater Collection.	(Type of species.)
b. Ad. sk.	Camacusa, British Guiana, July 10 (*H. Whitely*).	Salvin-Godman Coll.	

30. Basileuterus bolivianus.

Basileuterus mesoleucus, *Scl. & Salv. P. Z. S.* 1879, p. 594 (*nec Scl.*).

Adult. Very similar to *B. mesoleucus*, but distinguished by its rufescent throat and by the absence of rufous edgings to the wing-coverts. Total length 4·8 inches, culmen 0·55, wing 2·75, tail 2·2, tarsus 0·85.

Hab. Bolivia.

a. Ad. sk.	Yuyo, Bolivia (*C. Buckley*).	Salvin-Godman Coll.	

31. Basileuterus leucopygius.

Basileuterus uropygialis, *Lawr. Ann. Lyc. N. Y.* viii. p. 179 (1866), ix. p. 95 (1868, *nec Scl.*).
Basileuterus leucopygius, *Scl. & Salv. Nomencl. Av. Neotr.* pp. 10, 156 (1873); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 172 (1881, pt.).

Adult male (type of species). General colour above dusky olive-brown with a slight shade of ashy; rump and upper tail-coverts creamy white, with an isabelline shade on the former; wing-coverts dark brown,

narrowly fringed with dull olive; bastard-wing and primary-coverts dark sepia-brown; quills dark brown, edged with dull olive; tail-feathers dark brown, creamy white for the basal half like the rump; head dark slaty brown, contrasting slightly with the back; a narrow superciliary line of ashy white; lores and a streak along the upper part of the ear-coverts dusky black; upper and under margins of eyelid dull white, the anterior and posterior margins dusky blackish; feathers below the eye and ear-coverts dusky brown, relieved by very distinct shaft-lines of white; cheeks dull white, edged with dusky; throat dull white, uniform; remainder of under surface of body pale isabelline brown; the flanks and sides of body brown, darker on the sides of the upper breast; thighs dark brown; under tail-coverts paler isabelline; under wing-coverts and axillaries dark brown slightly washed with olive, with a few whitish feathers near the edge of the wing; quills sepia-brown below, ashy brown along the edge of the inner web. Total length 5·3 inches, culmen 0·6, wing 2·6, tail 2·15, tarsus 0·95.

Hab. Costa Rica and Nicaragua.

a. ♂ ad.; *b*. ♂ juv. sk.	Costa Rica (*Carmiol*).	Sclater Collection. (Types of species.)
c. Juv. sk.	Tucurriqui, Costa Rica, Oct. (*Arcé*).	Salvin-Godman Coll.

Subsp. *α*. **Basileuterus veraguensis.**

Basileuterus uropygialis (*non Scl.*), *Scl. & Salv. P. Z. S.* 1864, p. 347; *Baird, Review Amer. B.* p. 246 (1865); *Salv. P. Z. S.* 1867, p. 136, 1870, p. 183; *id. Ibis*, 1872, p. 313.

Basileuterus semicervinus (*nec Scl.*), *Lawr. Ann. Lyc. N. Y.* vii. p. 322 (1861).

Basileuterus leucopygius, *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 172 (1881, pt.).

Adult. General colour above uniform dark brown washed with olive; lesser wing-coverts like the back; median and greater series blackish, narrowly edged with dark olive, a fringe of clearer olive being seen at the tips of the median coverts; bastard-wing and primary-coverts uniform dark brown; quills blackish brown, externally edged with olive-brown; lower rump, upper tail-coverts, and base of tail clear fawn-buff, the terminal half of the tail dark brown, the feathers edged narrowly with olive; head dusky olive-brown, more dingy than the back, with which it contrasts slightly; a narrow rufescent eyebrow; lores and ear-coverts dusky brown, the latter streaked with fawn-coloured shaft-lines; cheeks and under surface of body pale fawn-colour, lighter on the abdomen and deepening on the under tail-coverts; sides of the body and thighs brown, the feathers of the chest also slightly mottled with brown edges; axillaries and under wing-coverts dusky brown washed with olive; quills dark brown below, lighter along the edge of the inner web. Total length 5 inches, culmen 0·6, wing 2·45, tail 2, tarsus 0·85.

Hab. Veragua and Panama.

a. ♀ imm. sk.	Bugaba, Chiriqui (*E. Arcé*).	Salvin-Godman Coll.
b. ♂ ad. sk.	Santa Fe, Veragua.	Salvin-Godman Coll.
c, *d*. ♂ ♀ ad. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.
e. Ad. sk.	Paraiso Station, Panama (*Hughes*).	Purchased. (Type of species.)

32. Basileuterus semicervinus.

Basileuterus semicervinus, *Scl. P. Z. S.* 1860, pp. 84, 291; *id. Cat. Amer. B.* p. 35; *id. P. Z. S.* 1865, p. 285, pl. 10. fig. 1; *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873); *Berlepsch & Taez. P. Z. S.* 1883, p. 541.

Setophaga semicervina, *Gray, Hand-l. B.* i. p. 244, no. 3546 (1869).

Adult male (type of species). General colour above very dark olive-brown, the rump and upper tail-coverts very deep fawn-colour like the base of the tail; wing-coverts like the back; the bastard-wing and primary-coverts dark sepia-brown, the latter obsoletely fringed with olive; quills dark sepia, washed externally with olive; tail fawn-colour, with a band of dark brown occupying about the terminal third and decreasing towards the outermost feathers, which are tipped with pale fawn-colour and have the caudal band incomplete; crown of head dark slate-colour, contrasting with the back; a fawn-coloured superciliary streak from the base of the nostrils to above the hinder part of the eye; upper and under margin of eyelid and feathers below the eye deep fawn-colour; lores, as well as the anterior and posterior margins of the eyelids and a mark behind the eye, dusky blackish; ear-coverts dark brown, with narrow fawn-coloured shaft-lines; cheeks and under surface of body fawn-colour, deeper on the flanks and under tail-coverts and thighs; the centre of the breast and abdomen somewhat white; axillaries brown, like the sides of the breast; under wing-coverts deep fawn-colour; quills dusky brown below, ashy along the edge of the inner web. Total length 5 inches, culmen 0·55, wing 2·55, tail 2·15, tarsus 0·9.

Adult female. Not to be distinguished from the male. Total length 4·8 inches, culmen 0·55, wing 2·4, tail 1·95, tarsus 0·85.

The typical specimens have the caudal band dark brown, and when compared with *B. uropygialis* look distinct enough at first sight, the paler colour of the base of the tail, the evident olive colour on the terminal band, and the lighter under surface sufficiently distinguishing the latter species. Specimens from Antioquia and Bogotá (mus. Salvin and Godman) are strictly intermediate in these points, and possess the darker under surface of *B. semicervinus* with almost as much olive on the caudal band as in *B. uropygialis*. Examples from the Peruvian Amazons again are lighter underneath, and approach the last-named species in the distinct olive caudal band, but in the fawn-coloured eyebrow and base of tail they approach *B. semicervinus*.

Hab. Ecuador and Colombia.

a, *b*. ♂ ♀ ad. sk.	Nanegal, Ecuador, Feb. (*L. Fraser*).	Sclater Collection. (Types of species.)

c. Ad. sk.	Quito.	Gould Collection.
d. Ad. sk.	Santa Rita Mountains, Ecuador (*Villagomez*).	Salvin-Godman Collection.
e. ♂ ad. sk.	Bogotá (*Crowther*).	Salvin-Godman Collection.

Subsp. *α*. Basileuterus uropygialis.

Basileuterus uropygialis, *Scl. P. Z. S.* 1861, p. 128; *id. Cat. Amer. B.* p. 35 (1862); *id. P. Z. S.* 1865, p. 286, pl. 10. fig. 2; *id. & Salv. P. Z. S.* 1867, pp. 749, 754; *iid. P. Z. S.* 1873, p. 257; *iid. Nomencl. Av. Neotr.* p. 10 (1873); *Tacz. P. Z. S.* 1874, p. 509, 1882, p. 6; *id. Orn. Pérou*, p. 478 (1884).
Setophaga uropygialis, *Gray, Hand-l. B.* i. p. 244, no. 3545 (1869).

Adult (type of species). General colour above dull olive-greenish with a shade of ashy grey; rump and upper tail-coverts ochreous buff; wing-coverts like the back; bastard-wing and primary-coverts dark sepia-brown, the former rather more ashy externally, the latter obsoletely edged with olive-green; quills dark sepia-brown, externally edged with dark olive-green, a little lighter than the back; tail-feathers ochreous buff, with a band of brown across the terminal third and washed with pale olive-green on the outer webs, the feathers tipped with a spot of pale ochreous, and the terminal band decreasing in extent towards the outer feathers, being reduced to a small mark of brown near the end of the outer web; crown of head and hind neck dark slate-grey, contrasting with the olive back; the sides of the crown slightly blacker; a narrow streak of pale sandy rufous from the base of the nostril to the level of the hind part of the eye; upper and under edge of eyelid and the feathers below the eye also sandy rufous; lores black, as also a spot behind the eye and the anterior and posterior margins of the eyelid; ear-coverts earthy brown, with narrow sandy-buff shaft-lines; sides of neck behind the ear-coverts pale sandy rufous; cheeks and throat also pale sandy rufous, a little more ashy on the fore neck and breast; abdomen white; under tail-coverts white, slightly washed with buff; sides of body and flanks earthy brown, with a slight reddish tinge on the latter; axillaries and under wing coverts olive-brown, with a pale reddish edge to the wing. Total length 5 inches, culmen 0·5, wing 2·7, tail 2·15, tarsus 0·85.

Hab. Colombia and Ecuador, extending into Peru. Mr. Bartlett's skins from Santa Cruz and Chyavetas, as well as Mr. Salmon's from Antioquia, are intermediate between this species and *B. semicervinus*.

a. Ad. sk.	[Ecuador.]	Sclater Collection. (Type of species.)
b. Ad. sk.	Sarayacu, Ecuador (*C. Buckley*).	Sclater Collection.
c, d. Ad. sk.	Sarayacu, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
e. Ad. sk.	Bogotá.	Sclater Collection.
f. Ad. sk.	Remedios, Antioquia (*Salmon*).	Sclater Collection.

g. ♂ ad. sk.	Remedios (*Salmon*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Santa Cruz, Peruvian Amazons, May 31.	E. Bartlett, Esq. [C.].
i. ♂ ad. sk.	Chyavetas, E. Peru, Aug. 19 (*E. Bartlett*).	Salvin-Godman Coll.

18. ERGATICUS.

Type.

Ergaticus, *Baird, Review Amer. B.* i. pp. 237, 264 (1865)*. . E. ruber.
Ergaticus, *Scl. & Salv. Nomencl. Av. Neotr.* p. 11 (1873).



Bill of *Ergaticus ruber*.

Range. Highlands of Mexico and Guatemala.

Key to the Species.

a. Upper and under surface nearly uniform red, with a silvery patch on the ear-coverts . . . . . *ruber*, p. 406.
b. Head and nape of a silvery rose-colour, like the sides of the head, throat, and breast, contrasting with the back, which is dark crimson, and with the under surface, which is brighter crimson . . . . . *versicolor*, p. 407.

1. Ergaticus ruber.

Setophaga rubra, *Swains. Phil. Mag.* ser. 2, i. p. 368 (1827); *id. An. in. Menag.* p. 293 (1837); *Bp. P. Z. S.* 1837, p. 118; *Gray, Gen. B.* i. p. 265 (1846); *Baird in Stansb. Rep. Great Slave L.* p. 329 (1852); *Sclater, P. Z. S.* 1855, p. 65.
Sylvia miniata (*nec Sw.*), *Lafr. Mag. Zool.* 1836, pl. 54.
Parus leucotis, *Giraud, Sixteen B. Texas*, pl. 4. fig. 1 (1841).
Sylvia argyrotis, *Illiger, teste Bp. Consp.* i. p. 312 (1850).
Cardellina rubra, *Bp. Consp.* i. p. 312 (1850); *Cass. Ill. B. Calif.* p. 265, pl. 43 (1856); *Scl. P. Z. S.* 1856, p. 292, 1858, p. 299, 1859, pp. 363, 374; *id. Cat. Amer. B.* p. 38 (1862); *id. P. Z. S.* 1864, p. 173; *Baird, Review Amer. B.* p. 264 (1865); *Dugès, La Natur.* i. p. 140 (1868); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 546 (1869); *Gray, Hand-l. B.* i. p. 244, no. 3532 (1869); *Finsch, Abhandl. nat. Ver. Bremen*, ii. p. 329 (1870).
Basileuterus ruber, *Cab. Mus. Hein.* Th. i. p. 18 (1850).
Ergaticus ruber, *Scl. & Salv. Nomencl. Av. Neotr.* p. 11 (1873); *Salv. & Godman, Biol. Centr.-Amer., Aves*, i. p. 165 (1881); *Ridgw. Bull. U.S. nat. Mus.* no. 21, p. 19 (1881).
Cardellina (Ergaticus) ruber, *Coues, B. Color. Vall.* p. 331 (1878).

Adult. General colour above dark crimson, the mantle and back

* Subgenus of *Cardellina*. *Cf.* Salv. & Godm. Biol. Centr.-Amer., Aves, i. p. 164.

duller and overshaded with dusky, the rump brighter; lesser wing-coverts like the back; median and greater coverts blackish, the former tipped, the latter edged with pale crimson; bastard-wing and primary-coverts blackish brown, with paler brown edges; quills also blackish brown, margined with paler brown, tinged with rosy; upper tail-coverts dark crimson, with dusky brown bases; tail-feathers dusky brown, very much pointed, and edged with rosy; head a little richer crimson than the back, and shaded with dusky towards the nape; lores, cheeks, and sides of neck, as well as the entire under surface of the body, dark crimson, becoming paler and more rose-coloured on the breast and abdomen; thighs also rosy; the ear-coverts silvery white, forming a conspicuous patch; axillaries pale rosy, with dusky ash-coloured bases; under wing-coverts dusky, with rose-coloured margins, the greater series silky white; quills dusky brown below, ashy white along the edge of the inner web. Total length 4·6 inches, culmen 0·4, wing 2·5, tail 2·35, tarsus 0·75.

Hab. Highlands of Mexico. Said by Bonaparte to have come from Guatemala, but this fact is considered doubtful by Messrs. Salvin and Godm[illegible]. Also included by Giraud amongst his 'Sixteen Birds of Texas,' but has not been recently observed within the United-States border.

a. Ad. sk.	Mexico (*White*).	Sclater Collection.
b. Juv. sk.	Mexico.	Salvin-Godman Coll.
c. Ad. sk.	Near the City of Mexico.	Salvin-Godman Coll.
d. Ad. sk.	Jalapa (*De Oca*).	Salvin-Godman Coll.
e. Ad. sk.	Oaxaca, Mexico (*Fenochio*).	Sclater Collection.
f. ♂ ad. sk.	Oaxaca (*Fenochio*).	Salvin-Godman Coll.
g. ♂ ad.; *h*. ♀ juv. sk.	Ciudad Durango, Mexico, June (*A. Forrer*).	Salvin-Godman Coll.
i. Juv. sk.	Ciudad Durango, July (*A. Forrer*).	Salvin-Godman Coll.

2. Ergaticus versicolor.

Cardellina versicolor, *Salv. P. Z. S.* 1863, p. 188, pl. 24. fig. 1; *id. Ibis*, 1866, p. 192; *Baird, Review Amer. B.* p. 265 (1865); *Gray, Hand-l. B.* i. p. 244, no. 3533 (1869).

Ergaticus versicolor, *Scl. & Salv. Nomencl. Av. Neotr.* p. 11 (1873); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 165, pl. 11. fig. 1 (1881).

Adult male. General colour above dark rich crimson, rather obscured with dusky on the back and mantle, the feathers having a subterminal shade of blackish; lower rump paler, and forming a band of pale rose-colour; lesser wing-coverts like the mantle; median and greater coverts black, with light rose-coloured edges, darker towards the base of the latter series; bastard-wing, primary-coverts, and quills blackish brown, edged with lighter brown, washed slightly with rose-colour; upper tail-coverts darker crimson, with blackish bases; tail-feathers dusky blackish, with a narrow margin of faint rose-colour; crown of head and nape of a silvery rosy tint,

more crimson on the forehead and lores; the head somewhat mottled with blackish bases to the feathers, with which is associated a crimson tint; feathers round the eye hoary whitish; ear-coverts, sides of neck, throat, and chest of the same silvery rosy appearance as the head; the breast also of the same colour, but mottled with darker crimson centres to the feathers; remainder of under surface of body crimson, the under tail-coverts mottled with dusky centres to the feathers; axillaries and under wing-coverts dusky smoky brown, edged with pale rose-colour; quills dark brown below, whitish along the edge of the inner web. Total length 5·5 inches, culmen 0·4, wing 2·45, tail 2·3, tarsus 0·75.

Hab. Highlands of Guatemala, Central America.

a. Ad. sk.	Guatemala (*O. Salvin*).	Sclater Collection.
b. ♂ ad. sk.	Volcan de Fuego, Guatemala, Sept. 4 (*O. Salvin*).	Sclater Collection.
c. Ad. sk.	Volcan de Fuego, Nov. (*O. S. & F. D. G.*)	Salvin-Godman Coll.
d. ♀ ad. sk.	Upper Chirostemon forest, Volcan de Fuego, Nov. 20 (*O. S.*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Chilasco, Vera Paz, Jan. (*O. S. & F. D. G.*).	Salvin-Godman Coll. (Type of species.)
f. Ad. sk.	Near Solola, Guatemala, Feb. (*O. S.*).	Salvin-Godman Coll.

19. CARDELLINA.

	Type.
Cardellina, *DuBus, Esq. Orn.* pl. 25 (c. 1850)	C. rubrifrons.

Range. Central America: Guatemala and Mexico. Occurs also in Southern Arizona in the United States.

1. Cardellina rubrifrons.

Muscicapa rubrifrons, *Giraud, Sixteen B. Texas*, pl. 7. fig. 1 (1841).
Cardellina amicta, *DuBus, Esq. Orn.* pl. 25 (c. 1850); *Bp. Consp.* i. p. 312 (1850).
Parus erythropis, *Licht. Mus. Berol., teste Bp. Consp.* i. p. 312 (1850).
Setophaga rubrifrons, *Baird in Stansb. Rep. Great Slave L.* p. 329 (1852).
Cardellina rubrifrons, *Scl. P. Z. S.* 1855, p. 66, 1858, p. 299, 1859, p. 374; *id. Cat. Amer. B.* p. 37 (1862); *Baird, Review Amer. B.* p. 264 (1865); *Salv. Ibis*, 1866, p. 192; *Scl. & Salv. Nomencl. Av. Neotr.* p. 11 (1873); *Salv. Ibis*, 1874, p. 99; *Hensh. List B. Ariz.* p. 156 (1875); *id. Zool. Expl. W. 100th Merid.* p. 211 (1875); *Coues, B. Color. Vall.* p. 331 (1878); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 102 (1881); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 19 (1881); *Coues, Check-list N. Amer. B.* p. 41 (1882); *id. Key N. Amer. B.* 2nd ed. p. 314 (1884).
Basileuterus rubrifrons, *Sclater, P. Z. S.* 1859, p. 363.
Setophaga amicta, *Gray, Hand-l. B.* i. p. 243, no. 3531 (1869).

Adult male. General colour above delicate slaty grey, the lower back and rump white; wing-coverts slaty grey, the lesser wing-coverts tipped with white, forming a bar; the greater series blackish,

externally edged with slaty grey, whitish towards the ends of the outer web; bastard-wing, primary-coverts, and quills dusky, edged with slaty grey; upper tail-coverts dull slaty grey, the shorter ones with a slight white tip; tail-feathers dusky brown, with ashy edgings; crown of head and ear-coverts black, the nape crossed with a line of white, separating the black crown from the grey back; forehead, lores, and eyelid rich crimson, the hinder edge of the latter black where it adjoins the ear-coverts; cheeks and entire throat rich crimson, extending backwards behind the ear-coverts along the sides of the neck; fore neck and remainder of under surface of body white, with a blush of rose-colour on the fore neck and breast; the sides of the neck and sides of upper breast light slaty grey, extending a little way down the sides of the body; thighs slaty grey; under tail-coverts white, the longer ones mottled with dusky bases; axillaries ashy white; under wing-coverts whitish, ashy near the edge of the wing; quills dusky brown below, edged with white along the inner web. Total length 5·2 inches, culmen 0·4, wing 2·75, tail 2·3, tarsus 0·65.

Adult female. Similar to the male in colour, but all the tints duller, the crimson less pronounced on the face and throat, and the white nape-band obscured with dusky margins to the feathers. Total length 5 inches, culmen 0·4, wing 2·6, tail 2·25, tarsus 0·7.

"*Young* (newly fledged). Ash of the upper parts shaded with brown, and white of the underparts the same; rump snowy white, as in the adult, but the nuchal patch obscure or inappreciable; wings and tail as in the adult, but with browner edgings; black cap restricted to top of head, and of a dull sooty cast. Red parts of the adult, including those parts of the side of the head which are occupied in the adult with the extension of the black cap, dull greyish brown, tinged or irregularly slashed with red, especially on the forehead and throat. Bill light brown; feet pale." (*Coues.*)

Hab. The same as that of the genus.

a. ♂ ad. sk.	Santa Rita Mts., Arizona, July 1 (*E. W. Nelson*).	U.S. Nat. Museum [P.].
b. ♂ ad. sk.	Mexico.	Purchased.
c. ♂ ad. sk.	Parada, Mexico, Dec.	M. A. Sallé [C.].
d. [♂] ad. sk.	S. Mexico (*Sallé*).	Sclater Collection.
e. Ad. sk.	Valley of Mexico (*H. S. Le Strange*).	Salvin-Godman Coll.
f. ♀ ad. sk.	Volcan de Fuego, Guatemala, Nov. (*O. S.*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Volcan de Fuego, Jan. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
h, i. ♂ ♀ ad. sk.	Calderas, Volcan de Fuego, Sept. (*O. S.*).	Salvin-Godman Coll.
k, l. ♂ ♀ ad. sk.	Calderas, Oct. (*O. S.*).	Salvin-Godman Coll.
m, n. ♂ ♀ ad. sk.	Calderas, Oct. (*O. S.*).	Sclater Collection.

20. SETOPHAGA.

	Type.
Setophaga, *Swains. Zool. Journ.* iii. p. 360 (1827)	S. ruticilla.
Sylvania, *Nuttall, Man. Orn.* i. p. 291 (1832)	S. ruticilla.
Euthlypis, *Cab. Mus. Hein.* Th. i. p. 18 (1850)	S. lachrymosa.
Myioborus, *Baird, Review Amer. B.* p. 237 (1865)	S. verticalis.

Cf. *Salvin, Ibis*, 1878, pp. 302–321.



Bill of *Setophaga ruticilla*.

Range. The whole of Northern and Central America, and the Andes of South America as far as Bolivia. Colombia and Guiana. Absent in the valley of the Amazons, S.E. Brazil, and the low-lying forest-country of South America. (*Cf.* Salvin & Godman, Biol. Centr.-Amer., Aves, i. p. 177.)

Key to the Species *.

a. With red in the tail and on the wing ..... *ruticilla*, p. 411.
b. With white in the tail.
  a'. Breast crimson.
    a''. Head black like the back; wing-coverts white, forming a conspicuous wing-patch; two outer tail-feathers almost entirely white ..... } *picta*, p. 415.
    b''. Crown with a chestnut patch; no white on wing-coverts; three outer tail-feathers with a white spot at the end } *guatemalæ*, p. 417. } *miniata*, p. 418. } *flammea*, p. 419.
  b'. Breast yellow or orange.
    c''. Two outer tail-feathers more or less white, with a blackish inner web.
      a'''. Throat slaty or blackish; a chestnut patch on the head.
        *a*⁴. Forehead and sides of crown dark slaty grey ..... *verticalis*, p. 420.
        *b*⁴. Forehead and sides of crown black . *aurantiaca*, p. 421.
      b'''. Throat yellow; a chestnut patch on the head; back slaty grey.
        *c*⁴. Chestnut crown surrounded by black, which forms a frontal band.
          *a*⁵. Base of forehead and feathers round eye white..... *albifrons*, p. 422.

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* SETOPHAGA MULTICOLOR.

Setophaga multicolor, *Bp. Consp.* i. p. 312 (1850); *Baird, Review Amer. B.* p. 257 (1865); *Salv. Ibis*, 1878, p. 321.

Hab. Mexico.

There seems to be little doubt that Mr. Salvin's surmise with regard to this species is correct, and that it is really an Australian bird, *Petræca multicolor* (Cat. B. iv. p. 168).

b^4. Base of forehead and feathers round eye golden yellow.
a^6. Ear-coverts blackish; no band across the breast ..... *bairdi*, p. 423.
b^6. Ear-coverts yellow; a pectoral band ..... *torquata*, p. 424.
d^4. Forehead golden yellow; hinder crown chestnut, not separated by a black band; feathers round the eye, lores, and a line skirting the chestnut patch golden yellow.... *ruficoronata*, p. 425.
c'''. Throat yellow; no chestnut on the head; back slaty grey.
e^4. Lores and feathers round eye white; forehead and vertex yellow; hinder head and nape black ..... *ornata*, p. 426.
f^4. Lores and feathers round eye yellow.
c^5. Forehead yellow; top of crown black ..... *chrysops*, p. 427.
d^5. Entire crown black ..... *melanocephala*, p. 427.
d''. Throat yellow; entire crown chestnut.
g^4. Back yellowish olive; hind neck clear blue-grey; upper tail-coverts slaty grey, lighter than the tail .. *brunneiceps*, p. 428.
h^4. Back dull olive-brown, the hind neck only a little more ashy; upper tail-coverts blackish like the tail ..... *castaneicapilla*, p. 429.
d'. Three outer tail-feathers tipped with white; crown black, with a broad band of golden yellow down the centre. *lachrymosa*, p. 430.

1. Setophaga ruticilla *.

The Redstart, *Catesby, Nat. Hist. Carol.* i. tab. 67 (1731).
The Small American Redstart, *Edwards, Nat. Hist. B.* p. 80, pl. 80 (1747).
Yellow-tailed Flycatcher, *Edwards, Gleanings*, p. 101, pl. 257 (1758).
Le Gobe-mouche d'Amérique, *Briss. Orn.* ii. p. 383 (1760); *Daubent. Pl. Enl.* v. pl. 566. figs. 1, 2.
Muscicapa ruticilla, *Linn. Syst. Nat.* i. p. 326 (1766); *Bodd. Tabl. Pl. Enl.* p. 33 (1783); *Vieill. Ois. Amér. Sept.* i. p. 66, pls. 35, 36 (1807); *Wils. Amer. Orn.* i. p. 103, pl. 6. fig. 6 (1808), v. p. 119, pl. 45. fig. 2 (1812); *Audub. B. Amer.* pl. 40; *id. Orn. Biogr.* i. p. 202 (1831), v. p. 428 (1839); *id. B. Amer.* i. p. 240, pl. 68 (1839).
Figuier noir et jaune de Cayenne, *Daubent. Pl. Enl.* vi. pl. 391. fig. 2.
Le petit noir Aurore, *Buff. H. N. Ois.* iv. p. 546 (1778).
Le Figuier noir, *Buff. H. N. Ois.* v. p. 314 (1778).

* It has been suggested by some naturalists that *Sylvia russeicauda*, Vieill., Nouv. Dict. d'Hist. Nat. xi. p. 266 (ex Vieill. Ois. Amér. Sept. ii. p. 17, pl. 71)—*Setophaga russeicauda*, Gray, Hand-l. B. i. p. 243, no. 3517,—is referable to *S. ruticilla*; but I cannot recognize the figure as representing the latter species.

Motacilla tricolora, *P. L. S. Müll. Natursyst., Anhang*, p. 175 (1776, *ex Daubent.* pl. 391).
Blackheaded Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 427 (1783).
Rufous-and-Black Warbler, *Lath. t. c.* p. 493 (1783).
Yellow-tail Warbler, *Penn. Arctic Zool.* p. 406 (1785).
Motacilla multicolor, *Gm. Syst. Nat.* i. p. 972 (1788).
Motacilla flavicauda, *Gm. t. c.* p. 997.
Ruticilla americana, *Bartram, Trav. Florida*, p. 292 (1791).
Setophaga ruticilla, *Swains. Phil. Mag.* new series, i. p. 368 (1827); *id. Zool. Journ.* iii. p. 360 (1827); *id. Faun. Bor.-Amer., Birds*, p. 223 (1831); *Bp. Comp. List B. Eur. & N. Amer.* p. 24 (1838); *D'Orb. in Ramon de la Sagra's H. N. Cuba, Ois.* p. 73 (1839); *Gray, Gen. B.* i. p. 265 (1846); *Gosse, B. Jamaica*, p. 164 (1847); *Cab. in Schomb. Reis. Guian.* iii. p. 667 (1848); *id. Mus. Hein.* Th. i. p. 18; *Bp. Consp.* i. p. 312 (1850); *Scl. P. Z. S.* 1854, p. 111, 1855, p. 144, 1856, p. 289; *Sallé, P. Z. S.* 1857, p. 231; *Baird, B. N. Amer.* p. 297 (1858); *Scl. P. Z. S.* 1859, p. 374; *Scl. & Salv. Ibis*, 1859, p. 12; *A. & E. Newt. t. c.* p. 144; *Bryant, Proc. Bost. Soc. N. H.* vi. 1, p. 111 (1859); *Cab. J. f. O.* 1860, p. 325; *Gundl. J. f. O.* 1861, p. 326; *Lawr. Ann. Lyc. N. Y.* vii. p. 322 (1861); *Scl. Cat. Amer. B.* p. 36 (1862); *Blakist. Ibis*, 1862, p. 4, 1863, p. 63; *March, Proc. Philad. Acad.* 1863, p. 293; *Scl. P. Z. S.* 1864, p. 172; *Scl. & Salv. t. c.* p. 347; *Lawr. Ann. Lyc. N.Y.* viii. pp. 174, 285 (1864); *Baird, Review Amer. B.* p. 256 (1865); *Dresser, Ibis*, 1865, p. 479; *Léot. Ois. Trinid.* p. 248 (1866); *Lawr. Ann. Lyc. N. Y.* ix. p. 96 (1866); *Bryant, Proc. Bost. Soc. N. H.* xi. p. 91 (1867); *Salvin, P. Z. S.* 1867, p. 136; *Baird, Ibis*, 1867, pp. 272, 273, 275; *Gray, Hand-l. B.* i. p. 243, no. 3514 (1869); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 547 (1869); *Von Frantz. J. f. O.* 1869, p. 294; *Salv. P. Z. S.* 1870, p. 183; *Finsch, t. c.* p. 565; *Scl. & Salv. t. c.* p. 780; *Wyatt, Ibis*, 1871, p. 323; *Allen, Bull. Mus. Comp. Zool. Cambr.* iii. p. 175 (1872); *Coues, Key N. Amer. B.* p. 110 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873); *Coues, B. N.-West*, pp. 81, 232 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 322, pl. 16. figs. 1, 5 (1874); *Hensh. Rep. Zool. Expl. W. 100th Merid.* p. 209 (1876); *Gundl. Orn. Cuba*, p. 70 (1876); *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 16 (1876); *Coues, B. Color. Vall.* p. 337 (1878); *Salv. P. Z. S.* 1878, p. 305; *Lawr. Pr. U.S. Nat. Mus.* i. pp. 35 (1876), 232, 486 (1879); *Scl. & Salv. P. Z. S.* 1879, p. 494; *Cory, B. Bahamas*, p. 75 (1880); *A. & E. Newt. Handb. Jamaica*, p. 106 (1881); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 19 (1881); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 178 (1881); *Boucard, P. Z. S.* 1883, p. 441; *Coues, Key N. Amer. B.* 2nd ed. p. 316 (1884); *Cory, B. S. Domingo*, p. 40 (1884).
Sylvania ruticilla, *Nuttall, Man.* p. 291 (1832).

Adult male. General colour above glossy black, the rump with concealed whitish subterminal spots; wing-coverts like the back; bastard-wing and primary-coverts blackish; quills blackish, with a large basal portion pale orange-scarlet, forming a conspicuous wing-patch; inner secondaries entirely blackish; first primary edged with pale orange-scarlet; four centre tail-feathers blackish, the remainder pale orange-scarlet, with the terminal third black, forming a broad band at the ends; sides of head, lores, ear-coverts, cheeks, throat, and chest black, slightly mottled on the sides of the

neck with reddish-white bases to the feathers; sides of breast and flanks pale orange-scarlet, the former mottled with black spots near the black chest: centre of breast and abdomen white, washed with red; under tail-coverts white with dusky centres, the long ones dusky blackish; thighs dull white, blackish posteriorly; axillaries and under wing-coverts pale orange-scarlet; quills dusky, pale orange-scarlet on the inner web: "bill brownish black; feet blackish; iris dark brown" (*Audubon*). Total length 5 inches, culmen 0·45, wing 2·45, tail 2·3, tarsus 0·7.

The plumage of the adult male is more brilliant in winter than in summer; the black is more glossy and brilliant, and the red on the wings and tail and breast is much brighter and more orange-red.

Adult female. Different from the male. Ashy brown above, with a wash of olive; lesser wing-coverts like the back; median series dusky brown, edged with ashy; greater coverts dusky brown, slightly edged with olive-brown; bastard-wing and primary-coverts brown; quills brown, edged with olive-yellow, the secondaries with a patch of brighter yellow near the base; upper tail-coverts dusky brown; four centre tail-feathers blackish brown, all the others pale yellow, with dark-brown shafts and a broad band of blackish brown at their ends; crown of head and nape ashy; lores, feathers above and round the eye, and ear-coverts paler grey; eyelid ashy whitish; cheeks and throat pale ashy white, browner and washed with olive-yellow on the fore neck; sides of upper breast brighter olive-yellow; breast and abdomen as well as the under tail-coverts white, the latter with dusky-brown centres, the longer coverts entirely dusky brown; axillaries and under wing-coverts pale yellow, those near the edge of the wing ashy; quills dusky brown, yellow along the edge of the inner web. Total length 4·5 inches, culmen 0·45, wing 2·2, tail 2·2, tarsus 0·65.

Young male. Resembles the old female, but is rather more olive on the back, and purer grey on the head; the yellow spot on the quills is found on the inner primaries as well as the secondaries; the throat is purer greyish white; and the fore neck and chest, as well as the sides of the breast, are brighter yellow. Around the lores and the eyes, as well as on the chin and throat, are several black feathers of the approaching adult plumage.

An immature male killed on the 14th of May shows a considerable trace of orange-scarlet on the sides of the breast and on the tail-feathers. According to Coues, the male bird does not obtain his full plumage until the third year.

Hab. The greater part of temperate North America, especially the eastern province; north to Fort Simpson; west to Utah; breeding in most of the United States, and all of its British American range (*Coues*). Winters throughout Central America, extending to Guiana, Colombia, Ecuador, and Peru, as well as to most of the West-India islands.

a. ♂ ad. st.	North America.	Purchased.
b. ♂ ad.; *c*. ♂ imm. sk.	Fort Simpson, May.	B. R. Ross, Esq. [P.].

d, *e*. ♂ ♀ ad. sk.	Fort Simpson, June.	B. R. Ross, Esq. [P.].
f. ♂ ad.; *g*. ♂ imm. sk.	49th Parallel (*G. Dawson*).	N. A. B. Commission.
h. [♂ imm.] sk.	Niagara Falls.	Gould Collection.
i. ♂ ad. sk.	Pennsylvania (*Baird*).	Sclater Collection.
k. ♂ ad. sk.	Pennsylvania, Sept. 13 (*W. L. Collins*).	R. B. Sharpe, Esq. [P.].
l. ♂ ad. sk.	District Columbia (*Shufeldt*).	U.S. Nat. Museum [P.].
m, *n*. ♂ ♀ ad. sk.	District Columbia, May (*E. Coues*).	Salvin-Godman Coll.
o. ♀ ad. sk.	Rock Creek, D.C., Sept. 6 (*D. W. Prentiss*).	U.S. Nat. Museum [P.].
p. ♀ ad. sk.	Chicago, Ill., May 11 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
q, *r*. ♂; *s*. ♀ ad.; *t*. ♂ imm. sk.	Hyde Park, Cook Co., Ill., May (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
u. ♂ imm. sk.	Lake Forest, Ill., May (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
v. ♀ ad. sk.	Colehour, Ill., Sept. 4 (*H. K. Coale*).	R. B. Sharpe, Esq.
w. ♂ juv. sk.	Mt. Carmel, Ill., Aug. 20 (*R. Ridgway*).	U.S. Nat. Museum [P.].
x. ♂ ad. sk.	West side of Rocky Mountains.	J. K. Lord, Esq. [P.].
y, *z*. ♂ ♀ ad. sk.	N. Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
a', *b'*. ♂ ♀ ad. sk.	Cozumel Island (*E. C. Devis*).	Salvin-Godman Coll.
c'. ♂ ad. sk.	British Honduras (*Blancaneaux*).	Salvin-Godman Coll.
d'. Var., alb. sk.	Vera Paz, Guatemala.	Salvin-Godman Coll.
e'. ♀ juv. sk.	Dueñas, Guatemala, Sept. 24 (*O. S.*).	Salvin-Godman Coll.
f'. ♂ ad. sk.	Coban, Vera Paz, Nov. (*O. S.*).	Salvin-Godman Coll.
g', *h'*. ♂ ♀ ad. sk.	Choctum, Vera Paz (*O. S.*).	Salvin-Godman Coll.
i'. ♀ ad. sk.	Retalhuleu, Guatemala, Sept. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
k'. ♀ ad. sk.	Costa Rica (*J. Carmiol*).	Salvin-Godman Coll.
l'. ♂ ad. sk.	Irazu District, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
m'. ♂ ad. sk.	Calovevora, Veragua (*E. Arcé*).	Salvin-Godman Coll.
n'. ♂ juv. sk.	Santa Fé, Veragua (*E. Arcé*).	Salvin-Godman Coll.
o'. ♀ ad. sk.	Volcan de Chiriqui (*E. Arcé*).	Salvin-Godman Coll.
p', *q'*. ♂ ♀ ad. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.
r'. ♀ ad. sk.	Bogotá.	Salvin-Godman Coll.
s'. ♂ juv. sk.	Atanques, Santa Marta (*F. Simons*).	Salvin-Godman Coll.
t'. ♂ ad. sk.	Minca, Santa Marta, Jan. 18 (*F. Simons*).	Salvin-Godman Coll.
u'. ♀ ad. sk.	Antioquia (*T. K. Salmon*).	Salvin-Godman Coll.
v'. ♂ imm. sk.	Medellin.	T. K. Salmon, Esq. [C.].
w'. ♀ ad. sk.	Jima, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
x'. ♂ ad. sk.	Roraima, Oct. 4 (*H. Whitely*).	Salvin-Godman Coll.
y'. ♂; *z'*, *a*. ♀ ad. sk.	Roraima, Jan. (*H. W.*).	Salvin-Godman Coll.
β, *γ*. ♂ ♀ ad. sk.	Moneague, Jamaica, Aug. 30 (*O. S. & F. D. G.*).	Salvin-Godman Coll.

δ, ε. ♂ ad. sk.	Samaná, San Domingo, Jan. & Feb (*C. G. McGregor*).	Salvin-Godman Coll.
ζ η. ♂ ♀ ad. sk.	Santa Lucia, W. I. (*Semper*).	Sclater Collection.
θ. ♂ ad. sk.	Tobago.	Governor Ussher [P.].
ι, κ. ♂ ♀ ad. sk.	Trinidad.	Sclater Collection.
λ. ♂ ad. sk.	Trinidad.	Gould Collection.
μ, ν. Skeletons.	N. America.	Purchased.
ξ. Skull.	Jamaica.	P. H. Gosse, Esq. [P.].

2. Setophaga picta.

Setophaga picta, *Swains. Zool. Illustr.* ser. 2, i. pl. iii. (1829); *Gray, Gen. B.* i. p. 265 (1846); *Bp. Consp.* i. p. 312 (1850); *Kaup, P. Z. S.* 1851, p. 50; *Scl. P. Z. S.* 1855, p. 66, 1856, p. 292, 1858, p. 209, 1859, p. 374; *Baird, B. N. Amer.* p. 298 (1858), pl. 77. fig. 2 (1860); *id. U.S. Bound. Surv.* ii., *Birds*, p. 11 (1859); *Scl. & Salv. Ibis*, 1859, p. 12; *E. C. Taylor, Ibis*, 1860, p. 110; *Scl. Cat. Amer. B.* p. 36 (1862); *Baird, Review Amer. B.* p. 256 (1865); *Gray, Hand-l. B.* i. p. 243, no. 3515 (1869); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 546 (1869); *Coues, Key N. Amer. B.* p. 110 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* iii. *App.* p. 507 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 270 (1874); *Hensh. Rep. Zool. Expl. W. 100th Merid.* p. 209 (1875); *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 16 (1876); *Coues, Birds Color. Vall.* p. 335 (1878); *Salv. Ibis*, 1878, p. 306; *id. & Godm. Biol. Centr.-Amer., Aves*, i. p. 179 (1881); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 19 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 315 (1884).

Muscicapa leucomus, *Giraud, Sixteen B. Texas*, pl. 6. fig. 1 (1841).

Muscicapa tricolor, *Licht. Mus. Berol.*; *Bp. Consp.* i. p. 312 (1850).



Tail of *Setophaga picta*, to show the white on the third feather.

Adult male. General colour above jet-black, with greyish bases to the feathers; lesser wing-coverts black; median and greater series white, forming a large wing-patch; the inner greater coverts black, and all the others black on the inner web, becoming gradually more

and more white on the outer one; bastard-wing, primary-coverts, and quills black; tail-feathers black, the two outermost ones white, with an oblique black mark across the base of the outer web and the lower part of the inner web, the third feather with a wedge-shaped mark of white at the end of the inner web and a white tip to the outer; head, sides of face, lores, ear-coverts, cheeks, and throat black like the back; upper and under edge of eyelid white; remainder of under surface from the lower throat downwards deep crimson, the sides of the body and flanks being jet-black; vent, thighs, and under tail-coverts white; under wing-coverts and axillaries white; quills ashy blackish below, whitish along the edge of the inner web: "bill and feet black" (*Coues*). Total length 5 inches, culmen 0·5, wing 2·75, tail 2·35, tarsus 0·65.

Adult female. Not particularly different from the male, though rather less richly coloured. (*Coues.*)

In poor plumages the black is not so lustrous; the red of the belly is less extensive and of a more brick-red tone, and the white of the wings and tail more restricted. (*Coues.*)

Mexican specimens, instead of having the third tail-feather white at the end only, have almost as much white on it as the penultimate feathers; the greater part of the outer web is white, as well as an oblique mark across the inner one. This difference does not seem to be caused by age, as the young Mexican bird shows the peculiarity in as great a degree as the old birds.

Some adult males have the inner secondaries edged with white; but whether this is a sign of age I cannot say; it is more pronounced in examples from Mexico than in those from Guatemala. Coues speaks of Arizona specimens as having a broad white edging to the inner secondaries.

Young. Dusky or sooty black above where the adult is jet-black; inner secondaries edged with white; tail as in adult, the third feather also for a great part white, nearly the whole of the outer web and the terminal third of the inner web near the shaft being white also; sides of head and under surface of body sooty brown with grey bases, the lower abdomen washed with sandy buff; thighs and under tail-coverts ashy, tipped with white; under wing-coverts white; quills dusky below, whitish along the edge of the inner web. Total length 5 inches, wing 2·65, tail 2·4, tarsus 0·65.

Hab. Central America: Mexico, extending into New Mexico and Arizona in North America.

a. ♀ juv. sk.	Santa Rita Mts., Arizona, July 5 (*E. W. Nelson*).	U.S. Nat. Museum [P.].	
b. Ad. sk.	Mexico.	J. Taylor, Esq. [P].	(Type of species.)
c. ♀ juv. sk.	S. Mexico.	M. A. Sallé [C.].	
d. ♂ ad. sk.	Near the City of Mexico.	Salvin-Godman Coll.	
e. ♂ ad. sk.	Oaxaca (*Fenochio*).	Salvin-Godman Coll.	
f. ♂ ad. sk.	Ciudad Durango, June 15 (*A. Forrer*).	Salvin-Godman Coll.	

Subsp. *a.* Setophaga guatemalæ.

Setophaga picta (*nec Swains.*), *Scl. & Salv. Ibis*, 1859, p. 12; *E. C. Taylor, Ibis*, 1860, p. 110; *Scl. Cat. Amer. B.* p. 36 (1862, pt.); *et auct. recent.*

Adult male. Similar to *S. picta*, but distinguished by the much smaller amount of white on the three outer tail-feathers. Total length 5·3 inches, culmen 0·45, wing 2·7, tail 2·4, tarsus 0·65.



Tail of *Setophaga guatemalæ*, to show the amount of white on third feather.

Obs. In the Salvin-and-Godman collection are five adult males from Guatemala, which confirm the distinctions pointed out in the above diagnosis. In some of them there is no trace of white on the third tail-feather, whereas three males from Mexico in the same collection have nearly as much white on the third tail-feather as on the penultimate feather. The Guatemalan skins have a very narrow fringe of white to the secondaries, this being very broad in the Mexican examples.

Hab. Central America: Guatemala. The Honduras bird is probably the same, but an examination of specimens is necessary.

a.	Ad. sk.	Guatemala (*Bridges*).	Eyton Collection.
b.	Ad. sk.	Guatemala (*Constancia*).	Sclater Collection.
c.	Juv. sk.	Guatemala (*O. Salvin*).	Salvin-Godman Coll.
d.	♂ ad. sk.	Volcan de Fuego, Guatemala, Sept. (*O. S.*).	Sclater Collection.
e, f.	♂ ad. sk.	Volcan de Fuego, Aug. & Sept. (*O. S.*).	Salvin-Godman Coll.
g.	♂ ad. sk.	Volcan de Fuego (*O. S. & F. D. G.*).	Salvin-Godman Coll.
h.	♂ ad. sk.	Santa Barbara, Vera Paz, Jan. (*O. S.*).	Salvin-Godman Coll.
i.	♂ ad. sk.	Tactic, Vera Paz, Jan. (*O. S.*).	Salvin-Godman Coll.

3. Setophaga miniata.

Setophaga miniata, *Swains. Phil. Mag.* new ser. i. p. 368 (1827); *id. An. in Menag.* p. 293 (1837); *Gray, Gen. B.* i. p. 265 (1846); *Scl. P. Z. S.* 1856, p. 292, 1858, p. 299; *Baird, B. N. Amer.* p. 299 (1858), pl. 58. fig. 1 (1860); *Scl. P. Z. S.* 1859, pp. 363, 374; *id. Cat. Amer. B.* p. 37 (1862); *Baird, Review Amer. B.* p. 259 (1865); *Gray, Hand-l. B.* i. p. 240, no. 3524 (1869); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 546 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873, pt.); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* p. 322 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 270 (1874); *id. Bull. U.S. Nat. Mus.* no. 4, p. 16 (1876); *Salv. Ibis*, 1878, p. 308 (pt.); *id. & Godm. Biol. Centr.-Amer., Aves*, i. p. 181 (1881, pt.); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 19 (1881).

Muscicapa larvata, *Licht. Preis-Verz. mex. Vög.* p. 2 (1830); *Cab. J. f. O.* 1863, p. 58.

Muscicapa vulnerata, *Wagler, Isis*, 1831, p. 529; *Kaup, P. Z. S.* 1851, p. 50.

Setophaga castanea, *Less. Rev. Zool.* 1839, p. 42.

Muscicapa derhami, *Giraud, B. Texas*, pl. 3. fig. 2 (1841); *Scl. P. Z. S.* 1855, p. 65.

Setophaga vulnerata, *Gray, Gen. B.* i. p. 265 (1846); *Bp. Consp.* i. p. 313 (1850).

Adult. General colour above dark slaty grey; lesser wing-coverts like the back; median and greater coverts blackish, edged with slaty grey like the back; bastard-wing, primary-coverts, and quills blackish, narrowly edged with slaty grey; upper tail-coverts like the back; tail-feathers black, the three outer ones with a broad white tip, increasing in extent towards the outermost, which has a white margin to the outer web for half its length; on the top of the crown a patch of deep chestnut; nape, sides of crown, and sides of neck dark slaty grey like the back; a broad frontal band of blackish, the feathers edged with slaty grey, the lores, cheeks, and ear-coverts being of the same colour; throat black, with a slight wash of slaty grey, the lower throat being entirely black; remainder of under surface from the fore neck downwards crimson, the sides of the breast and flanks being slaty grey, the latter slightly intermixed with blackish; thighs ashy grey externally, white on inner aspect; under tail-coverts white, with a slight rosy tinge; axillaries and under wing-coverts slaty grey, edged with white, which is slightly tinged with rosy; quills dusky below, ashy along the edge of the inner web. Total length 5·4 inches, culmen 0·5, wing 2·5, tail 2·6, tarsus 0·7.

Young. General colour above sooty black, the wing-coverts like the back, edged with rusty brown at the tips; quills blackish, washed with slaty grey on the edges; tail-feathers black; head a little more dusky than the back; sides of face and throat dull ashy, washed with brown on the chin; lower throat and sides of body dark chocolate-brown, the abdominal feathers paler and more chestnut and with whitish bases; under tail-coverts pale fulvous.

Obs. At present I have never seen any orange-scarlet birds from Mexico, all the specimens in the British Museum and in the Salvin-and-Godman collection having bright crimson breasts. The Mexican

examples also have much more white on the tail, and the chestnut patch on the head is obscured by slaty-grey tips to the feathers.



Tail of *Setophaga miniata*.

Prof. Baird says that the type of *Muscicapa derhami*, Giraud, which he regards as less mature or probably a female, has the black feathers of the forehead and throat edged with plumbeous and the sides of the head plumbeous.

Hab. Mexico.

a.	Ad. sk.	Mexico (*Mus. Derb.*).	Sclater Collection.
b.	♂ ad. sk.	Near the City of Mexico.	Salvin-Godman Coll.
c.	♂ ad. sk.	La Parada, Mexico (*A. Boucard*).	Salvin-Godman Coll.
d.	♂ ad. sk.	Jalapa (*De Oca*).	Salvin-Godman Coll.

Subsp. *a*. **Setophaga flammea.**

Setophaga flammea, *Kaup, P. Z. S.* 1851, p. 50; *Scl. & Salv. Ibis*, 1859, p. 12; *Scl. Cat. Amer. B.* p. 37 (1862); *Baird, Review Amer. B.* p. 259 (1865).

Setophaga intermedia, *Hartl. Rev. Zool.* 1852, p. 5.



Tail of *Setophaga flammea*.

Adult male. Similar to *S. miniata*, but with much less white on the outer tail-feathers. Total length 5·5 inches, culmen 0·45, wing 2·5, tail 2·5, tarsus 0·7.

It would appear as if the orange-breasted birds were the young males, as the collection of Messrs. Salvin and Godman contains one young bird emerging from the dusky first plumage into an orange-breasted plumage.

In the Guatemalan series in the same collection every shade of colour from orange to crimson is observable; the difference of the white on the tail holds good, but is not so marked as between *S. picta* and *S. guatemalæ*.

Hab. Guatemala and Costa Rica.

a. Ad. sk.	Guatemala (*Constancia*).	Sclater Collection.
b, c. Ad. sk.	Volcan de Fuego, Guatemala (*O. Salvin*).	Sclater Collection.
d. Ad. st.	Coban, Guatemala.	Purchased.
e. Ad. st.	Guatemala.	Purchased.
f. ♂ ad. sk.	Guatemala (*O. S.*).	Salvin-Godman Coll.
g, h. ♂ ad. sk.	Coban, Vera Paz (*O. S. & F. D. G.*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Choctum, Vera Paz (*O. S.*).	Salvin-Godman Coll.
k. ♂ imm. sk.	Dueñas, Guatemala (*O. S. & F. D. G.*).	Salvin-Godman Coll.
l, m. ♂ imm. sk.	Volcan de Fuego, Guatemala, Sept. (*O. S.*).	Salvin-Godman Coll.
n. ♂ ad. sk.	Volcan de Agua, Guatemala, Nov. (*O. S.*).	Salvin-Godman Coll.

4. Setophaga verticalis.

Setophaga verticalis, *Lafr. & D'Orb. Syn. Av.* p. 53 (1837); *D'Orb. Voy. Amér. Mérid.* p. 330, pl. 35. fig. 1 (1835–44); *Gray, Gen. B.* i. p. 265 (1846); *Bp. Consp.* i. p. 313 (1850); *Tschudi, Faun. Peruan., Aves*, p. 191 (1855); *Sclater, Cat. Amer. B.* p. 37 (1862); *Baird, Review Amer. B.* p. 258 (1865); *Gray, Hand-l. B.* i. p. 243, no. 3519 (1869); *Wyatt, Ibis*, 1871, p. 323; *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873); *id. P. Z. S.* 1876, p. 16; *Salv. Ibis*, 1878, p. 311; *Tacz. P. Z. S.* 1879, p. 223, 1882, p. 7; *Berlepsch & Tacz. P. Z. S.* 1883, p. 541; *Tacz. Orn. Pérou*, p. 481 (1841).

Myioborus verticalis, *Tacz. P. Z. S.* 1874, p. 508.

Adult male. General colour above slaty grey; lesser wing-coverts like the back; median and greater series, bastard-wing, primary-coverts, and quills blackish, externally edged with dull slaty grey, a little lighter on the primaries; feathers on the side of the rump with half-concealed subterminal spots of yellowish white; upper tail-coverts dark slate-colour, blackish in the centre of the feathers; tail-feathers black, the three outside ones white towards the ends, increasing in extent towards the outermost, which has more than half the feather and nearly the whole of the outer web white; forehead dark slaty grey, slightly mottled with black centres to the feathers; the hinder crown with a conspicuous patch of chestnut; sides of crown, ear-coverts, and sides of neck dull slaty grey, the lores and feathers round the eye blackish; cheeks and sides of throat

dull slate-colour, the centre of the latter blackish; rest of under surface of body from the fore neck downwards bright yellow; the sides of the upper breast dark slaty grey, the flanks also slate-colour; thighs ashy externally, white on their inner aspect; under tail-coverts white, washed with yellow; axillaries and under wing-coverts white, washed with yellow, with a patch of dusky near the edge of the wing; quills dusky below, ashy whitish along the edge of the inner web: "bill black; feet blackish brown; iris dark brown" (*Stolzmann*). Total length 5 inches, culmen 0·45, wing 2·4, tail 2·2, tarsus 0·7.

Obs. An adult male from Antioquia is very brilliantly coloured underneath, and is orange-yellow on the breast. Wing 2·6 inches.

Adult female. Rather paler in colour than the male, and with the coronal patch of chestnut scarcely perceptible, the chestnut feathers being tipped with slaty grey. Total length 5·3 inches, culmen 0·4, wing 2·35, tail 2·4, tarsus 0·7.

Hab. From Bolivia and Peru to Ecuador, Colombia, Venezuela, and British Guiana.

a, b. Ad. sk.	Typuani, Bolivia (*C. Buckley*).	Salvin-Godman Coll.
c. Ad. sk.	San Antonio, Peru, July 5 (*H. Whitely*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Pallatanga, Ecuador, Aug. (*Fraser*).	Sclater Collection.
e. Ad. sk.	Quito.	J. Gould, Esq.
f, g. Ad. sk.	Jima, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
h. Ad. sk.	Bogotá.	Salvin-Godman Coll.
i. Ad. sk.	Bogotá.	Sclater Collection.
k. Ad. sk.	Concordia, Antioquia (*Salmon*).	Sclater Collection.
l. ♂ ad. sk.	Santa Elena, Antioquia.	T. K. Salmon, Esq. [C.].
m, n. ♂ ♀ ad. sk.	Santa Elena (*T. K. Salmon*).	Salvin-Godman Coll.
o, p. ♀ ad. sk.	San Sebastian, Sierra Nevada of Santa Marta, July and Aug. (*F. Simons*).	Salvin-Godman Coll.
q. ♀ ad. sk.	San Salvador, Sierra Nevada of Santa Marta (*Simons*).	Sclater Collection.
r. ♀ ad. sk.	Caracas, Venezuela, Oct. (*A. Goering*).	Salvin-Godman Coll.
s, t. ♂ ad. sk.	Roraima, British Guiana, Aug. (*H. Whitely*).	Salvin-Godman Coll.

5. Setophaga aurantiaca.

Setophaga flammea, *Cab. J. f. O.* 1861, p. 85 (*nec Kp.*).
Setophaga aurantiaca, *Baird, Review Amer. B.* p. 261 (1865); *Lawr. Ann. Lyc. N. Y.* ix. p. 96 (1868); *Von Frantz. J. f. O.* 1869, p. 294; *Gray, Hand-l. B.* i. p. 243, no. 3525 (1869); *Salv. Ibis*, 1869, p. 313; *id. P. Z. S.* 1870, p. 183; *Scl. & Salv. Nomencl. Av. Neotr.* p. 11 (1873); *Salv. Ibis*, 1878, p. 310; *id. & Godm. Biol. Centr.-Amer., Aves*, i. p. 182 (1881).

Adult male. General colour above slaty grey, the long feathers on the side of the rump with yellowish tips; wing-coverts dusky, edged

with slaty grey like the back; bastard-wing, primary-coverts, and quills blackish, edged with slaty grey, almost obsolete on the quills; upper tail-coverts blackish, edged with slaty grey; tail-feathers black, the four outer ones white at the ends, the white gradually increasing towards the outermost, where it occupies the terminal half of the feather; forehead and sides of crown black, skirting a chestnut patch, which occupies the hinder crown and occiput; lores and a very broad eyebrow dark slaty grey; feathers round the eye, ear-coverts, cheeks, and throat blackish, washed with slaty; remainder of under surface bright yellow from the fore neck downwards; sides of the breast and flanks slaty grey; thighs slaty grey; vent and under tail-coverts white; axillaries white, with dusky bases; under wing-coverts slaty grey, edged with white; quills dusky below, ashy whitish along the edge of the inner web: "bill and feet black" (*Salvin*). Total length 5 inches, culmen 0·5, wing 2·5, tail 2·35, tarsus 0·75.

Sexes alike (*Baird*).

Young. Differs from the adult in being more dusky, the abdomen being chestnut.

Hab. Costa Rica, Veragua, and Panama.

a. Ad. sk.	Costa Rica (*J. Carmiol*).	Sclater Collection.
b. Ad. sk.	Costa Rica (*H. Rogers*).	Sclater Collection.
c. ♂ ad. sk.	San José, Costa Rica, Jan. 20 (*A. von Frantzius*).	Salvin-Godman Coll.
d. Ad sk.	Turrialba, Costa Rica (*E. Arcé*).	Salvin-Godman Coll.
e, f. Ad. sk.	Tucurriqui, Costa Rica (*E. Arcé*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Calovevora, Veragua (*E. Arcé*).	Salvin-Godman Coll.
h. ♂ ad.; *i.* juv. sk.	Volcan de Chiriqui (*E. Arcé*).	Salvin-Godman Coll.

6. Setophaga albifrons.

Setophaga albifrons, *Scl. & Salv. P. Z. S.* 1870, pp. 780, 784; *iid. Nomencl. Av. Neotr.* p. 11 (1873); *Salv. Ibis*, 1878, p. 318, pl. viii. fig. 2.

Adult male (type of species). General colour above slaty grey, with a slight olive tinge; lesser wing-coverts like the back; median and greater series dusky, externally slaty grey; bastard-wing, primary-coverts, and quills dusky blackish, externally edged with slaty grey; upper tail-coverts black; tail black, the two outer feathers white, with an oblique mark of black towards the base, occupying the terminal half of the penultimate feather; the third feather with a small terminal spot of white; a patch of light chestnut on the hinder crown and occiput, the lateral and hinder feathers of which are tipped with black spots; sides of crown black, meeting and forming a bar across the forehead, the base of which is white, as well as the lores and a ring of feathers round the eye; cheeks, ear-coverts, sides of neck, and sides of hinder crown dark slaty grey,

blackish below the eye and on the fore part of cheeks; base of chin white; throat and remainder of under surface of body bright yellow; sides of breast and flanks slaty grey; thighs ashy grey; under tail-coverts white, with ashy-grey bases; axillaries dark slaty grey, with white tips; under wing-coverts white; quills dusky below, ashy whitish along the edge of the inner web: "iris brown" (*Goering*). Total length 5·6 inches, culmen 0·45, wing 2·5, tail 2·5, tarsus 0·75.

Young. More dusky than the adult, and browner on the upper surface; forehead and region above the eye blackish; no rufous crown; throat rusty ash-brown, with a few bright yellow feathers intermixed; no white on the face or the chin.

Hab. Merida, Venezuela.

a. ♂ ad. sk.	Upper Wood-region, Merida (*A. Goering*).	Sclater Collection. (Type of species.)
b. ♂ ad.; *c*. ♂ juv. sk.	Sierra Nevada de Merida (*A. Goering*).	Sclater Collection.
d, *e*. ♂ ad.; *f*. ♂ juv. sk.	Sierra Nevada de Merida (*A. Goering*).	Salvin-Godman Coll.

7. Setophaga bairdi.

Setophaga ruficoronata (*nec Kp.*), *Scl. P. Z. S.* 1858, p. 550, 1860, p. 74; *id. Cat. Amer. B.* p. 37 (1862); *Scl. & Salv. P. Z. S.* 1870, p. 784; *iid. Nomencl. Av. Neotr.* p. 11 (1873).
Setophaga sp., *Baird, Review Amer. B.* p. 258 (1865).
Setophaga bairdi, *Salvin, Ibis*, 1878, p. 317, pl. viii. fig. 1; *Tacz. P. Z. S.* 1879, p. 224; *id. Orn. Pérou*, p. 480 (1884).

Adult male. General colour above dark slaty grey, slightly marked with olive; lesser wing-coverts like the back; median and greater series blackish, externally edged with slaty grey; bastard-wing and primary-coverts blackish; quills blackish, externally margined with slaty grey; upper tail-coverts black; tail-feathers black, the two outer ones white, with an oblique blackish mark on the inner web, broader on the penultimate feather, which has a blackish edging near the tip of the outer web; forehead and a broad streak along the sides of the crown black; remainder of crown cinnamon, the hinder feathers tipped with black, like the adjoining feathers of the nape, which are also mottled with black tips; a line across the base of forehead and a ring of feathers round the eye golden yellow; lores with a black spot; a line below the eye and ear-coverts black; sides of neck slaty grey; cheeks and under surface of body golden yellow, the fore neck and breast separated from the sides of the neck by a line of black; sides of upper breast slaty grey; under tail-coverts white, washed with yellow near the vent; thighs ashy grey; axillaries pale yellow or yellowish white, with slaty-grey bases; under wing-coverts slaty grey, edged with white; quills dusky below, ashy white along the edge of the inner web: "bill and feet black; iris dark brown" (*Stolzmann*). Total length 5·2 inches, culmen 0·45, wing 2·7, tail 2·5, tarsus 0·8.

Obs. The female birds are apparently less brightly coloured than the male, have a paler crown, and much narrower frontal band of

black, this being mottled with the golden-yellow bases to the feathers.

Young. Differs from the adult in having no chestnut crown, its presence being indicated by a few feathers only of the latter colour; the forehead mottled with a few golden-yellow feathers tipped with black; rest of the crown slaty grey, like the back.

Hab. Ecuador to Peru.

a. ♂ ad. sk.	Matos, Ecuador, June (*Fraser*).	Sclater Collection.
b. [♀] ad. sk.	Matos (*Fraser*).	Sclater Collection.
c, d, e. [♂ ♀] ad. sk.	Quito.	Gould Collection.
f. Ad. sk.	Quito (*Bruce*).	Salvin-Godman Coll.
g. Ad. sk.	Sical, Ecuador (*C. Buckley*).	Salvin-Godman Coll. (Type of species.)
h. Ad. sk.	Sical (*C. Buckley*).	Salvin-Godman Coll.
i, k. Ad. sk.	San Lucas, Ecuador (*Villagomez*).	Salvin-Godman Coll.
l. Juv. sk.	Ecuador.	Gould Collection.

8. Setophaga torquata.

Setophaga torquata, *Baird, Review Amer. B.* p. 261 (1865); *Salvin, P. Z. S.* 1867, p. 136; *Lawr. Ann. Lyc. N. Y.* ix. p. 96 (1868); *Von Frantz. J. f. O.* 1869, p. 294; *Gray, Hand-l. B.* i. p. 243, no. 3526 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 11 (1873); *Salv. Ibis*, 1878, p. 319; *id. & Godm. Biol. Centr.-Amer., Aves*, i. p. 183, tab. 10. fig. 2 (1881).

Adult. General colour above slaty grey with a slight tinge of olive, rather more distinct on the rump, the long lateral plumes of which are tipped with pale yellow; wing-coverts blackish, edged with slaty grey; bastard-wing, primary-coverts, and quills blackish, more narrowly margined with slaty grey; upper tail-coverts blackish, washed with slaty grey; tail-feathers blackish, the two outer ones white with oblique black bases, the white less extensive on the penultimate feather, the third feather with a white line skirting the shaft for more than half the length of its outer web and widening into a terminal spot; on the head a large chestnut patch occupying the vertex and occiput, the hinder feathers being tipped with black; sides of crown and a broad band across the forehead black; base of forehead, lores, eyebrow, feathers round the eye, cheeks, ear-coverts, sides of neck, and throat golden yellow; breast and abdomen also golden yellow, separated from the throat by a præpectoral collar of black, the sides of the upper breast slaty grey; thighs slaty grey; under tail-coverts paler yellow than the abdomen; axillaries pale yellow with ashy-grey bases; under wing-coverts ashy grey, edged with brighter yellow; quills dusky brown below, edged with pale ashy along the inner web: "bill and feet black" (*Salvin*). Total length 5·3 inches, culmen 0·45, wing 2·45, tail 2·3, tarsus 0·75.

A second specimen in the Sclater Collection has the back purer slaty grey without any olive tinge; the penultimate tail-feather

has a blackish margin along the outer web, only a faint trace of which is seen in the specimen described; the upper tail-coverts also are blacker.

Hab. Costa Rica and Veragua.

a, *b*. Ad. sk.	Irazu, Costa Rica (*Rogers*).	Sclater Collection.
c, *d*, *e*. Ad. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
f. Ad. sk.	La Palma, Costa Rica (*A. von Frantzius*).	Salvin-Godman Coll.
g. Ad. sk.	Costa Rica (*E. Arcé*).	Salvin-Godman Coll.
h. Ad. sk.	Veragua (*E. Arcé*).	Salvin-Godman Coll.
i. Ad. sk.	Cordillera de Tolé, Veragua (*E. Arcé*).	Salvin-Godman Coll.

9. Setophaga ruficoronata.

Setophaga ruficoronata, *Kaup, P. Z. S.* 1851, p. 49; *Baird, Review Amer. B.* p. 255 (1865, pt.); *Gray, Hand-l. B.* i. p. 243, no. 3522 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 11 (1873); *Salv. Ibis*, 1878, p. 316, pl. 7. fig. 1.

Adult. General colour above dark slate-colour, slightly varied on the hind neck with nearly obsolete blackish centres to the feathers; lesser wing-coverts like the back, the median and greater series blackish, externally edged with slate-colour; bastard-wing, primary-coverts, and quills blackish, the latter slightly edged with slaty grey; upper tail-coverts black, with slaty-grey margins; tail-feathers black, the two outer ones white, the penultimate feather with an oblique mark of black on the inner web and a narrow blackish margin to the end of the outer one, the outer feather with a nearly concealed oblique mark of black near the base of the inner web: forehead and sinciput golden yellow, extending in a narrow line backwards along the side of the chestnut patch occupying the vertex and occiput; lores golden yellow with black bases; feathers round the eye and a streak above the latter golden yellow, the last surmounted by a broad band of black running to the side of the nape; ear-coverts also black; the feathers below the eye golden yellow, mottled with black bases; cheeks and under surface of body brilliant golden yellow; sides of neck rather clearer slaty grey than the back, and separated from the yellow breast by a line of black feathers; sides of upper breast slaty grey; thighs darker slaty grey externally, washed with yellow on the inner aspect; under tail-coverts white, with a slight tinge of yellow; axillaries and under wing-coverts slaty grey, edged with white, the greater series entirely white; quills dusky below, ashy whitish along the edge of the inner web. Total length 5 inches, culmen 0·45, wing 2·7, tail 2·45, tarsus 0·8.

Hab. Peru, and interior of Colombia and Ecuador.

a. Ad. sk.	Foot of Mt. Pichincha, Ecuador (*Whymper*).	Sclater Collection.
b, *c*, *d*. Ad. sk.	Pasto, Ecuador (*Lehmann*).	Salvin-Godman Coll.
e, *f*. Ad. sk.	Yanayaca, Ecuador (*C. Buckley*).	Salvin-Godman Coll.

10. Setophaga ornata.

Setophaga ornata, *Bois. Rev. Zool.* 1840, p. 70; *Gray, Gen. B.* i. p. 265 (1846); *Bp. Consp.* i. p. 313 (1850); *Kaup, P. Z. S.* 1851, p. 50; *Scl. P. Z. S.* 1855, p. 114; *Scl. Cat. Amer. B.* p. 37 (1862); *Baird, Review Amer. B.* p. 258 (1865); *Gray, Hand-l. B.* i. p. 243, no. 3523 (1869); *Wyatt, Ibis*, 1871, p. 323; *Scl. & Salv. Nomencl. Av. Neotr.* p. 11 (1873); *Salv. Ibis*, 1878, p. 315.

Setophaga flaveola, *Lafr. Rev. Zool.* 1844, p. 81; *Gray, Gen. B.* i. p. 265 (1846); *Bp. Consp.* i. p. 313 (1850); *Scl. P. Z. S.* 1855, p. 144; *id. & Salv. Nomencl. Av. Neotr.* p. 11 (1873).

Setophaga leucophomma, *Kaup, P. Z. S.* 1851, p. 49; *Scl. P. Z. S.* 1855, p. 144; *id. Cat. Amer. B.* p. 37 (1862); *Gray, Hand-l. B.* i. p. 243, no. 3530 (1869).

Adult. General colour above dark slaty grey, with a slight tinge of olive; lesser wing-coverts like the back, the median and greater series black, edged with slaty grey; bastard-wing, primary-coverts, and quills blackish, the latter with obsolete slaty-grey margins; upper tail-coverts black, margined with slaty grey; tail-feathers black, the two outer ones white, with an oblique blackish mark across the inner web, larger on the penultimate feather, which has a narrow blackish edging near the end of the outer web also; crown of head golden yellow, as far as the vertex; the latter, as well as the nape and hind neck, black; a narrow line across the base of the forehead, lores, a broad eyebrow, as well as the feathers round the eye, and the fore part of the ear-coverts and of the cheeks white; hinder part of cheeks, remainder of ear-coverts, and sides of neck black like the hind neck, with a few white streaks on the hinder ear-coverts and cheeks; base of chin white like the fore part of the cheeks; remainder of under surface of body golden yellow; sides of the upper breast dark slaty grey, separated from the yellow breast by a line of black which descends from the black ear-coverts; thighs slaty grey; under tail-coverts white, washed with yellow near the vent; axillaries and under wing-coverts white, with ashy-grey bases; edge of wing tinged with yellow; quills dusky below, ashy along the edge of the inner web. Total length 5 inches, culmen 0·45, wing 2·55, tail 2·25, tarsus 0·75.

Young (=S. flaveola). Differs in having the sides of the head, including the lores, of the same colour as the back, with a few white feathers present. (*Salvin.*)

Hab. Interior of Colombia.

a, b, c. Ad. sk.	Bogotá.	Sclater Collection.
d, e. Ad. sk.	Bogotá.	Purchased.
f. Ad. sk.	Bogotá.	Purchased.
g. Ad. sk.	Bogotá (*Crowther*).	Salvin-Godman Coll.
h. Ad. sk.	Colombia.	Salvin-Godman Coll.
i. Ad. sk.	[Ecuador.]	Salvin-Godman Coll.

11. Setophaga chrysops.

Setophaga flaveola, *Kaup, P. Z. S.* 1851, p. 50 (*nec Lafr.*).
Setophaga chrysops, *Salv. Ibis*, 1878, p. 314, pl. 7. fig. 2.

Adult male. General colour above dark slaty grey, with a faint tinge of olive; lesser wing-coverts like the back; median and greater coverts black, narrowly edged with slaty grey like the back; bastard-wing, primary-coverts, and quills blackish, the latter with narrow margins of slaty grey; upper tail-coverts black; tail-feathers black, the two outer ones white, with an oblique black mark across the base of the inner web, more extended on the penultimate feather, the third one just tipped with white; crown of head and nape black, with chestnut bases to the feathers adjoining the yellow forehead; feathers round the eye forming a broad ring of golden yellow; the forehead deep orange-yellow, as well as the cheeks; ear-coverts black, with a small posterior patch of yellowish-white plumes; sides of neck slaty grey; entire under surface of body golden yellow, rather paler on the lower flanks; sides of upper breast dark slaty grey; thighs dark slaty grey; under tail-coverts white, with blackish bases; axillaries very pale yellow or white, with ashy bases; under wing-coverts black, edged with white or pale yellow; quills blackish below, ashy whitish along the edge of the inner web. Total length 5·6 inches, culmen 0·5, wing 2·85, tail 2·6, tarsus 0·8.

Adult (?) *female.* Slightly paler than the male, both above and below, and not showing the chestnut bases to the black coronal feathers. Total length 6 inches, culmen 0·45, wing 2·6, tail 2·6, tarsus 0·8.

Young male. Paler in colour than the adult male, and having the black coronal patch much less strongly pronounced and washed with olive; no chestnut bases to the black feathers on the head; penultimate tail-feather with a slight blackish fringe near the edge of the outer web; the white tip to the third tail-feather obsolete.

Hab. Colombia.

a. ♂ ad. sk.	Santa Elena, Antioquia (*T. K. Salmon*).	Salvin-Godman Coll. (Type of species.)
b. ♂ ad. sk.	Santa Elena, Antioquia (*T. K. Salmon*).	Sclater Collection.
c, d. ♂ ♀ ad. sk.	Santa Elena, Antioquia.	T. K. Salmon, Esq. [C.].
e. ♀ ad. sk.	Frontino, Colombia (*T. K. Salmon*).	Salvin-Godman Coll.
f. Ad. sk.	Retiro, Colombia (*T. K. Salmon*).	Sclater Collection.

12. Setophaga melanocephala.

Setophaga melanocephala, *Tschudi in Wiegm. Arch.* x. p. 276 (1844); *Gray, Gen. B.* i. p. 265 (1846); *Bp. Consp.* i. p. 313 (1850); *Kaup, P. Z. S.* 1851, p. 50; *Tschudi, Faun. Peruan.* p. 192, Taf. 12.

fig. 2 (1855); *Baird, Review Amer. B.* p. 258 (1865); *Gray, Hand-l. B.* i. p. 243, no. 3521 (1869); *Salv. Ibis*, 1878, p. 312; *Tacz. P. Z. S.* 1882, p. 7; *id. Orn. Pérou*, i. p. 479 (1884).
Myioborus melanocephalus, *Tacz. P. Z. S.* 1874, p. 509.

Adult male. General colour above dark slate-colour, the long rump-feathers washed with pale yellowish-olive at the ends; wing-coverts like the back, with black bases; bastard-wing, primary-coverts, and quills blackish, narrowly fringed with slaty grey; upper tail-coverts black; tail-feathers black, the outer ones white, with an oblique blackish mark across the inner web, the penultimate feather having a broader mark of the same character, the white being reduced on the third to a large wedge-shaped mark at the end; crown of head black, forming a cap; base of forehead bright yellow, continued in a distinct line over the eye and forming an eyebrow; eyelid yellow, except in front, where it is black like the lores; ear-coverts black; sides of neck slaty grey; cheeks and under surface of body brilliant yellow; sides of upper breast dark slaty grey, which continues on to the upper flanks, which have also a slight greenish tinge; thighs dark ashy; under tail-coverts white, slightly washed with yellow near the vent; under wing-coverts and axillaries dark slaty grey, narrowly edged with yellow; edge of wing yellow, the greater series whitish; quills dusky blackish below, edged with white along the inner web: "bill and feet black; iris dark brown" (*Jelski*). Total length 5 inches, culmen 0·45, wing 2·7, tail 2·5, tarsus 0·8.

The *young bird in its first plumage* has the top of the head grey, a little darker than the back; the yellow of the throat paler than in the adult; the yellow eyebrow, as well as the plumelets round the eye, commencing to show by scattered feathers of this colour; there are also some new black feathers appearing on the head. (*Taczanowski.*)

Hab. Peru and Bolivia.

a. ♂ ad. sk.	Pumamarca, Peru, June 5 (*Stolzmann*).	Salvin-Godman Coll.
b. ♂ ad. sk.	Tamiapampa, Peru, Nov. 18 (*Stolzmann*).	Sclater Collection.
c. ♂ ad. sk.	Central Peru (*Jelski*).	Sclater Collection.
d. Ad. sk.	Chachuapata, Peru, Sept. 6 (*H. Whitely*).	Salvin-Godman Coll.
e. Ad. sk.	Bolivia.	Mr. Bridges [C.].
f. Ad. st.	Bolivia.	Mr. Bridges [C.].
g. ♂ ad. sk.	Simacu, Bolivia (*C. Buckley*).	Salvin-Godman Coll.

13. Setophaga brunneiceps.

Setophaga brunneiceps, *D'Orb. Voy. Amér. Mérid.* p. 329, pl. 34. fig. 3 (1835–44); *Lafr. & D'Orb. Syn. Av.* p. 50 (1837); *Gray, Gen. B.* i. p. 265 (1846); *Sclater, Cat. Amer. B.* p. 37 (1862); *Baird, Review Amer. B.* p. 258 (1865); *Gray, Hand-l. B.* i. p. 243,

no. 3528 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 11 (1873); *Salv. Ibis*, 1878, p. 312.
Basileuterus brunneiceps, *Bp. Consp.* i. p. 314 (1850).

Adult male. General colour dull olive-yellowish, with grey bases to the feathers, the scapulars more ashy than the back; the long feathers at the sides of the rump tipped with pale yellow; wing-coverts dark slaty grey, the median and greater series with blackish bases; bastard-wing and primary-coverts blackish; quills blackish, edged externally with slaty grey; upper tail-coverts slaty grey, slightly washed with olive; tail-feathers blackish, the outer feather white, excepting an oblique blackish mark across the inner web, the penultimate feather white, but with a larger blackish mark and a narrow edging of blackish along the edge of the outer web, the third feather with a large wedge-shaped mark of white at the end; crown of head deep chestnut, occupying as far as the vertex, the occiput and nape being slaty grey like the hind neck and sides of the neck; across the base of the forehead a line of black, running backwards along the sides of the crown, accompanied by a narrow line of white from the base of the nostril above the eye; lores blackish; eyelid and a few feathers below the eye white; ear-coverts and cheeks slaty blackish, the latter separated from the throat by a narrow malar line of whitish, meeting on the chin; remainder of under surface of body bright yellow; the sides of the upper breast mixed with ashy; the flanks washed with olive; thighs ashy grey; under tail-coverts white, washed with yellow near the vent; under wing-coverts and axillaries white; quills dusky below, whitish along the edge of the inner web. Total length 5 inches, culmen 0·45, wing 2·45, tail 2·4, tarsus 0·75.

Hab. Bolivia and South-eastern Brazil.

a. Ad. sk.	South America.	Sclater Collection.
b. ♂ ad. sk.	Catamarca, Argentine Republic, Aug. 2 (*White*).	Sclater Collection.
c, *d*. Ad. sk.	Bolivia (*Buckley*).	Salvin-Godman Coll.

14. Setophaga castaneicapilla.

Setophaga castaneicapilla, *Cab. in Schomb. Reis. Guian.* iii. p. 667 (1848); *Baird, Review Amer. B.* p. 259 (1865); *Gray, Hand-l. B.* i. p. 243, no. 3529 (1869); *Salv. Ibis*, 1878, p. 313.

Adult male. General colour above dull olive-brown, dark slaty grey on the hind neck and mantle; upper tail-coverts black, slightly washed with olive; lesser and median wing-coverts dark slaty grey; greater coverts, bastard-wing, primary-coverts, and quills blackish, obsoletely margined with dull slaty grey, a little clearer on the primaries; tail-feathers black, the three outer ones white towards their ends, the white decreasing on the penultimate and third feathers, which have a blackish margin to the outer web; crown of head bright chestnut or bay; base of forehead ashy, slightly mottled with black centres to the feathers; a broad eyebrow, cheeks, and

ear-coverts ashy grey, slightly washed with olive-brown; the lores ashy white; eyelid whitish; feathers below the eye spotted with dull white; entire under surface of body bright yellow, inclining to orange on the throat and fore neck, and becoming paler sulphur-yellow on the under tail-coverts; sides of neck and sides of upper breast slaty grey; flanks olive-brown; thighs slaty grey; axillaries and under wing-coverts white, with ashy-black bases; edge of wing washed with yellow; quills blackish, ashy along the edge of the inner web. Total length 5·5 inches, culmen 0·5, wing 2·55, tail 2·55, tarsus 0·75.

Adult female. Not to be distinguished from the male in colour, but with less white on the third tail-feather. Total length 5·2 inches, culmen 0·5, wing 2·5, tail 2·4, tarsus 0·75.

Hab. British Guiana.

a. ♂; *b*, *c.* ♀ ad. sk.	Roraima, Aug. (*H. Whitely*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Roraima, Aug. 10 (*H. W.*).	Sclater Collection.
e. ♀ ad. sk.	Roraima, Sept. 7 (*H. W.*).	Sclater Collection.
f. ♂ ad. sk.	Roraima, Sept. (*H. W.*).	Salvin-Godman Coll.

15. Setophaga lachrymosa.

Euthlypis lachrymosus, *Cab. Mus. Hein.* Th. i. p. 19, note (1850); *Scl. P. Z. S.* 1856, p. 291, 1859, p. 363; *Salv. & Scl. Ibis*, 1860, p. 274; *Scl. Cat. Amer. B.* p. 36 (1862); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 546 (1869); *Lawr. op. cit.* ii. p. 270 (1874).

Basileuterus lachrymosus, *Bp. Consp.* i. p. 314 (1850).

Setophaga lachrymosa, *Baird, Review Amer. B.* p. 263 (1865); *Gray, Hand-l. B.* i. p. 244, no. 3539 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 11 (1873); *Salv. Ibis*, 1878, p. 320; *id. & Godm. Biol. Centr.-Amer., Aves*, i. p. 136, tab. 11. fig. 2 (1881).

Adult male. General colour above dark slaty grey, slightly washed with olive on the mantle and back; lesser wing-coverts like the back, the median and greater series also slaty grey, black internally; bastard-wing and primary-coverts black; quills black, externally margined with slaty grey; upper tail-coverts slaty grey like the rump; tail-feathers black, edged with slaty grey, all the four outer feathers with a conspicuous white spot on the tip; centre of crown bright yellow, the feathers tipped with black; forehead and sides of the crown black, as well as the lores, feathers below the eye, and fore part of cheeks; in the centre of the lores a spot of white; a streak along the sides of the crown behind the eye, ear-coverts, hinder cheeks, and sides of neck slaty grey; base of chin white, as well as a faint indication of a malar line; remainder of under surface of body dull orange, the centre of the breast and abdomen brilliant lemon-yellow; sides of breast and flanks ashy grey, the latter with subterminal bars of white and washed with olive; thighs slaty grey; under tail-coverts white, washed with yellow near the base; under wing-coverts and axillaries dark slaty grey, blacker near the edge of the wing; quills dusky below, ashy along the edge

of the inner web: "bill black, feet hazel-brown" (*Salvin*). Total length 6 inches, culmen 0·6, wing 2·9, tail 2·6, tarsus 0·95.

Hab. Mexico and Guatemala.

a. Ad. sk.	Jalapa, Mexico (*De Oca*).	Sclater Collection.
b. Ad. st.	Cordova.	M. A. Sallé [C.].
c. ♀ ad. sk.	Santa Efigenia, Tehuantepec, Dec. (*F. Sumichrast*).	Salvin-Godman Coll.
d, e. ♂ ♀ ad. sk.	Volcan de Agua, above San Diego, Guatemala, Nov. 1873 (*O. Salvin*).	Sclater Collection.
f. ♀ ad. sk.	Volcan de Agua, Nov. (*O. S.*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Barranco-Hondo, Guatemala, Oct. 20 (*O. S.*).	Salvin-Godman Coll.
h, i. ♂ ♀ ad. sk.	Altonango, Guatemala, Sept. 9 (*O. S.*).	Salvin-Godman Coll.

21. MYIODIOCTES *.

Type.

Wilsonia, *Bp. Comp. List B. Eur. & N. Amer.* p. 23 (1838, *nec Brown*).
Myiodioctes, *Audub. Syn.* p. 48 (1839) ..... M. mitratus.
Myioctonus, *Cab. Mus. Hein.* Th. i. p. 18 (1850) .... M. mitratus.



Head of *Myiodioctes mitratus*.

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* MYIODIOCTES MINUTUS.

Muscicapa minuta, *Wils. Amer. Orn.* vi. p. 62, pl. 50. fig. 6 (1812); *Audub. B. Amer.* pl. 434. fig. 2; *id. Orn. Biogr.* v. p. 291 (1839); *id. Syn.* p. 44 (1839); *id. B. Amer.* ii. p. 238, pl. 67.
Sylvia minuta, *Bp. Journ. Philad. Acad.* iv. p. 197 (1824).
Wilsonia minuta, *Bp. Comp. List B. Eur. & N. Amer.* p. 23 (1838).
Setophaga minuta, *Richards. Rep. Brit. Assoc.* 1836–37, p. 172.
Sylvania pumilia, *Nutt. Man.* 1843, p. 334.
Myiodioctes minutus, *Baird, B. N. Amer.* p. 293 (1858); *id. Review Amer. B.* p. 241 (1865); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 316 (1874); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 19 (1881).
Myiodioctes? minutus, *Coues, B. Color. Vall.* p. 326 (1878).

Hab. Eastern United States.

"The above synonymy is nearly all mere compilation, the several authors, excepting Wilson, Nuttall, and Audubon, not claiming to know the species. The existence of any such bird is doubtful, and its reference to *Myiodioctes* by Baird and others is wholly conjectural. Bonaparte first put it here, *i. e.* in his genus *Wilsonia*, but in 1850 queerly identified it with *Empidonax flaviventris* of Baird. The history of the bird begins with a misunderstanding between Wilson and Audubon, and the whole record from that day to this is a tissue of surmises."
—*Coues, l. c.*

Range. The whole of Northern and Central America, extending to Colombia and Ecuador; Bermuda; Cuba; Jamaica.

Key to the Species.

a. Outer tail-feather without any white.
  a'. Chest spotted.
    a''. Fore part of crown mottled with black centres to the feathers; chest spotted with black ..... *canadensis* ♂, p. 433.
    b''. Crown like the back, grey washed with olive; chest streaked with dusky ..... *canadensis* ♀, p. 433.
  b'. No spots on chest.
    c''. Forehead yellow.
      a'''. Forehead and eyebrow golden yellow; crown glossy black ..... *pusillus* ♂, p. 435.
      b'''. Crown of head like the back, olive yellowish ..... *pusillus* ♀, p. 436.
    d''. Forehead black like the rest of the crown *meridionalis*, p. 437.
b. Outer tail-feather with the inner web white.
  c'. Throat black; hinder crown black ..... *mitratus* ♂ æstiv., [p. 438.
  d'. Throat yellow; hinder crown like the back, the black hood being concealed ..... *mitratus* hiem., p. 438.

1. Myiodioctes canadensis.

Le Gobe-mouche cendré de Canada, *Briss. Orn.* ii. p. 406, pl. 39. fig. 4 (1760).

Muscicapa canadensis, *Linn. Syst. Nat.* i. p. 327 (1766); *Wils. Amer. Orn.* iii. p. 100, pl. 26. fig. 2 (1811); *Audub. B. Amer.* pl. 103; *id. Orn. Biogr.* ii. p. 17 (1834).

Canada Flycatcher, *Lath. Gen. Syn.* ii. pt. 1, p. 354 (1783); *Penn. Arctic Zool.* ii. p. 388 (1785).

Sylvia pardalina, *Bp. Journ. Philad. Acad.* iv. p. 179 (1824).

Muscicapa bonapartii, *Audub. B. Amer.* pl. 5; *id. Orn. Biogr.* i. p. 27 (1831).

Setophaga bonapartii, *Swains. & Richards. Faun. Bor.-Amer., Birds*, p. 225, pl. 47 (1831); *Richards. Rep. Brit. Assoc.* 1836–37, p. 172; *Gray, Hand-l. B.* i. p. 244, no. 3538 (1869).

Setophaga canadensis, *Jard. ed. Wils. Amer. Orn.* i. p. 358 (1832); *Gray, Gen. B.* i. p. 265 (1846); *id. Hand-l. B.* i. p. 244, no. 3536 (1869).

Sylvicola pardalina, *Bp. Comp. List B. Eur. & N. Amer.* p. 22 (1838).

Wilsonia bonapartii, *Bp. Comp. List B. Eur. & N. Amer.* p. 23 (1838); *Audub. Syn.* p. 49 (1839); *id. B. Amer.* ii. p. 17, pl. 73 (1841).

Myiodioctes canadensis, *Audub. Syn.* p. 49 (1832); *id. B. Amer.* ii. p. 14, pl. 72 (1841); *Scl. P. Z. S.* 1854, p. 111, 1855, p. 143, 1858, pp. 64, 451; *Baird, B. N. Amer.* p. 294 (1858); *Scl. & Salv. Ibis*, 1859, p. 11; *Scl. Cat. Amer. B.* p. 34 (1862); *Lawr. Ann. Lyc. N. Y.* vii. p. 468 (1862); *Blakist. Ibis*, 1863, p. 63; *Baird, Review Amer. B.* p. 239 (1865); *Dresser, Ibis*, 1865, p. 478; *Lawr. Ann. Lyc. N. Y.* viii. p. 285 (1866), ix. p. 95 (1868); *Von Frantz. J. f. O.* 1869, p. 294; *Coues, Key N. Amer. B.* p. 109 (1872); *Scl. & Salv.*

Nomencl. Av. Neotr. p. 10 (1873); *Coues, B. N.-West*, p. 80 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 320, pl. 16. fig. 6 (1874); *Coues, B. Color. Vall.* p. 323 (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 19 (1881); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 166 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 314 (1884).

Sylvania bonapartii, *Nutt. Man.* 1840, p. 322.

Setophaga nigrocincta, *Lafr. Rev. Zool.* 1843, p. 292, 1844, p. 79.

Euthlypis canadensis, *Cab. Mus. Hein.* Th. i. p. 18; *id. J. f. O.* 1860, p. 326.

Myiodioctes pardalina, *Bp. Consp.* i. p. 315 (1850).

Adult male. General colour above light slaty grey, with a faint trace of olive occasionally (the remains of winter plumage); wing-coverts like the back; greater series, bastard-wing, primary-coverts, and quills dusky, externally edged with slaty grey, a little lighter on the primaries, the first of which is edged with ashy whitish; tail-feathers dusky, edged with slaty grey, the outer ones fringed with whitish near the end of the outer web; crown of head grey like the back, but mottled with black centres to the feathers, the black increasing towards the forehead; a conspicuous supraloral streak of yellow from the nostrils to the corner of the eye; eyelid yellow; lores and feathers below the eye black, descending in a streak down the sides of the neck; ear-coverts and sides of neck clear slaty grey; cheeks and under surface of body bright yellow, the fore neck and chest thickly spotted with triangular marks of black; thighs yellow; under tail-coverts white; axillaries yellow; under wing-coverts white; quills dusky below, ashy white along the edge of the inner web: "bill pale brown above, flesh-coloured below; feet and claws flesh-coloured and semitransparent; iris deep brown" (*Audubon*). Total length 5·1 inches, culmen 0·45, wing 2·65, tail 2·3, tarsus 0·7.

Adult female. Differs from the male in the almost total absence of black spots on the crown and breast; above delicate ashy grey, with a tinge of olive; wings and tail as in the male; on the forehead a slight indication of black centres to the feathers, otherwise the head like the back; a yellow streak from the nostril to the corner of the eye, but paler than in the male; eyelid yellowish white; lores and feathers below the eye dusky; ear-coverts pale ashy grey like the back; cheeks and under surface of body pale yellow; under tail-coverts white; on the chest a slight indication of dusky spots. Total length 5·2 inches, culmen 0·45, wing 2·45, tail 2·15, tarsus 0·8.

Female in winter plumage. Similar to the summer plumage above described, but more washed with olive above, especially on the head.

Young male in winter plumage. Scarcely to be distinguished from the adult female in winter, but has generally the spots on the chest blacker and more distinct, though much smaller than in the breeding-plumage of the adult male. On the head also, by lifting the feathers, traces of the black centres to the coronal plumes can be found, much more extended than in any female bird.

Hab. Eastern North America, breeding from the Middle States occasionally, from New England regularly, northward to the limit of trees (*Coues*). Doubtful in Mexico, but found in winter from Guatemala to Panama, Colombia, and Ecuador.

a. ♂ ad. st.	North America.	Purchased.
b. Juv. sk.	Mount Carmel, July 27 (*R. Ridgway*).	Salvin-Godman Coll.
c. ♀ ad. sk.	Mount Carmel, Illinois, Aug. 15 (*R. Ridgway*).	U.S. Nat. Museum [P.].
d. ♀ ad. sk.	Colehour, Illinois, Sept. 11 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
e. ♂; *f*. ♀ ad. sk.	Cahokie River, Illinois, May 24 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
g. ♂ ad. sk.	St. Louis Co., Missouri, May 21 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
h. ♂ ad. sk.	Montcalm Co., May 24 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
i. ♀ ad. sk.	Lake Regis, New York, June 30 (*Roosevelt*).	U.S. Nat. Museum [P.].
k. ♀ ad. sk.	Rockport, Ohio.	Prof. Kirtland [P.].
l. ♂ ad. sk.	Wisconsin.	Dr. Brewer [P.].
m. ♂ ad. sk.	Massachusetts (*Dr. Brewer*).	Salvin-Godman Coll.
n. ♂ ad. sk.	Washington, D. C. (*C. Dexter*).	Salvin-Godman Coll.
o. ♀ juv. sk.	Park Woods, D. C., Sept. 4 (*E. Coues*).	Salvin-Godman Coll.
p. ♂ ad. sk.	Pennsylvania.	Sclater Collection.
q. ♂ ad. sk.	Knox County, Indiana, May 2 (*R. Ridgway*).	U.S. Nat. Museum.
r. ♀ ad. st.	[Mexico.]	Purchased.
s. ♂ ad.; *t*. ♂ juv. sk.	Dueñas, Guatemala, Sept. (*O. S.*).	Salvin-Godman Coll.
u. Imm. sk.	Dueñas, Sept. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
v. ♂ ad. sk.	Retalhuleu, Sept. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
w. Imm. sk.	Retalhuleu, Sept. (*O. S.*).	Salvin-Godman Coll.
x. Ad. sk.	Volcan de Fuego, Sept. (*O. S.*).	Salvin-Godman Coll.
y. ♂ juv. sk.	Coban, Vera Paz, Jan. (*O. S.*).	Salvin-Godman Coll.
z. ♂ imm. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
a'. Imm. sk.	Costa Rica, Oct. 4 (*J. Carmiol*).	Salvin-Godman Coll.
b'. Ad. sk.	Bogotá.	Sclater Collection.
c'. Ad. sk.	Bogotá.	J. Purdie, Esq. [P.].
d', *e'*. Ad. et imm. sk.	Bogotá.	Salvin-Godman Coll.
f', *g'*. Ad. et imm. sk.	Sarayacu, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
h'. Ad. sk.	[Brazil.]	Purchased.

2. Myiodioctes pusillus.

Muscicapa pusilla, *Wils. Amer. Orn.* iii. p. 103, pl. 26. fig. 4 (1811).
Sylvia wilsonii, *Bp. Journ. Philad. Acad.* iv. p. 179 (1824).
Sylvia petarodes, *Licht. Preis-Verz. mex. Vög.* p. 2 (1830); *Cab. J. f. O.* 1863, p. 57.
Motacilla pileolata, *Pall. Zoogr. Rosso-Asiat.* i. p. 497 (1831).
Setophaga wilsonii, *Jard. ed. Wils. Amer. Orn.* i. p. 391 (1832).
Muscicapa wilsonii, *Audub. B. Amer.* pl. 124; *id. Orn. Biogr.* ii. p. 148 (1834).
Wilsonia pusilla, *Bp. Comp. List B. Eur. & N. Amer.* p. 23 (1838); *Allen, Bull. Mus. Comp. Zool. Cambr.* iii. p. 175 (1872).
Myiodioctes wilsoni, *Aud. Syn.* p. 50 (1839); *id. B. Amer.* ii. p. 21, pl. 75 (1841).
Sylvania pusilla, *Nutt. Man.* 1843, p. 335.
Myioctonus pusillus, *Cab. Mus. Hein.* Th. i. p. 18 (1850).
Myiodioctes pusillus, *Bp. Consp.* i. p. 315 (1850); *Scl. P. Z. S.* 1856, p. 291, 1858, p. 299; *Baird, B. N. Amer.* p. 293 (1858); *id. U.S. Mex. Bound. Surv.* ii. pt. 2, *Birds*, p. 10 (1859); *Scl. P. Z. S.* 1859, p. 363; *id. & Salv. Ibis*, 1859, p. 11; *Cab. J. f. O.* 1860, p. 325; *Scl. Cat. Amer. B.* p. 34 (1862); *Blakist. Ibis*, 1863, p. 63; *Lord, Proc. R. Artill. Inst.* iv. p. 115 (1864); *Baird, Review Amer. B.* p. 240 (1865); *Coues, Ibis*, 1865, p. 163; *Dresser, t. c.* p. 458; *Lawr. Ann. Lyc. N. Y.* viii. p. 285 (1866), ix. p. 95 (1868); *Dall & Bann. Trans. Chic. Acad.* i. p. 278 (1869); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 547 (1869); *Von Frantz. J. f. O.* 1869, p. 294; *Cooper, B. Calif.* p. 101 (1870); *Salv. P. Z. S.* 1870, p. 183; *Finsch, Abhandl. nat. Ver. Bremen*, iii. p. 36 (1872); *Coues, Key N. Amer. B.* p. 109 (1872); *Salv. Ibis*, 1873, p. 334; *Merrill, Bull. U.S. Geol. Surv.* 1872–73, pp. 675, 713; *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873); *Coues, B. N.-West*, pp. 79, 232 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 317, pl. 16. figs. 3, 4 (1874); *Hensh. Zool. Expl. W. 100th Merid.* p. 207 (1875); *Coues, B. Color. Vall.* p. 326 (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 18 (1881); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 168 (1881); *Nelson, Cruise R.S. 'Corwin,'* p. 64 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 313 (1884).
Sylvania wilsonii, *Woodh. in Sitgr. Rep. Zuni R.* p. 69 (1853).
Setophaga pusilla, *Gray, Hand-l. B.* i. p. 244, no. 3535 (1869).
Abrornis atricapilla, *Blyth, Ibis*, 1870, p. 169; *Finsch, P. Z. S.* 1875, p. 640.
Myiodioctes pusillus, var. pileolatus, *Ridgw. Amer. Journ. Sci.* 1872, p. 457; *id. Amer. Nat.* viii. p. 608 (1873); *Coues, t. c.* p. 417; *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 319 (1874).
Myiodioctes pusillus pileolatus, *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 19 (1881); *Allen & Brewst. Bull. Nutt. Orn. Club*, viii. p. 159 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 314 (1884).

Adult male. General colour above yellowish green; lesser wing-erts like the back; median and greater coverts greyish brown, ed with yellowish green; bastard-wing and primary-coverts y, narrowly fringed with yellowish green; quills dusky, with owish-green margins; upper tail-coverts like the back; tail-thers ashy brown, edged with yellowish green; crown of head shining blue-black, with a decided crest; lores, forehead, and a distinct eyebrow bright yellow, golden on the forehead; feathers

round the eye also yellow; ear-coverts olive washed with yellow; cheeks and feathers below the eye, throat, and entire under surface of body bright yellow, washed with green on the sides of the body and flanks; thighs and under tail-coverts bright yellow; under wing-coverts white, strongly washed with yellow; axillaries yellow; quills dusky below, ashy along the inner web: "bill light brown; feet flesh-coloured; iris hazel" (*Audubon*). Total length 4·3 inches, culmen 0·35, wing 2·3, tail 1·8, tarsus 0·65.

Adult female. Much duller in colour than the male, and wanting the black patch on the head; the crown dull green washed with dusky blackish; forehead rather more yellow; lores and eyebrow bright yellow; ear-coverts olive-yellow; entire under surface of body yellow, but not so bright as in the male. Total length 4·4 inches, culmen 0·4, wing 2·2, tail 1·8, tarsus 0·75.

Adult male in winter. Resembles the summer plumage, but has some of the black coronal feathers fringed with yellow.

Young. According to Dr. Coues, resembling the adult female.

With regard to the Western form called by the American authors *M. pusillus pileolatus*, Dr. Coues remarks in his 'Key':—"Specimens from the Southern Rocky Mountains and Pacific coast-region are frequently of a brighter yellow, almost orange, on the head and fore parts below, with the under mandible bright yellow." In the Museum series this difference is tolerably well indicated, and, along with the brighter colour, the black crest seems to me to be a little more extended; but the differences are too slight to be worthy of even subspecific difference, in my opinion.

Hab. The whole of North America in suitable localities: breeds probably from the latitude of Massachusetts northward, and in the higher mountains of the West as far south at least as Colorado, if not further; the var. *pileolatus* is from the moist Pacific slopes (*Coues*). Winters in Central America from Mexico to Panama (*Salvin and Godman*).

α. M. pusillus.

a. [♂] ad. sk.	Arctic America.	Dr. Rae [P.].
b. [♂] ad. sk.	Hudson's Bay.	Capt. Herd [P.].
c. ♂ ad. sk.	Halifax, Nova Scotia (*W. G. Winton*).	Salvin-Godman Coll.
d. [♂] ad. sk.	Fort Simpson, June 20.	B. R. Ross, Esq. [P.].
e. [♂] ad. sk.	Hidalgo Island.	Dr. Lyall [P.].
f. ♀ ad. sk.	Chicago, Illinois, May 20 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
g. ♂ ad. sk.	Hyde Park, Illinois, May 16 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
h. ♀ ad. sk.	Lake Forest, Ill., May 24 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
i, k. [♂ ♀] ad. sk.	Mexico.	Sclater Collection.
l. ♀ ad. sk.	Oaxaca (*Fenochio*).	Salvin-Godman Coll.
m. ♂ ad. sk.	Dueñas, Guatemala, Sept. 29 (*O. S.*).	Salvin-Godman Coll.

n, o. ♂ ♀ ad. sk.	Coban, Vera Paz (*O. S. & F. D. G.*).	Salvin-Godman Coll.
p. ♂ imm. sk.	Orosi, Costa Rica (*Kramer*).	Salvin-Godman Coll.
q. ♂ imm. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
r. ♂ imm. sk.	Guatemala.	Gould Collection.

β. M. pileolatus.

a, b. ♂; *c.* ♀ ad. sk.	West side of Rocky Mountains, Brit. Columbia.	J. K. Lord, Esq. [P.].
d. ♀ ad. sk.	Crittenden, Arizona, Aug. 30 (*H. W. Henshaw*).	Salvin-Godman Coll.
e. [♂] ad. sk.	California.	Purchased.
f. Ad. sk.	Big Trees, California, Aug. 6 (*H. W. Henshaw*).	R. B. Sharpe, Esq. [P.].
g. ♂ ad. sk.	Haywards, California, May 12 (*W. O. Emerson*).	R. B. Sharpe, Esq. [P.].
h, i. ♂ ♀ ad.	Tuczon, Arizona, April and May (*E. W. Nelson*).	U.S. Nat. Museum.
k. ♂ ad. sk.	Presidio, Mexico, Feb. 9 (*A. Forrer*).	Salvin-Godman Coll.
l, m. [♂] ad. sk.	Guatemala.	Gould Collection.
n. ♂ ad. sk.	Irazu district, Costa Rica.	Salvin-Godman Coll.
o, p. ♂ ad. sk.	Barranca, Costa Rica (*J. Carmiol*).	Salvin-Godman Coll.
q, r. ♂ ♀ ad. sk.	Volcan de Chiriqui, Veragua (*E. Arcé*).	Salvin-Godman Coll.

3. Myiodioctes meridionalis.

Myiodioctes pusillus ?, *Pelz. Verh. z.-b. Gesellsch. Wien*, 1876, p. 769.
Myiodioctes meridionalis, *Pelz. Verh. z.-b. Gesellsch. Wien*, 1882, p. 446.

Adult. Head and forehead black, even to the base of the bill; upper surface and sides of body olivaceous; lores and a superciliary streak on either side of the head and the under surface of the body yellow; upper and lower mandible both black; feet pale. Length 13 centim., wing 6½, tail 7, tarsus 2½, bill from gape 1½. (*Pelzeln.*)

Very like *M. pusillus*, but larger, and having the forehead black, not yellow, and the lower mandible pale instead of black. (*Pelzeln.*)

Hab. Colombia and Ecuador.

4. Myiodioctes mitratus.

The Hooded Titmouse, *Catesby, N. Hist. Carol.* i. p. 60, pl. 60 (1731).
La Mésange à collier de la Caroline, *Briss. Orn.* iii. p. 578 (1760).
Gobe-mouche de la Louisiane, *Daubent. Pl. Enl.* 666. fig. 2.
Gobe-mouche citrin de la Louisiane, *Buff. Hist. Nat. Ois.* iv. p. 538 (1778).
Hooded Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 462 (1783); *Penn. Arctic Zool.* ii. p. 400 (1785).
Motacilla mitrata, *Gm. Syst. Nat.* i. p. 977 (1788).

Sylvia mitrata, *Lath. Ind. Orn.* ii. p. 528 (1790); *Vieill. Ois. Amér. Sept.* ii. p. 23, pl. 77 (1807); *Audub. B. Amer.* pl. 60; *id. Orn. Biogr.* ii. p. 66 (1834).
Muscicapa pileata, *Steph. Gen. Zool.* x. p. 399 (1817).
Muscicapa cucullata, *Wilson, Amer. Orn.* iii. p. 101, pl. 26. fig. 3 (1811).
Muscicapa selbii, *Audub. B. Amer.* pl. 9; *id. Orn. Biogr.* i. pl. 46 (1831); *Nutt. Man.* 1832, p. 296.
Setophaga mitrata, *Jard. ed. Wils. Amer. Orn.* i. p. 389 (1832); *Richards. Rep. Brit. Assoc.* 1836–37, p. 172; *D'Orb. in Ramon de la Sagra's Hist. Nat. Cuba, Ois.* p. 75 (1838); *Gray, Gen. B.* i. p. 265 (1846); *id. Hand-l. B.* i. p. 244, no. 3534 (1869).
Wilsonia mitrata, *Bp. Comp. List B. Eur. & N. Amer.* p. 23 (1838); *Allen, Bull. Mus. Comp. Zool. Cambr.* iii. p. 175 (1872).
Myiodioctes mitratus, *Audub. Syn.* p. 48 (1839); *id. B. Amer.* ii. p. 12, pl. 71 (1841); *Bp. Consp.* i. p. 315 (1850); *Scl. P. Z. S.* 1856, p. 291, 1858, p. 358; *Baird, B. N. Amer.* p. 292 (1858); *Scl. & Salv. Ibis*, 1859, p. 11; *Taylor, Ibis*, 1860, p. 110; *Gundl. J. f. O.* 1861, p. 326; *Scl. Cat. Amer. B.* p. 33 (1862); *Scl. & Salv. P. Z. S.* 1864, p. 347; *Baird, Review Amer. B.* p. 239 (1865); *Dresser, Ibis*, 1865, p. 478; *Lawr. Ann. Lyc. N. Y.* viii. p. 284 (1866), ix. p. 200 (1868); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 547 (1869); *Coues, Key N. Amer. B.* p. 109 (1872); *Snow, B. Kansas*, p. 5 (1873); *Scl. & Salv. Nomencl. Av. Neotr.* p. 10 (1873); *Coues, B. N.-West*, p. 78 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 314, pl. 15. figs. 10, 11 (1874); *Gundl. Orn. Cuba*, p. 71 (1876); *Coues, B. Color. Vall.* p. 324 (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 19 (1881); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 167 (1881); *Boucard, P. Z. S.* 1883, p. 441.
Sylvania mitrata, *Nutt. Man.* 1840, p. 333; *Woodh. in Sitgr. Rep. Zuni R.* p. 69 (1853).
Myioctonus mitratus, *Cab. Mus. Hein.* Th. i. p. 18 (1850); *Gundl. J. f. O.* 1855, p. 472, 1861, p. 407.
Sylvicola mitrata, *Neuwied, J. f. O.* 1858, p. 113.

Adult male. General colour above yellowish green, rather more yellow towards the lower back and rump; lesser wing-coverts like the back; median and greater coverts ashy brown, externally edged with yellowish green; bastard-wing and primary-coverts ashy brown, the latter slightly fringed with yellowish green; quills ashy brown, margined with yellowish green, the primaries fringed with whitish towards their ends; tail-feathers ashy brown, washed externally with yellowish green, the three outer feathers white, their outer webs ashy brown, the inner web with a patch of ashy brown near the base, increasing in extent towards the centre of the tail; crown of the head jet-black as well as the hind neck and sides of the neck joining the fore neck, which, with the entire throat, is also black, except a narrow yellow line along the angle of the chin; lores dusky black; fore part of head bright yellow, extending backwards along the sides of the crown, and including the ear-coverts, eyelid, sides of face, and cheeks; remainder of under surface from the fore neck downwards bright yellow, a little paler on the under tail-coverts; flanks slightly tinged with green; axillaries and under wing-coverts white, slightly

washed with bright yellow, the edge of the wing bright yellow; quills ashy brown below, whitish along the inner web: "bill blackish above, paler below; feet flesh-coloured; iris brown" (*Audubon*). Total length 4·9 inches, culmen 0·45, wing 2·6, tail 2·15, tarsus 0·75.

Adult in winter plumage. Similar to the summer plumage and equally bright; the black on the throat and head slightly fringed with yellow margins to the feathers.

Adult female and *young male.* Have the black colour restricted or interrupted, if not wholly wanting, as it is in the earlier stages, when the parts concerned are simply coloured to correspond with the upper and under surfaces of the bird. The hood is said not to be perfected till the third year, and to be finally acquired, in the fulness of its extent, if not in the purity of the black, by the female. (*Coues.*)

Young in winter. Coloured like the adults and quite as bright, but with no black on the head and throat, the latter being bright yellow like the ear-coverts; the frontal patch of yellow is present, but is obscured by olive tips to all the feathers; in front of the eye a dusky spot.

Hab. Eastern United States, rather southerly; north regularly to the Middle States and the Connecticut Valley, perhaps casually to Massachusetts, west to Kansas; breeds at large in the United-States range (*Coues*). Winters in South-eastern Mexico, Yucatan, and Guatemala, a few birds wandering as far as the Isthmus of Panama (*Salvin and Godman*). Bermudas, Cuba, and Jamaica.

a. [♂] ad. sk.	North America (*Bell*).	Sclater Collection.
b. ♂ ad. sk.	Rockport, Ohio.	Prof. J. P. Kirtland [P.].
c. ♂ ad. sk.	Rockport, Ohio, May 20.	Salvin-Godman Coll.
d. ♂ ad. sk.	Chicago, Illinois, May 5 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
e. ♀ ad. sk.	Cahokie River, Illinois, May 24 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
f. ♂ ad. sk.	Elmore County, Alabama, April 5 (*N. C. Brown*).	R. B. Sharpe, Esq. [P.].
g. ♂ ad. sk.	Wheatland, Indiana, May 10 (*R. Ridgway*).	U.S. Nat. Museum [P.].
h. ♀ ad. sk.	Fort Leavenworth, July 13 (*J. G. Cooper*).	Salvin-Godman Coll.
i. ♀ hiem. sk.	Belize, British Honduras, Dec. 14 (*O. S.*).	Salvin-Godman Coll.
k. ♂ ad. sk.	Belize (*Blancaneaux*).	Salvin-Godman Coll.
l, m. ♂ ad. sk.	N. Yucatan (*F. Gaumer*).	Salvin-Godman Coll.
n, o. Imm. hiem. sk.	Guatemala.	Gould Collection.
p. ♂ ad. sk.	Choctum, Vera Paz (*O. S.*).	Salvin-Godman Coll.
q. ♂ ad. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.

APPENDIX

TO THE

FAMILY MNIOTILTIDÆ.

Mr. Seebohm has entirely left out the consideration of the genus *Polioptila* from the Fifth Volume of the 'Catalogue,' although all recent authors have considered them to be true *Sylviidæ*, and the only representative genus of this Old-World group in America. As it is impossible to place them with the nine-quilled *Mniotiltidæ*, they are inserted here; but I believe that the most natural position for the genus will be in the vicinity of the Muscicapine genus *Stenostira* (Cat. B. iv. p. 267), to which, both in form and style of coloration, *Polioptila* bears a striking resemblance, as has already been pointed out by Bonaparte, Sclater, and other ornithologists. Should this classification turn out to be correct, it will afford another instance of the affinity of the avifauna of North America with that of South Africa, as already noticed in the occurrence of *Petrochelidon spilodera* at the Cape, a close ally of *P. pyrrhonota* of North America.

The following is the synonymy of the genus:—

POLIOPTILA.

	Type.
Polioptila, *Sclater*, *P. Z. S.* 1855, p. 11	P. cærulea.



Bill and wing of *Polioptila cærulea*.

Range. North America; Central America; South America excepting the extreme southern portions; Cuba.

Key to the Species.*

a. No black cap; the head like the back.
  a'. No black on the ear-coverts.
    a''. First primary much less than half the second; outer tail-feather white except at the base; a narrow line of black skirting the sides of the crown from above the eye, and meeting across the base of the forehead; a white eyelid ..... *cærulea*, p. 442.
    b''. First primary more than half the second; outer tail-feather black for basal half of inner web; eyelid whitish; no black on the forehead, but a crescentic line behind the ear-coverts ..... *lembeyi*, p. 444.
    c''. First primary more than half the second; outer tail-feather black for nearly the whole of the inner web; a black line above the eye, not reaching the bill or the ear-coverts ..... *plumbea* ♀, p. 451.
  b'. Ear-coverts black like the lores and base of forehead ..... *dumicola*, p. 444.
b. A black cap.
  c'. Lores black like the forehead and crown.
    d''. Outer tail-feather white, with a black base.
      a'''. No white at the ends of the greater wing-coverts; white margins of inner secondaries not reaching to the shaft of the feather, but being in the form of a white or grey edging, more or less broad.
        *a*⁴. Black on inner web of outer tail-feathers forming a "directly transverse" outline ..... *leucogastra*, p. 446.
        *b*⁴. Black on inner web of outer tail-feathers forming an oblique or crescentic outline.
          *a*⁵. Outer edges of inner secondaries white and distinct.
            *a*⁶. Larger; culmen 0·5 inch: black base of outer feather not concealed by under tail-coverts ..... *nigriceps*, p. 447.
            *b*⁶. Smaller; culmen 0·45 inch: black base of outer feather entirely concealed by under tail-coverts ..... *parvirostris*, p. 448.
          *b*⁵. Outer edge of inner secondaries grey, very narrow and obsolete, so that the wing appears almost entirely black.. *sclateri*, p. 449.
      b'''. Ends of greater wing-coverts white; inner secondaries entirely white on outer web, the white reaching to the shaft ..... *buffoni*, p. 449.

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* The characters for some of the species not in the Museum have been adapted from Baird's 'Review.'

e''. Outer tail-feather black, white along outer web and at tip of the inner one ..... } *plumbea*, p. 450.
d'. Lores white, forming a broad streak on each side of the forehead. } *californica*, p. 451.

e'''. A broad white eyebrow, extending behind the eye; white of underparts washed with ashy; culmen 0·45–0·5 inch ..... *bilineata*, p. 452.

d'''. Eyebrow only a narrow line of white; white of underparts creamy, without any wash of grey on the breast; culmen 0·45 inch ..... *lactea*, p. 453.

e'''. Only a loral streak of white, not continued into an eyebrow; breast shaded with bluish grey ..... *albiloris*, p. 454.

1. Polioptila cærulea.

The Little Blue and Grey Flycatchers, *Edwards, Gleanings*, pt. ii. p. 194, pl. 302 (1760).

Le Figuier cendré de Pensilvanie, *Briss. Orn.* vi. App. p. 107 (1760).

Motacilla cærulea, *Linn. Syst. Nat.* i. p. 337 (1766); *Gm. Syst. Nat.* i. p. 992 (1788).

Figuier cendré à gorge cendrée, *Buff. Hist. Nat. Ois.* v. p. 319 (1778).

Figuier gris-de-fer, *Buff. Hist. Nat. Ois.* v. p. 359 (1778).

Cærulean Warbler, *Lath. Gen. Syn.* ii. pt. 2, p. 490 (1783); *Penn. Arctic Zool.* ii. p. 405 (1785).

Grey-throated Warbler, *Lath. t. c.* p. 496; *Penn. t. c.* p. 411.

Motacilla cana, *Gm. Syst. Nat.* i. p. 973 (1788).

Sylvia cana, *Lath. Ind. Orn.* ii. p. 543 (1790).

Sylvia cærulea, *Lath. Ind. Orn.* ii. p. 540 (1790); *Bp. Journ. Phil. Acad.* iv. p. 172 (1824).

Regulus griseus, *Bartr. Trav. Florida*, p. 291 (1791).

Muscicapa cærulea, *Wils. Amer. Orn.* ii. p. 164, pl. 18. fig. 5 (1810); *Audub. B. Amer.* pl. 84; *id. Orn. Biogr.* i. p. 431 (1831).

Culicivora cærulea, *Jard. ed. Wils. Amer. Orn.* i. p. 304 (1832); *d'Orb. in Ramon de la Sagra's Hist. Nat. Cuba*, p. 76 (1838); *Audub. B. Amer.* i. p. 244, pl. 75 (1840); *Gray, Gen. B.* i. p. 176 (1848); *Bp. Consp.* i. p. 316 (1850); *Cab. J. f. O.* 1855, p. 471; *Gundl. J. f. O.* 1861, p. 407.

Sylvanga cærulea, *Nutt. Man. Orn.* p. 337 (1840).

Culicivora mexicana, *Bp. Consp.* i. p. 315 (1850).

Polioptila cærulea, *Scl. P. Z. S.* 1855, p. 11; *Baird, B. N. Amer.* p. 380 (1858); *Gundl. J. f. O.* 1861, p. 324; *Scl. Cat. Amer. B.* p. 12 (1862); *Baird, Rev. Amer. B.* p. 74 (1864); *Dresser, Ibis*, 1865, p. 485; *Coues, t. c.* p. 538; *Lawr. Ann. Lyc. N. Y.* viii. p. 282 (1866); *Baird, Ibis*, 1867, p. 276; *Lawr. Ann. Lyc. N. Y.* ix. p. 199 (1869); *Gray, Hand-l. B.* i. p. 237, no. 3433 (1869); *Gundl. J. f. O.* 1872, p. 409; *Maym. B. Florida*, p. 28 (1872); *Coues, Key N. Amer. B.* p. 78 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 4 (1873); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 267 (1874); *Coues, B. N.-West*, p. 17 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 78, pl. 6. fig. 5 (1874); *Hensh. List B. Arizona*, p. 155 (1875); *id. Zool. Expl. W. 100th Merid.* p. 166 (1875); *Gundl. Orn. Cuba*, p. 61 (1876); *Lawr. Bull. U.S. Nat. Mus.* iv. p. 12 (1876);

Merrill, Proc. U.S. Nat. Mus. i. p. 120 (1878); *Coues, B. Color. Vall.* p. 101 (1878); *Salvin & Godm. Biol. Centr.-Amer., Aves*, i. p. 50 (1879); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 12 (1881); *Coues, Check-list N. Amer. B.* p. 27 (1882); *Salvin, Cat. Strickl. Coll.* p. 61 (1882); *Coues, Key N. Amer. B.* 2nd ed. p. 261 (1884).

Polioptila, sp., *Scl. P. Z. S.* 1856, p. 298.

Polioptila mexicana, *Scl. P. Z. S.* 1859, pp. 363, 373; *id. & Salv. Ibis*, 1859, p. 9; *Scl. Cat. Amer. B.* p. 12 (1862); *id. P. Z. S.* 1862, p. 18; *Salvin, Ibis*, 1866, p. 202; *Gray, Hand-l. B.* i. p 237, no. 3439 (1869).

Adult male. General colour above clear greyish blue, the sides of the rump with long silky greyish-white plumes; wing-coverts, bastard-wing, and primary-coverts dusky brown, with greyish-blue edges; quills dusky, narrowly margined with hoary grey, broader and more conspicuous on the inner secondaries; upper tail-coverts and tail-feathers black, the third outer feather white at the tip, the penultimate one with an oblique black mark extending across the base of the outer web, and obliquely for more than half of the inner web; the outside tail-feather nearly entirely white, with only a small oblique mark of blackish near the base; the shafts black, both of the external and penultimate feathers; crown of head clear greyish blue, brighter than the back, with a black line extending across the base of the forehead and backwards above the eye; immediately above the latter a narrow line of blue-grey; lores, feathers below the eye, and ear-coverts delicate greyish blue; round the eye a ring of white; entire under surface of body delicate ashy grey, whiter on the abdomen and under tail-coverts; sides of body rather more leaden grey; thighs white anteriorly, ashy posteriorly; axillaries and under wing-coverts delicate ashy grey, the latter mottled with dusky bases near the edge of the wing; quills dusky brown below, ashy white along the edge of the inner web: "bill bluish black; feet greyish blue; iris hazel" (*Audubon*). Total length 4·5 inches, culmen 0·45, wing 2·1, tail 2, tarsus 0·65.

Adult female. Like the male, but duller and more greyish blue above; the head like the back, and without any black; bill usually light-coloured in part (*Coues*). "The extent of white on the tail varies somewhat, but I have seen no eastern specimens in which the outer feather was not white in all its extent, and was not covered by the under tail-coverts. In some Arizona examples, however, the black which usually exists at the base extends beyond the coverts, and in fact there is little more white on this feather than there is in *P. plumbea*, though the black of the frontlet is intact." (*Coues.*)

Hab. United States, from the Atlantic to the Pacific; north to the Connecticut Valley and Yreka, Cal. Breeds throughout its United-States range, wintering on the southern United-States border and southward (*Coues*); also in Central America, from Mexico to Guatemala; Cuba; Bahamas.

a. [♂] ad. sk.	North America (*Bell*).	Sclater Collection.
b. ♂ ad. sk.	Park Woods, D.C., April 23 (*E. Coues*).	Salvin-Godman Coll.

c. [♂] ad. sk.	California.	Mr. F. Grueber.
d. [♀] ad sk.	South Mexico (*Sallé*).	Sclater Collection.
e. [♀] ad. sk.	Mexico (*De Saussure*).	Sclater Collection.
f. [♀] ad. sk.	Orizaba (*Botteri*).	Sclater Collection.
g. Ad. sk.	Jalapa (*C. F. Höge*).	Salvin-Godman Coll.
h. ♀ ad. sk.	Presidio, Mexico, Jan. 17 (*A. Forrer*).	Salvin-Godman Coll.
i. ♀ ad. sk.	Mazatlan, July (*A. Forrer*).	Salvin-Godman Coll.
k, *l.* ♂ ♀ ad. sk.	N. Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
m. Ad. sk.	Merida, Yucatan, Feb. (*E. C. Devis*).	Salvin-Godman Coll.
n. Imm. sk.	Retalhuleu, Guatemala, Sept. (*O. S.*).	Salvin-Godman Coll.
o. ♀ ad. sk.	Dueñas, Guatemala, Feb. 12 (*O. S.*).	Salvin-Godman Coll.
p, *q*, *r.* Imm. sk.	Coban, Vera Paz, Jan. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
s. ♂ ad. sk.	Lanquin, Vera Paz, March (*O. S.*).	Salvin-Godman Coll.
t. Ad. sk.	Guatemala.	Gould Collection.

2. Polioptila lembeyi.

Polioptila lembeyi, *Gundl. J. f. O.* 1861, p. 32 ; *Baird, Review Amer. B.* p. 68 (1864) ; *Gray, Hand-l. B.* i. p. 237, no. 3441 (1869); *Gundl. J. f. O.* 1872, p. 410 ; *id. Orn. Cuba*, p. 60 (1876).

Adult. General colour above dull ashy grey, the long feathers of the rump tipped with silky white ; wing-coverts like the back, the bastard-wing black, fringed with white ; primary-coverts and quills dusky, edged with dull ashy, a little more hoary grey on the primaries, and whiter on the inner secondaries ; upper tail-coverts and tail black, the three outer feathers white at the ends, increasing in extent towards the outermost, where it occupies about half of the outer web and about one third of the inner web ; head like the back ; lores, eyelid, sides of face, and ear-coverts pale ashy grey, whiter on the fore part of the eyelid ; round the hinder edge of the ear-coverts a crescentic line of black ; throat and abdomen dull white, the fore neck, breast, sides of body, thighs, and under tail-coverts washed with ashy ; axillaries and under wing-coverts ashy white ; quills dusky below, ashy white along the inner web. Total length 4·2 inches, culmen 0·4, wing 1·55, tail 1·9, tarsus 0·6.

Hab. Cuba.

a. [♂] ad. sk.	Cuba (*ex. mus. Lawrence*).	Sclater Collection.
b. ♂ ad. sk.	Cuba (*ex mus. Lawrence*).	Salvin-Godman Coll.

3. Polioptila dumicola.

Contramaestre azuladillo, *Azara, Apunt.* ii. p. 60 (1805).
Sylvia dumicola, *Vieill. N. Dict. d'Hist. Nat.* xi. p. 170 (1877).
Culicivora bivittata, *Lafr. et D'Orb. Mag. de Zool.* 1837, p. 56.

Culicivora dumicola, *D'Orb. Voy. Amér. Mérid.* p. 331 (1835–44); *Hartl. Ind. Azara*, p. 11 (1847); *Gray, Gen. B.* i. p. 176 (1848); *Burm. Reis. La Plata, St.* ii. p. 473 (1861).
Culicivora boliviana, *Scl. P. Z. S.* 1852, p. 34, pl. 47.
Polioptila dumicola, *Scl. P. Z. S.* 1855, p. 12; *id. Cat. Amer. B.* p. 12 (1862); *Baird, Review Amer. B.* p. 73 (1864); *Scl. & Salv. P. Z. S.* 1868, p. 139; *Gray, Hand-l. B.* i. p. 237, no. 3438 (1869); *Pelz. Orn. Bras.* p. 70 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 4 (1873); *Hudson, P. Z. S.* 1874, p. 158; *Durnf. Ibis*, 1876, p. 157, 1877, p. 167; *Scl. & Salv. P. Z. S.* 1879, p. 592; *Salv. Ibis*, 1880, p. 352; *White, P. Z. S.* 1882, p. 593.
Polioptila boliviana, *Gray, Hand-l. B.* i. p. 237, no. 3435 (1869).

Adult male. General colour above dark slaty blue, the head slightly deeper than the back; wing-coverts like the back, the bastard-wing black, conspicuously edged with white; primary-coverts and quills edged externally with slaty grey, inclining to hoary white near the ends of the secondaries; upper tail-coverts and tail glossy black; the outer tail-feather white excepting a concealed base of black; penultimate feather black at base of outer web and obliquely black across the inner web, the third feather white for the terminal fourth and along the edge of the outer web; base of forehead, lores, feathers round the eye, sides of face, and ear-coverts black; cheeks slaty grey, separated from the black face by a line of white; throat, breast, and sides of body dark leaden grey, rather lighter on the abdomen; the under tail-coverts whitish; thighs leaden grey, hoary white anteriorly; under wing-coverts and axillaries silvery grey, washed with slaty blue, and clearer slaty blue along the edge of the wing; quills blackish below, silvery white along the edge of the inner web: "bill, legs, and iris black" (*A. Peel*). Total length 5·3 inches, culmen 0·45, wing 2·05, tail 2·3, tarsus 0·7.

Adult female. Differs from the male only in the facial markings, the base of the forehead and lores being light bluish grey; round the eye a ring of white; ear-coverts silvery white, with a broad crescentic mark of black round their hinder margin. Total length 4·5 inches, culmen 0·5, wing 2·05, tail 2·25, tarsus 0·75.

The Bolivian bird (*P. boliviana*) differs from *P. dumicola* in its white belly and the conspicuous white on the malar line and throat, the lower throat, breast, and flanks being light ashy grey, much paler than in *P. dumicola*. Total length 4·8 inches, culmen 0·45, wing 2·1, tail 2·2, tarsus 0·7.

The type of Sclater's *C. boliviana* is somewhat intermediate between some of the Bolivian specimens and *P. dumicola*, having a whiter belly than the latter, but having the throat and fore neck grey like the breast. It is quite possible that it may be the winter plumage of *P. dumicola*, which certainly extends to Bolivia, as one of Mr. Bridges's specimens is indistinguishable from La-Plata birds.

Hab. Southern Brazil and La Plata, ranging across to Bolivia.

a. [♂] ad. sk.	Uruguay, Sept. 1877.	Alan Peel, Esq. [C.].
b. ♀ ad. sk.	Rio de la Plata.	Sclater Collection.
c. [♀] ad. sk.	Paysandu, Banda Oriental.	Henry Durnford, Esq. [C.].

d. ♂ ad. sk.	Punta Lara, Dec. 17.	Henry Durnford, Esq. [C.].
e. Ad. sk.	Parana (*Burmeister*).	Salvin-Godman Collection.
f. ♂ ad. sk.	Monte Grande, Buenos Aires, Jan. (*E. W. White*).	Salvin-Godman Collection.
g, h. ♂ ♀ ad. sk.	Cosquin, Cordova, Argentine Republic, June (*E. W. White*).	Salvin-Godman Collection.
i, k. [♀] ad. sk.	Bolivia.	Zoological Society.
l. [♂] ad. sk.	Bolivia (*Bridges*).	Sclater Collection. (Type of *C. boliviana*, Scl.)
m. [♂] ad. sk.	Bolivia (*Bridges*).	Eyton Collection.
n, o. [♂] ad. sk.	Bolivia.	Mr. Bridges [C.].

4. Polioptila leucogastra.

Sylvia leucogastra, *Neuwied, Beitr. Naturg. Bras.* iii. p. 710 (1831).
Culicivora atricapilla, *Swains. Zool. Illustr.* 2nd ser. pl. 57 (1830–31); *id. Classif. B.* ii. p. 243 (1837).
Culicivora leucogastra, *Gray, Gen. B.* i. p. 176 (1848); *Burm. Th. Bras.* ii. p. 111 (1855).
Culicivora dumicola (*nec V.*), *Cab. Mus. Hein.* Th. i. p. 34 (1850); *Bp. Consp.* i. p. 316 (1850).
Polioptila leucogastra, *Scl. Cat. Amer. B.* p. 12 (1862); *Baird, Review Amer. B.* p. 69 (1864); *Gray, Hand-l. B.* i. p. 237, no. 3434 (1869); *Pelz. Orn. Bras.* p. 70 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 4 (1873); *Forbes, Ibis*, 1881, p. 327.

Adult male. General colour above dark blue-grey, with silky whitish ends to the long feathers of the rump; wing-coverts like the back; bastard-wing black, rather broadly edged with white; primary-coverts and quills dusky blackish, edged with bluish grey, and fringed with white at the tips; the inner secondaries rather broadly edged with white; upper tail-coverts and tail-feathers black, the three outer ones white at their ends, the white increasing in extent towards the outermost, where it occupies two thirds of the outer web and nearly one half of the inner web; on the penultimate feather the white is nearly the same on the outer web, but occupies only about the terminal third of the inner web; on the third feather the white is confined to a broad spot at the tips of both webs; crown of head and nape glossy blue-black, including the lores, eyelid, and upper half of the ear-coverts; sides of face, cheeks, and lower half of ear-coverts, as well as the throat and under surface of body, creamy white with a silky gloss, the fore neck and sides of body washed with delicate grey; under wing-coverts and axillaries white; quills dusky blackish below, edged with white along the inner web: "bill black; feet lead-coloured, the toes somewhat blackish; iris greyish brown" (*Neuwied*). Total length 4·5 inches, culmen 0·55, wing 2·1, tail 2·15, tarsus 0·7.

A specimen in the Sclater collection marked as an adult female differs from the male described in wanting the black cap, the head being only a shade darker than the back, with a black line along the sides of the hinder crown; the lores are dusky, surmounted by a

streak of ashy white from the base of the nostrils to the fore corner of the eye. Total length 4·4 inches, culmen 0·5, wing 1·85, tail 2, tarsus 0·7.

Hab. Brazil.

a. ♂ ad. sk.	Brazil.	Sclater Collection.
b, *c*. Ad. sk.	Brazil.	Gould Collection.
d, *e*. ♂ ♀ ad. sk.	Bahia (*Wucherer*).	Salvin-Godman Coll.
f, *g*. ♂ ♀ ad. sk.	Bahia.	Salvin-Godman Coll.
h. ♀ juv. sk.	Bahia (*Wucherer*).	Sclater Collection.
i. ♂ ad. sk.	Bahia (*Berlepsch*).	Sclater Collection.
k. ♂ ad. sk.	Pernambuco (*W. A. Forbes*).	Sclater Collection.

5. Polioptila nigriceps.

Polioptila nigriceps, *Baird, Review Amer. B.* p. 69 (1864); *Gray, Hand-l. B.* i. p. 237, no. 3443 (1869); *Lawr. Ann. Lyc. N. Y.* ii. p. 267 (1874); *id. Bull. U.S. Nat. Mus.* iv. p. 12 (1876); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 52 (1879); *Tacz. P. Z. S.* 1880, p. 191; *Brewster, Bull. Nutt. Orn. Club*, vi. p. 105 (1881); *Tacz. Orn. Pérou*, i. p. 453 (1884).
Polioptila buffoni (pt.), *Tacz. P. Z. S.* 1879, p. 223.

Adult male (La Union, S. Salvador). General colour above delicate blue-grey, with silky white ends to the long feathers of the rump; wing-coverts like the back; bastard-wing feathers black, distinctly edged with hoary white; primary-coverts and quills black, edged with bluish grey, the inner secondaries rather broadly with hoary white; upper tail-coverts and tail-feathers black, the outer feathers almost entirely white, with a black basal mark on the inner web; the penultimate feather also white, with a larger basal mark of black; the third feather black, with a broad white tip and a white margin to the outer web, extending for two thirds of its length from the tip; crown of head and nape glossy blue-black, including also the lores, eyelid, and upper margin of ear-coverts; feathers below the eye, cheeks, lower half of ear-coverts, and under surface of body white, with a shade of ashy grey on the breast and sides of the body and thighs; under tail-coverts white; under wing-coverts and axillaries white, with a slight shade of ashy; quills dusky blackish below, white along the edge of the inner web. Total length 4·3 inches, culmen 0·5, wing 2, tail 1·9, tarsus 0·7.

The difference between *P. nigriceps* from S. Salvador and so-called *P. buffoni* from Colombia is so minute that Messrs. Salvin and Godman are undoubtedly right in uniting them specifically, for it consists only in the slightly larger amount of black on the inner web of the outer tail-feather, which is somewhat more developed in Colombian than in Mexican birds. For the ingenious way in which these authors attempt to account for the present separation of the two colonies of *P. nigriceps*, the reader is referred to their 'Biologia' (Aves, i. p. 53), though the explanation there afforded does not satisfy Mr. Brewster (Bull. Nutt. Orn. Club, vi. p. 105). The series examined by me seems to bear out the conclusions of Messrs. Salvin

and Godman; but I have not been able to compare many Central-American specimens.

Hab. Mexico and S. Salvador; absent apparently in intervening countries, but re-appearing again in Colombia (Bogotá) and the coast-line of Venezuela, and extending to Peru. Dr. Taczanowski's specimens will require to be compared with *P. parvirostris* and *P. sclateri*, as no specimen of the true *P. nigriceps* has as yet been met with in Ecuador.

a, b. ♂ ad. sk.	La Union, S. Salvador, March 14 (*O. S.*).	Salvin-Godman Coll.
c. ♂ ad. sk.	Merida, N. Yucatan, Aug. (*E. C. Devis*)*.	Salvin-Godman Coll.
d. ♂ ad. sk.	New Granada.	Purchased.
e, f. Ad. sk.	Bogotá.	Sclater Collection.
g, h. ♂, *i.* ♀ ad. sk.	Bogotá.	Salvin-Godman Coll.
k. ♂ ad. sk.	Caracas, Venezuela, Nov. (*A. Goering*).	Salvin-Godman Coll.
l. Ad. sk.	Cumana (*Bridges*)†.	Eyton Collection.

6. Polioptila parvirostris.

? Polioptila buffoni (*nec Scl. & Salv.*), *Scl. & Salv. P. Z. S.* 1866, p. 177 (*R. Ucayali*); *iid. P. Z. S.* 1873, p. 256 (*Sarayacu*).

Adult. General colour above light blue-grey, the long silky feathers on the sides of the rump tipped with white; wing-coverts like the back, somewhat more silvery grey on the greater series; bastard-wing black, edged with hoary white; primary-coverts black, with narrow grey margins; quills black, only the secondaries margined with white, a little broader on the inner ones, those nearest the back washed externally with grey; upper tail-coverts and tail black, the outer tail-feather almost entirely white, excepting a concealed black base, the outline of which is oblique; the second feather white, but the black basal mark much larger; the third feather black, excepting a large wedge-shaped white mark at the end; crown of head and nape glossy blue-black, including the lores, eyelid, and upper half of the ear-coverts; feathers below the eye, cheeks, and lower half of the ear-coverts, as well as the entire under surface of the body, silky white, with a shade of bluish grey over the fore neck, breast, and sides of the body; thighs, under tail-coverts, under wing-coverts, and axillaries white; quills black below, white along the inner web. Total length 4·3 inches, culmen 0·45, wing 1·8, tail 1·65, tarsus 0·55.

Hab. Upper Amazonia.

a. ♂ ad. sk. Chamicuros, R. Amazon (*Hauxwell*). Gould Collection.

* The specimen is in poor condition, and may prove to belong to some other species. The wing looks like that of *P. sclateri*.

† There is a Cumana in Venezuela, but I can find no such place marked on the atlas as being in Bolivia. As Mr. Bridges only collected in Chili and Bolivia, there may be some mistake in the locality of the specimen.

7. Polioptila sclateri.

Polioptila nigriceps (*nec Baird*), *Salv. & Godm. Ibis*, 1880, p. 116.

Adult male. General colour above dark French grey, with whitish tips to the long feathers of the rump; wing-coverts dusky, externally edged with the same grey as the back; bastard-wing black; primary-coverts and quills blackish brown, edged with pale grey, rather hoary on the secondaries, all the grey margins very narrow; upper tail-coverts and tail black, the three outer feathers white at the ends, increasing greatly towards the outermost, which is almost entirely white, excepting a black mark near the base of the inner web, this black increasing on the penultimate feather, until on the third it is confined to a spot at the tip; entire head glossy black, including the lores, feathers round the eye, and a line below the latter and along the upper edge of the ear-coverts; feathers below the eye and cheeks silvery white; throat dull white, a little purer white on the abdomen, thighs, and under tail-coverts; the fore neck, breast, and sides of the body bluish grey; axillaries and under wing-coverts white; quills dusky below, white along the inner web: "iris bright chrome-yellow" (*Simons*). Total length 4·5 inches, culmen 0·45, wing 1·85, tail 1·8, tarsus 0·7.

Hab. Venezuela and the Sierra Nevada of Santa Marta, Colombia.

a. ♂ ad. sk.	Venezuela (*Spence*).	Sclater Collection. (Type of species.)
b. ♂ ad. sk.	Campano, Venezuela, Oct. 5 (*A. Goering*).	Salvin-Godman Coll.
c, *d*. ♂ ♀ ad. sk.	Valencia, Sierra Nevada of Santa Marta, May 24 (*F. Simons*).	Salvin-Godman Coll.

8. Polioptila buffoni.

Figuier à tête noire de Cayenne, *Daubent. Pl. Enl.* vi. pl. 704. fig. 1.
Motacilla cærulea, *Bodd. Tabl. Pl. Enl.* p. 44 (1783, *nec L.*).
Motacilla cærulea, var. β, *Gm. Syst. Nat.* i. p. 992 (1788).
Polioptila leucogastra, pt., *Scl. P. Z. S.* 1855, p. 12 (*nec Neuwied*).
Polioptila buffoni, *Scl. P. Z. S.* 1861, p. 127; *id. Cat. Amer. B.* p. 12 (1862); *Baird, Review Amer. B.* p. 70 (1864); *Gray, Hand-l. B.* i. p. 237, no. 3437 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 4 (1873).

Adult male. General colour above slaty blue, the long silky plumes of the rump tipped with white; lesser wing-coverts like the back, the median series with a white spot at the end, the greater coverts conspicuously edged with white near the ends; bastard-wing and primary-coverts black, with obsolete grey margins; quills black, the secondaries narrowly edged with ashy, the inner ones externally white, occupying the entire outer web, as well as running round the tip of the feather; upper tail-coverts and tail-feathers

black, the three outer tail-feathers almost entirely white excepting an oblique basal mark of black, the fourth feather with a spot of white at the end; crown of head and nape glossy blue-black, as well as the lores and feathers round the eye; cheeks and ear-coverts white; under surface of body white, rather ashy on the throat; breast and sides of the body, the abdomen, thighs, and under tail-coverts purer white; under wing-coverts and axillaries white; quills blackish below, white along the edge of the inner web. Total length 4 inches, culmen 0·5, wing 1·9, tail 1·85, tarsus 0·7.

Adult female. Differs from the male in wanting the black head; it has the white ends to the greater wing-coverts, and the broad white outer web of the inner secondaries; head light slaty grey, as also the lores; sides of face, ear-coverts, and under surface of body white, washed with bluish grey on the fore neck, breast, and sides of the body. Total length 3·9 inches, culmen 0·5, wing 1·75, tail 1·6, tarsus 0·65.

Hab. Guiana.

a. ♂ ad. sk.	Cayenne.	Sclater Collection. (Type of species.)
b. ♀ ad. sk.	Cayenne.	H. C. Rothery, Esq. [P.].
c. ♀ ad. sk.	Demerara.	Eyton Collection.

9. Polioptila plumbea *.

Culicivora atricapilla, *Lawr. Ann. Lyc. N. Y.* v. p. 123 (1852).
Culicivora mexicana, *Cass. B. Calif.* p. 164, pl. 27 (1856).
Culicivora plumbea, *Baird, Proc. Philad. Acad.* vii. p. 118 (1858).
Polioptila plumbea, *Baird, B. N. Amer.* p. 382 (1858); *Atlas*, pl. 33. fig. 1 (1860); *id. Review Amer. B.* p. 74 (1864); *Coues, Ibis*, 1865, p. 538; *Gray, Hand-l. B.* i. p. 237, no. 3442 (1869); *Cooper, B. Calif.* p. 37 (1870); *Coues, Key N. Amer. B.* p. 79 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* p. 80, pl. 6. fig. 6 (1874); *Hensh. B. Utah*, p. 155 (1875); *Coues, B. Color. Vall.* p. 105 (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 13 (1881); *Brewster, Bull. Nutt. Orn. Club*, vi. p. 102 (1881); *Coues, Check-list N. Amer. B.* p. 27 (1882); *id. Key N. Amer. B.* 2nd ed. p. 261 (1884).
Polioptila melanura, *Lawr. Ann. Lyc. N. Y.* vi. p. 168 (1856); *Baird, Proc. Philad. Acad.* 1869, p. 304; *Dresser, Ibis*, 1865, p. 485; *Gray, Hand-l. B.* i. p. 237, no. 3445 (1869); *Hensh. B. Arizona*, p. 155 (1875); *Coues, B. Color. Vall.* p. 107 (1878); *id. Check-list N. Amer. B.* p. 27 (1882); *id. Key N. Amer. B.* 2nd ed. p. 261 (1884).

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* Mr. Brewster has recently shown that *P. plumbea* is the female of *P. melanura*, and has at the same time separated the Californian bird as *P. californica*. I have compiled the synonymy of these species from Dr. Coues's 'Birds of the Colorado Valley' and from Mr. Brewster's paper (*l. c.*); but as I have not seen a single specimen of either of the species, I have not been able to judge for myself in the matter, and the synonymy will doubtless be subject to revision.

Adult male (*P. melanura*). The whole head black; white of tail reduced to a minimum, the outer web of the outer feather being usually edged with white, instead of wholly white, and the tip of the inner web, with the tip of the next feather, white for a very slight space; no white observed on the third feather. Tarsus 0·70 inch. (*Coues.*)

Adult [*female*=*P. plumbea*]. Upper parts like those of *P. cærulea*, but duller and more greyish; no black on the forehead; a short black stripe over each eye, and below this another one of white. Outer tail-feather with the whole outer web and tip white (much like the second feather of *P. cærulea*), the next two feathers tipped with white. Size of *P. cærulea*. (*Coues.*)

Dr. Coues describes the female of *P. plumbea* as being "like the male. The upper parts still duller, and frequently with a decided brownish shade; no black over the eye; only distinguished from the female of *P. cærulea* by less white on the tail." He also distinguishes the female of *P. melanura* as differing from the male in having "no black on the head." Judging from analogy of some of the plumages undergone by certain of the South-American species of *Polioptila*, I should think that Mr. Brewster's surmise as to the identity of *P. melanura* and *P. plumbea* is correct.

Hab. Colorado and valley of the Rio Gila.

10. Polioptila californica*.

Culicivora atricapilla, *Heerm. Journ. Philad. Acad.* ii. p. 262 (1853).
Polioptila melanura (*nec Lawr.*), *Baird, B. N. Amer.* p. 382 (1858); *id. Review*, p. 68 (1864); *Heerm. Pacific R. Rep.* x. p. 39 (1859); *Cooper, Am. Nat.* iii. pp. 184, 474 (1869); *id. B. Cal.* i. p. 37 (1870); *Coues, Key N. Amer. B.* p. 79 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 81, pl. 6. fig. 7 (1874).
Polioptila californica, *Brewster, Bull. Nutt. Orn. Club*, vi. p. 103 (1881); *Ridgw. Bull. U.S. Nat. Mus.* no. 25, p. 13 (1881).

Adult male. Whole top of head from bill to occiput deep shining black; wings dusky brown; the primaries edged with greyish white, the secondaries and tertials with light brown; rest of upper surface plumbeous ashy. Tail glossy black; the external half of the outer webs of the outer pairs of rectrices dull brownish white, the white passing narrowly across the end of the feather and at its extremity nearly touching the shaft, but basally diverging more and more until at the tail-coverts it is confined to a scarcely appreciable edging; no light colour on any of the other rectrices. Throat and upper parts of breast, with sides of head, neck, and body, dull but decided ash, with a faint wash of brownish fulvous on the tips of the feathers; along the central portions of the body beneath this wash becomes clear fulvous, which is deepest in tint

* Synonyms on the authority of Mr. Brewster.

on the abdomen, crissum, and under tail-coverts. Lining of wings very pale pearl-grey. Length 4·50 inches, extent 6·10, wing 1·84, tail 1·80, tarsus 0·73, bill (culmen) 0·50, from nostril 0·30. (*Brewster.*)

Adult female. Similar to the male, but with the crown deep plumbeous; the abdomen and crissum pale *chestnut*; the external webs of second pair of rectrices margined with white. (*Brewster.*)

Young male. Similar to the female, but with the plumbeous of the crown clearer, the brownish wash beneath confined to the abdomen and crissum, the white of tail restricted to outer pair of rectrices and a narrow tipping on the second pair. (*Brewster.*)

"Upon comparing the California bird with *P. plumbea* as represented by my Arizona specimens, the following differences appear:—The ash of the upper parts is decidedly plumbeous instead of bluish; the throat, breast, and sides dull ashy instead of ashy white; the abdomen, crissum, and under tail-coverts fulvous, in some specimens pale chestnut, the light edging of the tail-feathers confined to the outer pair of rectrices (with sometimes a slight tipping on the second pair) and on these restricted to the extreme tips and a narrow margin along the outer web; the lining of the wings pearl-ash instead of white, and the secondaries and tertials edged with light brown. There is no pure white anywhere on the bird, and the general aspect beneath is nearly as dark as in the Cat-bird.

"The proportions also apparently differ. The bill and tarsi are longer and more slender than those of *P. plumbea*; but the wing and tail, especially the latter, are generally shorter than in the specimens of *plumbea* which my collection embraces." (*Brewster.*)

Hab. California.

11. Polioptila bilineata.

Culicivora bilineata, *Bp. Consp.* i. p. 316 (1850, *ex Licht. MSS.*).
Polioptila bilineata, *Scl. P. Z. S.* 1855, p. 12, 1860, pp. 273, 2[illegible]; *id. Cat. Amer. B.* p. 13 (1862); *Baird, Review Amer. B.* i. p. [illegible]; (1864); *Gray, Hand-l. B.* i. p. 237, no. 3444 (1869); *Scl. & S. Nomencl. Av. Neotr.* p. 4 (1873); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 52 (1879); *Boucard, P. Z. S.* 1883, p. 439.
Polioptila superciliaris, *Lawr. Ann. Lyc. N. Y.* vii. pp. 304, [illegible] (1861); *Baird, Review Amer. B.* p. 71 (1864); *Scl. & Salv. P. Z. S.* 1864, p. 344; *Lawr. Ann. Lyc. N. Y.* viii. p. 178 (1865); *Salv. P. Z. S.* 1866, p. 190; *Lawr. Ann. Lyc. N. Y.* ix. p. 92 (1868); *Gray, Hand-l. B.* i. p. 237, no. 3436 (1869); *Salv. P. Z. S.* 1870, p. [illegible]
Polioptila albiloris (*non Scl. & Salv.*), *Taez. P. Z. S.* 1877, p. [illegible] 1879, p. 223; *id. Orn. Pérou*, p. 452 (1884).

Adult male. General colour above pure French grey, the long silky feathers of the rump whitish near their ends; wing-coverts like the back, the median and greater series with concealed dusky bases; bastard-wing and primary-coverts dusky, edged narrowly with light grey; quills dusky brown, edged with light French

grey like the back, inclining to hoary white on the margins of the primaries and towards the ends of the innermost secondaries; upper tail-coverts and tail-feathers black, all but the centre feathers tipped with white, increasing largely towards the outermost one, which is almost entirely white, with a black base to the inner web, this latter character increasing gradually towards the centre of the tail; crown of head black, extending down the sides of the neck behind the ear-coverts; the occiput and nape like the back; a superciliary streak as well as the lores greyish white, impinging on the base of the forehead; feathers round the eye, sides of face, and ear-coverts greyish white, the hinder edge of the ear-coverts pure white, forming a silvery spot, the upper edge of the ear-coverts black like the sides of the crown; chin, abdomen, thighs, and under tail-coverts silky white; the lower throat and breast washed with pale bluish grey, extending on to the sides of the breast; axillaries and under wing-coverts pure white; quills dusky below, white along the inner webs. Total length 4·2 inches, culmen 0·5, wing 1·85, tail 1·65, tarsus 0·65.

Adult female. Differs from the male in wanting the black head, this being only slightly darker grey than the back. Total length 3·8 inches, culmen 0·45, wing 1·9, tail 1·75, tarsus 0·7.

Hab. Central America from Guatemala to Costa Rica and Panama; Colombia; Ecuador; Peru.

a, b. ♂ ♀ ad. sk.	Costa Rica (*Carmiol*).	Sclater Collection.
c. Imm. sk.	Turrialba, Costa Rica (*E. Arcé*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Punta Arenas, Costa Rica, March 18 (*O. S.*).	Salvin-Godman Coll.
e, f. ♂ ad. sk.	Chisec, Vera Paz, Guatemala (*O. S. & F. D. G.*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Bugaba, Chiriqui (*E. Arcé*).	Salvin-Godman Coll.
h, i. ♂, *k.* ♀ ad. sk.	Lion Hill, Panama (*McLeannan*).	Salvin-Godman Coll.
l. ♀ ad. sk.	Chepo, Isthmus of Panama (*E. Arcé*).	Salvin-Godman Coll.
m, n. ♂ ad. sk.	Panama (*McLeannan*).	Sclater Collection.
o, p. ♂ ♀ ad. sk.	Veragua (*Arcé*).	Sclater Collection.
q, r. ♂ ♀ ad. sk.	Babahoyo, Ecuador, July (*Fraser*).	Sclater Collection.
s. ♂ ad. sk.	Esmeraldas, Dec. (*Fraser*).	Sclater Collection.
t, u. ♂ ♀ ad. sk.	Puna Island (*Buckley*).	Sclater Collection.
v, w. ♂ ♀ ad. sk.	Puna Island (*Villagomez*).	Salvin-Godman Coll.
x. ♀ ad. sk.	Guayaquil.	G. Barclay, Esq. [P.].
y. ♀ ad. sk.	Pacamayo, Peru (*Stoltzmann*).	Sclater Collection.

12. Polioptila lactea.

Adult [*male*]. General colour dark slaty blue from the nape to the upper tail-coverts, the long silky plumes of the rump tipped

with white; wing-coverts like the back; bastard-wing black, with a conspicuous white edging; primary-coverts black, edged with grey; quills black, margined with bluish grey, the inner secondaries with a broad edging of white and more narrowly tipped with the same; upper tail-coverts and tail-feathers black, the fourth feather with a white tip, the white increasing on the third, and still more on the penultimate and external tail-feathers, which have only a diagonal mark of black across the base, the shafts even becoming white towards the end of the feathers; crown of head glossy blue-black; lores pure white, extending in a narrow line above the eye; cheeks, ear-coverts, and entire under surface of body pure white, the sides of the fore neck and breast washed with blue-grey; thighs, under tail-coverts, under wing-coverts, and axillaries pure white; quills blackish below, white along the edge of the inner web. Total length 4·1 inches, culmen 0·45, wing 1·85, tail 1·75, tarsus 0·65.

Hab. Unknown.

a. Ad. sk. [South America.] Sclater Collection.

13. Polioptila albiloris.

Polioptila albiloris, *Scl. & Salv. P. Z. S.* 1860, p. 298; *iid. Ibis*, 1860, p. 397; *Owen, Ibis*, 1861, p. 61, pl. 2. fig. 3; *Baird, Review Amer. B.* p. 70 (1864); *Gray, Hand-l. B.* i. p. 237, no. 3440 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 4 (1873); *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 12 (1876); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 53, pl. 5. figs. 1, 2 (1879).

Adult male (type of species). General colour above dark blue-grey, with dull whitish ends to the long feathers of the rump; wing-coverts like the back; bastard-wing feathers black, distinctly margined with greyish white; primary-coverts and quills blackish, edged with blue-grey, more hoary on the primaries, the inner secondaries more broadly edged with white; upper tail-coverts and tail-feathers black, the three outer feathers white, black on the inner webs, the black decreasing towards the outermost feather, which has not more than the basal third of the inner web black, increasing to about one half of the inner web on the penultimate feather, the third white for the greater part of the outer web and at tip of the inner one; crown of head glossy blue-black, forming a cap which extends to the occiput; a distinct loral streak of white; feathers round the eye and upper edge of ear-coverts black; lower part of ear-coverts, sides of face, cheeks, throat, abdomen, and under tail-coverts white; fore neck, breast, sides of body, and thighs delicate bluish grey; axillaries and under wing-coverts ashy white; quills dusky blackish below, whitish along the edge of the inner web. Total length 4·5 inches, culmen 0·5, wing 1·95, tail 1·9, tarsus 0·7.

Adult female. Wants the black head of the male, the crown only being a little darker than the back, with a shade of blackish along the sides of the hinder crown. Total length 4 inches, culmen 0·5, wing 1·8, tail 1·8, tarsus 0·7.

Hab. Guatemala and S. Salvador to Western Mexico. Messrs. Salvin and Godman consider that their specimens from Tehuantepec are somewhat intermediate between true *P. albiloris* and *P. nigriceps*.

a, b. ♂ ♀ ad. sk.	Tehuantepec (*F. Sumichrast*).	Salvin-Godman Coll.
c. ♀ ad. sk.	La Union, S. Salvador, March 14 (*O. S.*).	Salvin-Godman Coll.
d, e. ♂ ♀ ad. sk.	Chuacus, Vera Paz, Guatemala, Feb. (*O. S.*).	Salvin-Godman Coll. (Types of species.)

Family MOTACILLIDÆ.

This family contains only the Wagtails and Pipits, and is the best-defined of all the nine-quilled Passeres, as the inner secondary quills are elongated so as to be nearly as long as the primaries. In this respect they resemble the Larks (*Alaudidæ*), to which they also bear a great likeness in the formation of the feet. The *Alaudidæ*, however, have the hinder aspect of the tarsus scutellated and have a small bastard primary, so tiny, however, as in general to escape observation. The Wagtails and Pipits have no bastard primary at all.

On close comparison the generic differences between Wagtails and Pipits will be found to be very insignificant and difficult to express in words. To every student of ornithology the general notion of distinction between Wagtails and Pipits is familiar enough; and as regards colour, the former are generally either black and white or grey and white, or else have a good deal of yellow in their plumage, while their uniform system of coloration must also be taken into consideration, as compared with the mottled plumage of the Pipits, which renders them so similar to Larks in appearance. Dr. Coues has admitted two subfamilies, *Motacillinæ* and *Anthinæ*; and his characters, though slight, hold good for the American species, as do those of Prof. Baird in his 'Review,' but when the mass of Old-World species has to be classified, they break down. Therefore I have found it practicable to recognize only a few genera, which can be identified with some degree of certainty, as set forth in the following

Key to the Genera.

a. Plumage uniform above; feet black. Profile of culmen straight from the base of bill to the tip; culmen about equal to outer toe and claw ..... 1. MOTACILLA, p. 457.

b. Plumage uniform above; feet pale. Bill very long, exceeding the length of the outer toe and claw ..... 2. LIMONIDROMUS, p. 532.

c. Plumage generally mottled and Lark-like, the feathers of the back with dark centres and pale edges; feet pale; no scutellations on upper part of back of tarsus. Profile of culmen swollen from the centre to the tip.

a'. Outstretched feet not reaching beyond the tail..... 3. ANTHUS, p. 534.

b'. Outstretched feet reaching beyond the tail.

a''. Feet moderately large, the hind toe and claw not exceeding the length of the tarsus ..... 5. NEOCORYS, p. 620.

b''. Feet extremely large, the hind toe and claw exceeding the tarsus in length.
a'''. Rictal bristles obsolete; culmen less than hind claw ..... 4. XANTHOCORYS, [p. 619.
b'''. Rictal bristles very strong and reaching beyond nostrils; culmen equal to hind toe ..... 7. MACRONYX, p. 623.
d. Plumage mottled, the feathers of the upper surface edged with pale margins; upper part of hinder tarsus with scutellations. Culmen decurved ..... 6. OREOCORYS, p. 622.

1. MOTACILLA.

	Type.
Motacilla, *Linn. Syst. Nat.* i. p. 328 (1766)	M. alba.
Budytes, *Cuvier, Règne Anim.* i. p. 371 (1817)	M. flava.
Calobates, *Kaup, Natürl. Syst.* p. 33 (1829)	M. melanope.
Pallenura, *Bp. Consp.* i. p. 250 (1850).....	M. melanope.

Range. The whole of the Old World, except Australia and Polynesia, occurring also in the extreme north-west of America.

I have united the Field-Wagtails (*Budytes*) with the Water-Wagtails (*Motacilla*), as their separation does not appear to me to depend upon any structural character. A study of the whole of the Wagtails teaches us that, although European forms might be divided under the above headings, there are certain intermediate species, such as *M. flaviventris*, which unite these two supposed genera.

Our knowledge of these birds is still very imperfect, and even the immense series which I have examined, not only from the Museum collection, but from the cabinets of Mr. Seebohm, Canon Tristram, Capt. Wardlaw Ramsay, Capt. Shelley, and other naturalists, has been insufficient to enable me to feel perfect confidence in the arrangement of some of the Yellow Wagtails, and certain of the synonyms may ultimately prove to have been referred to the wrong species.

Key to the Species.

a. Under tail-coverts white or yellowish white.
a'. Throat black; chin only white sometimes.
a''. Ear-coverts white.
a'''. No black streak through the eye.
a⁴. Back black.
a⁵. Black extending right up to the chin.
a⁶. Median and greater wing-coverts black, externally edged with white; sides of body ashy grey ..... *lugubris*, p. 460.
b⁶. Median and greater wing-coverts pure white, forming a wing-patch; sides of body pure white ..... *leucopsis* ad., p. 484.
b⁵. Black extending more or less on the fore neck and throat..... *leucopsis* ad., p. 485.

b^4. Back ashy grey.
c^5. Wing-coverts edged with white, the bases black ..... *alba* ad., p. 467.
d^3. Wing-coverts white, forming a conspicuous shoulder-patch.
e^6. Sides of neck white, continuous with the white ear-coverts.. *baicalensis* ad., p. 470.
d^6. Sides of neck white, but very indistinct, and separated by black from the white ear-coverts ..... *persica*, p. 479.
b'''. With a black (*adult*) or dusky (*young*) streak through the eye along the top of the ear-coverts.
c^4. Back clear grey at all seasons .... *ocularis*, p. 471.
d^4. Back black..... *lugens*, p. 474.
b''. Ear-coverts black.
c'''. A broad frontal band of white.
e^4. Back grey ..... *personata*, p. 479.
f^3. Back black.
e^5. Base of secondaries black; primary-coverts black, edged with ashy white ..... *hodgsoni*, p. 486.
f^3. Base of secondaries white; primary-coverts white with a little black at the tip ..... *grandis*, p. 492.
d'''. Forehead black to the base of the bill, flanked on each side by a broad white eyebrow..... *maderaspatensis*, p. 490.
b'. Throat white, with a black band across the fore neck.
c''. Back black, with the forehead also black to the end of the bill, with a broad white eyebrow on each side of the crown ..... *vidua*, p. 488.
d''. Back grey, with the forehead white or grey like the head.
e'''. Three outer tail-feathers with oblique marks of black on inner web.
g^4. No black or dusky streak through the eye.
g^5. Ear-coverts white or yellowish white.
e^6. Black mark ascending in a crescentic shape from the fore neck to the ear-coverts.
a^7. Hinder crown and nape black ..... *lugubris* ad. hiem., [p. 462. *alba* ad. hiem., p. 467.
b^7. Hinder crown and nape grey like the back ..... *lugubris* juv. hiem., [p. 461. *alba* juv. hiem., p. 466.
f^6. Black mark on fore neck not ascending towards the ear-coverts ..... *leucopsis* hiem., p. 484.
h^5. Ear-coverts dusky or blackish.
g^6. Wing-coverts tipped with white; no yellow on abdomen, which is white ..... *personata* juv. hiem., [p. 480. *hodgsoni* juv. hiem., [p. 487.

h^6. Wing-coverts edged with brown; abdomen pale sulphur-yellow ..... *capensis* ad., p. 494.
h^4. A black or dusky streak through the eye ..... } *ocularis* hiem., p. 472.
f'''. Three outer tail-feathers pure white, without any oblique black mark on inner web; back delicate blue-grey like the head ..... } *lugens* hiem., p. 474.
longicauda, p. 495.

b. Under tail-coverts bright yellow.
c'. Breast white, separated by a broad black crescent from the throat, which is also white; entire abdomen yellow ..... *flaviventris*, p. 496.
d'. Breast yellow or yellowish white; the under tail-coverts much more brilliantly yellow than the abdomen.
e''. Throat black.
g'''. Throat entirely black ..... *melanope* ♂ æstiv., p. 500.
h'''. Throat black, with hoary whitish edgings to the feathers ..... *melanope* ♀ æstiv., p. 501.
f'. Throat white ..... *melanope* hiem., p. 499.
e'. Breast entirely bright yellow, the under tail-coverts being of the same colour as the breast.
g''. Forehead yellow.
i'''. Crown of head and nape yellow as well as the forehead.
i^4. Back grey, with or without a black collar round the hind neck ..... *citreola* æstiv., p. 505.
k^4. Back black, including the hind neck *citreoloides* æstiv., p. 508.
k'''. Hinder crown and nape yellowish green or olive-green; head bright yellow, with a bright yellow eyebrow ..... *campestris*, p. 510.
k''. Forehead grey; head greenish like rest of upper surface; a bright yellow eyebrow ..... *taivana*, p. 514.
i''. Forehead grey; rest of crown grey.
l'''. Ear-coverts grey, with an inferior small patch of white below the eye; loral streak blackish; a broad white eyebrow from the base of the bill to the sides of the nape.
l^4. Head ashy grey ..... *flava*, p. 516.
m^4. Head pearly grey ..... *beema*, p. 521.
m'''. Ear-coverts jet-black, like the lores and the feathers below the eye.
n^4. No eyebrow at all; throat entirely yellow or the upper part of it white ..... *borealis*, p. 522.
o^4. A faint indication of an eye-streak, either before or behind the eye, but not continuous; entire throat white ..... *cinereicapilla*, p. 526.
k'. Forehead black like crown of head.
n'''. No white eyebrow ..... *feldeggi*, p. 527.
o'''. A broad white eyebrow ..... *paradoxa*, p. 531.
p'''. A broad yellow eyebrow ..... *xanthophrys*, p. 532.

1. Motacilla lugubris.

The Water Wagtail, *Albin, Nat. Hist. B.* i. p. 49, pl. 49 (1738).
Variété de la Lavandière, *Daubent. Pl. Enl.* vi. pl. 652. fig. 2.
White Wagtail (pt.), *Lath. Gen. Syn.* ii. pt. 2, p. 395 (1783).
Motacilla lugubris, *Temm. Man. d'Orn.* i. p. 253 (1820); *Roux, Orn. Prov.* pl. 194 (1825); *Werner, Atlas, Insectivores*, pl. 72 (1827); *Temm. Pl. Col. Tab. Méth.* p. 35 (1836); *Schleg. Vog. Nederl.* pl. 102 (1854); *Borggr. Vögelf. Norddeutschl.* p. 86 (1869); *Newt. ed. Yarr. Brit. B.* i. p. 538 (1874); *Dresser, B. Eur.* iii. p. 239, pls. 125. fig. 3, & 126. fig. 2 (1875); *Seebohm, Ibis*, 1882, p. 20; *B. O. U. List Brit. B.* p. 30 (1883).
Motacilla alba (*nec Linn.*), *Gould, B. Eur.* ii. text to pl. 141 (1837).
Motacilla yarrelli, *Gould, B. Eur.* preface to vol. ii. (1837); *Macgill. Hist. Brit. B.* ii. p. 225 (1839); *Temm. Man. d'Orn.* iv. p. 620 (1840); *Hewits. Eggs Brit. B.* i. p. 125, pl. 33. fig. 1 (1846); *Gray, Gen. B.* i. p. 203 (1847); *Bp. Consp.* i. p. 250 (1850); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 277 (1859); *Blas. Nachtr. Naum. Vög. Deutschl.* Taf. 377. fig. 1 (1860); *id. Ibis*, 1862, p. 70; *Scl. t. c.* p. 296; *Gray, List Brit. B.* p. 66 (1863); *More, Ibis*, 1865, p. 121; *Gould, B. Gt. Brit.* iii. pl. 1 (c. 1865); *Degl. et Gerbe, Orn. Eur.* i. p. 384 (1867); *Smith, Ibis*, 1868, p. 442; *Gray, Hand-l. B.* i. p. 246, no. 3564 (1869); *Fritsch, Vög. Eur.* tab. xxi. fig. 22 (c. 1870); *Saunders, Ibis*, 1871, p. 215; *Salvad. Faun. Ital., Uce.* p. 121 (1871); *R. Gray, B. West Scotl.* p. 110 (1871); *Harting, Handb. Brit. B.* p. 23 (1872); *Irby, B. Gibr.* p. 108 (1875); *Fallon, Ois. Belg.* p. 68 (1875); *Giglioli, Ibis*, 1881, p. 190; *Irby, Ibis*, 1881, p. 185; *Seebohm, Hist. Brit. B.* vol. ii. p. 194 (1883); *Booth, Rough Notes*, pt. iv. (1883).
Motacilla alba lugubris, *Kjærb. Orn. Dan.* pl. xix. fig. 2 (1852).
Motacilla algira, *Selys-Longch. Naum.* 1856, p. 391; *Loche, Expl. Sci. Algér., Ois.* ii. p. 5 (1867).
Motacilla alba β. algira, *Bp. Rev. et Mag. de Zool.* 1857, p. 61.
Motacilla vidua (*nec Sund.*), *Cordeaux, Ibis*, 1865, p. 180; *Seebohm, Ibis*, 1867, p. 163.

Nestling. General colour above dusky ash-colour, washed with olive-brown, especially on the head, which has a distinct black streak above the eye; lower back and rump blackish, with obscure edges of rusty brown, the lateral feathers externally whitish; lesser wing-coverts like the back, the median and greater series blackish, externally edged with olive-brown, and tipped with dull whitish or rusty white, so as to form a double bar across the wing; bastard-wing, primary-coverts, and quills blackish, externally edged with ashy grey, the secondaries with buffy whitish; tail-feathers black, the outer ones yellowish white; ring round the eye and feathers above the ear-coverts white; lores ashy; ear-coverts yellowish white, with black margins; cheeks and throat yellowish white, with a broad black stripe on the lower malar region, widening out and joining a black patch on the fore neck, the feathers slightly edged with rusty; sides of breast ashy, overwashed with rusty; remainder of under surface white, with a slight tinge of rusty, especially on the flanks; thighs black with white edges; under wing-coverts white, mottled with black bases.

Even in the nest there seems to be a certain difference in the sexes, for some, probably males, have the black throat-patch much more pronounced than others.

Young in first plumage. Dull ashy grey above, with the rump and upper tail-coverts black; least wing-coverts ashy like the back; median and greater coverts blackish, externally edged with ashy and tipped with white, forming two wing-bars; bastard-wing, primary-coverts, and quills blackish, externally edged with ashy, the secondaries browner and rather broadly edged with white; tail-feathers black, the two outer ones almost entirely white, excepting for a line of black along the inner web of the outermost; the penultimate feather with a little more black on it, in the shape of a narrow line along both the inner and the outer webs; head like the back, the lores blackish, and a narrow line of black above the eye; eyelid and a small patch behind the eye white; sides of face and ear-coverts dull whitish, with dusky bases; cheeks and throat white, succeeded by a black patch on the fore neck, extending up the sides of the throat; centre of breast, abdomen, and under tail-coverts white, the top of the breast and the sides of the body light ashy grey; thighs black, edged with white; axillaries and under wing-coverts white, with ashy bases, those near the edge of the wing mottled with dusky bases; quills dusky below, whitish along the edge of the inner web.

The young birds remain in their grey plumage till the late autumn, and then they moult into their first winter dress. The coverts are entirely moulted and, I believe, the quills also; but of this I am not quite certain, for a female shot at Axmouth in April appears to me to be putting on new quills.

The young birds get their first full plumage in the following spring *with a moult*. The old birds, however, do *not* moult in the spring, but the black gradually spreads over the grey feathers of the back, and the black throat is also gradually assumed without the loss of a feather. On the dorsal plumes the black appears to spread from the base upwards, but on the throat it begins at the tip and spreads downwards to the base. Many young birds commence to show traces of the black plumage on the back in the early winter; these I take to be the young of the first brood, which attain their winter dress earlier than those of the second brood, which are often found in their grey dress far into September. In November the signs of the approaching black throat are also often to be noticed.

Young in first winter dress. General colour above clear ashy grey, blacker on the lower rump and upper tail-coverts, the lateral ones of which are externally white; lesser wing-coverts like the back; median and greater series black, externally washed with brownish ashy, the tips ashy white; bastard-wing feathers, primary-coverts, and quills black, externally edged with ashy, the secondaries with brownish ashy, whitish towards the ends of the outer web in the long inner secondaries, the innermost of the latter conspicuously brownish along the outer web; tail-feathers black, the central pair

margined with white, the two outer ones nearly entirely white, with a black border along their inner web, broader on the penultimate feather; crown of head and nape black, contrasting with the back; a broad frontal band, sides of crown, entire sides of face, and sides of neck white, tinged with sulphur-yellow; throat white, succeeded by a black crescentic patch on the fore neck, which runs up on the sides of the throat and adjoining which are generally some black-tipped feathers (signs of the approaching black throat of the following spring); breast and abdomen white, the sides of the body grey; thighs black, with grey tips.

Adult male in breeding-plumage. General colour above black from the crown to the upper tail-coverts, the lateral ones of which are externally white; a broad frontal band of white; least wing-coverts black like the back; median series black, tipped with white, forming a wing-bar; greater coverts black, edged with white externally, the inner ones rather broadly; bastard-wing feathers, primary-coverts, and quills blackish, edged with ashy grey, the secondaries more broadly with whitish, especially the long inner ones; tail-feathers blackish, the two outermost white, black at the extreme base and along the edge of the inner web; lores, sides of face, feathers over the eye, sides of crown, ear-coverts, and sides of neck white, as also a line at the base of the cheeks; cheeks and throat, as well as the fore neck, black; remainder of under surface of body white, the sides of the body and flanks slaty grey; thighs black, with whitish margins; axillaries white, ashy on the inner web; under wing-coverts white, mottled with black bases near the edge of the wing; quills dusky blackish, white along the edge of the inner web; bill and feet black; iris dark brown. Total length 7·3 inches, culmen 0·6, wing 3·55, tail 3·7, tarsus 0·95.

Adult female. Never so black on the upper surface as the male, the back being slaty grey, with a blackish feather here and there; frontal band white; hinder crown, nape, and hind neck black, the latter mingling with the grey of the mantle; wings and tail as in the male; sides of face and sides of neck white as in the male, and the black throat and white underparts as in the male also. Total length 6·8 inches, culmen 0·55, wing 3·25, tail 3·2, tarsus 0·9.

Hab. Western Europe, occurring in the British Islands, France, Holland, and extending through Heligoland to Western Denmark and South-western Norway; wintering in Spain and North Africa, as well as partially in Great Britain and France.

a. ♂ ad. sk.	Inverary, N.B., April 11, 1867.	Gould Collection.
b. ♂, *c*, *d.* ♀ ad.; *e–i.* Juv. st.	Leicestershire.	Theodore Walker, Esq. [P.].
k. ♀ ad. sk.	Coton, Cambridgeshire, Jan. 1866 (*J. Baker*).	Salvin-Godman Collection.
l. Juv.; *m*, *n.* Pull. st.	Cambridgeshire.	Mr. J. Baker [C.].
o. ♂ ad. sk.	Cambridge, April 14, 1856 (*O. S.*).	Salvin-Godman Collection.

p–s. ♂, *t*, *u*. ♀ ad. sk.	Norfolk, March.	Lord Walsingham [P.].
v, *w*. ♂ ♀ ad. st.	Norfolk, June.	Lord Walsingham [P.].
x, *y*, ♂ ♀ ad.; *z–d'*. Juv. st. [group].	Norfolk, June*.	Lord Walsingham [P.].
e'. ♀ ad. sk.	Erith, Kent, May.	R. B. Sharpe, Esq. [P.].
f'. Ad. sk.	Plumstead, Kent, March.	R. B. Sharpe, Esq. [P.].
g'. ♀ ad. æstiv. sk.	Westerham, Kent, July.	R. B. Sharpe, Esq. [P.].
h', *i'*. Juv. sk.	Hampstead, Middlesex, Oct. 1869.	R. B. Sharpe, Esq. [P.].
k'. Juv. sk.	Near London, Sept. 13.	Gould Collection.
l'. Var. st.	Regent's Park, London, Sept. 26.	Miss Pearce [P.].
m'. Juv. sk.	Staines, Middlesex, Sept. 25.	J. E. Harting, Esq. [P.].
n'. ♂ ad. sk.	Godalming, Surrey, Jan. 28 (*F. G.*).	Salvin-Godman Collection.
o', *p'*. ♂ ad. sk.	Godalming, Surrey, Feb. (*F. G.*).	Salvin-Godman Collection.
q'. ♂ ad. sk.	Godalming, Surrey, Apr. 18 (*F. G.*).	Salvin-Godman Collection.
r'. ♀ ad. sk.	Maidenhead, Berks, Apr. 4 (*J. G.*).	Gould Collection.
s'. ♂ ad. sk.	Maidenhead, Berks, May 2 (*J. G.*).	Gould Collection.
t'. Juv. sk.	Taplow, Bucks, June (*J. G.*).	Gould Collection.
u'. Juv.; *v'*. ♂ ad. sk.	Taplow, Bucks, Sept. (*J. G.*).	Gould Collection.
w'. Juv. sk.	Cookham, Berks, July 25.	R. B. Sharpe, Esq. [P.].
x', *y'*. Juv. sk.	Cookham, Berks, Aug. 29.	R. B. Sharpe, Esq. [P.].
z', *α*, *β*. Juv. sk.	Cookham, Berks, Sept.	R. B. Sharpe, Esq. [P.].
γ. ♂ imm. sk.	Romney Marsh, Kent, Sept. 11.	R. B. Sharpe, Esq. [P.].
δ. ♂ ad. æstiv. st.	Brighton, Sussex, April (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
ε. ♂ ad. hiem. st.	Brighton, Sussex, Sept. (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
ζ. ♂ ad. sk.	Brighton, Sussex, Feb. (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
η. ♂ ad. sk.	Brighton, Sussex, March (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
θ. ♂ ad. sk.	Brighton, Oct. 20 (*R. B. S.*).	R. B. Sharpe, Esq. [P.].
ι. ♂ ad. sk.	Brighton, Nov. (*R. B. S.*).	R. B. Sharpe, Esq. [P.].
κ, *λ*, *μ*. Ad. et juv. hiem. sk.	Hove, Sussex, Nov. (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
ν, *ξ*. Imm. hiem. sk.	Lancing, Sussex, Nov. (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
ο, *π*. ♂ ♀ imm. æstiv. sk.	Lancing, March 2 (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
ρ, *σ*, *τ*, *υ*, *φ*. Pull. sk.	Hassock's Gate, June (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].

* The male in this mounted group is *M. alba*, as referred to under the heading of that species.

χ. ♂ ad. sk.	Avington, Hants, May 12 (*R. B. S.*).	R. B. Sharpe, Esq. [P.].
ψ. ♂ juv. sk.	Christchurch, Hants, Sept. 9.	R. B. Sharpe, Esq. [P.].
ω. ♂ ad. sk.	Wiltshire.	Col. Montagu [P.].
α'. ♂ ad. sk.	Axmouth, Devon, March (*H. Swaysland*).	R. B. Sharpe, Esq.
β', γ'. ♀ ad. sk.	Axmouth, April (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
δ'. Var., sk.	Devonshire.	J. C. Prideaux, Esq. [P.].
ϵ'. Var., sk.	Bristol.	J. Raddon, Esq. [P.].
ζ'. ♂ ad. sk.	Heligoland.	Gould Collection.

2. Motacilla alba.

La Lavandière, *Briss. Orn.* iii. p. 461 (1760); *Daubent. Pl. Enl.* vi. pl. 652. fig. 1.

La Bergeronette grise, *Briss. Orn.* iii. p. 465, pl. xxv. fig. 1 (1760); *Buff. Hist. Nat. Ois.* vi. p. 261, pl. xiv. (1778); *Daubent. Pl. Enl.* vi. pl. 674. fig. 1.

Motacilla alba, *Linn. Syst. Nat.* i. p. 331 (1766); *Gm. Syst. Nat.* i. p. 960 (1788); *Temm. Man. d'Orn.* i. p. 254 (1815), ii. p. 255 (1820); *Naum. Vög. Deutschl.* iii. p. 803, Taf. 86. figs. 1–3 (1823); *Roux, Orn. Prov.* pl. 193 (1825); *Werner, Atlas, Insectiv.* pl. 73 (1827); *Ménétr. Cat. Rais. Cauc.* p. 36 (1832); *Temm. Man. d'Orn.* iv. p. 178 (1835); *Rüpp. Neue Wirb., Vög.* p. 84 (1835–40); *Gould, B. Eur.* ii. pl. 143 (1837); *Macgill. Hist. Br. B.* ii. p. 221 (1839); *Keys. & Blas. Wirbelth. Eur.* p. 174 (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 153 (1840); *Rüpp. Syst. Uebers.* p. 59 (1845); *Gray, Gen. B.* i. p. 203 (1847); *Thomps. B. Irel.* i. p. 218 (1849); *Bp. Consp.* i. p. 250 (1850); *Cab. Mus. Hein.* Th. i. p. 12 (1850); *Kjærb. Danm. Fugle*, pl. xix. fig. 1 (1852); *Schl. Vog. Nederl.* pls. 100, 101 (1854); *Sundev. Sv. Fogl.* pl. 9. figs. 7, 8 (c. 1856); *Jaub. & Barth.-Lapomm. Rich. Orn.* p. 276 (1858); *Salvin, Ibis*, 1859, p. 310; *Walker, Ibis*, 1860, p. 166; *Powys, t. c.* p. 228; *Simpson, t. c.* p. 394; *Linderm. Vög. Griechenl.* p. 79 (1860); *Reinh. Ibis*, 1860, p. 6; *F. & P. Godman, t. c.* p. 82; *Schl. Dier. Nederl., Vog.* pl. 9. figs. 7, 8, 8 *a* (1861); *Reinh. Ibis*, 1861, p. 6; *A. Newt. in Baring-Gould's Iceland*, p. 409 (1863); *Gould, B. Gt. Br.* iii. pl. 2 (c. 1863); *Gray, List Br. B.* p. 66 (1863); *Radde, Reise Sibir., Vög.* p. 224 (1863); *Baird, Review*, p. 152 (1864); *Adams, Ibis*, 1864, p. 27; *Wright, t. c.* p. 62; *More, Ibis*, 1865, p. 122; *Bettoni, Ucc. Nidif. Lomb.* tav. 37 (1865–70); *Lilford, Ibis*, 1866, p. 187; *Tristr. t. c.* p. 290; *Degl. & Gerbe, Orn. Eur.* p. 383 (1867); *Blyth, Ibis*, 1867, p. 29; *Chambers, t. c.* p. 100; *Drake, t. c.* p. 427; *Loche, Expl. Sci. Algér., Ois.* ii. p. 3 (1867); *Smith, Ibis*, 1868, p. 442; *Keulem. Onze Vogels*, i. pl. 25 (1869); *Gray, Hand-l. B.* i. p. 245, no. 3562 (1869); *Borggr. Vogelf. Deutschl.* p. 86 (1869); *Doderl. Avif. Sicil.* p. 100 (1869); *Heugl. Orn. N.O.-Afr.* i. p. 316, iv. p. lxxxviii (1869-71); *Blanf. Geol. & Zool. Abyss.* p. 380 (1870); *Finsch, Trans. Zool. Soc.* vii. p. 324 (1870); *Wyatt, Ibis*, 1870, p. 15; *Elwes & Buckley, t. c.* p. 195; *Fritsch, Vög. Eur.* pl. 21. fig. 14 (c. 1870); *Gurney, junr., Ibis*, 1871, p. 85; *Saunders, t. c.* p. 215; *Sharpe, Cat. Afr. B.* p. 73 (1871); *Salvad. Faun. Ital., Ucc.* p. 120 (1871); *Gray, B. West Scotl.* p. 111 (1871); *Harting, Handb. Brit. B.* p. 23 (1872);

Shelley, B. Egypt, p. 126 (1872); *Severtz. Turkest. Jevotn.* p. 66 (1873); *Alston & Harvie Brown, Ibis*, 1873, p. 61; *Blanf. t. c.* p. 220; *Brooke, t. c.* p. 244; *Hume, Str. F.* 1873, pp. 29, 30; *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 165 (1874); *Durnf. Ibis*, 1874, p. 396; *Newton, ed. Yarr. Br. B.* i. p. 548 (1874); *Stoliczka, Str. F.* 1875, p. 217; *Dresser, B. Eur.* iii. p. 233, pls. 125, 126 (1875); *Irby, B. Gibr.* p. 108 (1875); *Danf. & Harvie Brown, Ibis*, 1875, p. 309; *Dresser, Ibis*, 1876, p. 176; *Wharton, t. c.* p. 22; *Seebohm & Harvie Brown, t. c.* p. 125; *Blanf. East. Persia*, ii. p. 232 (1876); *Scully, Str. F.* 1876, p. 151; *Wardlaw Ramsay, Ibis*, 1877, p. 463; *Brooks, Str. F.* 1877, p. 472; *Danf. Ibis*, 1878, p. 20; *Seebohm, t. c.* p. 343; *Brooks, Str. F.* 1878, vol. ii. p. 137; *Bogdanoff, B. Cauc.* p. 106 (1879); *Irby, Ibis*, 1879, p. 344; *Hume, Str. F.* 1879, p. 103; *Scully, t. c.* p. 313; *Brooks, t. c.* p. 484; *Seebohm, Ibis*, 1880, p. 189; *Vidal, Str. F.* 1880, p. 69; *Giglioli, Icon. Avif. Ital.* pl. 163 (1881); *Ridgway, Bull. U.S. Nat. Mus.* no. 21, p. 15 (1881); *Biddulph, Ibis*, 1881, p. 68; *Scully, t. c.* p. 451; *C. Swinhoe, Ibis*, 1882, p. 109; *Seebohm, t. c.* p. 216; *Biddulph, t. c.* p. 280; *Seebohm, t. c.* pp. 375, 376; *id. Ibis*, 1883, p. 19; *Severtz. t. c.* p. 80; *Irby, t. c.* p. 184; *Saunders, t. c.* p. 350; *B. O. U. List Br. B.* p. 29 (1883); *Oates, B. Br. Burm.* i. p. 156 (1883); *Booth, Rough Notes*, part 4 (1883); *Seebohm, Hist. Brit. B.* vol. iii. p. 199 (1883); *Homeyer & Tancré, Mitth. orn. Ver. Wien*, 1883, p. 85; *Tristr. Faun. & Flor. Palest.* p. 54 (1884); *Radde, Orn. Cauc.* p. 223, Taf. xii. (1884); *Salvad. Ann. Mus. Civ. Genov.* (2) i. p. 166 (1884).

White Wagtail, *Lath. Gen. Syn.* ii. pt. 2, p. 395 (1783).

Cinereous Wagtail, *Lath. tom. cit.* p. 397 (1783).

Motacilla cinerea, *Gm. Syst. Nat.* i. p. 961 (1788).

Motacilla albeola, *Pall. Zoogr. Rosso-Asiat.* i. p. 506 (1811).

Motacilla septentrionalis, *Brehm, Vög. Deutschl.* p. 347 (1831).

Motacilla sylvestris, *Brehm, t. c.* p. 348 (1831).

Motacilla brachyrhynchos, *Brehm, t. c.* p. 348 (1831).

Motacilla dukhunensis, *Sykes, P. Z. S.* 1832, p. 91; *Bp. Consp.* i. p. 250 (1850); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 349 (1854, pt.); *Gould, B. Asia*, pl. 62 (1861); *Blanf. Ibis*, 1863, p. 219; *Blyth, Ibis*, 1865, p. 49; *Swinh. P. Z. S.* 1870, p. 130; *Finsch & Hartl. Vög. Ostafr.* p. 259 (1870); *Hume, Str. F.* 1873, pp. 29, 30; *Ball, Str. F.* 1874, p. 416; *Brooks, t. c.* p. 457; *id. Str. F.* 1875, p. 249; *Butler, t. c.* p. 489; *Wald. in Blyth B. Burm.* p. 97 (1875); *Brooks, Str. F.* 1876, p. 506; *Pryer, in Rowley's Orn. Misc.* ii. p. 192 (1876); *Butler, Str. F.* 1877, pp. 221, 230; *Hume & Davison, Str. F.* 1878, p. 362; *Brooks, Str. F.* 1878, vol. ii. p. 137; *Hume, Str. F.* 1879, p. 103; *Butler, Cat. B. Sind etc.* p. 40 (1879); *id. Cat. B. S. Bomb. Pres.* p. 54 (1880); *Vidal, Str. F.* 1880, p. 69; *Reid, Str. F.* 1881, p. 48; *Davidson, Str. F.* 1882, p. 310; *Davison, Str. F.* 1883, p. 395.

Motacilla gularis, *Swains. B. W. Afr.* ii. p. 38 (1837); *Allen & Thomps. Exped. Niger*, ii. p. 310 (1848); *Hartl. Orn. W.-Afr.* p. 72 (1857).

Motacilla cervicalis, *Brehm, Vogelf.* p. 143 (1855).

Motacilla major, *Brehm, Naum.* 1855, p. 280.

Motacilla fasciata, *Brehm, Naum.* 1855, p. 280.

Motacilla luzoniensis, *Beavan, Ibis*, 1868, p. 76.

Motacilla alba β. dukhunensis, *Severtz. Turkest. Jevotn.* p. 66 (1873).

Motacilla dukhanensis, *Fairb. Str. F.* 1876, p. 200.

Key to the Plumages of M. alba.

a. Throat white or yellowish white.	
a'. Forehead like the crown.	
a''. Throat dingy white tinged with yellow; fore neck and chest dull ashy, with a dusky patch in the centre of the former.	*Young*: 1st plumage.
b''. Throat white washed with yellow, separated from the white breast by a crescent of black on the fore neck	*Young*: 1st autumn plumage.
b'. Forehead white.	
c''. Crown grey like the back	*Young*: 1st winter plumage.
d''. Crown black, contrasting with the grey back	*Adult*: winter plumage.
b. Throat black, as well as the fore neck.	
c'. Head and nape black.....	*Adult male*: breeding-plumage.
d'. Nape mixed with ashy.....	*Adult female*: breeding-plumage.

Young in first plumage. General colour above uniform ashy grey, washed with olive, the upper tail-coverts blackish, the lateral ones externally white; least wing-coverts like the back; median and greater series dusky ashy, washed with brown externally and white at the ends; bastard-wing, primary-coverts, and quills blackish, externally edged with ashy, the secondaries with white, subterminally shaded with brown; tail-feathers black, the two centre ones edged with white, the two outer ones white, with a blackish edging to the inner web, the base of the penultimate feather also black; forehead and crown like the back; lores ashy; above the ear-coverts a streak of yellowish white; ear-coverts pale yellowish; cheeks and throat dingy white, with a slight yellowish tinge; fore neck, chest, and sides of body ashy grey, with a patch of blackish on the fore neck; remainder of underparts white; thighs dull ashy, with dusky bases; axillaries and under wing-coverts white; quills dusky below, ashy whitish along the edge of the inner web.

From this first plumage a complete moult brings the bird into its full winter plumage; the quills, however, are apparently not shed. The upper surface is uniform grey, and there is generally a strong suffusion of yellow on the face; but this is not always the case, and may be peculiar to one sex or to the birds of the second brood.

In the following spring the full plumage is reached, not by a moult, but by a change of feather, the black on the head generally appearing first, and afterwards that on the throat. In the case of the female birds, at least in their first spring, the head never seems to become entirely black, the nape still retaining some ashy plumes.

Young male in first winter plumage. General colour above light ashy grey, washed with yellowish olive on the head and back, the rump purer grey and becoming dusky towards the upper tail-coverts, which are black, washed externally with ashy, the lateral coverts white on their outer webs; lesser wing-coverts ashy

grey like the back, and similarly washed with olive; median and greater coverts blackish, externally washed with brownish ashy, whiter towards the ends of the feathers; bastard-wing, primary-coverts, and quills blackish, externally edged with dull ashy, the inner secondaries browner on the outer web, which is fringed with dull white; tail as in adult, but with black extending along the outer web of the penultimate feather; head like the back, and washed with olive in the same manner; a frontal band of white obscured with yellowish olive; lores ashy; a streak of yellowish white above the ear-coverts, surmounted by a line of blackish along the sides of the crown; ear-coverts pale yellowish, as also the sides of the neck; throat yellowish white, followed by a crescentic band of black on the fore neck, which extends upwards in a broad line to the hinder part of the cheeks; the black crescent extending to a point on the centre of the chest; remainder of under surface of body white, washed with yellowish on the upper breast and with grey on the sides of the body and flanks; axillaries white, washed with yellow; under wing-coverts white, mottled with blackish bases near the edge of the wing. Total length 7 inches, culmen 0·55, wing 3·45, tail 3·35, tarsus 0·85.

The *adult in winter plumage* has a grey back, white forehead, and black crown and nape; the sides of the crown, region of the eye, ear-coverts, sides of neck, cheeks, and throat pure white, sometimes with a slight tinge of yellow; on the fore neck a broad black crescent, extending up the sides of the throat to the hinder cheeks; otherwise the plumage is the same as in summer, excepting that the wing-coverts are more ashy.

Adult male in breeding-plumage. General colour above light ashy grey from the nape to the upper tail-coverts, the latter being blackish edged with ashy grey, the lateral ones externally white; lesser wing-coverts ashy grey; median and greater series black, externally edged and broadly tipped with white, the outer greater coverts, browner; bastard-wing, primary-coverts, and quills dark brown, edged with ashy, the longer inner secondaries rather broadly margined with white, the innermost ones externally brown; tail-feathers black, the two centre ones edged with white, the two outermost white, black at the base and obliquely along the edge of the inner web; a broad frontal band, lores, cheeks, sides of face, ear-coverts, and sides of crown pure white, the top of the head and nape black; sides of neck white, washed with ashy; throat and fore neck black, the lower feathers tipped with white where they adjoin the breast, which is entirely white as well as the under tail-coverts; flanks and sides of body light ashy grey, clearer on the sides of the upper breast; thighs ashy white; under wing-coverts and axillaries white, the coverts near the edge of the wing with blackish bases; quills dusky brown below, lighter along the edge of the inner web, whiter near the base of the feathers; bill, legs, and feet black; iris dark brown. Total length 6·7 inches, culmen 0·5, wing 3·35, tail 3·35, tarsus 0·85.

Adult female. Similar to the male. Females in the first spring

appear not to attain the full black head like the male, the nape retaining some of the ashy feathers, which do not change to black. Total length 6·8 inches, culmen 0·55, wing 3·3, tail 3·25, tarsus 0·85.

The full plumage of both sexes is generally attained by the middle of April; but Mr. Seebohm has a male bird, shot by himself in Greece on the 21st of May, which has not yet completed the change on the throat and cap.

With regard to *M. dukhunensis*, as the Oriental form of this Wagtail is called, specimens from Siberia, collected by Mr. Seebohm in the valley of the Yenesay, cannot be specifically separated from *M. alba*, being merely of a little purer French grey. This applies to the examples from India and Burmah collected in the winter season; and it seems to be a fact, as Mr. Brooks says, that the young ones killed in these countries have not the yellow face of European specimens; but this can not be made a specific character, for many European individuals do not have it either. A gradual transition seems to take place, as the species ranges eastwards, from the duller grey of the West-European specimens to the pure grey of the Siberian birds. This difference is only visible on the actual comparison of a large series, and may be due to a strain of *M. lugubris*, with which *M. alba* undoubtedly sometimes crosses. A pair of birds presented by Lord Walsingham with their nest and young birds, to illustrate the breeding of the Common Pied Wagtail of England (*M. lugubris*), proved to belong, the male to *M. alba* and the female to *M. lugubris*. Mr. Seebohm informs us that in winter he has always seen the two consorting in flocks in the south of France; and it is therefore quite likely that, on their return to their breeding-quarters, a White Wagtail may often mate with a Pied Wagtail. In addition to the purer grey of the Eastern birds, there is always more white on the wing-coverts in the Siberian and Indian specimens than in West-European examples.

Dr. Radde has recently figured (Orn. Cauc., Taf. xii.) several variations in the facial markings of *M. alba*, which seem to show very clearly that there is a connection between this species and *M. persica*, leading through to *M. personata*.

Hab. The whole of Europe and Northern Asia, wintering in N.E. Africa and Senegambia, the plains of India, and the Burmese countries.

a. ♂ ad. æstiv. sk.	Lapland, May 20.	R. B. Sharpe, Esq. [P.].
b. Juv. sk.	Borregaard, S. Norway, June 1866 (*P. Godman*).	Salvin-Godman Coll.
c. ♂ ad. æstiv. sk.	Borregaard, June 1866 (*J. Baker*).	Salvin-Godman Coll.
d. ♀ ad. sk.	Sarpsborg, June 1866 (*J. Baker*).	Salvin-Godman Coll.
e, *f*. ♂ ; *g*. ♀ ad. sk.	Norway, May (*Collett*).	Christiania Museum [P.].
h, *i*. ♂ ad. sk.	Norway, June (*Collett*).	Christiania Museum [P.].
k. ♂ juv. sk.	Norway, Oct. (*Collett*).	Christiania Museum [P.].
l. Pull. sk.	Norway, Aug. (*Collett*).	Christiania Museum [P.].

m. Ad. æstiv. st.	Kingsbury, Middlesex.	F. Bond, Esq. [P.].
n. Juv. hiem. st.	Brighton, Sussex, Sept.	Messrs. Swaysland.
o, *p*, *q*. ♂ ♀ ad. æstiv. sk.	Valkenswaard, Holland (*J. Baker*).	Salvin-Godman Coll.
r. ♂ ad. æstiv. sk.	Saxony, May.	R. B. Sharpe, Esq. [P.].
s. ♀ ad. æstiv. sk.	Saxony, April 15.	R. B. Sharpe, Esq. [P.].
t. Juv. hiem. sk.	Saxony, Oct. 7.	R. B. Sharpe, Esq. [P.].
u,*v*. ♂ ad. æstiv. sk.	Baden, March.	R. B. Sharpe, Esq. [P.].
w. ♂ ad. hiem. sk.	Baden, November.	R. B. Sharpe, Esq. [P.].
x. ♂ ad. æstiv. sk.	Near Hamburg.	Gould Collection.
y. ♀ ad. æstiv. sk.	Heligoland, April (*L. Gätke*).	R. B. Sharpe, Esq. [P.].
z. Imm. hiem. sk.	S. France (*P. L. Sclater*).	India Museum.
a'. Ad. æstiv. sk.	San Remo.	Gould Collection.
b'. ♂ ad. æstiv. sk.	Switzerland, May 3, 1873.	M. Léon Olph.-Galliard [P.].
c'. ♂ ad. æstiv. sk.	Florence, Jan.	Prof. H. H. Giglioli [P.].
d'. ♀ imm. hiem. sk.	Souza, Tunis, March 3 (*O. S.*)	Salvin-Godman Coll.
e'. Ad. hiem. sk.	Tangiers (*Favier*).	India Museum.
f'. Juv. hiem. sk.	Tangiers.	R. B. Sharpe, Esq. [P.].
g', *h'*. Ad. hiem. sk.	Tangiers.	R. B. Sharpe, Esq. [P.].
i'. Imm. hiem. sk.	Bathurst, River Gambia, Dec. 15.	Sharpe Collection.
k', *l'*. Ad. hiem. sk.	River Gambia.	Sharpe Collection.
m'. Imm. hiem. sk.	Dakah, Senegal, Oct.	M. L. Laglaize [C.].
n'. ♀ imm. hiem. sk.	Lake Ashangi, Abyssinia, April 3.	W. T. Blanford, Esq. [C.].
o'. ♂ ad.; *p'*. ♀ imm. hiem. sk.	Zoulla, Annesley Bay, Dec. & Jan.	W. T. Blanford, Esq. [C.].
q'. ♂ ad. hiem. sk.	Socotra, Feb. 18 (*Prof. Balfour*).	British Association [P.].
r'. ♂ ad. hiem. sk.	Socotra, March 11 (*Prof. Balfour*).	British Association [P.].
s'. Imm. hiem. sk.	Egypt (*Dr. Christie*).	W. B. D. Turnbull, Esq. [P.].
t'. ♂ ad. hiem. sk.	Caiffa, Palestine.	Canon Tristram [C.].
u'. ♀ juv. hiem. sk.	Beersheba, Palestine.	Canon Tristram [C.].
v'. ♂ ad.; *w'*. ♀ imm. hiem. sk.	Asia Minor.	Mr. T. Robson [C.].
x', *y'*. ♂ ♀ ad. sk.	Caucasus, May.	Purchased.
z'. ♂ ad. æstiv. sk.	Ust Zylma, Petchora River, May 12.	Henry Seebohm, Esq. [P.].
α. ♂ ad. hiem. sk.	Sarai Gor, Ob River, Sept 10 (*Dr. Finsch*).	Geogr. Soc. Bremen.
β. ♂ ad. æstiv.; *γ*. Juv. sk.	Schtschutschja, August (*Dr. Finsch*).	Geogr. Soc. Bremen.
δ, *ε*. Ad.; *ζ*, *η*. Juv. hiem. sk.	Yarkand (*Dr. Bellew*).	India Museum.
θ, *ι*. ♂ ♀ imm. heim. sk.	Gwadar, Baluchistan, Dec.	W. T. Blanford, Esq. [C.].
κ. ♂ ad. æstiv. sk.	Dizak, Baluchistan, March 24.	W. T. Blanford, Esq. [C.].
λ. Ad. hiem. sk.	Afghanistan (*Griffith*).	India Museum.
μ. Ad. æstiv. sk.	Afghanistan (*Griffith*).	India Museum.
ν. ♀ ad. hiem. sk.	Kandahar, Dec. 30.	Col. C. Swinhoe [C.].
ξ. ♀ ad. æstiv. sk.	Kandahar, March 20.	Col. C. Swinhoe [C.].

o. Ad.; *π*, *ρ*. Imm. hiem. sk.	Scinde (*Dr. Gould*).	India Museum.
σ. ♂ ad. hiem. sk.	Gilgit, Sept. 20.	Major Biddulph [C.].
τ. ♀ ad. hiem. sk.	Gilgit, Feb. 1.	Major Biddulph [C.].
υ. Juv. hiem. sk.	Cashmere.	R. B. Sharpe, Esq. [P.].
φ. Ad. æstiv. sk.	Valley of Gurias, Cashmere.	B. B. Sharpe, Esq. [P.].
χ. ♀ imm. sk.	Deyrah.	Major Biddulph [C.].
ψ. Ad. æstiv. sk.	N.W. India.	Gould Collection.
ω. Ad. æstiv. sk.	N.W. India.	Capt. Stackhouse Pinwill [P.].
α'. ♀ imm. sk.	Meerut, Jan. 19.	Major J. Biddulph [C.].
β'. Ad. æstiv. sk.	Lucknow, April 20.	Col. Way [P.].
γ', *δ'*. Ad. æstiv. sk.	Kumaon (*Strachey*).	India Museum.
ε', *ζ'*. Ad. hiem. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
η'. ♀ ad. hiem. sk.	Behar.	B. H. Hodgson, Esq. [P.].
θ'. Ad. hiem. sk.	Bengal (*Dr. Falconer*).	India Museum.
ι', *κ'*. Ad. æstiv.; *λ'*. Juv. hiem. sk.	Kamptee, C. Provinces.	Dr. B. Hinde [P.].
μ'. ♀ ad.; *ν'*. ♂ juv. sk.	Mhow, Oct.	Col. Swinhoe [P.].
ξ'. ♀ ad. sk.	Mhow, April.	Col. Swinhoe [P.].
ο'. Ad. æstiv. sk.	Deccan (*Sykes*).	India Museum. (Type of *M. dukhunensis*.)
π'. Juv. hiem. sk.	Assam (*McClelland*).	India Museum.
ρ'. ♀ ad. hiem. sk.	Myitkio, Lower Pegu, April 19.	Oates Collection.
σ'. ♀ imm. hiem. sk.	Pegu, Nov. 6.	Oates Collection.
τ'. ♀ ad. hiem. sk.	Pegu, Oct. 27.	Oates Collection.
υ', *φ'*, *χ'*. Skulls.	S. Germany.	Dr. Günther [C.].

Subsp. *a*. Motacilla baicalensis.

Motacilla baicalensis, *Swinhoe, P. Z. S.* 1871, p. 363; *David & Oust. Ois. Chine*, p. 301; *Slater, Ibis*, 1882, p. 433.

Adult male (type of species). General colour above very pure pearly grey, the rump like the back; the upper tail-coverts blackish, edged with grey, the lateral ones externally white; lesser wing-coverts like the back; median and greater coverts pure white, the blackish bases entirely hidden; bastard-wing black, edged with white; primary-coverts and quills blackish, externally edged with grey, the long secondaries externally white, preceded by a shade of light brown; tail-feathers black, the two centre ones edged with white, the two outermost pure white, with the extreme base and a broad edge to the inner web blackish; fore part of the head white, the hinder crown and hind neck black; lores, sides of face, cheeks, ear-coverts, sides of hinder crown, and sides of neck pure white; chin and sides of throat white; centre of throat, fore neck, and chest black; remainder of under surface, including the under tail-coverts, pure white, the sides of the breast and flanks ashy grey; axillaries white, washed with ashy; under wing-coverts pure white; quills dusky below, with a great deal of white along the inner webs.

Total length 7·2 inches, culmen 0·55, wing 3·5, tail 3·55, tarsus 0·85. (*Mus. H. Seebohm.*)

This is an eastern form of *M. alba*, from which it differs in its white shoulders, the white on the median and greater coverts being so broad as entirely to hide the black bases.

The type is a nearly full-plumaged bird; but Mr. Seebohm has one, killed by himself on the Yenesay in June, which has the black extended right up to the chin and has even the outer tail-feathers pure white save for remains of a blackish fringe to the inner web.

Hab. Eastern Siberia, probably wintering in India and China.

a.	♂ ad. æstiv. sk.	Lake Baikal.	Gould Collection.
b.	♂ ad. æstiv. sk.	[India.]	Gould Collection.

3. Motacilla ocularis. (Plate IV. figs. 5, 6.)

Motacilla ocularis, *Swinh. Ibis*, 1860, p. 55; *Gray, Hand-l. B.* i. p. 246, no. 3576 (1869); *Swinh. P. Z. S.* 1870, p. 129, 1871, p. 364; *Prjev. in Rowley's Orn. Misc.* ii. p. 192 (1877); *David & Oustal. Ois. Chine*, p. 299 (1878); *Hume & Davison, Str. F.* 1878, p. 518; *Hume, Str. F.* 1879, p. 103; *Scully, t. c.* pp. 312, 315; *Hume, t. c.* p. 413; *Oates, B. Brit. Burm.* i. p. 158 (1883); *Dybowski, Bull. Soc. Zool. France*, viii. p. 360 (1883); *Nelson, Cruise R. S. 'Corwin,'* p. 62, pl. ii. (1883); *Ridgw. Pr. U.S. Nat. Mus.* iv. p. 414 (1882); *Coues, Key N. Amer. B.* 2nd ed. p. 284 (1884).

Key to the Plumages of M. ocularis.

a. Throat white or white tinged with yellow.
  a'. Only a dusky-brown patch on the fore neck; upper parts ashy brownish ..... *Young*: first plumage.
  b'. A black crescent on the fore neck.
    a''. Head like the back; white forehead slightly indicated ..... *Young*: first winter plumage.
    b''. Head black; forehead white ..... *Adult*: second winter plumage.
b. Throat black up to the chin, or nearly so .... *Adult* ♂ ♀: summer plumage.

Young in first plumage (Amoy; R. Swinhoe). General colour above ashy brown, the lower rump blackish, the upper tail-coverts black with earthy-brown margins, the lateral ones externally dull white; least wing-coverts like the back, but changing to darker grey; median wing-coverts white; greater series white with black bases; bastard-wing black; primary-coverts and quills black, edged with hoary grey, the secondaries broadly edged with white, the inner ones submarginally browner; tail-feathers black, the two centre ones edged with white, the two outermost white, black at the base and along the edge of the inner web; head like the back, with a dusky line along the sides of the crown; the forehead paler than the crown, dull white obscured with ashy brown; a broad white eyebrow along the sides of the crown; cheeks, ear-coverts, and sides of face white, with a dusky line through the eye; sides of neck white, overshaded with brown; under surface of body white,

purer on the abdomen and under tail-coverts; on the fore neck a patch of light brown; under wing-coverts and axillaries white, the latter washed with brown; quills dusky below, broadly white along the inner web. (*Mus. H. Seebohm.*)

Obs. The young bird described has unfortunately no date of capture affixed to it; but it is just beginning to put on its first winter plumage, some ashy-grey feathers appearing in a patch on the back. Two females obtained in January at Shanghai are apparently in their first winter plumage, and are similar to specimens procured in Burmah during the cold season, excepting that the latter, shot rather earlier in the year, have the face suffused with yellow. Young individuals always show the streak through the eye which is characteristic of the species.

Young in first winter plumage. General colour above dark ashy grey, clearer grey on the lower back and rump; the upper tail-coverts black, broadly edged with grey, the lateral ones externally white; least wing-coverts like the back; lesser and median coverts white, with dusky blackish bases; bastard-wing black; primary-coverts and quills blackish, edged with hoary grey, the secondaries with white, the innermost subterminally brown; tail-feathers black, the centre ones edged with white, the two outer ones blackish at base and having a broad edging to the inner web; head like the back, with a broad white eyebrow skirting the sides of the crown, above which is a slight trace of a dusky blackish line; the forehead hoary whitish, but not very distinct from the crown; cheeks, sides of face, and ear-coverts white, with a line of dusky blackish through the eye, running through the lores and along the upper edge of the ear-coverts; throat white, the lower part with black fringes to the feathers where they adjoin the black gorget; remainder of under surface of body dull white, ashy on the breast and sides of the body; thighs ashy; under tail-coverts white; axillaries ashy like the breast; wing-coverts white; quills dusky below, white along the edge of the inner web; bill and feet black; iris black. Total length 6·8 inches, culmen 0·5, wing 3·5, tail 3·5, tarsus 0·85. (*Mus. H. Seebohm.*)

Adult male in breeding-plumage (Amoor Land, May 13th). General colour above clear pearly grey from the mantle to the upper tail-coverts, the lower rump slightly blackish; upper tail-coverts black, washed with ashy on their outer webs, the lateral feathers externally white; lesser wing-coverts like the back; median coverts pure white, with concealed black bases; greater series white, with more distinct blackish bases; bastard-wing black, edged with white; primary-coverts and quills blackish, edged with ashy, inclining to whitish near the ends of the feathers, the long secondaries broadly edged with white, with a submarginal shade of brown; tail-feathers black, the two centre ones edged with white, the two outer white, black near the base and along the edge of the inner web; crown of head, nape, and hind neck black, extending to the upper mantle; a broad frontal band and a broad eyebrow along the sides of the crown pure white; lores, cheeks, ear-coverts, and sides of neck pure white;

a streak of black through the eye, running through the lores and along the upper edge of the ear-coverts; throat, fore neck, and chest black, the feathers of the latter fringed with white; remainder of under surface of body white, including the under tail-coverts; sides of breast and flanks clear ashy grey; thighs ashy white; axillaries and under wing-coverts white, the latter mottled with blackish bases near the edge of the wing; quills dusky ash-brown below, white along the edge of the inner web: "bill black, plumbeous at the base; legs and claws black; iris brown" (*Oates*). Total length 7·3 inches, culmen 0·6, wing 3·6, tail 3·7, tarsus 1·95.

The *adult female in breeding-plumage* does not differ from the male, but is apparently longer in attaining the black throat and black head. Both, however, are fully donned in due course. Total length 7·8 inches, culmen 0·55, wing 3·55, tail 3·7, tarsus 0·85.

Adult in full winter plumage. Blue-grey on the back as in the summer dress; the wings and the tail similar; the head black, with a broad white frontal band; the facial markings the same at both seasons, but instead of the throat being black in winter, there is merely a black crescent on the fore neck. This appears to extend upwards very rapidly, and birds obtained in Burmah show traces of the change in November; one in the Swinhoe collection from Amoy is considerably advanced, even on the 29th of October. It is evident that in this species the black throat is assumed by a direct moult and a change of feather going on at the same time, the newly moulted plumes being white at the base, black at the tips, the latter colour spreading downwards with extreme rapidity.

Hab. From Kamtschatka and Amoor Land to South China, breeding throughout this extent of country, wintering in the Burmese countries and extending westwards to Nepal. In North America from Alaska * to California (the latter locality only an occasional winter resort in all probability).

a.	Juv. æstiv. sk.	N.W. America.	Capt. Kellett and Lieut. Wood [P.].
b.	♀ ad. sk.	Island of Askold, May (*Doerries*).	R. B. Sharpe, Esq. [P.].
c.	♂ juv. hiem. sk.	Suiffu district, Oct. (*Doerries*).	R. B. Sharpe, Esq. [P.].
d.	♂ ad. æstiv. sk.	Amoor Land, May 13.	R. B. Sharpe, Esq. [P.].
e.	♂ ad. æstiv. sk.	Amoy, China (*R. Swinhoe*).	Gould Collection.
f.	♀ ad. hiem. sk.	Amoy, China (*R. Swinhoe*).	Gould Collection.

* I have received the following information in a letter from Mr. Ridgway:—"There is no valid record of the occurrence of any species of *Motacilla* in Alaska, although *M. ocularis* undoubtedly wanders there occasionally from the opposite coasts of Asia. All our Plover-Bay specimens, including the one figured in the 'Corwin' report, are true *M. ocularis*, of which we have a specimen from Lower California (see Proc. U.S. Nat. Mus. vol. iv. p. 414). L. M. Turner saw a White Wagtail on the island of Attu, in the Aleutian chain, which was probably this species, although it may have been *M. amurensis* (= *M. ingens*, Kittl.)."

g, *h*. ♀ juv. hiem. sk.	Lower Pegu, Nov. 11.	E. W. Oates, Esq. [C.].
i. ♂ ad. hiem. sk.	Lower Pegu, Dec. 27.	E. W. Oates, Esq. [C.].
k. ♀ juv. hiem. sk.	Lower Pegu, Jan. 10.	E. W. Oates, Esq. [C.].
l, *m*. ♀ ad. æstiv. sk.	Lower Pegu, April.	E. W. Oates, Esq. [C.].
n. ♀ imm. sk.	Lower Pegu, April.	E. W. Oates, Esq. [C.].

4. **Motacilla lugens.** (Plate IV. figs. 1–4.)

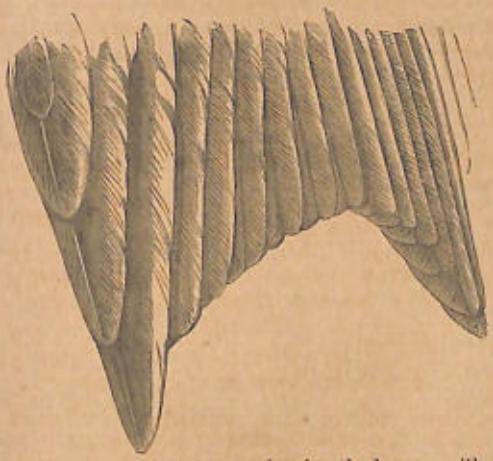
Motacilla albeola, var., *Pall. Zoogr. Rosso-Asiat.* i. p. 507 (1811).
Motacilla lugens, "*Pall.*," *Kittl. Kupf. Vög.* p. 16, pl. 21. fig. 1 (1832, *nec T. & S.*); *Jouy, Proc. U.S. Nat. Mus.* vi. p. 290 (1883).
Motacilla lugubris (*non T.*), *Gould, B. Eur.* ii. pl. 142 (1837); *Keys. & Blas. Wirb. Eur.* p. 174 (1840); *Cab. Mus. Hein.* Th. i. p. 12 (1850); *Swinh. Ibis*, 1863, p. 308.
Motacilla lugens, "*Illig.*," *Bp. Consp.* i. p. 250 (1850, pt.).
Motacilla alba, var. lugens, *Schrenck, Reis. Amurl.* i. p. 338 (1859).
Motacilla japonica, *Swinh. Ibis*, 1863, p. 309; *Whitely, Ibis*, 1867, p. 198; *Swinh. Ibis*, 1874, p. 156, 1876, p. 33; *David & Oustalet, Ois. Chine*, p. 300 (1877).
Motacilla amurensis, *Seebohm, Ibis*, 1878, p. 345, pl. ix., 1879, p. 34, 1883, p. 91, 1884, p. 39; *Blakist. & Pryer, B. Japan*, p. 155 (1882); *Ridgw. Pr. U.S. Nat. Mus.* vi. p. 144 (1883); *Blakist. Chrysanthemum*, ii. p. 31 (1883); *id. Amended List B. Jap.* p. 53 (1884); *Seebohm, Ibis*, 1884, p. 39.
Motacilla blakistoni, *Seebohm, Ibis*, 1883, p. 91, 1884, p. 38; *Ridgw. Proc. U.S. Nat. Mus.* vi. p. 144 (1883).
Motacilla camtschatica, *Tacz. Bull. Soc. Zool. France*, 1882, p. 388.
Motacilla kamtschatica, *Stejneger, Pr. U.S. Nat. Mus.* vi. p. 71 (1883); *Dybowski, Bull. Soc. Zool. France*, viii. p. 360 (1883).

Key to the Plumages of M. lugens.

a. Outer secondaries entirely white; primaries white, with black near the ends.
  a'. Back black as well as the crown.
    a''. Entire back black ..... ♂ *ad.*: summer.
    b''. Back black, mixed with ashy ..... ♀ *ad.*: summer.
  b'. Back grey; head black ..... ♂ ♀ *ad.*: winter.
b. Quills brown, edged with white.
  c'. Back black ..... ♂ in first summer.
  d'. Back grey, or grey mixed with black.... ♀ in first summer.
  e'. Back entirely grey, with no black or grey with an olive tinge; head sometimes blackish; crescent on throat black .... *Young* in first winter.
  f'. Back grey, washed with olive; no black on head; crescent on throat dusky blackish ..... *Young* in first plumage.

Young in first plumage. General colour above light ashy brown, the lower rump rather more dusky; the upper tail-coverts dusky blackish, with ashy edges, the lateral ones externally white; lesser wing-coverts like the back; median and greater coverts dusky brown,

mesially blackish, edged and tipped with white; bastard-wing and primary-coverts blackish brown; quills brown, with narrow ashy whitish edgings to the feathers, the long inner secondaries browner along the outer webs and edged with white, the inner web also internally brown; tail black, the two centre feathers edged with white, the two outer ones white, excepting for a little black near the base and along the lower part of the inner web; on each side of the crown a blackish stripe, succeeded by a whitish stripe; lores ashy, as well as the feathers round the eye and the ear-coverts; cheeks and throat ashy whitish, obscured with smoky brown and followed by a dusky blackish crescent on the fore neck; upper breast dull ashy; abdomen and under tail-coverts white; thighs blackish, edged with white; under wing-coverts and axillaries white, with ashy-brown bases; quills light brown below, with a great deal of white on the inner webs.

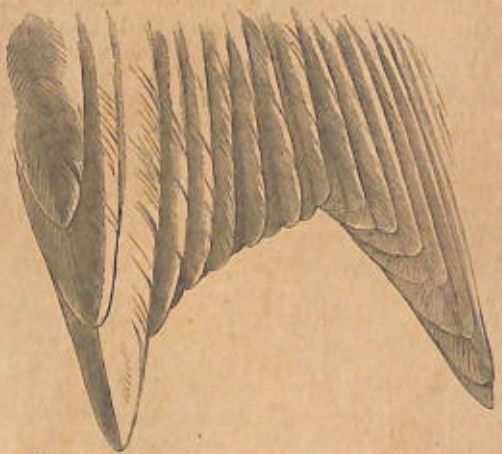


Wing of young *M. lugens*, showing the brown quills.

Young in first winter dress. Above ashy grey, shaded with olive, the lower rump and upper tail-coverts black, the lateral feathers of the latter externally white; scapulars and lesser wing-coverts ashy grey like the back; median and greater coverts pure white, with concealed blackish bases; bastard-wing feathers entirely black; primary-coverts dusky blackish, edged with ashy; quills blackish, edged externally with white, broader on the secondaries, the innermost brown on the outer web; tail black, the two outer feathers white, with a little black along the basal part of the inner web of the penultimate feather; crown of head grey like the back and similarly shaded with olive; lores and base of forehead yellowish white, as well as a streak along the sides of the hinder crown, above which is a slightly indicated line of blackish; a streak in front of the eye dusky, as well as the upper edge of the ear-coverts; cheeks, sides of face, and remainder of ear-coverts white, tinged with yellow; throat white,

tinged with yellow, especially on the lower parts; across the fore neck a broad crescent of black; remainder of under surface of body pure white, with a shade of grey on the breast and ashy on the sides of the body; axillaries pure white; under wing-coverts also white; quills dusky brown below, with a great deal of white along the inner web. Total length 7·5 inches, culmen 0·6, wing 3·6, tail 3·7, tarsus 0·95.

Obs. There is a great deal of difference in the amount of olive on the back of the winter-plumaged birds, and also in the extent of yellow on the eyebrow, face, and throat. The wings are those of the first plumage, but with much more white on the coverts and a larger extent of white along the inner web. No sooner is the winter dress completed than the approaching spring plumage begins to assert itself and the head commences to turn black, the black of the back appearing later. Thus Capt. Blakiston's collection contains specimens procured in October, one of which has a great deal of black on the head, while the other has the head uniform with the back; the latter I consider to be a bird *of the second brood*, and therefore later in showing the approach of mature plumage. Along with the black on the head the black edges to the feathers of the throat show a corresponding development. These changes of plumage are perfectly analogous to those undergone by the common Pied Wagtail of Europe (*M. lugubris*).



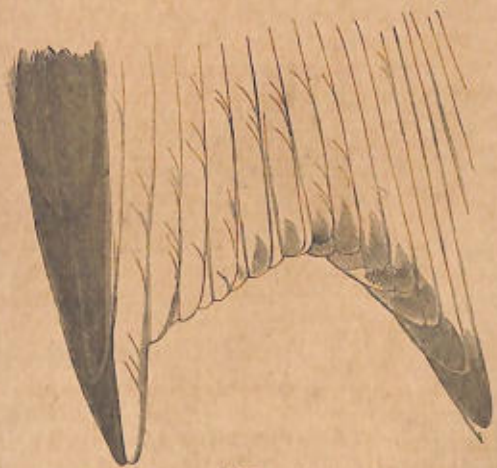
Wing of *M. ingens*, showing the commencement of the white quills.

The breeding-plumage is thoroughly assumed in the first spring, the black gradually extending on the throat, but not occupying the chin, while the whole back excepting the forehead becomes black, the quills and tail-feathers *being retained* (though it would seem as if in some specimens the long inner secondaries were renewed in the spring, reappearing as black as the back, with broad white margins). This process of change, which is abundantly illustrated in Capt. Blakiston's series, explains how it is that some black-backed males

have brown wings and others have white ones; the latter are the adults after their second winter has been passed.

After having gone through his first summer, the male bird moults into his second winter dress, this time putting on a grey back, but a black head, and being white underneath, with the black crescent on the fore neck; the black line through the eye is very distinct, and there is still a trace of yellow to be seen on the face or throat. The wings change, however, in a remarkable degree. The lesser wing-coverts are at first grey like the back, but rapidly become black; the median and greater coverts are pure white; the bastard-wing and primary-coverts are white, with more or less black on the outer webs; the quills are nearly all white, and the primaries have black shafts, a certain amount of black on their outer webs, and black ends with a narrow fringe of white at the tips; the shorter primaries and the secondaries are white, excepting for a dusky blackish spot at the end of each web, the inner ones pure white, the longer ones being blackish, externally more or less ashy brown, with a broad white edging. The outer tail-feathers are pure white, excepting a fringe of black along the inner web of the penultimate one, the third, however, showing an irregular patch of white on the inner web and a white shaft.

In the second spring of its existence the full summer plumage is again resumed, with the black throat and black back; but the wing-feathers and tail are not shed; and the only difference is that the black gradually disappears on the primaries till they become nearly white, excepting the ends, which are still blackish.



Wing of adult *M. lugens*, with the white quills fully developed.

The female goes through the same changes of plumage as the male, but is always more backward, never showing so much white on the wing, having the back mixed with black, &c.

Adult male in full plumage. General colour above black from

the middle of the crown to the upper tail-coverts, the lateral ones of which are externally white; lesser wing-coverts ashy grey mixed with black (entirely black in breeding-dress); median and greater coverts pure white; bastard-wing and primary-coverts pure white, with a little black on the outer webs; quills white, with black ends to the primaries, which are also mottled with blackish along the outer webs; the inner primaries white, with a black spot at the ends of the outer webs; the outer secondaries pure white, the long inner ones black, brownish on the outer webs, and externally more or less broadly edged with white; tail-feathers black, the two centre ones edged with white, the two outer ones pure white excepting a fringe of black along the inner web of the penultimate feather, the third one with a white shaft and a large white longitudinal mark along the inner web; lores and a broad frontal band white, extending backwards over the eye and forming a broad eyebrow; a line of black running from the base of the bill through the eye, and continued along the upper edge of the ear-coverts to the hind neck; cheeks, ear-coverts, and sides of neck pure white; chin white; centre of throat, extending on to the fore neck and chest, black; remainder of under surface of body pure white, with a wash of ashy grey on the sides; thigh-feathers black, edged with white; under wing-coverts and axillaries pure white; quills below pure white, with blackish ends to the primaries. Total length 6·5 inches, culmen 0·6, wing 3·7, tail 3·7, tarsus 1.

Adult female. Similar to the male, but never attaining the complete black back, which is always more or less intermingled with grey; the same may be said of the lesser wing-coverts; the black always remains on the bastard-wing and the primary-coverts, and there is much more blackish brown on the quills. In Capt. Blakiston's collection, however, there is a hen bird with much more white on the third tail-feather than in any other I have seen. Total length 7 inches, culmen 0·6, wing 3·7, tail 3·65, tarsus 1.

Hab. From Kamtschatka to Japan and Eastern Siberia, as well as China and Formosa.

a. Ad. hiem. sk.	Japan.	Purchased.
b. Juv. hiem. sk.	Yokohama.	H. Pryer, Esq. [P.].
c. ♀ ad. hiem. sk.	Hakodate, Oct. 29.	H. Whitely, Esq. [C.].
d. ♀ juv. hiem. sk.	Hakodate, Oct. 10.	H. Whitely, Esq. [C.].
e, f, g. ♂ ♀ ad. æstiv. sk.	Hakodate, April (*H. Whitely*).	Gould Collection.
h. Ad. sk.	Shanghai.	J. R. Reeves, Esq. [P.].
i. ♀ ad. hiem. sk.	Ussuri River, Oct. 1873 (*Dybowski*).	Warsaw Museum [P.].
k. ♀ ad. sk.	Ussuri district, April (*Doerries*).	R. B. Sharpe, Esq. [P.].
l. ♂ ad. sk.	Ussuri district, May (*Doerries*).	R. B. Sharpe, Esq. [P.].
m, n. ♂ ♀ ad. sk.	Island of Askold, May (*Doerries*).	R. B. Sharpe, Esq. [P.].
o, p. ♂ ad.; *q, r.* ♀ ad. sk.	Petropaulowski, Kamtschatka, May (*Dybowski*).	R. B. Sharpe, Esq. [P.].

5. Motacilla persica. (Plate V. figs. 5, 6.)

? Motacilla alba, *Defil. Viagg. Pers.* p. 348 (1865).
? Motacilla dukhunensis, *Bogd. B. Cauc.* p. 107 (1879).
Motacilla personata, var. persica, *Blanf. East. Pers.* ii. p. 232 (1876).

Adult male. General colour above light ashy grey, rather blacker on the lower rump; the upper tail-coverts black, edged with ashy, the lateral ones externally white; lesser wing-coverts light ashy grey like the back; median and greater coverts pure white; bastard-wing black, edged externally with white; primary-coverts white along the inner and outer webs, dusky blackish in the centre; quills blackish, edged with white, broader on the secondaries, the innermost of which are browner and incline to grey on the outer web before the white margin; tail black, the two outer feathers white, with a broad blackish margin along the inner web; fore part of the crown white, forming a broad frontal band; lores, eyelid, feathers below the eye, and ear-coverts white; crown of head black, extending on to the hind neck; throat and chest black, extending in a narrow line behind the ear-coverts, so as to separate them from the white patch on the sides of the neck, which is small and obscured; remainder of under surface pure white, the sides of the body ashy grey; thighs black, edged with white; under tail-coverts white; axillaries and under wing-coverts white; quills light ashy brown below, with a great deal of white along the inner web. Total length 7·4 inches, culmen 0·67, wing 3·65, tail 3·65, tarsus 1.

Adult female. Similar to the male in plumage, but with the white patch on the sides of the neck nearly obsolete and obscured with black. Total length 7·3 inches, culmen 0·7, wing 3·75, tail 3·8, tarsus 1.

This is an intermediate form between *M. personata* and *M. alba*, and may be an intermixture of the two. The specimens figured (*l. c.*) show a varying amount of white on the neck. (See also Radde, Orn. Cauc. pl. xii.)

Hab. Persia.

a. ♂ ad. sk.	Near Niriz, east of Shiraz, June 4.	W. T. Blanford, Esq. [C.]. (Type of species.)
b, c. ♂ ♀ ad. sk.	Near Karman, S.E. Persia.	W. T. Blanford, Esq. [C.].

6. Motacilla personata. (Plate V. figs. 3, 4.)

Motacilla personata, *Gould, B. Asia*, iv. pl. 63 (1861); *Blyth, Ibis*, 1865, p. 49; *id.* 1867, p. 29; *Pelz. Ibis*, 1868, p. 311; *Gray, Hand-l. B.* i. p. 246, no. 3571 (1869); *Blanf. Ibis*, 1873, p. 219; *Severtz. Turkest. Jevotn.* pp. 66, 139 (1873); *Hume & Henders. Lahore to Yark.* p. 224 (1873); *Hume, Str. F.* 1873, pp. 29, 30; *Ball, S. F.* 1874, p. 440; *Brooks, t. c.* p. 456; *id.* 1875, p. 250; *Scully, S. F.* 1876, p. 150; *Brooks, Str. F.* 1877, p. 472; *Blanf. Str. F.* 1877, p. 246; *Hume, t. c.* p. 329; *Dresser, Ibis*, 1876, p. 177; *Finsch, Ibis*, 1877, p. 51; *Seebohm, Ibis*, 1878, p. 344; *Brooks,*

Str. F. 1878, vol. ii. p. 140; *Finsch, Verh. z.-b. Gesellsch. Wien*, xxix. p. 172 (1879); *Legge, B. Ceylon*, p. 219 (1879); *Hume, Str. F.* 1879, p. 103; *Scully, t. c.* p. 312; *Wardlaw Ramsay, Ibis*, 1880, p. 60; *Seebohm, t. c.* p. 189; *Reid, S. F.* 1881, p. 48; *Biddulph, Ibis*, 1881, p. 68; *Scully, t. c.* p. 451; *Swinh. Ibis*, 1882, p. 109; *Severtz. Ibis*, 1883, p. 64; *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 86.

Motacilla maderaspatana (pt.), *Horsf. & Moore, Cat. B. E.I. Co. Mus.* p. 347 (1854–56).

Motacilla dukhunensis, *Jerd. B. Ind.* ii. p. 218 (1863, *nec Sykes*).

Motacilla cashmeriensis, *Brooks, Pr. As. Soc. Beng.* 1871, p. 289; *id. J. A. S. Beng.* xli. p. 82 (1872); *id. Str. F.* 1874, p. 456.

Motacilla alba, *Wardlaw Ramsay, Ibis*, 1879, p. 448 (*lapsu*).

Young in first winter plumage. Entire upper surface of body clear ashy grey, with a slight shade of olivaceous; the lower back clearer grey, becoming somewhat blackish on the rump; upper tail-coverts blackish, edged with ashy, the lateral ones with white; lesser wing-coverts like the back, the lower ones mottled with blackish bases; median series white, with dusky shaft-streaks; greater coverts white, with dusky-blackish bases; bastard-wing, primary-coverts, and quills blackish, edged with ashy white; the secondaries more broadly margined with white, the long inner ones much more widely edged and with a slight subterminal shade of ashy brown; tail-feathers black, the two centre ones with an external edging of white, the two outer ones white, with a broad black edging to the inner web, the third feather also externally white towards the end of the outer web; lores and forehead yellowish white, extending backwards over the eye and forming a streak above the ear-coverts; ear-coverts and a narrow line extending forwards along the basal edge of the upper mandible black; chin white; cheeks white, mottled with black bases, forming a broad moustache; a malar streak of black; throat and fore neck black, but much mottled with white bases, the lower feathers fringed with ashy brown; remainder of under surface of body pure white, slightly tinged with yellow on the breast; sides of the body and flanks light ashy; axillaries and under wing-coverts white, mottled with black bases near the edge of the wing; quills dusky blackish below, conspicuously white along the inner web. Total length 7 inches, wing 3·45. (*Mus. H. Seebohm.*)

Another young specimen in Mr. Seebohm's collection, obtained, like the above, in August, has much less white on the wing-coverts, the dusky bases showing quite as plainly as in *M. alba*. The entire sides of the face are dusky ashy grey, the chin yellowish white, the throat and fore neck black, mottled all over with white bases to the feathers.

A young female, shot at Krasnojarsk on the 8th of September, is entirely grey above, but has less black on the throat.

Adult male. General colour above clear ashy grey, becoming blackish on the extreme lower rump; the upper tail-coverts black, the lateral ones externally white; lesser wing-coverts ashy like the back, the lower ones with dusky bases; median and greater series

white, with concealed blackish bases; bastard-wing, primary-coverts, and quills dusky blackish, narrowly edged with ashy white, the secondaries more broadly, the innermost long ones very broadly edged with white along the outer web, with a subterminal shade of brown; tail-feathers black, the two centre ones edged with white, the two outer ones white, broadly margined with blackish along the inner web; crown of head and nape, sides of neck, cheeks, ear-coverts, throat, and fore neck black, leaving a broad frontal white band; lores and feathers round the eye, extending beyond the latter above the ear-coverts, white; remainder of under surface of body white, with an ashy shade on the breast, sides of the body, and thighs; the black feathers of the lower fore neck edged with white where they adjoin the breast; axillaries and under wing-coverts white, slightly shaded with ashy; quills dusky below, white along the basal part of the inner web: "bill, legs, feet, and claws black; iris dark brown" (*Scully*). Total length 7·6 inches, culmen 0·6, wing 3·55, tail 3·6, tarsus 0·95.

Old birds in winter plumage are remarkably like the summer plumage, and have the same black ear-coverts; the chin, however, is white, as well as a good deal of the throat and the fore part of the cheeks, so that a narrow black stripe is left between the white lores and white cheeks, running from the base of the bill to the ear-coverts. It seems certain that old birds have the white chin-spot for a very short time only, for in December specimens have nearly got their full black chin.

The female in breeding-plumage (Gilgit: Scully) exactly resembles the male. Total length 6·5 inches, culmen 0·5, wing 3·5, tail 3·3, tarsus 0·9. Mr. Seebohm, however, has a female from Krasnojarsk, shot on the 3rd of April, which has the head grey like the back, and only slightly tinged with black. This is probably the first full summer plumage of a bird of the previous year.

Hab. Breeds in Western Siberia and Turkestan, as well as in Cashmere, occurring in winter in the plains of India.

a. Ad. hiem. sk.	[Marocco *.]	R. B. Sharpe, Esq. [P.]
b. Ad. sk.	Persia.	Charles Darwin, Esq. [P.].
c. ♂ ad. æstiv. sk.	Wernai, Turkestan, Feb. 27.	Dr. Severtzow [C.].
d. ♀ ad. æstiv. sk.	Kuldscha, Aug. 8.	Dr. Severtzow [C.].
e. ♂ ad. æstiv. sk.	Kyzil Archdschi river, Turkestan, May 18 (*Dr. Finsch*).	Geogr. Soc. Bremen.
f. Ad. hiem. sk.	Yarkand (*Chapman*).	R. B. Sharpe, Esq.
g. ♂ ad. æstiv. sk.	Shikarpore, Afghanistan (*Griffith*).	India Museum.
h. ♂ ad. æstiv. sk.	Kandahar, April 16.	Col. C. Swinhoe [P.].
i. ♀ ad. hiem. sk.	Kandahar, Jan. 2.	Col. C. Swinhoe [P.].
k. ♂ ad. hiem. sk.	Kandahar, Dec.	Col. C. Swinhoe [P.].

* This bird was purchased some years ago from M. Boucard. The locality requires confirmation.

l. ♂ ad. hiem. sk.	Gilgit, Feb. 28.	Major J. Biddulph [C.].
m, *n*. ♂ ad. æstiv. sk.	Gilgit, March.	Major J. Biddulph [C.].
o. ♂ ad. hiem. sk.	Gilgit, March.	Major J. Biddulph [C.].
p, *q*, *r*. ♂ ad. æstiv. sk.	Gilgit, March.	Dr. J. Scully [P.].
s. ♀ ad. æstiv. sk.	Gilgit, July.	Major J. Biddulph [C.].
t, *u*. ♂ ad. hiem. sk.	Gilgit, Sept.	Major J. Biddulph [C.].
v. ♂ ad. hiem. sk.	Kondu, Sept.	Major J. Biddulph [C.].
w. ♂ ad. hiem. sk.	Gilgit, Nov.	Major J. Biddulph [C.].
x. Ad. hiem. sk.	Cashmere, May.	Major J. Biddulph [C.].
y. ♂ ad. æstiv. sk.	Srinuggur, May.	Major J. Biddulph [C.].
z. Ad. hiem. sk.	Peshawur.	Col. Way [P.].
a'. Juv. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
b', *c'*. Ad. hiem. sk.	N.W. India (*W. Ewer*).	Gould Collection. (Types of species.)
d'. ♂ ad. hiem. sk.	Mhow, Nov. 1.	Col. Swinhoe [P.].
e'. ♀ ad. hiem. sk.	Assensole, Nov. 12 (*W. E. Brooks*).	Oates Collection.
f'–*g'*. Ad. hiem. sk.	Kumaon (*Strachey*).	India Museum.

7. Motacilla leucopsis *.

Motacilla hodgsoni, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 113. fig. 2 (no. 135).

Motacilla alboides, *Hodgs. Asiatic Researches*, xix. p. 191 (1836, pt.); *Blyth, Ibis*, 1865, p. 49; *Swinh. P. Z. S.* 1871, p. 363; *Seebohm, Ibis*, 1878, p. 346; *David & Oustal. Ois. Chine*, i. p. 298 (1878).

Motacilla leucopsis, *Gould, P. Z. S.* 1837, p. 78; *Swinh. P. Z. S.* 1870, p. 121; *Hume, Str. F.* 1879, p. 103; *Scully, t. c.* p. 313; *Oates, B. Brit. Burm.* i. p. 154 (1883).

Motacilla luzoniensis (*non Scop.*), *Gray, Cat. Mamm. etc. Nepal. pres. Hodgs.* p. 75 (1846); *id. Gen. B.* i. p. 203 (1847); *Blyth, Cat. B. Mus. As. Soc.* p. 137 (1849); *Bp. Consp.* i. p. 250 (1850); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 348 (1854); *Swinh. Ibis*, 1860, p. 55, 1861, p. 35; *Blyth, t. c.* p. 215; *Swinh. Ibis*, 1862, p. 259, 1863, p. 308; *Jerd. B. Ind.* ii. p. 118 (1863); *Blyth, Ibis*, 1865, p. 49, 1867, p. 29; *Beavan, t. c.* p. 328; *id. Ibis*, 1868, p. 76; *Gray, Hand-l. B.* i. p. 246, no. 3567 (1869); *Swinh. Ibis*, 1870, p. 80; *Blanf. Ibis*, 1873, p. 219; *Hume & Henders. Lahore to Yark.* p. 223 (1873); *Hume, Str. F.* 1873, pp. 26, 28; *Ball, t. c.* p. 73; *Hume, Str. F.* 1874, p. 237; *Ball, t. c.* p. 415; *Brooks, t. c.* p. 456; *Blyth & Wald. B. Burm.* p. 90 (1875); *Hume & Oates, Str. F.* 1875, p. 142; *Brooks, t. c.* pp. 248, 278; *Hume, Str. F.* 1876, p. 291; *Gammie, t. c.* p. 384; *Brooks, t. c.* p. 472; *Prjev. in*

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* La Bergeronette à collier de l'isle de Luçon, *Sonn. Voy. N. Guin.* p. 61, pl. 29 (1766).

Collared Wagtail, *Lath. Gen. Syn.* ii. part 2, p. 396 (1783).

Motacilla luzoniensis, *Scop. Del. Faun. et Flor. Insubr.* ii. p. 92, no. 105 (1786).

Motacilla alba, var. *β*, *Gm. Syst. Nat.* i. p. 961 (1788).

Since Sonnerat's time no Wagtail has been met with in the Philippines, and the identification of the species is impossible at present. The name of *luzoniensis* could not, in any case, be applied to this bird, as the descriptions of Sonnerat and Scopoli do not agree, one describing the bird as black, the other as grey.

Dawson Rowley's Orn. Misc. ii. p. 192 (1876); *Walden, Trans. Z. S.* ix. p. 198 (1877); *Wardlaw Ramsay, Ibis*, 1877, p. 462; *Hume & Davison, Str. F.* 1878, p. 362; *Anderson, Zool. Exped. Yun-nan, Aves*, p. 609 (1878); *Brooks, Str. F.* 1878, vol. ii. p. 137; *Ball, t. c.* p. 219; *Hume, t. c.* p. 519.

Motacilla alba, var. paradoxa, (*nec Brehm*) *Schrenck, Reis. Amurl., Vög.* p. 341, Taf. xi. fig. 2 (1859); *Swinh. P. Z. S.* 1871, p. 363.

Motacilla felix, *Swinh. P. Z. S.* 1870, p. 121; *Oates, Str. F.* 1880, p. 224.

Motacilla francisci, *Swinh. Ibis*, 1870, p. 345; *id. P. Z. S.* 1870, p. 123, 1871, p. 363.

Motacilla frontata, *Swinh. P. Z. S.* 1870, p. 129, 1871, p. 363; *David & Oust. Ois. Chine*, p. 301 (1877).

Motacilla alboides, var. 1. felix, *Swinh. P. Z. S.* 1871, p. 363.

Motacilla alboides, var. 2. sechuenensis, *Swinh. t. c.* p. 363.

Motacilla paradoxa, *David & Oust. Ois. Chine*, p. 299 (1877).

Key to the Plumages of M. leucopsis.

a. Forehead like the back; upper surface light ashy or pale olivaceous; least wing-coverts like the back; median coverts white, with a mesial streak of dark brown; on the fore neck a dusky blackish patch ..... *Young*: first plumage.

b. Forehead white; upper surface grey; median wing-coverts white; a narrow black band on the fore neck ..... *Young*: first winter.

c. Forehead white; head black; back grey, or grey mottled with black; least wing-coverts black; a broad band on fore neck ..... *Adult*: second winter.

d. Forehead white; remainder of upper surface black, as also the least wing-coverts; black extending on the throat, leaving the upper throat white; secondaries with the white confined to the inner web .... *Adult*: breeding-plumage.

e. Black extending on to the chin; base of secondaries white on both webs ..... *Adult*: final plumage.

Young in first plumage. General colour above light olivaceous, the feathers pale grey at their bases, the rump more dusky, the upper tail-coverts blackish, brown on their edges, paler at their tips, the lateral ones externally ashy whitish; lesser wing-coverts like the back; median coverts yellowish white, with a longitudinal dark brown centre; the greater coverts yellowish white, internally brown; bastard-wing black; primary-coverts and quills blackish, edged with ashy, the secondaries externally broadly washed with brownish white; tail-feathers black, edged with buffy white and with pale tips, the two outer ones white, the penultimate one with a blackish edging to the greater part of the inner web; head like the back, the lores and forehead the same; eyelid and a broad streak along the sides of the hinder crown, cheeks, and ear-coverts yellowish white; under surface of body white, suffused with brown on the

throat and flanks, and more dingy on the fore neck; thighs brown; under tail-coverts purer white, like the abdomen; axillaries and under wing-coverts white; quills dusky below, ashy whitish along the edge of the inner web.

The bird described is in Mr. Seebohm's collection from Amoy, procured on the 16th of April, 1858 (Swinhoe coll.). By June, as is proved by another specimen in the same collection (Amoy, June 1866; R. Swinhoe: s. n. *M. felix*), the young birds have commenced their moult. On the head appear a few black feathers, as well as on the rump and upper tail-coverts; the wing-coverts are moulted, the lesser ones being ashy with black centres, and the median ones white; on the fore neck some black spots are appearing. The back, however, is becoming grey, and there are no signs of black in this stage at first, but it soon begins to develop.

Young in first winter plumage. General colour above dull ashy grey with a slight wash of brown; upper tail-coverts black, the lateral ones externally white; least wing-coverts like the back, with blackish bases; median coverts pure white, with blackish shaft-lines; greater coverts white, with blackish bases to the outer webs and blackish inner webs; bastard-wing, primary-coverts, and quills blackish, edged with ashy, the secondaries broadly edged with white, the innermost browner externally; tail-feathers black, the centre ones narrowly edged with whitish, the two outer ones white, with blackish edges along the inner web, broader on the penultimate feather; crown of the head like the back, blacker on the top and sides of the crown; frontal band white, the posterior feathers tipped with blackish; eyebrow, feathers round the eye, lores, cheeks, and ear-coverts white, with a slight tinge of yellow; the sides of the neck white; throat and entire under surface of body white, with a tinge of yellow on the throat and breast; sides of the body and flanks ashy; thighs white; across the fore neck a band of black; axillaries and under wing-coverts pure white; quills dusky below, white along the inner web. Total length 7·25 inches, culmen 0·65, wing 3·2, tail 3·2, tarsus 0·9.

By the following spring the full plumage is attained, and the back becomes black, uniform with the crown, and the lesser wing-coverts are also black; the quills are those of the preceding autumn, and are not moulted. The black back is speedily assumed; one specimen from Amoy, obtained in November (Swinhoe coll.), has nearly gained a perfect black back, but still has a black band on the fore neck. As spring advances the black extends higher up the throat, and becomes a large black patch, instead of being only a black bar on the fore neck.

Adult in full plumage (Amoy, July 1866; R. Swinhoe). General colour above black, excepting the white frontal band, the lateral upper tail-coverts externally white; lesser wing-coverts like the back; median and greater series pure white, the latter with concealed black bases; bastard-wing, primary-coverts, and quills black, edged with ashy white, purer and broader on the secondaries, the innermost of which are submarginally shaded with brown; tail-

feathers black, with obsolete white margins, the two outer ones white, with black edges to the inner web; lores, feathers round the eye, ear-coverts, and a broad streak above them on the sides of the crown pure white like the frontal band; sides of neck and throat pure white; entire fore neck and lower throat black, and the remainder of the throat with some black feathers; remainder of under surface of body pure white, as well as the under tail-coverts; thighs white, with black bases; flanks and sides of the body washed with dark ashy grey; under wing-coverts and axillaries pure white; quills below blackish, with a great deal of white on the inner webs. Total length 6·8 inches, culmen 0·65, wing 3·45, tail 3·4, tarsus 0·9.

This specimen was selected for description, as I thought, from the date (July), that it might be a female in full breeding-plumage, from which the male would differ only in the greater extent of black on the throat; as will be seen, this specimen has only the lower throat and fore neck black. As, however, the primary quills are being moulted, I now believe that the specimen is an adult bird, beginning even in July to put on the winter dress; and this seems to show that the changes take place with *M. leucopsis* at a considerably earlier date than in our European Wagtails—as, indeed, might be inferred from the fact of full-grown young birds being obtained in April, though Mr. Oates states that the species does not leave Burmah till the latter month. He observes that the majority of birds obtained in the latter country are "in winter plumage, though occasionally even in January and February a fully summer-plumaged bird is seen."

From an examination of the series in our Museum along with those in Mr. Seebohm's collection, I believe that the *old birds, having once obtained their black back, never lose it again in the winter.*

With regard to the varying extent of black on the throat, I consider this to be a sign of age, the older birds in their breeding-plumage sometimes having the black extending right up to the chin. This is accompanied by a vast increase of white on the quills, *the secondaries having their basal portion white*, though never to the extent of *M. amurensis*. In this stage it is *M. felix* var. *szechuensis* of Swinhoe; and it is a little surprising that the latter ornithologist should have made so many different species or varieties, when the series in his own collection fully proved that the differences could be explained by the gradual changes of plumage undergone by the bird.

Hab. From Eastern Siberia to China generally and the Himalayas; wintering in Southern China, the Burmese countries, and the plains of Eastern India, as well as the Andaman Islands.

a. ♂ ad. æstiv. sk.	Ussuri District, June 13, 1881 (*H. Doerries*).	R. B. Sharpe, Esq. [P.].
b. Ad.; *c*. Juv. sk.	Amoy (*Swinhoe*).	Salvin-Godman Coll.
d, *e*, *f*, *g*. Ad.; *h*. Juv. sk.	Amoy (*Swinhoe*).	Gould Collection.
i. Juv. sk.	Chusan.	Gould Collection.

throat and flanks, and more dingy on the fore neck; thighs brown; under tail-coverts purer white, like the abdomen; axillaries and under wing-coverts white; quills dusky below, ashy whitish along the edge of the inner web.

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Young in first winter plumage. General colour above dull ashy grey with a slight wash of brown; upper tail-coverts black, the lateral ones externally white; least wing-coverts like the back, with blackish bases; median coverts pure white, with blackish shaft-lines; greater coverts white, with blackish bases to the outer webs and blackish inner webs; bastard-wing, primary-coverts, and quills blackish, edged with ashy, the secondaries broadly edged with white, the innermost browner externally; tail-feathers black, the centre ones narrowly edged with whitish, the two outer ones white, with blackish edges along the inner web, broader on the penultimate feather; crown of the head like the back, blacker on the top and sides of the crown; frontal band white, the posterior feathers tipped with blackish; eyebrow, feathers round the eye, lores, cheeks, and ear-coverts white, with a slight tinge of yellow; the sides of the neck white; throat and entire under surface of body white, with a tinge of yellow on the throat and breast; sides of the body and flanks ashy; thighs white; across the fore neck a band of black; axillaries and under wing-coverts pure white; quills dusky below, white along the inner web. Total length 7·25 inches, culmen 0·65, wing 3·2, tail 3·2, tarsus 0·9.

By the following spring the full plumage is attained, and the back becomes black, uniform with the crown, and the lesser wing-coverts are also black; the quills are those of the preceding autumn, and are not moulted. The black back is speedily assumed; one specimen from Amoy, obtained in November (Swinhoe coll.), has nearly gained a perfect black back, but still has a black band on the fore neck. As spring advances the black extends higher up the throat, and becomes a large black patch, instead of being only a black bar on the fore neck.

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feathers black, with obsolete white margins, the two outer ones white, with black edges to the inner web; lores, feathers round the eye, ear-coverts, and a broad streak above them on the sides of the crown pure white like the frontal band; sides of neck and throat pure white; entire fore neck and lower throat black, and the remainder of the throat with some black feathers; remainder of under surface of body pure white, as well as the under tail-coverts; thighs white, with black bases; flanks and sides of the body washed with dark ashy grey; under wing-coverts and axillaries pure white; quills below blackish, with a great deal of white on the inner webs. Total length 6·8 inches, culmen 0·65, wing 3·45, tail 3·4, tarsus 0·9.

This specimen was selected for description, as I thought, from the date (July), that it might be a female in full breeding-plumage, from which the male would differ only in the greater extent of black on the throat; as will be seen, this specimen has only the lower throat and fore neck black. As, however, the primary quills are being moulted, I now believe that the specimen is an adult bird, beginning even in July to put on the winter dress; and this seems to show that the changes take place with *M. leucopsis* at a considerably earlier date than in our European Wagtails—as, indeed, might be inferred from the fact of full-grown young birds being obtained in April, though Mr. Oates states that the species does not leave Burmah till the latter mouth. He observes that the majority of birds obtained in the latter country are "in winter plumage, though occasionally even in January and February a fully summer-plumaged bird is seen."

From an examination of the series in our Museum along with those in Mr. Seebohm's collection, I believe that the *old birds, having once obtained their black back, never lose it again in the winter.*

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Hab. From Eastern Siberia to China generally and the Himalayas; wintering in Southern China, the Burmese countries, and the plains of Eastern India, as well as the Andaman Islands.

a. ♂ ad. æstiv. sk.	Ussuri District, June 13, 1881 (*H. Doerries*).	R. B. Sharpe, Esq. [P.].
b. Ad.; *c*. Juv. sk.	Amoy (*Swinhoe*).	Salvin-Godman Coll.
d, *e*, *f*, *g*. Ad.; *h*. Juv. sk.	Amoy (*Swinhoe*).	Gould Collection.
i. Juv. sk.	Chusan.	Gould Collection.

k. Ad. æstiv. sk.	India.	Gould Collection. (Type of species.)
l, *m*. Ad. æstiv. sk.	India.	Gould Collection.
n, *o*, *p*. Ad.; *q*–*t*. Juv. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
u, *v*, *w*. Ad.; *x*–*a'*. Juv. sk.	Nepal (*Hodgson*).	India Museum.
b'. Ad. hiem. sk.	Darjiling (*Pearson*).	India Museum.
c', *d'*. Ad. hiem. sk.	Bengal (*A. S. Beng.*).	India Museum.
e'. Ad. æstiv. sk.	Assam (*McClelland*).	India Museum.
f'. Ad. hiem. sk.	Bhamo, Feb. 28.	Dr. Anderson [C.].
g'. Juv. hiem. sk.	Cochin China.	M. E. Pierre [P.].
h', *i'*. ♀ ad. & juv. hiem. sk.	Pegu, Oct.	E. W. Oates, Esq. [C.].
k', *l'*. ♂ ♀ juv. hiem. sk.	Pegu, Nov.	E. W. Oates, Esq. [C.].
m', *n'*. ♂; *o'*, *p'*. ♀ ad. hiem. sk.	Pegu, Nov.	E. W. Oates, Esq. [C.].
q'–*s'*. ♂; *t'*. ♀ ad. æstiv. sk.	Pegu, Feb.	E. W. Oates, Esq. [C.].
u'. ♀ ad. sk.	Pegu, March.	E. W. Oates, Esq. [C.].
v'. Ad. hiem. sk.	Tenasserim (*Helfer*).	India Museum.
w'. Juv. hiem. sk.	Tavoy (*Briggs*).	Gould Collection.
x'. Ad. sk.	[Java.]	

8. **Motacilla hodgsoni** *. (Plate V. figs. 1, 2.)

Motacilla alboides, *Hodgs. Asiat. Research.* xix. p. 191 (1836); *Brooks, Str. F.* 1878, vol. ii. p. 139; *Hume, t. c.* p. 519.

Motacilla hodgsoni, *Blyth, MSS.*; *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 113. fig. 3 (no. 133); *id. in Gray's Zool. Misc.* p. 83 (1844); *Gray, Cat. Mamm. etc. Nepal pres. Hodgs.* p. 39 (1863); *Blyth, Ibis*, 1865, p. 49, 1867, p. 30; *Gray, Hand-l. B.* i. p. 246, no. 3568 (1869); *Blanf. J. A. S. Beng.* 1872, p. 59; *id. Ibis*, 1873, p. 219; *Hume, Str. F.* 1873, p. 26; *Brooks, Str. F.* 1875, pp. 247, 278; *id. ibid.* 1878, p. 472; *Seebohm, Ibis*, 1878, p. 346; *David & Oust. Ois. Chine*, p. 298 (1878); *Brooks, Str. F.* 1878, vol. ii. p. 140; *Hume, Str. F.* 1879, p. 103; *Scully, t. c.* p. 312; *Brooks, t. c.* p. 484; *Biddulph, Ibis*, 1881, p. 67; *Scully, Ibis*, 1881, p. 451.

Motacilla luzoniensis, *Hume & Henders. Lahore to Yark.* p. 223 (1873).

Motacilla personata, var. melanonota, *Severtz. Turkest. Jevotn.* pp. 67, 139 (1873).

Motacilla japonica (*nec Swinh.*), *Dresser, Ibis*, 1876, p. 177.

Motacilla maderaspatensis, pt., *Anders. Exped. Yun-nan, Zool.* p. 610 (1878).

Adult. General colour above deep black from the crown to the upper tail-coverts, the lateral ones of which are externally white;

* The first mention of the name of *M. hodgsoni* appears in Hodgson's list of Nepalese Birds published in Gray's 'Zoological Miscellany,' where it is applied to three figures in the drawings (nos. 133, 134, 135). Of these figs. no. 134 represents *M. alba*, and no. 133 *M. hodgsoni*, while no. 135 is *M. leucopsis*[1]. It was not until the year 1865 that Blyth, whose MS. name appears to have been adopted in the first instance, gave a clear indication of the species.

[1] I do not employ Hodgson's name of *alboides* for the present species, as the plate on which it is founded contains figures of three distinct kinds of Wagtails.

lesser wing-coverts black; median and greater series white, with concealed blackish bases to the latter; bastard-wing black; primary-coverts and quills black, edged with white, the secondaries much more broadly margined with white; tail-feathers black, the two outer ones white with a broad edging of black on the inner web; crown of head like the back; a broad frontal line as well as the sides of the crown white, forming a broad white eyebrow; the lores and feathers below and behind the eye white; a line of black from the gape to the ear-coverts, which are also black; cheeks white, separated from the throat by an obsolete malar line of black; lower throat black, mottled with white bases to the feathers, the whole of the fore neck and chest black; remainder of under surface of body pure white, without any shade of ashy; thighs, under tail-coverts, axillaries, and under wing-coverts white; quills dusky below, with a great deal of white along the inner web. Total length 8 inches, culmen 0·65, wing 3·9, tail 3·8, tarsus 0·85.

Young. General colour above dark ashy grey, with a slight wash of olive-brown; lesser wing-coverts like the back; median and greater coverts white, with a narrow mesial streak of dark brown on the former, the latter with broad blackish bases; bastard-wing, primary-coverts, and quills blackish, narrowly edged with white, much more broadly on the secondaries, the innermost of which are browner; tail-feathers black, the centre ones edged with ashy white, the two outer ones white, black at the base and along the edge of the inner web; head like the back, a little paler on the forehead, with a slight appearance of black over the eye and on the crown; lores ashy whitish; over the ear-coverts a broad streak of yellowish white, extending below the eye; ear-coverts and cheeks dusky brown mixed with black; throat and chest dull ashy tinged with brown; remainder of under surface of body white, including the axillaries and under wing-coverts.

The *adult female* seems to be like the male in the facial and throat markings, but the back is dusky ash-colour instead of black.

In the winter plumage the back is ashy grey, and the black back is assumed by a change of colour in the feathers. The black throat is gradually assumed, and is apparently a long time in being fully developed. The black ear-coverts are constant.

Hab. Throughout the Himalayas, where it is resident, extending into Turkestan to the west and to Tenasserim in the south, and to Western China in the eastern portion of its range.

a. ♂ ad. hiem. sk.	Gilgit, Feb. 11.	Major J. Biddulph [C.].
b. Ad. æstiv. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
c, *d*. Ad. hiem. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
e. Juv. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
f, *g*, *h*. Ad. æstiv. sk.	Nepal (*Hodgson*).	India Museum.
i. Ad. æstiv. sk.	Bootan (*Pemberton*).	India Museum.
k, *l*. Ad. æstiv. sk.	Bootan Dooars, Jan. & Feb. (*Mandelli*).	Oates Collection.
m. Ad. æstiv. sk.	Upper Assam (*Reid*).	R. B. Sharpe, Esq. [P.].
n. Ad. hiem. sk.	Assam (*McClelland*).	India Museum.

o. Ad. æstiv. sk.	Sanda Valley, May 15.	Dr. J. Anderson [C.].
p. ♀ juv. sk.	Momien, Yun-nan, May 3.	Dr. J. Anderson [C.].
q. ♂ ad. hiem. sk.	Salween River, Tenasserim, July 23.	Capt. Bingham [P.].
r. Ad. sk.	[India.]	Gould Collection.

9. Motacilla vidua.

L'Aguimp ou La Lavandière Pie, *Levaill. Ois. d'Afr.* iv. p. 82, pl. 178 (1805).

Motacilla capensis (*non L.*), *Licht. Verz. Doubl.* p. 36 (1823); *Kittl. Kupf. Vög.* p. 16, pl. 21. fig. 2 (1832); *Rüpp. Neue Wirb. Vög.* p. 84 (1835–40); *id. Syst. Uebers.* p. 59 (1845); *Strickl. Ann. & Mag. Nat. Hist.* (2) ix. p. 344 (1852); *Heugl. Syst. Uebers.* p. 28 (1856); *Cass. Proc. Philad. Acad.* 1859, p. 41; *Hartl. J. f. O.* 1861, p. 161; *Mont. Ibis*, 1862, p. 334.

Motacilla vidua, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1850, p. 128; *Bp. Consp.* i. p. 251 (1850); *Kirk, Ibis*, 1864, p. 318; *Heugl. Orn. N.O.-Afr.* i. p. 317, iv. App. p. lxxxix (1869–71); *Layard, Ibis*, 1869, p. 367; *Finsch & Hartl. Vög. Ostafr.* p. 263 (1870); *Sharpe, P. Z. S.* 1869, p. 411, 1870, pp. 143, 148; *Shelley, B. Egypt*, p. 126 (1872); *Reichen. J. f. O.* 1877, p. 30; *Fischer, J. f. O.* 1879, p. 294; *id. & Reichen. t. c.* p. 355; *Oust. Nouv. Arch. Mus.* (2) ii. *Bull.* p. 105 (1879); *Bocage, Orn. Angola*, p. 291 (1881); *Shelley, P. Z. S.* 1881, p. 573; *id. Ibis*, 1882, p. 349, 1883, p. 542; *Butler, Feilden, & Reid, Zool.* 1882, p. 337; *Bocage, Jorn. Sc. Lisb.* xxxiv. p. 83 (1883); *Boehm, J. f. O.* 1883, p. 207; *Schalow, t. c.* p. 366; *Sharpe, ed Layard's B. S. Afr.* p. 545 (1884); *Tristr. Faun. & Flor. Palest.* p. 54 (1884).

Motacilla lichtensteini, *Cab. Mus. Hein.* Th. i. p. 12 (1850); *Antin. Cat. descr. Ucc.* p. 41 (1864); *Oustalet, Bull. Soc. Philom.* (7) i. p. 106 (1877).

Motacilla vaillantii, *Bp. Consp.* i. p. 13 (1850); *Gray, Hand-l. B.* i. p. 246, no. 3572 (1869); *Gurney, in Anderss. B. Dam. Ld.* p. 112 (1872).

Motacilla lugubris (*non T.*), *E. C. Taylor, Ibis*, 1859, p. 48; *Tristr. Ibis*, 1862, p. 279; *Swinh. P. Z. S.* 1863, p. 275; *Scl. P. Z. S.* 1864, p. 108; *Adams, Ibis*, 1864, p. 21; *Tristr. Ibis*, 1866, p. 291; *E. C. Taylor, Ibis*, 1867, p. 63.

Motacilla longicauda (*non Rüpp.*), *Blasius in Naum. Vög. Deutschl.* Nachtr. xiii. p. 117 (1860).

Motacilla leucomelæna, *Pr. Württ. Icon. ined.*; *Heugl. J. f. O.* 1867, p. 297.

Motacilla aguimp, *Layard, B. S. Afr.* p. 119 (1867); *Sharpe, Cat. Afr. B.* p. 73 (1871); *Ayres, Ibis*, 1871, p. 155; *Sharpe in Oates's Matabele Land*, App. p. 317 (1881).

Motacilla gariepina, *Holub & Von Pelz. Beitr. Orn. Südafr.* p. 85 (1882).

Young. Brown above, a little blacker on the rump and upper tail-coverts, the lateral ones of which are externally white; wing-coverts and quills as in the adult, but brown where the latter is black; tail (imperfect) apparently as in the adult, but browner; a broad white eyebrow; lores, feathers below the eye, and ear-coverts black; cheeks, throat, and a patch on the sides of the neck dull white, the latter separated from the throat by a line of black, which is connected with a blackish band across the fore neck; remainder

of under surface of body white, washed with brown on the flanks and sides.

Obs. The absence of knowledge as to the life-history of this species renders it very difficult to trace the sequence of plumages through which it passes. As far as I can follow it with the help of Mr. Seebohm's collection as well as that of the British Museum, the young would appear to moult about April into a perfectly dark grey back, in which signs of approaching black plumage may at once be detected; and this leads us to determine that the first full breeding-dress will be black above. It may be described as follows:—

Adult male. General colour above jet-black from head to tail; lesser wing-coverts like the back; median and greater coverts white with concealed black bases, forming a conspicuous shoulder-patch; bastard-wing and primary-coverts black; quills black, with white bases, the shafts of which are black; the innermost secondaries as well as the innermost greater wing-coverts entirely black, the former with slight ashy-white edgings; upper tail-coverts black, the lateral ones edged with white; all but the two outer tail-feathers black, with slight remains of a white edging on the centre ones; the two outer tail-feathers white, the penultimate one edged with black along the inner web; head like the back; a broad white eyebrow; lores and ear-coverts black, joined to the sides of the nape; throat white, succeeded by a black patch on the fore neck, which is joined above by a narrow line to the ear-coverts and laterally to the sides of the mantle, so as to enclose a large white patch on the sides of the neck; breast and abdomen white as well as the under tail-coverts; sides of breast and flanks ashy grey; thighs black with white tips; under wing-coverts and axillaries white, mottled with blackish bases near the edge of the wing; quills dusky blackish below, with a broad white base to the inner web. Total length 8 inches, culmen 0·7, wing 3·65, tail 3·7, tarsus 1.

Winter plumage. Ashy brown above with a black head, instead of being entirely black above. The black collar has remains of white edges to the feathers.

We have not yet been able to examine a specimen of the *adult female* in breeding-plumage.

Three specimens in the British Museum differ from the plumage described, which is that of the majority of specimens, by having the sides of the body black instead of grey, the sides of the breast black, and the axillaries black edged with white. I cannot believe that they belong to a different species, and at present consider them to be the winter plumage of *very old* males.

Hab. The whole of Africa, occurring as high as the First Cataract on the Nile and in Southern Palestine.

a.	Imm. hiem. sk.	Assouan, Egypt, Feb. 1865 (*J. C. Hawkshaw*).	Gould Collection.
b.	♀ juv. sk.	Nubia (*Verreaux*).	Sharpe Collection.
c.	♂ ad. sk.	Abyssinia.	M. Verreaux.
d.	Juv. hiem. sk.	Lokoja, R. Niger.	W. A. Forbes, Esq. [P.].
e.	Juv. hiem. sk.	Rabba, R. Niger.	W. A. Forbes, Esq. [P.].

f. Ad. sk.	Gaboon.	M. P. B. DuChaillu [C.].
g. Ad. sk.	Gaboon (*DuChaillu*).	Sharpe Collection.
h. Juv. hiem. sk.	Quilombo (*A. Heath*).	R. B. Sharpe, Esq. [P.].
i. Imm. hiem. sk.	Angola.	J. J. Monteiro, Esq. [C.].
k. Imm. hiem. sk.	River Loge.	J. J. Monteiro, Esq. [C.].
l. ♂ ad. sk.	Rio Dande (*Sala*).	Sharpe Collection.
m. Imm. hiem. sk.	South Africa.	Sharpe Collection.
n, *o*, *p*. Ad. sk.	Tete, Zambesi (*Sir John Kirk*).	Livingstone Expedition.
q. Ad. sk.	Lukoja (*Sir John Kirk*).	Livingstone Expedition.
r. Ad.; *s*. Imm. hiem. sk.	Zambesi.	Dr. Bradshaw [C.].
t. Ad. sk.	Crocodile River, Transvaal (*F. Oates*).	W. E. and C. G. Oates, Esqrs. [P.].
u. ♂ ad. sk.	Transvaal (*Ayres*).	Sharpe Collection.
v. Ad. sk.	Durban, Natal, April 23 (*F. Oates*).	W. E. and C. G. Oates, Esqrs. [P.].
w. ♂ ad. sk.	Umgeni River, Natal, June 2, 1841 (*Wahlberg*).	Sharpe Collection.
x. ♂ ad. sk.	Natal (*Gueinzius*).	Gould Collection.
y. ♂ ad. sk.	Natal.	Dr. Gueinzius [C.].
z. ♀ ad. sk.	Pinetown, July 10 (*T. L. Ayres*).	R. B. Sharpe, Esq. [P.].
a'. ♂ ad. sk.	Hope Town, May 1871 (*T. C. Atmore*).	Sharpe Collection.

10. Motacilla maderaspatensis.

La Bergeronette de Madras, *Briss. Orn.* ii. p. 478 (1760); *Buff. Hist. Nat. Ois.* v. p. 275 (1778).

Pied Wagtail, *Lath. Gen. Syn.* ii. pt. 2, p. 397 (1783); *id. Gen. Hist.* vi. p. 320, pl. civ. (1823).

Motacilla maderaspatensis, *Gm. S. N.* i. p. 961 (1788); *Hodgs. Icon. ined. in Brit. Mus.*, App. pl. 68. fig. 902; *Jerd. Madr. Journ.* xi. p. 10 (1840); *Gray, Gen. B.* i. p. 203 (1847); *Gould, B. Asia*, iv. pl. 61 (1853); *Irby, Ibis*, 1861, p. 231; *Holdsw. P. Z. S.* 1872, p. 458; *Severtz. Turkest. Jevotn.* pp. 66, 139 (1873); *Murray, Str. F.* 1878, p. 113; *Legge, B. Ceylon*, p. 107 (1879); *Hume, Str. F.* 1879, p. 103; *Butler, Cat. B. Sind &c.* p. 40 (1879); *id. Cat. B. S. Bomb. Pres.* p. 54 (1880); *id. Str. F.* 1880, p. 410; *Vidal, t. c.* p. 68; *Reid, Str. F.* 1881, p. 47; *Davidson, Str. F.* 1881, p. 310; *Salvin, Cat. Strickl. Coll.* p. 80 (1882); *Davison, Str. F.* 1883, p. 395.

Motacilla variegata (*nec V.*), *Steph. Gen. Zool.* xiii. pt. 2, p. 234 (1826); *Sykes, P. Z. S.* 1832, p. 91; *MacClell. P. Z. S.* 1839, p. 161.

Motacilla picata, *Frankl. P. Z. S.* 1831, p. 119.

Motacilla maderaspatana, *Blyth, J. A. S. Beng.* xvi. p. 428 (1847); *id. Cat. B. Mus. As. Soc.* p. 137 (1849); *Bp. Consp.* i. p. 251 (1850); *Layard, Ann. N. H.* xii. p. 268 (1853); *Horsf. & Moore, Cat. B. Mus. E.I. Co.* p. 347 (1854); *Jerd. B. Ind.* ii. p. 217 (1863); *Blyth, Ibis*, 1865, p. 49, 1867, p. 31; *Stoliczka, J. A. S. Beng.* xxxix. p. 48 (1868); *Beavan, Ibis*, 1868, p. 76; *Gray, Hand-l. B.* i. p. 246, no. 3569 (1869); *Hume, Nests and Eggs Ind. B.* p. 377 (1873); *id. Str. F.* 1873, p. 28; *Ball, Str. F.* 1874, p. 415; *Godw.-Aust. J. A. S. Beng.* xliii. p. 168 (1874); *Brooks, Str. F.* 1875, pp. 247, 249; *Butler & Hume, t. c.* p. 489; *Fairb. Str. F.* 1876,

p. 260; *Dresser, Ibis*, 1876, p. 177; *Brooks, Str. F.* 1877, p. 472; *Davidson & Wenden, Str. F.* 1878, p. 84; *Ball, t. c.* p. 219; *Seebohm, Ibis*, 1878, p. 348; *Anders. Zool. Exped. Yunnan*, p. 610 (1878); *Seebohm, Ibis*, 1883, p. 92.
Motacilla leucoptera, *Selys, Naum.* 1856, p. 391.

Adult male. General colour above rich black from bill to tail, the lateral upper tail-coverts externally white, and fringed with white on the inner web as well; lesser wing-coverts black like the back; median and greater coverts pure white, the inner ones black, white externally, the innermost entirely black like the back; bastard-wing black; primary-coverts black, edged with greyish white; quills black, edged with white, the outermost primary fringed with white for its entire length; secondaries more broadly white on the outer web, and fringed with white at the ends; tail-feathers black, the two centre ones edged with white, the two outer feathers white, with a broad blackish edging along the inner web; base of forehead narrowly black; a broad white eyebrow from the base of the nostrils running along the sides of the crown; upper and under margin of eyelids white, the anterior and posterior edge black; lores, sides of face, sides of neck, throat, and fore neck rich black; remainder of under surface of body pure white, the sides of the body washed with blackish grey, blacker on the sides of the upper breast; thighs and under tail-coverts white; axillaries and under wing-coverts white; quills blackish below, with a great deal of white on the inner webs: "bill black; legs and feet brownish black; iris dark brown" (*Legge*). Total length 9 inches, culmen 0·75, wing 3·85, tail 4·1, tarsus 1·2.

The *adult female* appears to differ from the male in having the back dark ashy instead of black, and has also only the entire throat black. Mr. Seebohm has three specimens in this plumage, collected in October, January, and February, but another female from Sambuhr (Adam), obtained in August, has a black back like the male. This bird has been described by Colonel Legge (*l. c.*) as being in the "non-breeding plumage":—"Chin and face just beneath the eye and the gorge white; upper surface not of so intense a black as the breeding-dress." He thinks further that the bird in question had bred early in the year, and had changed its plumage at once. The series in the Museum has not been sufficient to enable me to trace all the phases of plumage undergone by the present species.

Hab. The peninsula of India and Ceylon, extending into the Eastern Himalayas, and westward to Cashmere and Scinde, and thence to Turkestan.

a. Ad.; *b*. [Juv.] sk.	N.W. Himalayas (*Griffith**).	India Museum.
c. Ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
d, *e*, *f*. ♂ ad.; *g*. ♀ ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].

* ? Afghanistan.

h, *i*, *k*. Ad. sk.	Kumaon (*Strachey*).	India Museum.
l. Juv. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
m, *n*, *o*. Ad. sk.	Nepal (*Hodgson*).	India Museum.
p. Ad. sk.	Behar.	B. H. Hodgson, Esq. [P.].
q, *r*. ♂ ♀ ad. sk	Mhow, Nov.	Col. Swinhoe [P.].
s. ♂ ad. sk.	Mhow, March.	Col. Swinhoe [P.].
t. ♂ juv. sk.	Mhow, June.	Col. Swinhoe [P.].
u. Ad. sk.	Saugor (*Hooper*).	India Museum.
v, *w*. Ad. et juv. sk.	Kamptee.	Dr. B. Hinde [P.].
x, *y*. Ad. sk.	Deccan (*Sykes*).	India Museum.
z, *a'*. Ad. sk.	Madras.	Rev. H. B. Baber [P.].
b'. Ad. sk.	Madras (*Jerdon*).	India Museum.
c', *d'*. Ad. sk.	Travancore.	Major J. Biddulph [C.].
e'. Ad. sk.	Nilghiris (*Day*).	India Museum.
f'. Ad. sk.	Ootacamund, Nilghiris.	W. Davison, Esq. [P.].
g'. Ad. sk.	India.	Gould Collection.

11. Motacilla grandis.

Motacilla lugubris, *Temm. Man. d'Orn.* iii. p. 175 (1835, *nec Temm. op. cit.* i. p. 253, 1820).

Motacilla lugens (*nec Kittl.*), *Temm. & Schl. Faun. Jap., Aves*, p. 60, pl. 25 (1850); *Bp. Consp.* i. p. 250 (1850, pt.); *Blakist. Ibis*, 1862, p. 319; *Gray, Hand-l. B.* i. p. 246, no. 3565 (1869); *Seebohm, Ibis*, 1878, p. 347; *Blakist. Chrysanthemum*, ii. p. 31 (1883).

Motacilla japonica (*nec Swinh.*), *Tristr. Ibis*, 1866, p. 291; *Gray, Hand-l. B.* i. p. 246, no. 3566 (1869); *Swinh. Ibis*, 1874, p. 156; *Blakist. & Pryer, Ibis*, 1878, p. 236; *iid. List B. Japan*, p. 155 (1882); *Seebohm, Ibis*, 1879, p. 34; *id. Ibis*, 1884, p. 38; *Blakist. Amended List B. Japan*, p. 52 (1884).

Motacilla lugens, var. lugubris, *Swinh. Ibis*, 1860, p. 357.

Adult. General colour above black from the crown to the tail, with the forehead white; upper tail-coverts black, the lateral ones externally white; lesser wing-coverts black like the back; median and greater coverts pure white, forming a large shoulder-patch; the innermost greater coverts mesially black; bastard-wing and primary-coverts pure white, the former with some black in their centres; quills black, with the base white, the secondaries pure white, the long inner ones black, white along the outer web, which has the basal third pure white; tail-feathers black, the two centre ones edged with white, the two outer feathers pure white, with a broad black edging to the inner web; a broad frontal band of white extending in an eyebrow to above the ear-coverts; lores, feathers round the eye, ear-coverts, cheeks, throat, and fore neck black, the chin only being white; remainder of under surface of body pure white, including the under tail-coverts, axillaries, and under wing-coverts; thighs white, with blackish bases; quills blackish, internally white. Total length 8·5 inches, culmen 0·7, wing 3·85, tail 3·9, tarsus 1.

In Mr. Seebohm's collection is a very interesting specimen, obtained by Capt. Blakiston at Sapporo in Yezo, in October, which is moulting from a grey plumage into the black dress of the adult. The young bird therefore must be grey; and it is to be noted that

the new black feathers on the throat have broad white bases, so that it would account for a good deal of the white which is so often apparent in adult birds shot in winter. The white chin is constant.

The black plumage, which (as is shown by the young moulting specimen mentioned above) is very rich when first donned, appears to get worn to an ashy black as winter progresses; but in the spring apparently a change of feathers to a blacker plumage takes place. Summer-plumaged birds are, however, absent both in Mr. Seebohm's collection and the British Museum, and the above account of the changes from ashy black to rich black may be incorrect; but it appears to me to be the natural sequence.

Hab. Japan and the opposite coasts of Eastern Siberia.

a. Ad. sk.	Yokohama, Japan.	H. Pryer, Esq. [P.].
b. ♂ ad. sk.	Nagasaki, Nov. 12.	F. Ringer, Esq. [P.].
c. ♂ ad.; *d*. Ad. sk.	Sapporo, Yezo, Sept.	Capt. Blakiston [P.].
e. ♂ ad.; *f*. Ad. sk.	Sapporo, Yezo, Oct.	Capt. Blakiston [P.].

12. Motacilla capensis.

La Bergeronette du Cap de Bonne Espérance, *Briss. Orn.* iii. p. 476, pl. xxxv. fig. 3 (1760); *Daubent. Pl. Enl.* vi. pl. 28. fig. 2.

Motacilla capensis, *Linn. Syst. Nat.* i. p. 333 (1766, *ex Briss.*); *Licht. Verz. Doubl.* p. 36 (1823); *Gray, Gen. B.* i. p. 203 (1847); *Bp. Consp.* i. p. 251 (1850, pt.); *Cab. Mus. Hein.* Th. i. p. 13 (1850); *Grill, Zool. Anteckn.* p. 25 (1858); *Gurney, Ibis*, 1860, p. 208, 1862, p. 156; *Layard, B. S. Afr.* p. 118 (1867); *Ayres, Ibis*, 1869, p. 292; *Gray, Hand-l. B.* i. p. 246, no. 3573 (1869); *Finsch & Hartl. Vög. Ostafr.* p. 266 (1870); *Sharpe, Cat. Afr. B.* p. 73 (1871); *Gurney in Anderss. B. Dam. Ld.* p. 111 (1872); *Shelley, Ibis*, 1875, p. 73; *Bocage, Orn. Angola*, p. 290 (1877–81); *Sharpe in Oates's Matabele Land*, App. p. 317 (1881); *Holub & Von Pelz. Beitr. Orn. Südafr.* p. 82 (1882); *Shelley, Ibis*, 1882, p. 349; *Salv. Cat. Strickl. Coll.* p. 80 (1882); *Butler, Feilden, & Reid, Zool.* 1882, p. 337; *Sharpe, ed. Layard's B. S. Afr.* p. 547 (1884).

La Petite Bergeronette du Cap de Bonne Espérance, *Buff. Hist. Nat. Ois.* v. p. 274 (1778).

African Wagtail, *Lath. Gen. Syn.* ii. pt. 2, p. 402 (1783).

Cape Wagtail, *Lath. Gen. Syn.* ii. pt. 2, p. 402 (1783).

Motacilla afra, *Gm. Syst. Nat.* i. p. 962 (1788).

La Lavandière brune, *Levaill. Ois. d'Afr.* iv. p. 80, pl. 177 (1805); *Sundev. Krit. Framst., Levaill.* p. 44 (1857).

Nestling. Perfectly brown all over the upper surface, the head being uniform with the back; eyebrow distinct, yellowish white; lores and ear-coverts brown like the head; wing-coverts dark brown, with broad edgings of pale reddish brown, forming on the greater coverts a distinct wing-bar, less pronounced on the median coverts; primary-coverts and quills dark brown, edged with pale olive-brown or light rufescent brown on the inner secondaries; the primaries narrowly fringed with whitish round the ends, the outermost white along the outer web; upper tail-coverts dark brown, washed with the same brown as the back; under surface white, sullied with a brownish shade on the throat and under tail-coverts; on the breast

and abdomen a slight yellowish tinge; sides of body and thighs pale reddish brown; across the fore neck a collar of dark brown.

Young after first moult. Can generally be distinguished by its brown head and back and a slight brownish appearance on the white of the throat; some of the lateral upper tail-coverts edged with white; the white tips to the greater wing-coverts very distinct, and forming a wing-bar.

Adult male. General colour above brown, with a faint wash of olive; wing-coverts like the back, the outer median and greater series, as well as the bastard-wing, edged with ashy olive; primary-coverts and quills dark brown, edged with ashy olive, browner on the secondaries, the first primary narrowly margined with white; upper tail-coverts and tail-feathers blackish brown, the two outer feathers white, with a mark of brown extending from the base of the outer web for some distance obliquely up the inner web and more extended on the penultimate than the external feather; head and hind neck dull ashy grey; a narrow eyebrow of white; lores, feathers below the eye, and ear-coverts blackish; cheeks and entire throat white; across the fore neck a rather broad crescentic band of black; breast and abdomen pale yellowish or white washed with pale yellow, becoming pure white on the under tail-coverts; sides of body brown, the sides of the upper breast lighter and more ashy brown; thighs dusky brown; axillaries pale ashy or smoky brown; under wing-coverts white, with dusky bases, the edge of the wing mottled with dark brown; quills below dusky brown, with a large patch of white near the base of the inner web. Total length 7·2 inches, culmen 0·65, wing 3·25, tail 3·4, tarsus 0·95.

Adult female. Similar to the male, but a little duller in colour, and having the collar on the fore neck not quite so broadly indicated. Total length 6·8 inches, culmen 0·65, wing 3·2, tail 3·35, tarsus 0·95.

Adult in winter plumage. Dull olive-brown above, the head a little greyer than the back; the greater coverts tipped, and the inner secondaries edged rather broadly, with whity brown; lateral upper tail-coverts with slightly pronounced whitish edges; underneath the yellow colour is more pronounced on the breast and abdomen, and the ashy-brown axillaries have also a tinge of yellow.

In the breeding-plumage the feathers become much abraded, the tips to the greater coverts and the edges to the secondaries being quite worn off. Below, the yellow on the breast is less strongly pronounced, and the whole aspect of the bird is darker.

Hab. South Africa, extending all over the Cape Colony to Mashoona Land on the east, and to Damara Land and Benguela on the west.

a. Pull. sk.	South Africa.	Sir A. Smith [P.].
b. Ad. hiem. sk.	South Africa.	J. B. Jukes, Esq. [P.].
c. Ad. hiem. sk.	South Africa.	J. Rocke, Esq. [P.].
d, e. Ad. hiem. sk.	Cape Town (*Layard*).	Sharpe Collection.
f. Ad. æstiv. sk.	Natal (*T. Ayres*).	J. H. Gurney, Esq. [P.].
g. ♂ ad. æstiv. sk.	Natal.	Dr. Gueinzius [C.].
h. ♀ ad. æstiv. sk.	Natal (*Gueinzius*).	Gould Collection.

i. ♂ juv. hiem. sk.	Pietermaritzburg, April 30 (*F. Oates*).	W. E. and C. G. Oates, Esqrs. [P.].
k. ♂ ad. hiem. sk.	Durban, April 23 (*F. Oates*).	W. E. and C. G. Oates, Esqrs. [P.].
l, m. ♂ ♀ ad. sk.	Durban, July 28 (*T. L. Ayres*).	R. B. Sharpe, Esq. [P.].
n, o. ♂ ♀ hiem. sk.	Transvaal (*Ayres*).	Sharpe Collection.
p. ♂ ad. æstiv. sk.	Inyati, Oct.3 (*F. Oates*).	W. E. and C. G. Oates, Esqrs. [P.].
q. ♀ ad. æstiv. sk.	Walvisch Bay, Dec. 7, 1860 (*C.J. Andersson*).	Sharpe Collection.
r. ♀ juv. hiem. sk.	Walvisch Bay, April 30, 1865 (*C. J. A.*).	R. B. Sharpe, Esq. [P.].
s. ♂ ad. hiem. sk.	Otjimbinque, Damaraland, Mar. 16, 1865 (*C.J.A.*).	R. B. Sharpe, Esq. [P.].
t. Pull. sk.	South Africa.	Purchased.

13. Motacilla longicauda.

Motacilla longicauda (*non Gm.*), *Rüpp. Neue Wirb., Vög.* p. 84, Taf. 29. fig. 2 (1835–50); *id. Syst. Uebers.* p. 59 (1845); *Gray, Gen. B.* i. p. 203 (1847); *Bp. Consp.* i. p. 251 (1850); *Heugl. Syst. Uebers.* p. 28 (1856); *Gurney, Ibis*, 1862, p. 151; *Layard, B. S. Afr.* p. 119 (1867); *id. Ibis*, 1869, p. 73; *Gray, Hand-l. B.* i. p. 246, no. 3574 (1869); *Heugl. Orn. N.O.-Afr.* i. p. 319, iv. p. lxxxix (1869–71); *Finsch & Hartl. Vög. Ostafr.* p. 265 (1870); *Sharpe, ed. Layard's B. S. Afr.* p. 544 (1884); *Salvad. Ann. Mus. Civic, Genov.* (2) i. p. 165 (1884).

Adult male. General colour above clear blue-grey; lesser wing-coverts blackish, edged with a little darker grey than the back; median and greater coverts black, tipped with white, the inner ones more broadly; inner greater coverts white, with a black centre to the outer web; bastard-wing, primary-coverts, and quills black, only the inner secondaries edged with white, narrowly along the inner web, very broadly along the outer one; upper tail-coverts grey like the back, the lateral ones externally white; four centre tail-feathers blackish, edged with greyish white, the remainder of the feathers pure white; head a little duller grey than the back, scarcely perceptible except on the forehead; a distinct superciliary streak of white from the base of the nostril to above the ear-coverts, as well as the upper and under edge of the eyelid; lores and ear-coverts blackish, the latter washed with ashy and having a patch of white on their posterior lower half; cheeks, throat, and under surface of body pure white, including the thighs and under tail-coverts; across the fore neck a crescentic bar of black, wider in the centre; sides of breast and flanks slightly washed with ashy grey; axillaries and under wing-coverts white; the external greater coverts blackish like the under surface of the quills, which are white at the base of the inner webs; "bill black; iris brown; tarsi and feet dark ash-colour" (*Ayres*). Total length 7 inches, culmen 0·7, wing 2·95, tail 3·8, tarsus 0·8.

Adult female. Similar to the male.

Young. Browner than the adult, and having the middle tail-feathers somewhat mottled with white indentations near the base; the white markings on the wings abraded and much less distinct; the black collar on the fore neck much narrower and browner than in the adult.

Hab. North-eastern Africa, only in Central Abyssinia and Shoa; it ranges southwards into Natal, and has even occurred in British Caffraria.

a. ♂ ad. sk.	Natal, Nov.	Dr. Gueinzius [C.].
b. ♂ ad. sk.	Natal, Nov. (*Gueinzius*).	Gould Collection.
c, d. ♂ ♀ ad. sk.	Pinetown, Natal, Feb. (*T. L. Ayres*).	R. B. Sharpe, Esq. [P.].
e. ♂ imm. sk.	Pinetown, Natal, Dec. (*T. L. Ayres*).	R. B. Sharpe, Esq. [P.].

14. Motacilla flaviventris.

Salale anacondrato, *Flacourt, Hist. Madag.* p. 165 (1661).

Motacilla flaviventris, *Verr. Cat. Rivoli Coll.* p. 9 (1846); *Hartl. J. f. O.* 1860, p. 94 (*ex Verr.*); *id. Faun. Madag.* p. 39 (1861); *Roch & E. Newt. Ibis*, 1862, p. 273; *Scl. P. Z. S.* 1863, p. 163; *E. Newt. Ibis*, 1863, p. 346; *Pollen, Nederl. Tijdsch. Dierk.* 1863, p. 305; *Verr. in Vinson, Voy. Madag., Ann. B.* p. 2 (1865); *Grandid. Rev. et Mag. de Zool.* 1867, p. 385; *Schl. & Poll. Faune Madag., Ois.* p. 158 (1868); *Gray, Hand-l. B.* i. p. 246, no. 3575 (1869); *Sharpe, P. Z. S.* 1870, p. 395; *id. Cat. Afr. B.* p. 73 (1871); *Hartl. Vög. Madag.* p. 123 (1877); *Milne-Edwards & Grandid. Hist. Nat. Madag., Ois.* p. 343, pls. cxxxiii., cxxxiv. (1882); *Salvin, Cat. Strickl. Coll.* p. 80 (1882).

Adult. General colour above dark slaty grey, inclining to olive-green on the lower back and rump; upper tail-coverts black, slightly washed with olive, the outer ones edged and tipped with yellowish white; lesser wing-coverts ashy grey; median series black, edged with ashy grey; greater coverts black, with remains of yellowish white at the ends; bastard-wing, primary-coverts, and quills black, edged narrowly with white along the outer web; secondaries externally white at the base, forming a conspicuous wing-patch, and fringed externally with white near the ends, the innermost browner along the outer webs; tail-feathers black, the two outer feathers white, with a blackish margin to the inner web; head like the back; a distinct white eyebrow running from the base of the nostrils above the eye and ear-coverts; upper and under margin of eyelid white; lores, feathers below the eye, and ear-coverts black, the latter with a central patch of ashy white, the anterior and posterior edge of eyelid black; cheeks and throat white, separated from the chest and sides of fore neck, which are also ashy white, by a distinct crescentic band of black, which extends from the ear-coverts and inclines to a point in the centre of the fore neck; remainder of under surface bright yellow, including the under tail-coverts; thighs white; axillaries and under wing-coverts white; lower primary-coverts and under surface of quills blackish, with a large patch of

white across the wing below. Total length 6·7 inches, culmen 0·55, wing 3·25, tail 3·25, tarsus 0·95.

Hab. Madagascar.

a. ♀ ad. sk.	Madagascar.	Mr. A. Crossley [C.].
b. Ad. sk.	Madagascar.	Mr. A. Crossley [C.].

15. Motacilla melanope.

The Yellow Water Wagtail, *Albin, Nat. Hist. B.* ii. p. 54, pl. lviii. (1738–40).

The Grey Water Wagtail, *Edwards, Gleanings*, p. 105, pl. 259 (1758).

La Bergeronette jaune, *Briss. Orn.* iii. p. 471, pl. xxiii. fig. 3 (1760).

La Bergeronette de Java, *Briss. t. c.* p. 474, pl. xxv. fig. 2 (1760).

Motacilla flava (*nec L.*), *Scop. Ann.* i. p. 154 (1769); *Bodd. Tabl. Pl. Enl.* p. 2 (1783).

Bergeronette jaune mâle, *Daubent. Pl. Enl.* vi. pl. 28. fig. 1; *Buff. Hist. Nat. Ois.* v. p. 268 (1778).

Motacilla melanope, *Pall. Reis. Russ. Reichs*, iii. App. p. 696 (1776); *Gm. Syst. Nat.* i. p. 997 (1788); *Pall. Zoogr. Rosso-Asiat.* i. p. 500 (1811); *Dresser, B. Eur.* iii. p. 251, pl. 128 (1875); *id. Ibis*, 1876, p. 177; *Danf. Ibis*, 1877, p. 262; *Blakist. & Pryer, Ibis*, 1878, p. 237; *Seebohm, t. c.* p. 352; *Legge, B. Ceylon*, p. 610 (1879); *Seebohm, Ibis*, 1879, p. 34; *Wardlaw Ramsay, t. c.* p. 448; *id. Ibis*, 1880, p. 60; *Seebohm, t. c.* p. 189; *Severtz. Ibis*, 1883, p. 64.

Motacilla boarula, *Linn. Mant.* p. 527 (1771); *Gm. Syst. Nat.* i. p. 997 (1788); *Temm. Man. d'Orn.* i. p. 257 (1820); *Roux, Orn. Provenç.* pl. 195 (1825); *Werner, Atlas, Insectiv.* pl. 74 (1827); *Rüpp. Neue Wirb.* p. 84 (1835–40); *Eyton, Cat. Brit. B.* p. 15 (1836); *Gould, B. Eur.* ii. pl. 147 (1837); *Bp. Comp. List B. Eur. & N. Amer.* p. 19 (1838); *Macg. Br. B.* ii. p. 235 (1839); *Keys. u. Blas. Wirb. Eur.* p. xlix (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 155 (1840); *Crespon, Orn. Gard*, p. 172 (1840); *Jerd. Madr. Journ.* xi. p. 10 (1840); *Rüpp. Syst. Uebers.* p. 59 (1845); *Hewits. Eggs Br. B.* p. 126, pl. 33. fig. 2 (1846); *Gray, Cat. Mamm. etc. Nepal pres. Hodgs.* p. 75 (1846); *id. Gen. B.* i. p. 203 (1847); *Blyth Cat. B. Mus. As. Soc.* p. 137 (1849); *Thomps. B. Irel.* i. p. 218 (1849); *Temm. & Schl. Faun. Jap., Aves*, p. 59 (1850); *Kelaart, Prodr. Cat.* p. 121 (1852); *Kjærb. Orn. Dan.* pl. 19. fig. 5 (1852); *Layard, Ann. & Mag. Nat. Hist.* xii. p. 268 (1853); *Vernon Harcourt, op. cit.* 1855, p. 437; *Bolle, J. f. O.* 1857, p. 286; *Jaubert & Barth.-Lapomm. Rich. Orn.* p. 274 (1859); *Linderm. Vög. Griechenl.* p. 80 (1860); *Swinh. Ibis*, 1860, p. 55; *Powys, t. c.* p. 229; *Simpson, t. c.* p. 394; *Swinh. Ibis*, 1861, pp. 35, 383; *Irby, t. c.* p. 232; *Swinh. Ibis*, 1862, p. 200; *Blakist. t. c.* p. 318; *Swinh. Ibis*, 1863, p. 309; *Adams, Ibis*, 1864, p. 22; *Wright, t. c.* p. 62; *Salvad. Orn. Sard.* p. 57 (1864); *Filippi, Viagg. Pers.* p. 348 (1865); *Altum, J. f. O.* 1865, p. 246; *Swinh. Ibis*, 1866, p. 138; *Pelz. Ibis*, 1868, p. 312; *Smith, t. c.* p. 442; *Gray, Hand-l. B.* i. p. 247, no. 3592 (1869); *Borggr. Vogelf. Deutschl.* p. 87 (1869); *Doderl. Avif. Sicil.* p. 101 (1869); *Salvad. Faun. Ital., Ucc.* p. 121 (1871); *R. Gray, B. W. Scotl.* p. 112 (1871); *Saunders, Ibis*, 1871, p. 215; *Harting, Handb. Br. B.* p. 23 (1872); *Blyth & Wald. B. Burm.* p. 97 (1875); *B. O. U. List Br. B.* p. 30 (1883); *Seebohm, Ibis*,

1883, p. 30; *Jouy, Pr. U.S. Nat. Mus.* vi. p. 290 (1883); *Radde, Orn. Cauc.* p. 222 (1884); *Blakist. Amended List B. Japan*, p. 55 (1884).

Grey Wagtail, *Lath. Gen. Syn.* ii. pt. 2, p. 398 (1783).

Tschutschi Wagtail, *Penn. Arctic Zool.* ii. p. 397 (1785).

Motacilla tschutschensis, *Gm. Syst. Nat.* i. p. 962 (1788).

Motacilla sulphurea, *Bechst. Naturg. Deutschl.* iii. p. 459 (1807); *id. Kurze Uebers. aller bekannt. Vögel*, p. 326 (1811); *Naum. Vög. Deutschl.* iii. p. 824, Taf. 87 (1823); *Brehm, Vög. Deutschl.* p. 346; *Cab. Mus. Hein.* Th. i. p. 13 (1850); *Midd. Sibir. Reis.* p. 168 (1851); *Schl. Vog. Nederl.* pl. 103 (1854); *Sundev. Sv. Fogl.* pl. 66. fig. 4 (c. 1856); *Schrenck, Amur. Reis., Zool.* p. 344 (1859); *Schl. Dier. Nederl., Vog.* pl. 9. figs. 11, 12 (1861); *Tristr. Ibis*, 1862, p. 279; *A. Newton, Ibis*, 1863, p. 194; *Gray's List Br. B.* p. 67 (1863); *Brehm, Reis. Habesch*, p. 213 (1863); *Radde, Reis. Sibir.* p. 227 (1863); *More, Ibis*, 1865, p. 122; *Godm. Ibis*, 1866, pp. 96, 106; *Tristr. t. c.* p. 290; *C. B. Wharton, t. c.* p. 323; *Lilford, t. c.* pp. 386, 391; *Degl. et Gerbe, Orn. Eur.* i. p. 385 (1867); *Heugl. Orn. N.O.-Afr.* i. p. 318 (1869); *Godman, Azores*, p. 25 (1870); *Fritsch, Vög. Eur.* Taf. xvii. figs. 13, 14 (c. 1870); *Wyatt, Ibis*, 1870, p. 15; *Elwes & Buckley, t. c.* p. 195; *Blanf. Geol. & Zool. Abyss.* p. 381 (1870); *Godm. Ibis*, 1872, p. 176; *Shelley, B. Egypt*, p. 127 (1872); *Keulem. Onze Vogels*, ii. pl. 33 (1873); *Newt. ed. Yarr. Br. B.* i. p. 552 (1873); *Severtz. Turkest. Jevotn.* p. 67 (1873); *Brooke, Ibis*, 1873, p. 245; *Danf. & Harvie-Brown, Ibis*, 1875, p. 309; *Irby, B. Gibr.* p. 108 (1875); *Blanf. East. Persia*, ii. p. 233 (1876); *Irby, Ibis*, 1883, p. 185; *Booth, Rough Notes*, part 4 (1883); *Seebohm, Hist. Brit. B.* ii. p. 263 (1883); *id. Ibis*, 1884, p. 39; *Tristr. Faun. & Flor. Palest.* p. 54 (1884); *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 166 (1884).

Motacilla cinerea, *Leach, Syst. Cat. Mamm. etc. Brit. Mus.* p. 22 (1816).

Motacilla bistrigata, *Raffl. Trans. Linn. Soc.* xiii. p. 312 (1820); *Gray, Hand-l. B.* i. p. 248, no. 3593 (1869).

Calobates sulphurea, *Kaup, Natürl. Syst.* p. 33 (1829); *Moore, P. Z. S.* 1854, p. 284; *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 349 (1854); *Jerd. B. Ind.* ii. p. 220 (1863); *Gould, B. Gt. Br.* iii. pls. 6, 7; *Holdsw. P. Z. S.* 1872, p. 458; *Hume & Henders. Lahore to Yark.* p. 224 (1873); *Butler & Hume, Str. F.* 1875, p. 489; *Butler, Str. F.* 1877, p. 230; *Bogdan. B. Cauc.* p. 108 (1879); *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 86.

Motacilla montium, *Brehm, Vög. Deutschl.* p. 345 (1831).

Motacilla xanthoschista, *Hodgs. in Gray's Zool. Misc.* p. 83 (1844).

Motacilla lunulata, *Des Murs in Lefebvre, Voy. Abyss.*, Atlas, pl. 7 (1845).

Motacilla ophthalmica, *Des Murs, op. cit.*, texte Ois. p. 94 (1845).

Pallenura sulphurea, *Bp. Consp.* i. p. 250 (1850); *Brehm, Naum.* 1855, p. 280; *Loche, Expéd. Sci. Algér., Ois.* ii. p. 5 (1867); *Dybowski, J. f. O.* 1873, p. 82, 1874, p. 335; *Taczan. Bull. Soc. Zool. France*, 1876, p. 150; *Dybowski, op. cit.* 1883, p. 360.

Pallenura javensis, *Bp. Consp.* i. p. 250 (1850).

Motacilla montium, *Brehm, Vogelf.* p. 143 (1855).

Motacilla rivalis, *Brehm, t. c.* p. 143 (1855).

Motacilla lindermayeri, *Brehm in Linderm. Vög. Griechenl.* p. 82 (1860).

Budytes boarulus, *Tristr. Ibis*, 1859, p. 41; *C. B. Wharton, Ibis*, 1876, p. 22.

Budytes flava (*nec L.*), *Bettoni, Ucc. Nidif. Lomb.* tav. 62 (1865–70).
Calobates boarula, *Swinh. Ibis*, 1870, p. 346; *Hume, Str. F.* 1873, p. 201; *id. Nests and Eggs Ind. B.* p. 381 (1874); *id. Str. F.* 1874, p. 237.
Motacilla (Calobates) sulphurea, *Blanf. Geol. & Zool. Abyss.* p. 381 (1870).
Motacilla (Calobates) boarula, *Heugl. Orn. N.O.-Afr.* ii. pt. 2, App. p. lxxxix (1871).
Calobates melanope, *Swinh. P. Z. S.* 1871, p. 364; *Brooks, J. A. S. Beng.* xli. p. 82 (1872); *id. Str. F.* 1875, p. 250; *Fairb. Str. F.* 1876, p. 260; *Bourd. t. c.* p. 401; *Prjev. in Dawson Rowley's Orn. Misc.* ii. p. 193 (1876); *David & Oust. Ois. Chine*, p. 302 (1877); *Walden, Tr. Z. S.* ix. p. 196 (1877); *Tweedd. Ibis*, 1877, p. 310; *Hume & Davison, Str. F.* 1878, p. 362; *Davison & Wend. Str. F.* 1878, vol. ii. p. 84; *Hume, Str. F.* 1879, pp. 65, 103, 161; *Scully, t. c.* p. 315; *Brooks, t. c.* p. 484; *Butler, Cat. B. Sind &c.* p. 40 (1879); *id. Cat. B. S. Bomb. Pres.* p. 54 (1880); *Vidal, Str. F.* 1880, p. 69; *Reid, Str. F.* 1881, p. 48; *Salvad. Orn. Papuasia etc.* ii. p. 431 (1881); *Biddulph, Ibis*, 1881, p. 68; *Scully, t. c.* p. 452; *Davidson, Str. F.* 1882, p. 310; *Nichols. Ibis*, 1882, p. 62; *C. Swinhoe, t. c.* p. 109; *Slater, t. c.* p. 433; *Nichols. Ibis*, 1883, p. 253; *Davison, Str. F.* 1883, p. 395; *Oates, B. Br. Burm.* i. p. 159 (1883).
Calobates bistrigata, *Salvad. Ucc. Born.* p. 259 (1874).
Budytes novæ guineæ, *Meyer, Sitz. Isis Dresden*, 1875, p. 74; *id. Mitth. K. Zool. Mus. Dresden*, i. p. 10 (1875); *Salvad. Ann. Mus. Civic. Genov.* xii. p. 345 (1878).
Calobates melanops (*lapsu*), *Ball, Str. F.* 1874, p. 416; *id. Str. F.* 1878, vol. ii. p. 219.

Nestling (Agoriane, Greece, May 8; H. Seebohm). General colour dull ashy grey, with a slight shade of brown on the head and neck; wing-coverts blackish brown, edged and tipped with pale fulvous brown, whiter at the ends of the greater series; quills blackish, edged with yellowish white, broader on the secondaries; tail (half-grown) blackish, the centre feathers edged with white or pale yellow, the three outer feathers white; lores, sides of face, and ear-coverts ashy grey, the latter mixed with pale tawny; a narrow eyebrow of pale tawny buff; under surface of body pale tawny buff, ashy on the throat, dull white on the abdomen, and saffron-yellow on the under tail-coverts, like the lower rump and upper tail-coverts. (*Mus. H. Seebohm.*)

The full-grown young bird has the same plumage as the nestling described, but has the eyebrow and throat whiter, the chest also ashy white, with a tinge of yellow; the edgings to the inner secondaries are pale yellow, and the wing-spot at the base of the secondaries is pronounced. After the autumn moult, although the belly and breast are much brighter yellow and the upper surface clearer grey, there is a return to the pattern of the nestling plumage in the buff-coloured throat and eyebrow.

Young in first winter plumage. General colour above ashy brown, greyer on the lower back and rump, the lower rump and upper tail-coverts olive-yellow, the lateral ones brighter; lesser wing-coverts like the back; median and greater coverts dusky blackish, edged

with ashy; the greater series tipped with white; bastard-wing, primary-coverts, and quills dusky blackish, edged with ashy brown, the inner secondaries more broadly with yellowish white, the bases white, but concealed by the coverts; tail-feathers brown, externally washed with olive-yellowish; outer tail-feathers white, the shaft dusky towards the base; the two next feathers white, brown on the outer web for the greater part of their length; head like the back; lores ashy, surrounded by a pale fawn-coloured streak, which extends as an eyebrow above the ear-coverts; feathers below the eye and ear-coverts ashy washed with brown; cheeks, throat, and fore neck pale fawn-colour; remainder of the under surface of body pale yellow, mixed with white; the vent and under tail-coverts bright yellow; sides of the body ashy; under wing-coverts and axillaries dull white, with dusky bases to the coverts near the edge of the wing; quills dusky below, with a good deal of white near the base of the secondaries. Total length 7·7 inches, culmen 0·55, wing 3·2, tail 3·65, tarsus 0·8.

In winter the buff-coloured throat and eyebrow are sure indications of immaturity, as the old birds are bright yellow underneath, with white throats. In the young birds, as winter progresses, the buff throat fades off into whitish, but not invariably, as a male obtained by Mr. Robson on the 3rd of April, is changing to the black throat directly fron the buff-coloured plumage.

A number of specimens in breeding-plumage are in the Museum, with the black throat obscured by hoary-white margins to the feathers; these I consider to be young males of the previous year in their first spring plumage. I have no doubt that these hoary edgings soon wear off.

Adult male in breeding-plumage. General colour above clear blue-grey, with a slight wash of yellowish olive on the back and crown; lower rump and upper tail-coverts brighter yellow, the lateral ones very conspicuous; lesser wing-coverts dark ashy; median and greater coverts dusky brown, edged with ashy olive; bastard-wing, primary-coverts, and quills dusky brown, with obsolete margins of ashy olive, the inner secondaries dull white near the base of the outer web, forming a more or less concealed wing-patch; innermost secondaries externally brighter yellow, or yellowish white; tail-feathers blackish brown, edged with olive-yellow, especially near the base; the outer feather entirely white, the next two white, edged with blackish along the outer web for the greater part of its length; lores blackish, extending below the eye; eyelid and a distinct line above the eye white; ear-coverts clear grey, with a whitish patch on the lower parts; throat black, having a white moustachial streak on each side joined to the sides of the neck; remainder of under surface bright yellow, becoming much more brilliant on the under tail-coverts; the sides of the body more ashy; thighs rather browner; axillaries and under wing-coverts ashy whitish, those near the edge of the wing mottled with ashy bases; lower primary-coverts and quills below dusky, with a good deal of white near the base of the secondaries: "bill black; legs, feet, and

claws blackish; iris dark brown." Total length 6·8 inches, culmen 0·55, wing 3·25, tail 3·55, tarsus 0·75.

Adult female in breeding-plumage. Exactly like the male, but paler, and with much less black on the throat. One obtained on the Volga, on the 11th of May, has the white throat of the winter still intact *. Total length 7 inches, culmen 0·6, wing 3·25, tail 3·8, tarsus 0·8.

The black throat is evidently assumed by a change of colour in the feathers and not by a direct moult.

No real specific difference can be found between Eastern and Western examples of the Grey Wagtail. The supposed shorter length of tail in Asiatic specimens is not borne out by the Museum series. On the whole, however, birds from the Asiatic continent have a more richly coloured winter plumage than European specimens, and the throat is often suffused with yellow, but in the summer plumage I cannot detect any difference.

The tail in European specimens ranges from 3·5 to 3·8 inches, while Asiatic specimens have the tail 3·2 to 3·4 inches, but many of them are quite equal to European birds in this respect and have the tail 3·8 inches. Azorean examples do not differ from the European.

Hab. Throughout the greater part of Europe and Siberia, wintering in the plains of India and the Burmese countries, the Malayan peninsula and the Indo-Malayan islands.

a. ♂ ad. æstiv. st.	Europe.	J. Gould, Esq. [P.].
b. ♂ ad. æstiv.; *c*. Juv. hiem. sk.	England.	Gould Collection.
d. Ad. æstiv. sk.	Derbyshire (*O. S.*).	Salvin-Godman Coll.
e. Juv. hiem. st.	Standon, Herts, Dec.	Herbert Langton, Esq. [P.].
f. Juv. autumn. sk.	Hampstead.	Salvin-Godman Coll.
g. Juv. hiem. st.	Cookham, Berks, Oct.	Mr. W. Briggs [P.].
h. ♂ ad. hiem. st.	Brighton, Oct. 1882 (*Swaysland*).	R. B. Sharpe, Esq. [P.].
i, *k*. ♂ ♀ ad. æstiv. sk.	Wiltshire.	Col. Montagu [P.].
l, *m*. Juv. hiem. sk.	Wiltshire.	Col. Montagu [P.].
n, *o*. ♂ ad. æstiv. sk.	Baden, April 3 (*W. Schlüter*).	R. B. Sharpe, Esq. [P.].
p. ♂ ad. æstiv. sk.	Hesse, March 29 (*W. Schlüter*).	R. B. Sharpe, Esq. [P.].
q. Juv. autumn. sk.	Saxony, Sept. 11 (*W. S.*).	R. B. Sharpe, Esq. [P.].
r. ♂ ad. æstiv. sk.	Silesia, May 3 (*W. S.*).	R. B. Sharpe, Esq. [P.].
s, *t*. ♂ ♀ ad. æstiv. sk.	Carpathians, April (*W. S.*).	R. B. Sharpe, Esq. [P.].
u. ♂ ad. æstiv. sk.	Carpathians, May 6 (*W. S.*).	R. B. Sharpe, Esq. [P.].
v, *w*. ♂ ♀ ad. sk.	Tuscany, Italy, April 23.	Prof. Giglioli [P.].
x, *y*. ♀ ad. æstiv. sk.	Azores (*F. G.*).	Salvin-Godman Coll.
z. ♂ ad.; *a'*. [♀] ad. æstiv. sk.	Flores, Azores, May (*F. G.*).	Salvin-Godman Coll.

* In England we have found the fully-fledged young birds flying about and fed by their parents on the 9th of May; the old female had a little black on the throat.

b', *c'*. Ad. æstiv. sk.	S. Michaels, Azores (*F. G.*).	Salvin-Godman Coll.
d', *e'*. ♂ ♀ ad. æstiv. sk.	Madeira, June (*F. G.*).	Salvin-Godman Coll.
f'. ♂ juv. hiem. sk.	Lebka Valley, Bogos Land, Aug. 10.	W. T. Blanford, Esq. [C.].
g'. Juv. hiem. sk.	Ramleh, Egypt.	Sir Samuel Baker [P.].
h'. ♂ juv. hiem. sk.	Nahr El Kelb, Palestine.	Canon Tristram [C.].
i', *k'*. ♂ ♀ ad. æstiv. sk.	Asia Minor.	T. Robson, Esq. [C.].
l'. ♂ ad. æstiv. sk.	Asia Minor, March 29 (*T. Robson*).	Salvin-Godman Coll.
m'. ♂ imm. hiem. sk.	Asia Minor, April 3 (*T. Robson*).	Salvin-Godman Coll.
n'. ♀ juv. sk.	Asia Minor, Sept. 28 (*T. Robson*).	Salvin-Godman Coll.
o'. Juv. autumn. sk.	Constantinople (*T. Robson*).	Salvin-Godman Coll.
p'. ♂ ad. æstiv. sk.	Turkey, March 15 (*T. Robson*).	Gould Collection.
q', *r'*. ♂ ♀ ad. æstiv. sk.	Central Volga, May.	R. B. Sharpe, Esq. [P.].
s'. ♀ imm. hiem. sk.	Near Abadeh, Persia, July.	Sir O. St. John [C.].
t'. ♀ imm. sk.	Candahar, Feb. 24.	Col. C. Swinhoe [P.].
u'. Juv. sk.	Ladak.	Purchased.
v'. Ad. hiem. sk.	Cashmere.	E. M. Langworthy, Esq. [P.].
w', *x'*. Ad. æstiv. sk.	Cashmere.	R. B. Sharpe, Esq. [P.].
y'. Ad. hiem. sk.	Valley of Gurias, Cashmere.	R. B. Sharpe, Esq. [P.].
z'. ♀ ad. æstiv. sk.	Gilgit, July 18.	Col. J. Biddulph [C.].
α. ♀ ad. æstiv. sk.	Gilgit, May 22.	Col. J. Biddulph [C.].
β. ♀ juv. autumn. sk.	Gilgit, Sept. 10.	Col. J. Biddulph [C.].
γ. Juv. autumn. sk.	Gilgit, Aug. 23.	Col. J. Biddulph [C.].
δ. ♂ juv. hiem. sk.	Valley of the Sutlej.	Gould Collection.
ε. ♂ ; *ζ*, *η*, *θ*. ♀ juv. hiem. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
ι. ♀ juv. hiem. sk.	Mhow, Oct. 4.	Col. C. Swinhoe [P.].
κ. Juv. hiem. sk.	Malabar.	R. B. Sharpe, Esq. [P.].
λ, *μ*. ♂ ad. et juv. hiem. sk.	Travancore, Nov.	F. W. Bourdillon, Esq. [C.].
ν. ♂ ad. hiem. sk.	Travancore, Dec.	F. W. Bourdillon, Esq. [C.].
ξ. Juv. hiem. sk.	Ceylon (*Thwaites*).	Hugh Cuming, Esq. [C.].
o. Ad. æstiv. sk.	Behar.	B. H. Hodgson, Esq. [P.].
π. Ad. hiem. sk.	Kumaon (*Strachey*).	India Museum.
ρ, *σ*, *τ*. Ad. æstiv. sk.	Nepal.	B. H. Hodgson, Esq. [P.]. (Types of *M. xanthoschista*.)
υ, *φ*. Ad. hiem. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
χ, *ψ*, *ω*. Juv. hiem. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
a'. Ad.; *β'*, *γ'*. Juv. hiem. sk.	Nepal (*Hodgson*).	India Museum.
δ'. ♂ ad. æstiv. sk.	Kamtschatka, May 27 (*Dybowski*).	R. B. Sharpe, Esq. [P.].
ε', *ζ'*. ♂ ♀ ad. sk.	Argun River, Dauuria, May (*Dybowski*).	Warsaw Museum [E.].

η', θ'. ♂ ad. æstiv. et hiem. sk.	Japan.	Gould Collection.
ι'. ♂ ad. hiem. sk.	Yokohama.	Prof. Milne [C.].
κ', ♂ ad.; λ'. hiem. sk.	Nagasaki, April.	F. Ringer, Esq. [P.].
μ'. ♂ ad. æstiv. sk.	Tientsin, China (*Fleming*).	Gould Collection.
ν'. ♂ ad. hiem. sk.	Rintang, China, April 1850 (*Capt. Ince*).	Gould Collection.
ξ', o'. Ad. et juv. hiem. sk.	Amoy (*R. Swinhoe*).	Gould Collection.
π'. Ad. hiem. sk.	Amoy, Feb. (*R. Swinhoe*).	R. B. Sharpe, Esq. [P.].
ρ'. Juv. hiem. sk.	Amoy (*R. Swinhoe*).	Salvin-Godman Coll.
σ'. ♂ ad. hiem. sk.	Siam.	M. E. Pierre [P.].
τ'. ♂ ad. æstiv. sk.	Assam.	R. B. Sharpe, Esq. [P.].
υ'. Ad. hiem. sk.	Bootan (*Pemberton*).	India Museum.
ϕ'. ♀ juv. sk.	Lower Pegu, Oct. 3.	Oates Collection.
χ'. ♂ ad. hiem. sk.	Malewoon, S. Tenasserim.	Oates Collection.
ψ'. Ad. hiem. sk.	Penang (*Cantor*).	India Museum.
ω', a''. Ad. sk.	Malacca.	India Museum.
β''. ♂ ad. hiem. sk.	West Java.	Wallace Collection.
γ''. ♀ ad. hiem. sk.	Sarawak, Borneo.	Wallace Collection.
δ''. Ad. hiem. sk.	Labuan.	Governor Ussher [C.].
ϵ''. ♂ ad. hiem. sk.	Cebu, Philippines, March.	Alfred Everett, Esq. [C.]
ζ''. ♀ ad. hiem. sk.	Zamboanga, Philippines.	Voy. H.M.S. 'Challenger.'
η'', θ''. Ad. hiem. sk.	Morty Island.	Wallace Collection.
ι''. Ad. hiem. sk.	Amboina.	Wallace Collection.

16. Motacilla citreola.

Die Bachstelze mit dem gelben Bauche, *Lepech. Iter.* ii. p. 187, pl. 8. fig. 1 (1775).

Motacilla citreola, *Pall. Reis. Russ. Reichs*, iii. App. p. 696 (1776); *Gmel. Syst. Nat.* i. p. 963 (1788); *Temm. Man. d'Orn.* p. 259 (1815); *Werner, Atlas, Insectiv.* pl. 75 (1827); *Temm. Man. d'Orn.* iii. p. 180 (1835); *Gould, B. Eur.* ii. pl. 144 (1837); *Keys. u. Blas. Wirb. Eur.* p. xlix (1840); *Schleg. Rev. Crit.* p. xxxix (1844); *Gray, Gen. B.* i. p. 203 (1847); *Middend. Reis. Sibir., Zool.* ii. p. 168, Taf. xiv. figs. 4, 5 (1851); *Naum. Vög. Deutschl.* xiii. p. 117, Taf. 377. figs. 2–4 (1860); *Radde, Reis. Sibir., Vög.* p. 228 (1863); *Gray, Hand-l. B.* i. p. 247, no. 3583 (1869); *Wald. Ibis*, 1869, p. 214; *Wright, t. c.* p. 255; *Borggr. Vög. Norddeutschl.* p. 87 (1869); *Wald. Ibis*, 1870, p. 293; *Cordeaux, Ibis*, 1875, p. 181; *Danf. & Harvie-Brown, t. c.* p. 310; *Dress. B. Eur.* iii. p. 245, pl. 127 (1875); *id. Ibis*, 1876, p. 178; *Brooks, t. c.* p. 502; *Finsch, Ibis*, 1877, p. 49; *id. Verh. z.-b. Gesellsch. Wien*, xxix. p. 175 (1879); *Seebohm, Ibis*, 1878, p. 372, 1882, p. 216.

Yellow-headed Wagtail, *Lath. Gen. Syn.* ii. pt. 2, p. 401 (1783).

Motacilla citrinella, *Pall. Zoogr. Rosso-Asiat.* i. p. 503 (1831); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 157 (1840).

Budytes aureocapilla, *Less. Traité*, p. 422 (1831); *Wald. Ibis*, 1870, p. 293; *Hume, Lahore to Yark.* p. 225, (1873).

Budytes citreola, *Sykes, P. Z. S.* 1832, p. 90; *Bp. Comp. List B. Eur. & N. Amer.* p. 19 (1838); *Jerd. Madr. Journ.* xi. p. 9 (1840); *Blyth, Cat. B. Mus. As. Soc.* p. 138 (1849); *Bp. Consp.* i. p. 250 (1850); *Blas. Ibis*, 1862, p. 70; *Blyth, Ibis*, 1865, p. 49; *Degl. et Gerbe, Orn. Eur.* p. 381 (1867); *Beavan, Ibis*, 1867, p. 328, 1868, p. 78; *Blyth, t. c.*

p. 132; *Hume, Ibis*, 1870, p. 142; *Wald. t. c.* p. 293; *Swinh. P. Z. S.* 1871, p. 364; *Hume, Ibis*, 1871, p. 34; *Brooks, J. A. S. Beng.* xli. p. 82 (1872); *Severtz. Turkest. Jevotn.* pp. 67, 139 (1873); *Ball, Str. F.* 1873, p. 73; *Hume, t. c.* p. 202; *Adam, t. c.* p. 384; *Hume, Str. F.* 1874, p. 239; *Stoliczka, t. c.* p. 464; *Ball, Str. F.* 1875, p. 293; *Scully, Str. F.* 1876, p. 151; *Seebohm & Harvie-Brown, Ibis*, 1876, p. 123; *Blanf. East. Pers.* ii. p. 235 (1876); *Prjev. in Rowley's Orn. Misc.* ii. p. 193 (1876); *Taczan. Bull. Soc. Zool. France*, i. p. 151 (1876); *Hume, Str. F.* 1877, p. 37; *Butler, t. c.* pp. 210, 230; *David & Oust. Ois. Chine*, p. 304 (1877); *Brooks, Ibis*, 1877, p. 208; *Davids. & Wend. Str. F.* 1878, vol. ii. p. 84; *Ball, t. c.* p. 219; *Cripps, t. c.* p. 287; *Hume, Str. F.* 1879, p. 103; *Butler, Cat. B. Sind &c.* p. 41 (1879); *id. Cat. B. S. Bomb. Pres.* p. 55 (1880); *Biddulph, Ibis*, 1881, p. 69; *Scully, t. c.* p. 452; *Davids. Str. F.* 1882, p. 313; *Swinh. Ibis*, 1882, p. 110; *Biddulph, t. c.* p. 280; *Davison, Str. F.* 1883, p. 396; *Severtz. Ibis*, 1883, p. 80; *Radde, Orn. Cauc.* p. 219 (1884).
Budytes calcarata, *Hodgs. Asiatic Research.* xix. p. 190 (1836).

Young male. General colour above earthy brown, the feathers with ashy-grey bases and a subterminal shade of black; the head like the back, with a distinct line of black along the side of the head; lesser wing-coverts like the back; median and greater coverts blackish, edged with earthy brown and broadly tipped with yellowish white; bastard-wing blackish; primary-coverts and quills blackish brown, edged with earthy or olive-brown, the inner secondaries more broadly margined with pale olive-yellowish; tail-feathers blackish brown, edged with olive, the two outer ones white for the most part, with an oblique mark of blackish brown along the inner web; over the eye a tolerably broad eyebrow of brownish white; lores, feathers below the eye, and ear-coverts dark earthy brown; cheeks brownish white, separated from the throat by a broad moustachial line of black; throat brownish white; remainder of under surface of body pale yellowish white, more sandy on the thighs and under tail-coverts, the throat spotted with black on the lower parts and sides, these spots descending down the centre of the fore neck; axillaries ashy, tipped with yellowish white; under wing-coverts whitish; quills dusky below, whitish towards the base of the inner web.

From this dress the young bird moults into its first winter plumage, which is more like that of the old females.

Young male in first winter plumage. General colour above dull olive-brown, rather clearer on the head, the lower back and rump dark ashy grey; upper tail-coverts blackish, edged with ashy, the lateral ones externally white; lesser wing-coverts ashy grey; median and greater coverts blackish, edged with ashy and broadly tipped with white, somewhat shaded with brown on the inner ones; bastard-wing black; primary-coverts blackish, edged with ashy grey; quills blackish brown, edged with hoary white, more distinct on the secondaries, where the margins are broader, the inner secondaries broadly margined with ashy brown; tail-feathers black, the two centre ones with hoary margins, the outer ones pure white, with

an oblique mark of black up the inner web; the penultimate feather white, black for half the outer web, and with a broad oblique black mark up the inner web, the adjoining part of the white feather being also freckled with black; crown of head rather more olive than the back, the feathers with a concealed subterminal shade of black; base of forehead and a broad eyebrow pale yellow; lores ashy; ear-coverts pale yellow, with dusky tips, the hinder margin dusky, along the lower edge a black line; cheeks and throat pale yellow, inclining to tawny on the lower throat, fore neck, and chest; the centre of the breast and abdomen pale yellow; the under tail-coverts white; sides of the body and flanks ashy grey; thighs yellowish; under wing-coverts and axillaries white with dusky bases; quills dusky below, white along the inner web. Total length 7·2 inches, culmen 0·6, wing 3·5, tail 3·5, tarsus 1.

This plumage lasts until the following early spring, becoming gradually much worn and abraded, the back getting quite brown in some examples, while the white edges to the wing-coverts become frayed almost to the verge of disappearance. A specimen collected by Mr. Blanford on the 9th of March, in Baluchistan, is only just commencing the spring moult with a renewal of the inner secondaries, which are broadly margined with ashy white on the outer web; a few bright yellow feathers are also appearing on the ear-coverts, eyebrow, and chin.

On old males with yellow heads in breeding-plumage there are often seen blackish tips to the feathers, especially towards the occiput. These males are very probably birds of the previous year, whose fresh-moulted feathers have blackish ends which gradually wear off.

Many specimens are to be found with grey backs and without the black collar. Mr. Brooks thinks that this collar has been missed in the spring moult; but, in my opinion, it is not put on by a moult, but is assumed by a change of feather, as in some of the Pied Wagtails.

Adult male in breeding-plumage (Viski, Petchora River, June 17; H. Seebohm). General colour above dark ashy grey, the hinder neck and upper mantle black, forming a broad collar round the hind neck, separating the head from the back; upper tail-coverts black, the lateral ones externally white; lesser wing-coverts ashy; median and greater coverts blackish brown, broadly tipped with white and narrowly edged with ashy; bastard-wing, primary-coverts, and quills blackish brown, narrowly margined with ashy, the innermost secondaries blacker and rather broadly margined with white; first primary margined with ashy white; tail-feathers black, the third one slightly tipped with white, the penultimate and outer feather white, with an oblique mark of black along the inner web; head all round, throat, and under surface of body brilliant yellow, with black tips to a few of the occipital feathers; lores whitish; sides of the body dark ashy, the sides of the neck and sides of upper breast black; thighs, vent, and under tail-coverts yellow, the latter becoming white at their ends; axillaries and under wing-

coverts white, mottled with black bases near the edge of the wing; quills dusky below, white near the base of the inner web: "bill black; legs and feet greyish to dusky; claws black; iris dark brown" (*Scully*). Total length 6·5 inches, culmen 0·6, wing 3·4, tail 3·25, tarsus 1.

Adult female in breeding-plumage. Differs from the adult male in being browner above, or at least not so pure grey on the back, and in not having the yellow head; the latter is dull olive-greenish, with the eyelid and a distinct eyebrow yellow; lores ashy; ear-coverts dull yellow washed with olive-brown; cheeks and under surface of body pale yellow, brighter on the throat; the sides of the body and flanks conspicuously ashy grey; under tail-coverts white. Total length 6 inches, culmen 0·55, wing 3·15, tail 2·8, tarsus 0·95.

The *old female* often has a slight wash of bright yellow on the forehead.

The *adult male* in winter has the underparts and sides of the head paler yellow than in summer, and the head, instead of being entirely yellow, is so only on the forehead and along the sides of the crown, the top of the head being dusky greenish, the feathers being tipped with this colour; ear-coverts and sides of head bright yellow, the former with a black line along the lower margin; sides of body and flanks ashy, washed with olive-brown, with a good deal of black appearing on the sides of the neck.

Hab. From North-eastern Europe to the valley of the Yenesay, and ranging throughout Turkestan and Central Asia, westwards to the Caucasus and eastwards to the Himalayas, occurring in winter in the plains of India.

a, b. ♂ ad. sk.	Alexievki, Petchora River, July.	Henry Seebohm, Esq. [P.].
c. ♂; *d.* ♀ ad. sk.	Viski, Petchora River, June.	Henry Seebohm, Esq. [P.].
e. ♂ ad. sk.	Petchora River (*J. A. H. B.*).	Major Feilden and J. A. Harvie-Brown, Esq. [P.].
f. Pull. sk.	Jotloch, Ob River, Aug. 18 (*Dr. Finsch*).	Geogr. Society Bremen.
g. ♂ juv. hiem. sk.	Jeslow, Ob River, Aug. 18 (*Dr. Finsch*).	Geogr. Society Bremen.
h. ♀ ad. sk.	Marka Kul, Chinese Altai, June 8 (*Dr. Finsch*).	Geogr. Society Bremen.
i. ♂ ad. æstiv. sk.	Schtschutschja, July 21 (*Dr. Finsch*).	Geogr. Society Bremen.
k. ♂ ad. sk.	Tashkend, Turkestan, March 13 (*Severtzoff*).	Gould Collection.
l, m, n. [♂]; *o, p.* [♂] ad. et juv. sk.	Kashgar (*Bellew*).	India Museum.
q, r, s. [♂] ad. sk.	Yarkand (*Chapman*).	R. B. Sharpe, Esq. [P.].
t. ♂ juv. hiem. sk.	Isfandak, Baluchistan, March 9.	W. T. Blanford, Esq. [C].
u, v, w. ♂; *x.* ♀ ad. sk.	Candahar, March.	Col. C. Swinhoe [P.].
y. ♀ ad. sk.	Candahar, April.	Col. C. Swinhoe [P.].
z. ♀ ad. sk.	Candahar, May.	Col. C. Swinhoe [P.].

a', *b'*. ♂ ♀ ad. sk.	Pushut, Afghanistan (*Griffith*).	India Museum.
c', *d'*. ♂ ad. sk.	Gilgit, March.	Col. J. Biddulph [C.].
e', *f'*. ♂ ad. sk.	Gilgit, April 26.	Dr. J. Scully [P.].
g'. ♀ ad. sk.	Gilgit, April 26.	Col. J. Biddulph [C.].
h'. ♂; *i'*. ♀ ad. sk.	Gilgit, May.	Col. J. Biddulph [C.].
k', *l'*. ♂ juv. sk.	Gilgit, August.	Col. J. Biddulph [C.].
m'. ♂; *n'*. ♀ juv. sk.	Gilgit, Sept.	Col. J. Biddulph [C.].
o'. [♂] ad. sk.	Peshawur, March.	Col. Way [P.].
p'. [♀] ad. sk.	N.W. Himalayas.	Gould Collection.
q', *r'*. [♂ ♀] ad. sk.	N.W. India.	Gould Collection.
s'. Ad. sk.	Behar.	B. H. Hodgson, Esq. [P.].
t'. Ad. sk.	Bengal (*As. Soc.*).	India Museum.
u'. ♂ ad. æstiv. sk.	Mhow, March 24.	Col. Swinhoe [P.].
v'. ♂ imm. hiem. sk.	Mhow, Jan. 27.	Col. Swinhoe [P.].
w'. ♂ ad. sk.	Kamptee, C. P.	Dr. B. Hinde [P.].
x'. [♂] ad. hiem. sk.	Madras.	T. C. Jerdon, Esq. [P.].
y', *z'*. Ad. sk.	Deccan (*Burgess*).	Gould Collection.
a. [♂] ad. sk.	Western Ghauts (*Coussmaker*).	Gould Collection.
β–*θ*. Ad. hiem; *ι*, *κ*. Juv. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
λ, *μ*. Ad. æstiv. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
ν, *ξ*, *ο*. ♂ ad.; *π*. hiem. sk.	Nepal (*Hodgson*).	India Museum.
ρ. Ad. hiem. sk.	Darjiling.	India Museum.
σ, *τ*, *υ*. Ad. hiem. sk.	Assam.	R. B. Sharpe, Esq. [P.].
φ. Ad. sk.	Assam (*McClelland*).	India Museum.
χ. ♂ juv. hiem. sk.	Bhamau, Feb. 1868.	Dr. J. Anderson [C.].
ψ. ♀ ad. hiem. sk.	Tsitkau, Tapeng River, Feb. 6.	Dr. J. Anderson [C.].

17. Motacilla citreoloides.

Budytes citreoloides, *Hodgs. in Gray's Zool. Misc.* 1844, p. 83; *Gould, B. Asia*, iv. pl. 64 (1865); *Hume, Lahore to Yark.* p. 225 (1873); *Butler & Hume, Str. F.* 1875, p. 490; *Butler, Str. F.* 1877, p. 230.

Budytes citreola, *Blyth, Cat. B. Mus. As. Soc.* p. 138 (1849); *Jerd. B. Ind.* ii. p. 225 (*nec Pall.*, 1863); *Hume, Str. F.* 1873, p. 202; *Adams, t. c.* p. 384.

Budytes aureocapilla, *Pucher. Arch. Mus.* vii. p. 377 (*nec Less.*); *Blyth, Ibis*, 1867, p. 30, 1868, p. 132.

Budytes auricapillus, *Hume, Str. F.* 1869, p. 357, 1870, p. 142.

Budytes citreola, var. melanota, *Severtz. Turkest. Jevotn.* pp. 67, 139 (1873).

Budytes calcaratus, *Blyth, Ibis*, 1865, p. 49; *Wald. Ibis*, 1869, p. 214; *Blyth, Ibis*, 1870, p. 172; *Wald. t. c.* p. 293; *Hume, Ibis*, 1871, p. 34; *Brooks, J. A. S. Beng.* xli. p. 82 (1872); *Hume, Nests and Eggs Ind. B.* p. 382 (1873); *id. Str. F.* 1874, p. 479; *Wald. B. Burm.* p. 96 (1875); *Brooks, Str. F.* 1876, p. 502; *Fairb. t. c.* p. 260; *Brooks, Ibis*, 1877, p. 208; *Anders. Exped. Yun-nan, Zool.* p. 609 (1878); *Hume & Davis. Str. F.* 1878, p. 364; *Hume, t. c.* vol. ii. p. 401; *id.* 1879, p. 103; *Scully, t. c.* p. 316; *Biddulph, Ibis*, 1881, p. 69; *Scully, t. c.* p. 452; *Reid, Str. F.* 1881, p. 48; *Swinh. Ibis*,

1882, p. 110; *Biddulph, t. c.* p. 280; *Oates, B. Brit. Burm.* i. p. 163 (1883); *Severtz. Ibis*, 1883, p. 63.
Motacilla citreoloides, *Gray, Hand-l. B.* i. p. 247, no. 3584 (1869); *Dresser, Ibis*, 1876, p. 178; *Brooks, t. c.* p. 502.
Budytes citreoloides, *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 86.

Nestling and young bird in first plumage. Not to be distinguished from the corresponding stage of *M. citreola*, but apparently rather darker and browner and not so ashy.

Adult male. General colour above glossy black, a little mixed with grey on the rump; upper tail-coverts black, the lateral ones slightly edged with white; lesser wing-coverts ashy brown with black bases; median wing-coverts white, with black bases and slightly washed with yellow; greater coverts blackish, broadly edged and tipped with white, the inner ones entirely white excepting for a blackish base, which, however, is concealed; bastard-wing blackish; primary-coverts and quills blackish brown, edged with white, the inner secondaries with a broad white margin; tail-feathers black, narrowly fringed with white, more broadly on the third; the two outside feathers for the most part white, with an oblique mark of black on the inner web; head all round and nape as well as the sides of the face and entire under surface of the body bright golden yellow; the long under tail-coverts white, slightly washed with yellow; sides of upper breast black like the sides of the neck; flanks slightly washed with greenish; under wing-coverts and axillaries white, the latter slightly washed with yellow; quills dusky below, white near the base of the inner web. Total length 6·6 inches, culmen 0·6, wing 3·25, tail 2·9, tarsus 1.

Adult female in breeding-plumage. General colour above ashy brown, clearer ashy on the lower back and rump; upper tail-coverts blackish, broadly edged with ashy grey; tail as in the male; lesser wing-coverts ashy brown like the back; median and greater coverts blackish brown, edged with ashy and broadly tipped with white; bastard-wing blackish; primary-coverts, quills, and tail as in the male, excepting that the white edges to the inner secondaries are narrower; crown of head like the back, the forehead and a broad eyebrow ashy yellow; lores greyish; ear-coverts and cheeks pale yellowish, with a dusky line on the upper and lower margins of the ear-coverts; cheeks and entire under surface of body pale yellow, a little brighter on the abdomen, the under tail-coverts whiter; sides of the body ashy brown, darker on the sides of the chest, which are more ashy; under wing-coverts and axillaries white with ashy bases; quills dusky below, white towards the base of the inner web. Total length 6·6 inches, culmen 0·65, wing 3·15, tail 2·85, tarsus 0·95.

It is extremely difficult, unless the series has been very carefully noted by the collector, to trace the sequence of changes of plumage in this species; and when in winter dress its resemblance to *M. citreola* is so close that I am not aware of any character which could be said to be absolutely distinctive of the two species. Mr.

Brooks thinks that *M. citreoloides* has a longer tarsus and longer hind claw, but this is not always the case even in fully adult males. In breeding-dress there is always more white on the wing, especially on the inner greater coverts and secondaries, in *M. citreoloides*; and this character appears to run through the other phases of plumage in the species, but when once the edges of the feathers are worn, there is no more reliance to be placed on this point.

The British Museum does not possess an authenticated specimen in winter plumage, but it is evident from some of the black-backed birds which have not finished their spring moult that the winter dress (remains of which are still seen) is browner than in *M. citreola*. Mr. Seebohm has in his collection a male killed on the 11th of November, and marked by Mr. Brooks as the winter plumage of the present species, which is apparently correctly identified, and which may be described as follows:—

Winter plumage of adult male. General colour above olive-brown, a trifle greyer towards the rump; the lower part of the latter and the upper tail-coverts black; lesser wing-coverts like the back; median and greater coverts blackish, edged with ashy brown and broadly tipped, the former with whity brown, the latter with yellowish white; bastard-wing blackish; primary-coverts and quills blackish brown, edged with hoary white, broader and purer white on the inner secondaries; tail-feathers black with narrow hoary margins, the two outer feathers white, with a broad oblique mark of blackish brown on the inner web, more extended on the penultimate feather; head a trifle more olive-yellow than the back, with a very broad and distinct eyebrow of bright yellow; cheeks and ear-coverts bright yellow, with greenish black on the upper and under margin; entire under surface of body bright yellow, whiter on the under tail-coverts; the sides of the body ashy brown, darker on the sides of the upper breast, and with a few spots of black on the sides of the lower throat; under wing-coverts and axillaries white, washed with yellow, with dull ashy bases. Total length 6·3 inches, culmen 0·6, wing 3·3, tail 2·9, tarsus 1·05.

Hab. From the Altai to Afghanistan and Turkestan, Cashmere and the Himalayas, to Nepal, wintering in the plains of India.

a, b. ♂ ad. sk.	Candahar, March.	Col. C. Swinhoe [P.].
c. ♂ ad. sk.	Thibet.	Earl of Gifford [P.].
d. ♂ ad. sk.	Gilgit, March.	Col. J. Biddulph [C.].
e, f. ♂ ad. sk.	Gilgit, May.	Col. J. Biddulph [C.].
g. ♂ ad. sk.	Gilgit, June.	Col. J. Biddulph [C.].
h, i. ♂ ad. sk.	Gilgit, August.	Col. J. Biddulph [C.].
k, l. ♂ ♀ juv. sk.	Gilgit, August.	Col. J. Biddulph [C.].
m. ♀ ad. sk.	Deosai Plain, July.	Col. J. Biddulph [C.].
n. ♂ ad. sk.	Astor Valley, Cashmere, May.	Col. J. Biddulph [C.].
o. ♀ ad. sk.	Cashmere (*Brooks*).	Canon Tristram [P.].
p. ♂ ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
q. Ad. sk.	N.W. India.	Gould Collection.

r. Ad. sk.	Himalayas.	Dr. Royle [P.].
s. Ad.; *t*, *u*. Imm. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
v. Ad.; *w*–*b'*. Imm. sk.	Nepal (*Hodgson*).	India Museum.
c', *d'*. [♂] ad. sk.	Assam.	R. B. Sharpe, Esq. [P.].

18. **Motacilla campestris.** (Plate VI. figs. 1, 2.)

The Yellow Water Wagtail, *Edw. Glean.* ii. p. 102, pl. 258 (1758); *Penn. Brit. Zool.* ii. p. 276 (1768).

Motacilla campestris, *Pall. Reis. Russ. Reichs.* iii. *Anhang*, p. 697 (1776); *Blas. in Naum. Vög. Deutschl.* xiii. p. 130, Taf. 372 (1860); *More*, *Ibis*, 1865, p. 123; *Harting*, *B. Middlesex*, p. 66 (1866); *Borggr. Vogelf. Norddeutschl.* p. 87 (1869); *Gray*, *Hand-l. B.* i. p. 247, no. 3581 (1869).

La Bergeronette du Printemps, *Daubent. Pl. Enl.* vi. pl. 674. fig. 2 (*nec Briss.*).

Motacilla flava (*non L.*), *Donovan*, *Nat. Hist. Brit. B.* i. pl. xv. (1794); *Gould*, *P. Z. S.* 1832, p. 129; *Selby*, *Brit. B.* p. 255, pl. xlix. fig. 3 (1833); *Gould*, *B. Eur.* ii. pl. 145 (1837); *Yarr. Brit. B.* i. p. 380 (1843); *Thompson*, *B. Irel.* i. p. 221 (1849); *Sterland*, *B. Sherw. Forest*, p. 92 (1867).

Yellow Wagtail, *Lath. Gen. Syn.* ii. pt. 2, p. 400 (1783).

Motacilla flaveola (*non Pall.*), *Temm. Man. d'Orn.* 1835, p. 183; *Werner*, *Atlas*, *Insectivores*, pl. 77; *Crespon*, *Orn. Gard.* p. 175 (1840); *De Selys Longchamps*, *Faune Belge*, p. 89 (1842); *id. Naum.* 1856, p. 390; *Blas. in Naum. Vög. Deutschl.*, *Anhang*, xiii. p. 129 (1860); *Fallon*, *Ois. Belg.* p. 69, note (1875).

Motacilla citreola (*nec Pall.*), *Calvi*, *Cat. Orn. Genov.* p. 37 (1828, *nec V.*).

Budytes flavissima, *Blyth*, *Mag. Nat. Hist.* vii. p. 342 (1834).

Budytes flava (*nec Linn.*), *Eyton*, *Cat. Brit. B.* p. 15 (1836).

Budytes rayi, *Bp. Comp. List B. Eur. & N. Amer.* p. 18 (1838); *Macgill. Brit. B.* ii. p. 212 (1839); *id. Man. Brit. Orn.* p. 163 (1840); *Rüpp. Syst. Uebers.* p. 59 (1845); *Gordon*, *Contr. Orn.* 1849, p. 7; *Blyth*, *Cat. B. Mus. As. Soc.* p. 138 (1849); *Bp. Consp.* i. p. 250 (1850); *Hartl. Orn. Westafr.* p. 72 (1857); *Jaub. et Barth. Lapomm. Rich. Orn.* p. 280, cum tab. (1859); *id. J. f. O.* 1861, p. 162; *Gould*, *B. Gt. Br.* iii. pl. 3 (1862-73); *Degl. & Gerbe*, *Orn. Eur.* i. p. 378 (1867); *Blyth*, *Ibis*, 1867, p. 30; *Loche*, *Expl. Sci. Algér.*, *Ois.* ii. p. 8 (1867); *Pelz. J. f. O.* 1868, p. 312; *id. Ibis*, 1868, p. 312; *Hume*, *Ibis*, 1869, p. 357; *Blyth*, *Ibis*, 1870, p. 173; *Elwes & Buckley*, *t. c.* p. 195; *Layard*, *Ibis*, 1871, p. 105; *Fritsch*, *Vög. Eur.* tab. xvii. fig. 19 (1870); *Salvad. Faun. Ital.*, *Ucc.* p. 122 (1871); *Sharpe*, *Cat. Afr. B.* p. 73 (1871); *Gurney*, *Ibis*, 1873, p. 282; *Brooks*, *Ibis*, 1876, p. 500; *Ayres*, *Ibis*, 1878, p. 294; *Hume*, *Str. F.* 1878, vol. ii. p. 404; *id.* 1879, p. 103; *Irby*, *Ibis*, 1879, p. 344; *C. Swinhoe*, *Ibis*, 1882, p. 109; *Irby*, *Ibis*, 1883, p. 185; *Radde*, *Orn. Cauc.* p. 220 (1884); *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 167 (1884).

Motacilla flava anglica, *Sundev. Öfv. K. Vet.-Akad. Förh. Stockh.* 1840, p. 53.

Budytes campestris, *Keys. & Blas. Wirb. Eur.* p. xlix (1840, pt.); *Brehm*, *Naum.* 1855, p. 280; *id. Reis. Habesch*, p. 214 (1863); *Blanf. Geol. & Zool. Abyss.* p. 382 (1870); *Sharpe*, *ed. Layard's B. S. Afr.* p. 551 (1884).

Motacilla flava rayi, *Schleg. Rev. Crit.* p. xxxviii (1844); *Heugl. Orn. N.O.-Afr.* i. p. 321 (1869).
Motacilla rayi, *Hewits. Brit. B. Eggs*, p. 129, pl. 34. fig. 3 (1846); *Powys, Ibis*, 1860, p. 229; *Stevenson, B. Norf.* i. p. 165 (1866); *Smith, Ibis*, 1868, p. 442; *Gray, Hand-l. B.* i. p. 247, no. 3582 (1869); *Wright, Ibis*, 1870, p. 491; *R. Gray, B. W. Scotl.* p. 144 (1871); *Harting, Handb. Brit. B.* p. 23 (1872); *Newt. ed. Yarrell's Brit. B.* i. p. 564 (1874); *Dress. B. Eur.* iii. p. 277, pl. 131 (1875); *Harting, Summer Migr.* p. 117 (1875); *Fallon, Ois. Belg.* p. 69, note (1875); *Dress. Ibis*, 1876, p. 179; *B. O. U. List Brit. B.* p. 31 (1883); *Seebohm, Hist. Brit. B.* ii. p. 212 (1883).
Motacilla flava anglica, *Schleg. Vog. Nederl.* p. 190 (1854).
Budytes neglectus (*nec Gould*), *Brehm, Vogelf.* p. 142 (1855); *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 86.
Motacilla anglorum, *Flor. Prev., teste Degl. & Gerbe, Orn. Eur.* i. p. 442 (1867).
Motacilla flava campestris, *Heugl. Orn. N.O.-Afr.* i. p. 322 (1869).
Motacilla flava, var. rayi, *Finsch & Hartl. Vög. Ostafr.* p. 273 (1870).
Motacilla flava, var. campestris, *Finsch & Hartl. t. c.* p. 273 (1870).
Motacilla flava, var. flavifrons, *Severtz. Turkest. Jevotn.* p. 67 (1873).
Budytes flavifrons, *Severtz. Str. F.* 1875, p. 424.

Young in first plumage. General colour above earthy brown, the feathers of the back and scapulars darker brown with paler ends; lower rump rather paler brown; the upper tail-coverts mottled, dark brown with pale reddish-brown tips; lesser wing-coverts like the back; median wing-coverts blackish, edged and broadly tipped with whity brown; greater coverts blackish, externally pale earthy brown, lighter and more of a ruddy white at the ends; bastard-wing blackish; primary-coverts and quills blackish, externally edged with light earthy brown, paler and broader on the secondaries; tail-feathers blackish, edged with pale brown, the two outer ones white, with a broad edging of dark brown on the inner web, much wider on the penultimate feather; head brown like the back, with a blackish line along the sides of the crown; a streak of dull white above the eye over the ear-coverts; lores also dull white; ear-coverts brown; throat dull white; remainder of under surface of body pale earthy fulvous, the lower throat mottled with black spots descending on the fore neck in a mesial streak; under tail-coverts slightly tinged with yellow; axillaries white, with a faint tinge of yellow; under wing-coverts ashy white, mottled near the edge of the wing with dusky bases.

From the first plumage the young bird obtains its winter dress by a moult, the winter plumage of the young bird being easily recognized by the light fawn-colour on the throat and eyebrow. Before they leave England many of the young, probably those of the first brood, become paler, and almost white on the throat. The young female is always paler than the young male and has always less yellow on the belly. There are spots to be seen on the fore neck in both sexes in the winter plumage.

Young male in first winter plumage. General colour above olive-brown, more inclining to olive-yellow on the lower back, rump, and

upper tail-coverts; upper tail-coverts blackish, edged with olive-yellow, the lateral ones externally yellowish white; lesser wing-coverts like the back; median and greater wing-coverts blackish, edged externally with olive-yellowish, whiter towards the ends; bastard-wing black; primary-coverts and quills blackish, edged with olive-yellowish, whiter on the secondaries, where the edges are also much broader; tail-feathers blackish, edged narrowly with yellowish, the two outer ones white, with a blackish edging to the inner web; a broad eyebrow of pale fawn-brown; ear-coverts brown; throat and chest pale fawn-brown, with dusky spots on the latter, plainer in the centre, the chin and cheeks rather white; abdomen, flanks, thighs, and under tail-coverts bright yellow; axillaries and under wing-coverts ashy white, slightly tinged with yellow, the latter mottled with dusky near the edge of the wing.

Young female in winter plumage. Similar to the male, but whiter on the abdomen, only the lower flanks, lower abdomen, and under tail-coverts being yellow; throat and breast dull white, washed with fawn-colour on the throat and chest.

Young birds in the same bleached plumage in which some of them leave England occur plentifully in Senegambia during the European winter; and it is evident that a complete moult takes place, the yellow under surface being completely assumed before the birds return.

This I believe to be the case in young birds only. The old ones seem to leave in brilliant winter plumage, with a bright-yellow eyebrow, returning in spring in a plumage very little brighter than the one they depart with.

Adult male in breeding-plumage. General colour above dark olive-yellowish on the back, clearer and brighter yellow on the head and also on the rump and upper tail-coverts, the latter being brown edged with olive-yellow, the lateral ones externally yellowish white; lesser wing-coverts olive-yellow like the back; median and greater coverts blackish brown, externally ashy brown and yellowish white near the ends of the outer webs and at the tips of the feathers; bastard-wing, primary-coverts, and quills dark brown or blackish brown, edged externally with ashy brown, the secondaries with dull white, the innermost submarginally paler brown; tail-feathers blackish brown, edged with yellowish olive, the two outer ones white with an oblique mark of brown along the inner web, the third one white along the outer web, and with an irregular shaped wedge of white on the inner web extending far up the feathers; forehead decidedly brighter yellow than the rest of the crown; from the base of the nostrils a broad eyebrow of bright yellow; eyelid and lores also bright yellow; ear-coverts bright yellow in the centre, yellowish olive on the upper and hinder portion; cheeks and entire under surface of body bright yellow, the sides of the body slightly tinged with greenish yellow; axillaries bright yellow; under wing-coverts dull white, slightly washed with yellow, and mottled with dusky bases near the edge of the wing; lower primary-coverts and quills light brown, whiter along the inner webs, espe-

cially near the base. Total length 6·3 inches, culmen 0·5, wing 3·15, tail 2·7, tarsus 0·9.

Obs. Some of the old males are beautiful birds in spring, being quite of a canary-yellow; but this bright colour gets greatly deteriorated and abraded during the breeding-season, the upper surface being worn to an ashy greenish and the yellow of the under surface to a dull yellow.

Adult female. Similar to the male, but duller in colour and not having the yellow forehead, which is greenish like the head. Total length 6·6 inches, culmen 0·5, wing 3·1, tail 2·8, tarsus 0·9.

Adult in winter plumage. Rather greener than in the summer dress; the head like the back; ear-coverts greenish like the back; a broad yellow eyebrow; under surface of body yellow, with a slight saffron tinge on the chest; a few brown spots on the sides of the throat and on the fore neck, mostly concealed. Total length 6·8 inches, culmen 0·5, wing 3·4, tail 3·1, tarsus 0·95.

Eastern specimens (Plate VI. fig. 2) are decidedly more brilliant than the Western (Plate VI. fig. 1), and have the entire head yellow in the old bird, the ear-coverts being uniformly yellow. Should these characters be confirmed by a large series, the Eastern race will have to be distinguished. The winter home will also be found to be more easterly also, as Mr. Blanford's specimen from Adigrat, as well as those from the Zambesi collected by Sir John Kirk, belong to the brighter form, which passes the summer in the Altai Mountains and Turkestan.

Hab. Occurs in Western Europe on migration, breeding in the British Islands, wintering in Western and Southern Africa. A second colony occurs in South-eastern Russia and extends to Turkestan.

a, b. ♂ ♀ ad. æstiv. st.	Thetford, Norfolk, June.	Lord Walsingham [P.].
c, d. ♂ ♀ ad. æstiv. st.	Leicestershine, June.	Theodore Walker, Esq. [P.].
e. Ad. autumn. sk.	Hampstead, Middlesex.	F. D. Godman and O. Salvin, Esqrs. [P.].
f, g. ♂ ♀ ad. æstiv. sk.	Near London.	Gould Collection.
h. Juv. hiem. sk.	Cookham, Berks, Aug. 20.	R. B. Sharpe, Esq. [P.].
i, k. ♂ ♀ ad. sk.	Cookham, Berks, May 14.	R. B. Sharpe, Esq. [P.].
l. Ad. sk.	Plumstead, Kent, May.	R. B. Sharpe, Esq. [P.].
m, n. Juv. hiem. sk.	Plumstead, Aug. & Sept.	R. B. Sharpe, Esq. [P.].
o, p. ♂ ♀ æstiv. sk.	Romney Marsh, May.	R. B. Sharpe, Esq. [P.].
q. ♂ ad. æstiv. sk.	Romney Marsh, July 8.	R. B. Sharpe, Esq. [P.].
r, s. ♀ juv. autumn. sk.	Romney Marsh, Aug. 29.	R. B. Sharpe, Esq. [P.].
t, u, v. ♂ juv. autumn. sk.	Romney Marsh, Sept.	R. B. Sharpe, Esq. [P.].
w. Ad. hiem. sk.	Pagham, Sussex, Sept. 4.	R. B. Sharpe, Esq. [P.].
x–e'. Juv. autumn. sk.	Pagham, Sussex, Sept.	R. B. Sharpe, Esq. [P.].
f'. ♂ ad. hiem.; *g'.* ♀ juv. autumn. st.	Brighton, Sussex, Sept.	Messrs. Swaysland [C.].
h'. ♂ ad. æstiv. st.	Brighton, Sussex, April.	Messrs. Swaysland [C.].
i'. ♂ ad. æstiv. st.	Brighton, April (*Swaysland*).	R. B. Sharpe, Esq. [P.].

k'. ♂ ad. heim.; *l'*, *m'*. Juv. autumn. sk.	Brighton, Sept. (*Swaysland*).	R. B. Sharpe, Esq. [P.]
n'. ♂ juv. autumn. sk.	Brighton, Aug. (*Swaysland*).	R. B. Sharpe, Esq. [P.].
o'. Juv. sk.	Brighton, June (*Swaysland*).	Edward Hargitt, Esq. [P.].
p'. Juv. sk.	Lancing, Sussex, June 20 (*Swaysland*).	R. B. Sharpe, Esq. [P.].
q'. Ad. sk.	Wiltshire.	Col. Montagu [P.].
r'. Ad. st.	France.	R. B. Sharpe, Esq. [P.].
s'. Ad. sk.	Heligoland.	Gould Collection.
t', *u'*. Ad. sk.	Altai Mountains.	Mr. Brandt.
v'. Ad. sk.	Egypt.	W. B. D. Turnbull, Esq. [P.].
w'. ♂ ad. sk.	Adigrat, Tigré.	W. T. Blanford, Esq. [C.].
x'–a. Ad. sk.	Tete, Zambesi (*Sir John Kirk*).	Livingstone Expedition [C.].
β. Juv. hiem. sk.	Natal.	Dr. Gueinzius [C.].
γ. Ad. hiem. sk.	Gaboon (*Verreaux*).	Gould Collection.
δ. Ad. hiem. sk.	Gold Coast.	Col. Strachan [P.].
ε. Juv. hiem. sk.	Ashantee.	Godfrey Lagden, Esq. [P.].
ζ–θ. Ad.; *ι–ο*. Juv. hiem. sk.	River Gambia.	Sharpe Collection.
π, *ρ*. Ad. hiem. sk.	Dakar, Senegal (*Marche*).	M. A. Bouvier.

19. Motacilla taivana.

Budytes rayi (*nec Bp.*), *Swinhoe*, *Ibis*, 1862, p. 260.
Budytes flavus, var. rayi, *Swinhoe*, *Ibis*, 1868, p. 309.
Budytes taivanus, *Swinhoe*, *P. Z. S.* 1863, p. 334, *id. Ibis*, 1866, p. 138; *Blyth*, *Ibis*, 1867, p. 30; *Swinh. Ibis*, 1870, p. 346; *id. P. Z. S.* 1871, p. 364; *Brooks*, *Ibis*, 1877, p. 207; *Tacz. Bull. Soc. Zool. France*, i. p. 151 (1876); *David & Oust. Ois. Chine*, i. p. 303 (1877); *Hume*, *Str. F.* 1879, p. 156; *Kelham*, *Ibis*, 1882, p. 18.
Budytes melanotis, *Swinhoe*, *Ibis*, 1864, p. 364.
Budytes campestris (*nec Pall.*), *Tacz. J. f. O.* 1874, p. 319.
Budytes flavus taivanus, *Seebohm*, *Ibis*, 1884, p. 39; *Blakist. Amended List B. Japan*, p. 55 (1884).

Adult male in breeding-plumage. General colour above dull olive-green; upper tail-coverts black, edged with olive-green; lesser wing-coverts ashy brown, obsoletely edged with olive-green; median and greater coverts blackish, tipped with olive-yellowish, inclining to yellowish white at the ends of the greater coverts; bastard-wing, primary-coverts, and quills dusky blackish, narrowly edged with olive, the inner secondaries more broadly with yellowish white; tail-feathers black, the outer one white, with an oblique mark of blackish brown on the inner web; the penultimate feather blackish, white at the tip of the outer web, and with a large wedge-shaped mark of white on the inner web extending down two thirds of the feather; head like the back, greyer at the base of the fore-head; lores, feathers below the eye (including the lower margin of the eyelid), and ear-coverts jet-black; a very distinct eyebrow and the upper margin of the eyelid bright yellow; cheeks and entire

under surface of body bright yellow, olive-green on the sides of the breast and flanks; the fore neck with some dusky greenish spots; thighs dusky at base; under tail-coverts yellow; axillaries pale yellow, with dull ashy bases; under wing-coverts greyish white, slightly washed with yellow, with dull ashy bases; quills dusky below, white near the base of the inner web: "iris dusky brown" (*Dybowski*). Total length 7 inches, culmen 0·55, wing 3·2, tail 2·9, tarsus 1.

Adult female. General colour above dull olive, browner on the upper back and mantle, and ashy washed with olive on the rump; upper tail-coverts blackish, edged with olive; lesser wing-coverts olive-yellowish; median and greater coverts blackish, edged with olive-yellowish, whiter at the ends of the latter; bastard-wing, primary-coverts, and quills blackish, edged narrowly with olive, the margins broader and yellowish white on the inner secondaries, the first primary white along the edge of the outer web; tail-feathers as in the adult; head like the back; lores, feathers below the eye, and ear-coverts dusky blackish; a broad eyebrow of yellowish white; cheeks and throat white, the latter washed with fawn-colour on the lower parts; fore neck and breast pale fawn-colour, more ashy on the sides of the latter; flanks pale olive-brown; centre of breast white, slightly washed with sulphur-yellow; the lower abdomen, thighs, and under tail-coverts pale sulphur-yellow; axillaries ashy, edged with sulphur-yellow; under wing-coverts white, washed with yellow near the edge of the wing, which is slightly mottled with dusky bases; quills dusky below, dull white near the base of the inner web. Total length 6·3 inches, culmen 0·55, wing 3·2, tail 2·95, tarsus 1.

With the Gould Collection the Museum received the Singapore specimen alluded to by Mr. Swinhoe (*l. c.*). There can be little doubt that it represents the winter plumage of the present species.

The upper surface is olive-brown; the wings dusky brown, with few remains of the light margins to the coverts and secondaries; the eyebrow is pure sulphur-yellow; the lores and ear-coverts blackish brown, washed with olive; the under surface white, more ashy on the breast, which has some yellow feathers intermingled, doubtless the commencement of the summer plumage, as the throat is already bright yellow.

I have seen in some collections birds from the Moluccas marked *Motacilla taivana*; but in every case I believe the specimens to be referable to true *M. flava*, traces of blue-grey being always discernible on the head.

Hab. From the Kurile Islands, Eastern Siberia, Dauria, and Amoor Land, throughout China and Formosa, wintering in the Malayan peninsula.

a. ♂ ad. sk.	Dauria, May 18 (*Dybowski*).	Warsaw Museum [E.].
b. ♂ ad. sk.	N. Formosa.	W. Hobson, Esq. [P.].
c. ♂ ad. sk.	N. Formosa, May (*Swinhoe*).	Gould Collection.
d. [♀] ad. sk.	Slighe, Nov. (*Swinhoe*).	Oates Collection.
e, *f*. Juv. sk.	Singapore.	Gould Collection.

20. Motacilla flava. (Plate VI. figs. 3–5.)

La Bergeronette de Printemps, *Briss. Orn.* iii. p. 468 (1760, pt.).
La Bergeronette de Java, *Briss. t. c.* p. 475, pl. 25. fig. 2 (1760); *Montb. Hist. Nat. Ois.* v. p. 266.
Motacilla flava, *Linn. Syst. Nat.* i. p. 331 (1760); *Horsf. Trans. Linn. Soc.* xiii. p. 156 (1820); *Temm. Man. d'Orn.* i. p. 260 (1820); *Naum. Vög. Deutschl.* iii. p. 839, Taf. 88 (1823); *Roux, Orn. Prov.* pl. 196 (1825); *Werner, Atlas, Insectivores*, pl. 76 (1827); *Rüpp. Neue Wirb.* p. 84 (1835–40); *Temm. Man. d'Orn.* 1835, p. 181, 1840, p. 622; *Crespon, Orn. Gard.* p. 174 (1840); *Keys. & Blas. Wirb. Eur.* p. 175 (1840); *Nord. in Démid. Voy. Russ. Mérid.* iii. p. 156 (1840); *Selys-Longch. Faune Belge*, p. 88 (1842); *Schl. Rev. Crit.* p. xxxviii (1844); *Hewits. Eggs Brit. B.* i. p. 127, pl. 34. figs. 1, 2 (1846); *Gray, Gen. B.* i. p. 203 (1847); *Middend. Reis. Sibir., Zool.* p. 168 (1851); *Kjærb. Dann. Fugle*, Taf. xix. fig. 3, xix. *Suppl.* fig. 4 (1852); *Schl. Vog. Nederl.* pls. 98, 99 (1854); *Sundev. Svensk. Fogl.* pl. ix. figs. 4, 5 (c. 1856); *Selys-Longch. Naum.* 1856, p. 390 (cum var.); *Salvin, Ibis*, 1859, p. 310; *Tristr. t. c.* p. 420; *Simpson, Ibis*, 1860, p. 393; *Linderm. Vög. Griechenl.* p. 80 (1860); *Blasius, in Nachtr. Naum. Vög. Deutschl.* p. 120 (1860); *Schl. Dier. Nederl., Vog.* pl. ix. figs. 9, 10 (1861); *F. & P. Godman, Ibis*, 1861, p. 82; *Wright, Ibis*, 1864, p. 62; *Finsch, Neu-Guinea*, p. 167 (1865); *Smith, Ibis*, 1868, p. 442; *Gray, Hand-l. B.* i. p. 246, no. 3578 (1869); *Keul. Onze Vogels*, i. pl. 26 (1869); *Baird, Trans. Chicago Acad.* i. p. 312, pl. 30. fig. 1 (1869); *Dall & Bann. t. c.* p. 297 (1869); *Heugl. Orn. N.O.-Afr.* i. p. 320 (1869); *Wyatt, Ibis*, 1870, p. 15; *Finsch & Hartl. Vög. Ostafr.* p. 268 (1870); *R. Gray, B. W. Scotl.* p. 113 (1871); *Swinh. P. Z. S.* 1871, p. 364; *Harting, Handb. Brit. B.* p. 23 (1872); *Pelz. Verh. z.-b. Gesellsch. Wien*, viii. p. 428 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 167 (1874); *Danford & Harvie-Brown, Ibis*, 1875, p. 310; *Dresser, B. Eur.* iii. p. 261, pl. 129. figs. 1, 2 (1875); *id. Ibis*, 1876, p. 178; *Finsch, t. c.* p. 62; *Seebohm, Ibis*, 1878, p. 351; *E. Adams, t. c.* p. 423; *Coues, B. Color. Vall.* p. 192 (1878); *Seebohm, Ibis*, 1882, p. 216; *Dixon, t. c.* p. 571; *Seebohm, Ibis*, 1883, p. 20; *id. Hist. Brit. B.* ii. p. 208 (1883); *Shelley, t. c.* p. 543; *B. O. U. List Brit. B.* p. 31 (1883); *Tristr. Faun. & Flor. Palest.* p. 55 (1884); *Radde, Orn. Cauc.* p. 220 (1884).
Parus luteus, *S. G. Gmelin, Reis. Russl.* iii. p. 101, pl. 20. fig. 1 (1774).
Parus caspicus, *S. G. Gmelin, t. c.* p. 104, pl. 20. fig. 2 (1774).
La Bergeronette de l'isle de Timor, *Montb. Hist. Nat. Ois.* v. p. 275.
Motacilla boarula, *β.* javensis, *Gm. Syst. Nat.* i. p. 998 (1788).
Motacilla flaveola, *Pall. Zoogr. Rosso-Asiat.* i. p. 501 (1811).
Motacilla chrysogastra, *Bechst. Kurze Uebers.* p. 327 (1811).
Motacilla flavescens, *Steph. Gen. Zool.* pt. 2, p. 559 (1817); *Gray, P. Z. S.* 1860, p. 350; *Wall. P. Z. S.* 1863, p. 485; *Gray, Hand-l. B.* i. p. 247, no. 3586 (1869).
Budytes flava, *Cuvier, Règne Anim.* p. 371 (1817); *Brehm, Vög. Deutschl.* p. 344 (1831); *Ménétr. Cat. Rais. Cauc.* p. 36 (1832); *Bp. Faun. Ital., Ucc.* pl. 31. fig. 1 (1832–44); *Macgill. Brit. B.* ii. p. 208 (1839); *Bp. Consp.* i. p. 249 (1850); *Cab. Mus. Hein.* Th. i. p. 13 (1850); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 279 (1850); *Tristr. Ibis*, 1859, pp. 31, 420; *Salvin, t. c.* pp. 310, 358; *Swinh. Ibis*, 1860, p. 55, 1861, pp. 36, 333, 411, 1862, p. 260, 1863, p. 208; *Brehm,*

Reis. Habesch, p. 214 (1863); *Adams, Ibis*, 1864, p. 20; *Salvad. Ucc. Sard.* p. 58 (1864); *Sel. P. Z. S.* 1864, p. 108; *Altum, J. f. O.* 1865, p. 247; *Blyth, Ibis*, 1865, p. 50; *Giglioli, t. c.* p. 55; *Lilford, Ibis*, 1866, pp. 187, 386, 391; *Tristr. t. c.* p. 290; *Chambers, Ibis*, 1867, p. 104; *Drake, t. c.* p. 427; *Malmgr. t. c.* p. 230; *Degl. & Gerbe, Orn. Eur.* i. p. 376 (1867); *Loche, Expl. Sci. Algér., Ois.* ii. p. 7 (1867); *Heugl. Orn. N.O.-Afr.* i. p. 321 (1868); *Doderl. Avif. Sicil.* p. 101 (1869); *Dall & Bann. Tr. Chicago Acad.* i. p. 312, pl. 30. fig. 1 (1869); *Wyatt, Ibis*, 1870, p. 15; *Elwes & Buckley, t. c.* p. 195; *Layard, t. c.* p. 282; *Gould, B. Gr. Brit.* iii. pl. 4 (c. 1870); *Fritsch, Vög. Eur.* tab. 17. figs. 17, 18 (1870); *Salvad. Faun. Ital., Ucc.* p. 122 (1871); *Swinh. P. Z. S.* 1871, p. 364; *Ayres, Ibis*, 1871, p. 154; *Saunders, t. c.* p. 215; *Shelley & Buckley, t. c.* p. 292; *Sharpe, Cat. Afr. B.* p. 73 (1871); *Gurney in Anderss. B. Dam. Ld.* p. 112 (1872); *Shelley, B. Egypt*, p. 128 (1872); *Coues, Key N. Amer. B.* p. 90 (1872); *Severtz. Turkest. Jevotn.* p. 67 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* p. 167 (1874); *Blanf. East. Pers.* ii. p. 233 (1876); *Tacz. Bull. Soc. Zool. France*, 1876, p. 150; *David & Oust. Ois. Chine*, p. 302 (1877); *Brooks, Ibis*, 1877, p. 208; *Ayres, t. c.* p. 294; *Homeyer, J. f. O.* 1878, p. 130; *Bogd. B. Cauc.* p. 108 (1879); *Giglioli, Ibis*, 1881, p. 200; *Ketham, t. c.* p. 517; *Shelley, P. Z. S.* 1881, p. 573; *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 15 (1881); *Coues, Check-list*, p. 32 (1882); *C. Swinh. Ibis*, 1882, p. 110; *Irby, Ibis*, 1883, p. 185; *Severtz. t. c.* p. 64; *Nelson, Cruise R.S. 'Corwin,'* p. 62 (1883); *Dybowski, Bull. Soc. Zool. France*, viii. p. 360 (1883); *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 86; *Sharpe, ed. Layard's B. S. Afr.* p. 550 (1884); *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 166 (1884).

Motacilla neglecta, *Gould, P. Z. S.* 1832, p. 129; *id. B. Eur.* ii. pl. 146 (1837); *E. C. Taylor, Ibis*, 1859, p. 48.

Motacilla flava vulgaris, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1840, p. 53.

Budytes gouldi, *Macgill. Man. Brit. B.* i. p. 163 (1840).

Motacilla (Budytes) flava, *Schrenck, Sibir. Reis.* p. 345 (1853); *Radde, Reis. Ost-Sibir., Vög.* p. 230 (1863).

? Budytes pygmæus, *A. E. Brehm, J. f. O.* 1854, p. 74, note.

Budytes fasciatus, *C. L. Brehm, Vogelf.* p. 141 (1855).

? Budytes pygmæus, *Oscar Brehm, in C. L. Brehm's Vogelf.* p. 142 (1855).

Motacilla flava typica, *Radde, Reis. Ost-Sibir., Vög.* p. 229 (1863).

Budytes viridis (*non auct.*), *Sclater, P. Z. S.* 1863, p. 214; *Swinh. Ibis*, 1864, p. 418; *Walden, Trans. Zool. Soc.* viii. p. 65 (1872); *Salvad. Ucc. Born.* p. 200 (1874); *Tweedd. Ibis*, 1877, p. 228; *id. P. Z. S.* 1878, p. 82; *Meyer, Ibis*, 1879, p. 127; *Sharpe, t. c.* p. 262; *Salvad. Orn. Papuasia etc.* ii. p. 430 (1881).

Budytes cinereocapillus, *Swinh. Ibis*, 1863, pp. 94, 309; *id. P. Z. S.* 1871, p. 364.

Motacilla flava cinereocapilla fasciata, *Heugl. Orn. N.O.-Afr.* i. p. 321 (1869).

Budytes leucostriatus (*var. hybrida*), *Homeyer, J. f. O.* 1878, p. 128.

Budytes flavescens, *Homeyer, J. f. O.* 1878, p. 131.

Adult male. General colour dull olive-yellow, the rump lighter; upper tail-coverts dusky, edged with olive-yellow, the lateral ones externally yellowish white; lesser wing-coverts brown, with a slight olive-yellow tinge; median wing-coverts blackish, broadly tipped

with pale yellowish white; greater wing-coverts blackish, edged externally with pale brown, inclining to whitish at the tips; bastard-wing blackish brown; primary-coverts and quills brown, edged with ashy brown, tinged with olive on the primaries, the inner secondaries rather more broadly margined with yellowish white; tail-feathers blackish brown, narrowly edged with white on the fourth feather; the two outermost white, with a broad inner margin of blackish brown; head blue-grey, contrasting with the back; lores black; over the eye a very distinct line of white; upper and lower edge of eyelid white, the anterior and posterior portion black; ear-coverts dark slaty grey, a little blacker than the crown, the lower parts mixed with whitish; chin and a streak along the cheeks white; throat and remainder of under surface of body bright yellow, with a few dusky spots on the sides of the fore neck; thighs dull yellow; under tail-coverts like the breast; axillaries white, washed with yellow; under wing-coverts dull white, washed with yellow near the edge of the wing, where the coverts have dusky bases; quills lighter brown below, white along the edge of the inner web. Total length 5·7 inches, culmen 0·55, wing 2·95, tail 2·7, tarsus 0·85.

Adult female in breeding-plumage. Rather duller in colour than the male, and browner on the back and head; wings browner, the yellow edges to the coverts worn off and obsolete; underneath very pale yellow, whiter on the throat. Total length 6 inches, culmen 0·55, wing 3·1, tail 2·65, tarsus 0·9.

Young. General colour above brown, the head like the back; rump rather more ashy; upper tail-coverts dark brown, edged with ashy or olive-yellow, the lateral ones externally white; lesser wing-coverts brown like the back, slightly washed with olive-yellow; median and greater coverts dark brown, edged with pale fulvous-brown, whiter on the greater coverts; bastard-wing blackish; primary-coverts dark brown, edged with ashy; quills dark brown, margined with olive-yellow, the inner secondaries with whity brown; tail-feathers dark brown, the two outer ones white, with a broad dusky brown edging to the inner web, the third feather also narrowly edged with white towards the end; over the eye a narrow streak of tawny buff, whiter above the lores; ear-coverts brown; cheeks and throat dull white, the latter becoming browner on the fore neck and chest; remainder of under surface of body dull white, pale yellow on the abdomen and vent, and white on the under tail-coverts; axillaries brown, externally whiter, tinged with olive-yellow; wing-coverts dull white, tinged with yellow, and mottled with dusky bases near the edge of the wing; quills dusky brown below, more ashy brown on the inner web.

The chest is mottled with blackish spots, which, however, are often quite obscured. During the absence of the bird in winter, however, the feathers get worn, and the black spots become much more distinct. Before returning to Europe a complete moult takes place both above and below, the new plumage being dark olive-yellowish above and bright yellow below. Underneath the olive tips the grey feathers of the head can be distinguished; and it is by

the wearing away of the edges to the feathers that the head is left grey in its first summer plumage.

The *old birds in winter plumage* are distinguished from the young by their olive-yellow back and yellow under surface. I have not found an old bird moulting from its winter to its summer dress, as the young bird most certainly does; and I believe that the spring moult is confined to the first year's bird, and that the old ones attain their full plumage by wearing off the margins to the feathers, which in course of time become much brighter. This opinion is corroborated by the fact that many of the blue-headed birds on their first arrival in Europe have a little olive on the crown, remains of winter plumage.

In breeding-plumage the feathers get rather worn and the ear-coverts somewhat blacker, the white eyebrow, however, being always very distinct.

Hab. Europe generally in summer, wintering in Africa. An eastern colony extends from Alaska and Northern Siberia to China, wintering in the Moluccas.

a, b. ♂ ♀ ad. sk.	Dovrefjeld, Norway, July 4 (*J. G.*).	Gould Collection.
c. ♀ ad. sk.	Christiania, May 27 (*R. Collett*).	Christiania Museum [P.].
d. ♂ ad. sk.	Sweden, July 2.	R. B. Sharpe, Esq. [P.].
e, f. Juv. st.	Turnham Green, Middlesex.	Mr. J. Baker [C.].
g, h. ♂ ♀ ad. st.	Lowestoft.	
i. Ad. st.	Europe.	J. Gould, Esq.
k. Ad. sk.	Brittany, France.	J. E. Harting, Esq. [P.].
l. Ad. sk.	France (*Fairmaire*).	India Museum.
m, n. ♂ ad. sk.	Southern France.	R. B. Sharpe, Esq. [P.].
o. ♂; *p, q.* ♀ ad. æstiv. sk.	Valkenswaard, Holland (*J. Baker*).	Salvin-Godman Collection.
r, s. ♂ ad. æstiv. sk.	Saxony, April (*W. Schlüter*).	R. B. Sharpe, Esq. [P.].
t. ♂ ad. æstiv. sk.	Saxony, May 19 (*W. S.*).	R. B. Sharpe, Esq. [P.].
u. ♂ ad. æstiv. sk.	Pomerania, May 3 (*W. S.*).	R. B. Sharpe, Esq. [P.].
v. Juv. sk.	Dalmatia.	R. B. Sharpe, Esq. [P.].
w. ♀ juv. sk.	Italy, Feb.	R. B. Sharpe, Esq. [P.].
x. ♂ ad. sk.	Florence, May.	Prof. Giglioli [P.].*
y, z. ♂; *a.* ♀ ad. sk.	Florence, May 19.	Prof. Giglioli [P.].
b', c'. ♂ ad. sk.	Prato, Tuscany, April 22.	Prof. Giglioli [P.].
d'. Ad. sk.	Corsica, May 1.	John Whitehead, Esq. [P.].
e', f'. ♂; *g'.* ♀ ad. sk.	Malta, April (*A. L. Adams*).	Gould Collection.
h', i'. ♂ ♀ ad. sk.	Malta, May (*A. L. Adams*).	Gould Collection.
k', l'. ♂ ad.; *m'.* Juv. hiem. sk.	Malta, Sept. (*A. L. Adams*).	Gould Collection.
n'. ♂ ad. sk.	Tangiers (*Favier*).	Gould Collection.

* Some of Prof. Giglioli's specimens show an approach to *M. cinereocapilla*.

o'. ♂ ad. sk.	Tangiers (*Favier*).	R. B. Sharpe, Esq. [P.].
p', *q'*. ♂; *r'*, *s'*. ♀ ad. sk.	Kef Laks, Algeria, April (*O. S.*).	Salvin-Godman Collection.
t'. Juv. sk.	Asia Minor, Sept. (*T. Robson*).	Salvin-Godman Collection.
u'. ♀ ad. sk.	Asia Minor, April (*T. Robson*).	Salvin-Godman Collection.
v', *w'*. Juv. sk.	Asia Minor, Sept. (*T. Robson*).	Gould Collection.
x'. Juv. sk.	At sea, 90 miles off Senegal, Oct. 24 (*E. L. Layard*).	Sharpe Collection.
y'. Ad. hiem. sk.	Wasa, Gold Coast.	Capts. Burton and Cameron [P.].
z'. Ad. sk.	Fantee (*Ussher*).	Sharpe Collection.
a. Ad. sk.	Gold Coast.	Capt. Moloney [P.].
β. Ad.; *γ*, *δ*. Juv. hiem. sk.	Shonga, R. Niger.	W. A. Forbes, Esq. [P.].
ε, *ζ*. ♂ ♀ ad. hiem. sk.	Damara Land (*Anderson*).	Sharpe Collection.
η, *θ*. ♂ ♀ ad. hiem. sk.	Damara Land (*Anderson*).	Sharpe Collection.
ι. ♂; *κ*, *λ*. ♀ ad. hiem. sk.	Transvaal (*T. Ayres*).	Sharpe Collection.
μ, *ν*. ♂ ♀ ad. æstiv. sk.	Lukoja, Zambesi, March.	Sir J. Kirk [P.].
ξ. ♂ ad. sk.	Abyssinia.	Gould Collection.
o. [♂] ad. sk.	Lake Ashangi, Abyssinia, April 3.	W. T. Blanford, Esq. [C.].
π, *ρ*. Ad. sk.	Socotra (*Prof. Balfour*).	British Association.
σ. Ad. sk.	Persia.	Purchased.
τ. ♂ ad. sk.	Petropaulowski, Kamtschatka (*Dybowski*).	R. B. Sharpe, Esq. [P.].
υ. ♂ ad.; *φ*. Juv. sk.	Sea of Ochotsk.	Gould Collection.
χ. Juv. sk.	Amoor Land.	R. B. Sharpe, Esq. [P.].
ψ. ♂ ad. sk.	S. Michael's, Alaska (*L. M. Turner*).	Salvin-Godman Collection.
ω. Juv. sk.	Malacca (*Cantor*).	India Museum.
a'. Ad. sk.	Penang (*Cantor*).	India Museum.
β', *γ'*. Juv. sk.	Java (*Horsfield*).	India Museum.
δ'. Ad. sk.	Java (*mus. Lugd.*).	Salvin-Godman Collection.
ε'–*θ'*. Ad.; *ι'*. Juv. sk.	Labuan.	Governor Ussher [C.].
κ'. Juv. sk.	Labuan.	Hugh Low, Esq. [C.].
λ', *μ'*, *ν'*. Ad.; *ξ*. Juv. sk.	Lumbidan.	Governor Ussher [C.].
o', *π'*. ♂ ♀ juv. sk.	Sibu, N.W. Borneo.	A. Everett, Esq. [C.].
ρ'. Juv. sk.	Sarawak (*Brooke*).	Gould Collection.
σ'. Juv. sk.	Banjermassing.	J. Motley, Esq. [C.].
τ'. Ad.; *υ'*. Juv. sk.	Timor (*Wallace*).	Gould Collection.
φ', *χ'*. ♂; *ψ'*, *ω'*. ♀ ad. sk.	E. Timor.	Wallace Collection.
a''. Ad. sk.	Flores.	Wallace Collection.
β'', *γ''*. ♂ ♀ ad. sk.	Macassar, Celebes.	Wallace Collection.
δ''. ♂ ad. sk.	Macassar, Celebes, Oct. (*Dr. Meyer*).	Gould Collection.
ε'', *ζ''*. Ad. sk.	Celebes.	Gould Collection.
η'', *θ''*. ♂ ad.; ♀ juv. sk.	Gilolo.	Wallace Collection.

ι''. ♂ ad. sk.	Ceram.	Wallace Collection.
κ''. ♂ imm. sk.	Amboyna.	Wallace Collection.
λ''. ♂ juv. sk.	Amboyna (*Wallace*).	Gould Collection.
μ''. ♂; ν''. ♀ ad. sk.	Amboyna.	Voy. H.M.S 'Challenger.'
ξ''. ♀ ad. sk.	Kajeli, Bouru, Nov.	H. O. Forbes, Esq. [C.].
o''. ♀ ad. sk.	Kajeli, Bouru, Dec.	H. O. Forbes, Esq. [C.].

Subsp. *a*. **Motacilla beema.** (Plate VI. fig. 6.)

Budytes dubius, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 114. figs. 1–3 (no. 808); *Brooks, Str. F.* 1878, vol. ii. p. 138.
Motacilla beema, *Sykes, P. Z. S.* 1832, p. 90.
Budytes neglecta (*nec Gould*), *Jerd. Madr. Journ.* xi. p. 9 (1840).
Budytes dubius *vel* anthoides, *Hodgs. in Gray's Zool. Misc.* p. 83 (1844).
Budytes flava (*non L.*), *Hume, Ibis*, 1869, p. 357, 1870, p. 142; *Hume, Str. F.* 1874, pp. 81, 238; *Ball, t. c.* p. 416; *Armstr. Str. F.* 1876, p. 329; *Butler, Str. F.* 1877, pp. 210, 230; *Blanf. t. c.* p. 246; *Brooks, Str. F.* 1878, vol. ii. p. 138; *Hume, t. c.* p. 97; *Ball, t. c.* p. 219; *Cripps, t. c.* p. 287; *Hume, Str. F.* 1879, pp. 65, 103; *Seebohm, Ibis*, 1880, p. 189; *C. Swinh. Ibis*, 1882, p. 110.
Budytes brevicaudatus, *Homeyer, J. f. O.* 1878, p. 131.

Adult male. General colour above yellowish green, rather brighter yellow towards the lower back and rump; upper tail-coverts dusky brown, edged with yellowish, the lateral ones externally white, washed with yellow; lesser wing-coverts like the back; median and greater coverts dull brown, edged and tipped with dull olive-yellow or white tinged with olive-yellow; primary-coverts and quills dark brown, edged with ashy olive; the secondaries broadly edged with yellowish white, or brown washed with olive; tail-feathers blackish, edged with pale olive-yellowish, the two outer ones white with a broad oblique mark of dark brown on the inner web; head light pearly grey as well as the hind neck; lores dusky, surmounted by a very broad white eyebrow, extending from the base of the nostrils to above the ear-coverts; ear-coverts white, only the upper portion dark slaty or dusky blackish; cheeks and chin white; remainder of throat and under surface of body brilliant yellow, a little more green on the sides of the upper breast; thighs ashy; axillaries yellow, dusky ash-colour at base; under wing-coverts yellow, with dusky bases to those near the edge of the wing; quills light brown below, ashy whitish along the inner web. Total length 5·8 inches, culmen 0·6, wing 3·15, tail 2·8, tarsus 0·95.

The principal character in which this species differs from *M. flava* is the white face and ear-coverts. I think that the ashy thighs are probably only the result of worn breeding-plumage, as some examples undoubtedly have the thighs bright yellow like the abdomen.

Hab. Represents *M. flava* in Western and Central Siberia, wintering in Afghanistan and in India. Probably occurs in Western Europe and the Mediterranean on migration.

a. ♂ ad. sk.	Arkad Mountains, near Semipalatinsk, May 6 (*Dr. Finsch*).	Geogr. Soc. Bremen.

b. Ad. sk.	Tunis.	L. Fraser, Esq. [C.].
c. ♂ ad. sk.	Candahar, March 31.	Col. Swinhoe [P.].
d. ♂ ad. sk.	Candahar, April 5.	Col. Swinhoe [P.].
e. Imm. sk.	India.	India Museum.
f. ♂ ad. sk.	N.W. Himalayas (*Pinwill*).	Gould Collection.
g. Ad. sk.	Himalayas.	Gould Collection.
h. Ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.]. (Type of *B. dubius*.)
i. Ad.: *k*, *l.* Juv. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
m. Ad.; *n*, *o.* Juv. sk.	Nepal (*Hodgson*).	India Museum.
p. Ad. sk.	Sikhim (*Schlagintweit*).	India Museum.
q. Ad. sk.	Behar.	B. H. Hodgson, Esq. [P.].
r. ♂ ad. sk.	Mhow, March 23.	Col. Swinhoe [P.].

21. **Motacilla borealis** *. (Plate VII. figs. 1–3.)

Motacilla flava, var. β, *Lath. Gen. Hist.* vi. p. 329 (1820).

Motacilla flava borealis, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1840, p. 53; *Finsch & Hartl. Vög. Ostafr.* p. 272 (1870).

Budytes schisticeps, *Hodgs. in Gray's Zool. Misc.* p. 83 (1844).

Budytes fulviventer, *Hodgs. in Gray's Zool. Misc.* p. 83 (1844).

Budytes flava melanocephala, *De Selys-Longchamps, Faun. Belg.* p. 88 (1842).

Motacilla viridis, *Gray, Gen. B.* i. p. 203 (1847); *id. Hand-l. B.* i. p. 247, no. 3585 (1869); *Dresser, Ibis*, 1875, p. 178; *id. B. Eur.* iii. p. 181, pl. 129. fig. 3 (1875); *Seebohm, Ibis*, 1878, p. 352; *Danford, Ibis*, 1880, p. 96; *Seebohm, Ibis*, 1882, p. 109; *B. O. U. List Brit. B.* p. 31 (1883); *Danf. Ibis*, 1883, p. 20.

Budytes viridis, *Jerd. Madr. Journ.* xiii. p. 132 (1844); *Blyth, J. A. S. Beng.* xvi. p. 430 (1847); *id. Cat. B. Mus. As. Soc.* p. 138 (1849); *Bp. Consp.* i. p. 250 (1850); *Kelaart, Prodr. Cat.* p. 121 (1852); *Layard, Ann. & Mag. N. H.* xiii. p. 268 (1853); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 350 (1854, pt.); *Irby, Ibis*, 1861, p. 232; *Jerd. B. Ind.* ii. p. 222 (1863, pt.); *Blyth, Ibis*, 1865, p. 50; *Newton, t. c.* p. 333, 1867, p. 30; *Beavan, Ibis*, 1868, p. 78; *Blyth, Ibis*, 1870, p. 173; *Holdsw. P. Z. S.* 1872, p. 458; *Wald. & Layard, Ibis*, 1872, p. 97; *Wald. Ibis*, 1873, p. 308; *Blyth & Wald. B. Burm.* p. 96 (1875); *Seebohm & Harvie-Brown, Ibis*, 1876, p. 122; *Brooks, Ibis*, 1877, p. 208; *Anders. Zool. Exped. Yun-nan; Aves*, p. 608 (1878); *Legge, B. Ceylon*, p. 617 (1879); *Scully, Ibis*, 1881, p. 452; *Oates, B. Brit. Burm.* i. p. 161 (1883); *Sharpe, ed. Layard's B. S. Afr., App.* p. 853 (1884).

Motacilla cinereocapilla (*nec Savi*), *Eversm. Bull. Mosc.* 1850, p. 570; *Tristr. Faun. & Flor. Palest.* p. 55 (1884).

Motacilla (flava) cinereocapilla, *Kjærb. Danm. Fugle*, pl. 19. fig. 4 (1852).

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* The name of *viridis* by which this species is generally known, should, it seems to me, be discarded, Brown's plate, on which the name was founded by Gmelin, not being recognizable as belonging to a Wagtail at all. The synonymy is as follows:—

Green Wagtail, *Brown, Ill. Zool.* pl. 33. fig. 2 (1775).

Motacilla viridis, *Gm. Syst. Nat.* i. p. 962 (1788); *Lath. Ind. Orn.* ii. p. 505 (1783).

Motacilla flava, var. nigricapilla, *Selys-Longchamps, Naum.* 1856, p. 390.
Budytes atricapillus (pt.), *C. L. Brehm, Vogelf.* p. 141 (1855).
Motacilla flava, var. borealis, *Sundev. Svensk. Fogl.* pl. 9. fig. 6 (c. 1856).
? Budytes rayi, *Pelz. Ibis*, 1868, p. 312.
Budytes cinereocapillus (*nec Savi*), *Hume, Ibis*, 1869, p. 357; *R. Swinh. Ibis*, 1870, pp. 83, 346; *Wright, t. c.* p. 491; *R. Swinh. P. Z. S.* 1871, p. 364; *Brooks, J. A. S. Beng.* xli. p. 82 (1872); *Alston & Harvie-Brown, Ibis*, 1873, p. 61; *Adam, Str. F.* 1873, p. 384; *Hume, Str. F.* 1874, p. 237, 1875, p. 489; *id. & Oates, t. c.* p. 142; *Fairb. Str. F.* 1876, p. 260; *Tacz. Bull. Soc. Zool. France*, ii. p. 151 (1876); *Prjev. in Dawson Rowley's Orn. Misc.* ii. p. 193 (1877); *David & Oust. Ois. Chine*, p. 303 (1878); *Hume & Davison, Str. F.* 1878, pp. 363, 518; *Ball, Str. F.* 1878, vol. ii. p. 219; *Davids. & Wend. t. c.* p. 84; *Brooks, t. c.* p. 139; *Cripps, t. c.* p. 286; *Hume, Str. F.* 1879, pp. 65, 103, 161; *Vidal, Str. F.* 1880, p. 69; *Butler, Cat. B. S. Bomb. Pres.* p. 55 (1880); *Biddulph, Ibis*, 1881, p. 68; *C. Swinh. Ibis*, 1882, p. 109; *Davids. Str. F.* 1882, p. 310; *Davison, Str. F.* 1883, p. 396.
Motacilla (Budytes) borealis, *Severtz. Turkest. Jevotn.* p. 67 (1873).
Motacilla melanocephala (*nec Licht.*), *Cordeaux, Ibis*, 1875, p. 181.
Budytes borealis, *Homeyer, J. f. O.* 1878, p. 129; *id. & Tancré, MT. orn. Ver. Wien*, 1883, p. 86.

Adult male in breeding-plumage. General colour above dark olive-yellow, a little brighter on the lower back and rump; the upper tail-coverts dusky brown, edged with olive-yellow, the lateral ones externally yellowish white; lesser wing-coverts like the back; median and greater coverts blackish, edged and tipped with pale olive-whitish, the inner ones browner; bastard-wing blackish; primary-coverts and quills dusky brown, edged with ashy brown, the inner secondaries more broadly margined with white, slightly tinged with yellow; tail-feathers blackish, edged with olive-yellow, the two outer ones white, with a broad edging of blackish brown along the inner web; head and nape dark slaty blue; lores, feathers all round the eye, and ear-coverts black; sides of neck slaty blue like the head; cheeks and chin white; remainder of under surface bright yellow, the fore neck mottled with greenish-black centres to the feathers, forming a conspicuous patch; axillaries and under wing-coverts yellow, the longer coverts pale ashy on the inner web, yellowish white on the outer ones; the coverts near the edge of the wing mottled with dusky bases; quills light brown below, lighter on the inner web, white near the base. Total length 6·7 inches, culmen 0·5, wing 3·3, tail 3, tarsus 0·85.

Adult female in breeding-plumage. Differs from the male in being much duller in colour, the head being dull ashy, washed with olive; a distinct superciliary line of dull white; lores and ear-coverts dull ashy brown, mixed with white on the lower portion of the latter; throat and fore neck pale yellowish white, brighter yellow on the rest of the underparts; the fore neck with the same blackish spots as in the male. Total length 6·3 inches, culmen 0·55, wing 3, tail 2·8, tarsus 0·9.

In breeding-plumage the black patch on the fore neck is not

seen at first, the whole under surface being bright yellow, but on lifting the feathers the black bases can be clearly perceived, and as the plumage gets worn the black on the fore neck becomes plainer and plainer.

Mr. Eugene Oates's collection contained a most complete series of this Wagtail, obtained by him in Pegu during the winter, and the whole of the cold-season changes of plumage are fully illustrated, as follows:—

Young after first moult (Pegu; Sept. 9). General colour above ashy brown, the head like the back, the lower back and rump clearer grey, the upper tail-coverts blackish, the lateral ones externally white, the basal ones edged with ashy grey; lesser wing-coverts like the back; median and greater coverts blackish, externally washed with brown, dull whitish at the ends; bastard-wing blackish; primary-coverts and quills dusky brown, edged with ashy brown, olive on the primaries, the secondaries rather broadly margined with whitish; tail-feathers blackish brown, edged with lighter brown, slightly tinged with olive; the outer tail-feathers white, with a white shaft and an oblique mark of dark brown on the inner web; the penultimate feather also white, with an oblique mark of dark brown on the inner web, the outer web with a dark brown line along the side of the white shaft nearly reaching to the end; lores and a distinct eyebrow white; feathers in front of and below the eye, as well as the ear-coverts, slaty blackish; eyelid whitish, with a slight brownish shade below the eye; cheeks and throat white, mottled with blackish spots on the lower part and on the sides of the lower throat; remainder of under surface of body pale sandy buff or deep isabelline, whiter on the abdomen and under tail-coverts, the centre of the breast mottled with large black spots; sides of body and flanks ashy brown, darker ashy on the sides of the upper breast; axillaries and under wing-coverts dull white, with dusky bases; quills dusky below, more ashy along the inner web. Total length 6·4 inches, culmen 0·55, wing 3·1, tail 2·65, tarsus 0·85.

Young birds remain in this plumage from September to November, but as early as the 10th of October traces of a change of plumage to the forthcoming spring dress are visible in Mr. Oates's specimens. The new plumage is moulted very irregularly and in patches, yellow feathers appearing on the breast and olive plumes on the back. The inner secondaries appear to be moulted as well, and have distinct olive-yellow margins, and the white eyebrow gradually disappears.

By March the adult birds have moulted, before their departure for the north: the new feathers on the crown have generally some olive-yellow tips to the feathers, which may be seen on specimens in their breeding-quarters, but which soon wear off. There is scarcely any difference between a specimen obtained in Pegu in March and one shot in the Yenesai valley in June.

The adult female in winter differs from the male in winter to the same extent as the summer plumages of the two birds differ.

Hab. From Northern Scandinavia across Northern Europe and

Siberia, occurring on migration throughout Southern Europe down to South Africa, and being met with in winter throughout the plains of India, the Burmese countries, and the Malayan peninsula.

a. ♂ ad. sk.	Ala-kul, May 9 (*Dr. Finsch*).	Geogr. Soc. Bremen.
b. ♂ ad. sk.	Obdorsk, July 16 (*Dr. Finsch*).	Geogr. Soc. Bremen.
c. ♂ ad. sk.	Ust Zylma, Petchora, May (*Seebohm & Harvie Brown*).	Henry Seebohm, Esq. [P.].
d. ♂ ad. sk.	Ust Zylma, Petchora, June 2 (*Seebohm & Harvie Brown*).	Major Feilden & J. A. Harvie Brown, Esq. [P.].
e, *f*. ♂ ad. sk.	Lapland, May.	R. B. Sharpe, Esq. [P.].
g, *h*. ♂ ad.; *i*, *k*. ♀ ad. sk.	Lapland, June.	R. B. Sharpe, Esq. [P.].
l. ♂ ad. sk.	Skåne, Sweden, May 15.	R. B. Sharpe, Esq. [P.].
m. ♂ ad. sk.	Dovrefjeld, July 4 (*J. G.*)	Gould Collection.
n, *o*. ♂ ♀ ad. sk.	Dovrefjeld, June (*R. Collett*).	Christiania Museum [P.].
p. ♀ juv. sk.	Norway, Aug. (*R. Collett*).	Christiania Museum [P.].
q. Juv. sk.	Norway, July (*R. Collett*).	Christiania Museum [P.].
r. ♂ ad.; *s*. ♀ ad. sk.	Bodö, Norway, May (*F. Godman*).	Salvin-Godman Coll.
t. Ad. sk.	Heligoland.	Salvin-Godman Coll.
u, *v*. ♂ ad. sk.	Pomerania, May 8 (*W. Schlüter*).	R. B. Sharpe, Esq. [P.].
w. ♂ ad. sk.	Saxony, May 5 (*W. S.*).	R. B. Sharpe, Esq. [P.].
x. Ad. sk.	Dalmatia.	Mr. Parreyss [C.].
y, *z*. ♂ ♀ ad. sk.	Tuscany, April 16*.	Prof. Giglioli [P.].
a'. ♂ ad. sk.	Piedmont.	Count Salvadori [P.].
b'. Ad. sk.	Italy.	Gould Collection.
c'. Ad. sk.	Sicily, June 15.	Gould Collection.
d', *e'*. ♂ ♀ ad. sk.	Malta, May 5 (*A. L. Adams*).	Gould Collection.
f', *g'*. ♂ ad. sk.	Marocco.	R. B. Sharpe, Esq. [P.].
h', *i'*, *k'*. ♂ ad. sk.	Near Kef Laks, Algeria, April (*O. S.*).	Salvin-Godman Coll.
l', *m*. ♂ ♀ ad. sk.	Tunis.	L. Fraser, Esq. [C.].
n'. ♀ juv. sk.	Candahar, March 22.	Col. C. Swinhoe [P.].
o'. ♀ ad. sk.	Dubrai, April 24.	Col. C. Swinhoe [P.].
p'. Ad. sk.	Lucknow, April.	Col. Way [P.].
q'. Ad. sk.	Lucknow, May.	Col. Way [P.].
r'–*t'*. Ad.; *u'*. Juv. sk.	Nepal.	B. H. Hodgson, Esq. [P.]. (Types of *B. schisticeps* and *B. fulviventer*.)
v', *w'*. Juv. sk.	Nepal (*Hodgson*).	India Museum.
x'. Juv. hiem. sk.	Behar.	B. H. Hodgson, Esq. [P.].
y'–*α*. Ad. sk.	Calcutta (*As. Soc.*).	India Museum.
β. Ad. hiem. sk.	India.	Gould Collection.
γ, *δ*. Ad. et juv. sk.	Deccan (*Sykes*)†.	India Museum.

* The male has a small white line over the eye, showing an approach to true *M. flava*.

† These specimens are placed by Horsfield and Moore as the types of *M. beema*; but they do not agree with the description of that bird.

ϵ. Ad. sk.	Madras (*Jerdon*).	Gould Collection.
ζ. ♂ ad. sk.	Colombo, Ceylon, Aug. 17 (*W. V. Legge*).	R. B. Sharpe, Esq. [P.].
η. ♂ juv. sk.	Galle, Ceylon, Oct. 23 (*W. V. Legge*).	R. B. Sharpe, Esq. [P.].
θ, ι. Ad. sk.	Assam.	R. B. Sharpe, Esq. [P.].
κ. Juv. sk.	Assam.	R. B. Sharpe, Esq. [P.].
λ. Juv. sk.	Assam (*McClelland*).	India Museum.
μ, ν. ♂ ad. sk.	Bhamau, Upper Burmah, Jan.	Dr. J. Anderson [C.].
ξ. ♂ var. sk.	Pegu, Sept. 16.	Oates Collection.
ο, π. Juv. sk.	Pegu, Sept.	Oates Collection.
ρ, σ. ♂ ♀ hiem. sk.	Pegu, Sept.	Oates Collection.
τ–α′. Juv. sk.	Pegu, Oct.	Oates Collection.
β′–ϵ′. ♂; ζ′, η′. ♀ ad. sk.	Pegu, Oct.	Oates Collection.
θ′, ι′. ♂; κ′. ♀ juv.; λ′–ν′. ♂; ξ′. ♀ ad. sk.	Pegu, Nov.	Oates Collection.
ο′. ♂ ad. sk.	Pegu, Jan.	Oates Collection.
π′–τ′. ♂ ad. sk.; υ′. ♂ imm. sk.	Pegu, March.	Oates Collection.
φ′. Juv. sk.	Tenasserim.	J.C.D.Packman,Esq.[P.].

Subsp. α. **Motacilla cinereicapilla.** (Plate VII. figs. 4–6.)

Motacilla cinereocapilla, *Savi, Nuovo Giorn. dei Letter.* no. 57, p. 190; *id. Orn. Tosc.* iii. p. 216 (1831); *Bp. Faun. Ital., Ucc.* pl. 31. fig. 2 (1832–41); *Selys-Longch. Faun. Belge*, p. 88 (1842); *id. Naum.* 1856, p. 391; *Shelley, B. Egypt*, p. 128 (1872).

Motacilla melanocephala, pt., *Bruch, Isis*, 1832, p. 1106; *Gray, Gen. B.* i. p. 203 (1847).

Budytes cinereocapilla, *Bp. Comp. List B. Eur. & N. Amer.* p. 19 (1838); *Cab. Mus. Hein.* Th. i. p. 13 (1850); *Bp. Consp.* i. p. 249 (1850); *C. L. Brehm, Vogelf.* p. 141 (1855, pt.); *Powys, Ibis*, 1860, p. 229; *Wright, Ibis*, 1864, p. 62; *Giglioli, Ibis*, 1865, p. 55; *Tristr. Ibis*, 1866, p. 290; *Blyth, Ibis*, 1867, p. 30; *Degl. & Gerbe, Orn. Eur.* i. p. 379 (1867); *Fritsch, Vög. Eur.* Taf. 17. fig. 16 (c. 1870); *Salvad. Faun. Ital., Ucc.* p. 123 (1871); *Shelley, B. Egypt*, p. 129 (1872); *Danf. & Harvie-Brown, Ibis*, 1875, p. 301; *C. B. Wharton, Ibis*, 1876, p. 22; *Giglioli, Ibis*, 1881, p. 200.

Motacilla flava dalmatica, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1840, p. 54.

Motacilla flava cinereocapilla, *Temm. Man. d'Orn.* iv. p. 622 (1840); *Sch. Rev. Crit.* p. xxxviii (1844); *Heugl. Orn. N.O.-Afr.* p. 321 (1869).

Motacilla (Budytes) cinereocapilla, *Blasius in Nachtr. Naum. Vög. Deutschl.* xiii. p. 128, Taf. 373 (1860).

Budytes flavus, var. cinereocapillus, *Wyatt, Ibis*, 1870, p. 15; *Shelley, Ibis*, 1871, p. 138.

Budytes feldegii (*nec Michah.*), *Homeyer, J. f. O.* 1878, p. 130.

Adult male. General colour above olive-greenish, rather more olive-yellow on the lower back and rump; lesser wing-coverts like

the back; median and greater coverts blackish brown, broadly tipped with yellow, rather whiter on the ends of the latter; bastard-wing blackish brown; primary-coverts and quills dark brown, edged with olive-yellow, pale yellowish white on the secondaries, which have broader margins, the inner secondaries brown, broadly margined with lighter brown; upper tail-coverts dark brown, edged with olive-yellow; centre tail-feathers blackish, edged with yellowish, inclining to white near the end of the third rectrix; penultimate and external feathers white, with an oblique mark of blackish brown along the inner web; head, hind neck, and sides of neck dark slaty grey; lores, feathers round the eye, and ear-coverts jet-black; cheeks and entire throat white; remainder of under surface of body from the fore neck downwards brilliant yellow, with a more or less distinct mark of blackish in the centre of the chest; axillaries and under wing-coverts yellow with ashy bases; quills dusky below, whitish along the edge of the inner web. Total length 6·7 inches, culmen 0·55, wing 3·1, tail 2·9, tarsus 0·95.

Adult female. Very similar to the female of *M. flava*, but with the throat conspicuously white. Total length 6·3 inches, culmen 0·5, wing 2·9, tail 2·6, tarsus 0·9.

Obs. Some specimens of the Mediterranean Yellow Wagtail are undistinguishable from true *M. borealis*, but the majority have a very distinct white throat, and might be recognized as a species were it not for the occurrence of intermediate specimens, apparently shot from the same flock, showing also an approach to true *M. flava* in the presence of an ill-defined white eyebrow.

Hab. All the countries of the Mediterranean; said to extend occasionally into Germany and even to be of rare occurrence in Belgium; wintering apparently in Senegambia.

a. Ad. sk.	Dalmatia.	Mr. Parreyss.
b. Ad. sk.	Greece.	India Museum.
c. ♂ ad. sk.	Southern France.	R. B. Sharpe, Esq. [P.].
d, *e.* ♂; *f.* ♀ ad. sk.	Tuscany, April 22.	Prof. Giglioli [P.].
g. ♂ ad. sk.	Near Florence, April 11.	Prof. Giglioli [P.].
h. ♂ ad. sk.	Italy.	Gould Collection.
i. ♂ ad. sk.	Gibraltar, April 24.	Col. Irby [P.].
k, *l.* ♂ ♀ ad. sk.	Casa Vieja, Andalucia, May 6.	Col. Irby [P.].
m. ♂ ad. sk.	Egypt.	Capt. Shelley [P.].
n. ♂ ad. sk.	Beershoum, Delta, Egypt, Jan. 13.	J. H. Gurney, Esq. [P.].
o. Ad. sk.	Girgeh, Egypt, March 21 (*Hawkshaw*).	Gould Collection.
p. Ad. sk.	Senegal.	M. L. Laglaize [C.].

22. **Motacilla feldeggi.** (Plate VIII. figs. 1–4.)

Motacilla melanocephala, *Licht. Verz. Doubl.* p. 36 (1823, *ex Hempr. & Ehr. MSS.*; *nec Gm. S. N.* i. p. 970); *Cretzschm. in Rüpp. Atlas*, p. 50, Taf. 33. fig. *b* (1826); *Savi, Orn. Tosc.* p. 219 (1831);

Ménétr. Cat. Rais. Cauc. p. 36 (1832); *Rüpp. Neue Wirb., Vög.* p. 84 (1835–40); *Temm. Mon.* iv. p. 623 (1840); *Eversm. Bull. Soc. Mosc.* 1850, p. 570, tab. viii. fig. 3; *Selys-Longch. Naum.* 1856, p. 390; *Linderm. Vög. Griechenl.* p. 82 (1860); *Blasius in Naum. Vög. Deutschl.* p. 274 (1860); *Powys, Ibis*, 1860, p. 229; *Simpson, t. c.* p. 393; *Wright, Ibis*, 1864, p. 62; *Sperling, t. c.* p. 279; *Gray, Hand-l. B.* i. p. 247, no. 3579 (1869); *Wright, Ibis*, 1870, p. 491; *Dresser, B. Eur.* iii. p. 273, pl. 160 (1875); *id. Ibis*, 1876, p. 178; *Finsch, Ibis*, 1877, p. 50; *Danford, Ibis*, 1878, p. 20, 1880, p. 95; *Seebohm, Ibis*, 1882, p. 216, 1883, p. 20; *Tristr. Faun. & Flor. Palest.* p. 55 (1884).

Motacilla feldeggi, *Michah. Isis*, 1830, p. 814; *Bruch, Isis*, 1831, p. 701; *Temm. Man. d'Orn.* iv. p. 623, note (1840).

Budytes melanocephalus, *Bp. Faun. Ital., Ucc.* pl. 31. fig. 3 (1832–41); *Sykes, P. Z. S.* 1832, p. 290; *Bp. Comp. List B. Eur. & N. Amer.* p. 19 (1838); *Jerd. Madr. Journ.* xi. p. 9 (1840); *Rüpp. Syst. Uebers.* p. 59 (1845); *Blyth, Cat. B. Mus. As. Soc.* p. 138 (1849); *Bp. Consp.* i. p. 250 (1850); *Cab. Mus. Hein.* Th. i. p. 13 (1850); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 351 (1854); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 281 (1859); *Tristr. Ibis*, 1859, p. 30; *Brehm, Reis. Habesch*, p. 213 (1863); *Blyth, Ibis*, 1865, p. 49; *Giglioli, t. c.* p. 55; *Blyth, Ibis*, 1867, p. 30; *Degl. & Gerbe, Orn. Eur.* i. p. 380 (1867, pt.); *Loche, Expl. Sci. Algér., Ois.* ii. p. 10 (1867); *Doderl. Avif. Sicil.* p. 103 (1869); *Elwes & Buckley, Ibis*, 1870, p. 195; *Hume, t. c.* p. 142; *De Selys-Longch. t. c.* p. 452; *Blanf. Geol. & Zool. Abyss.* p. 381 (1870); *Sharpe, Cat. Afr. B.* p. 73 (1871); *Hume, Ibis*, 1871, p. 33; *Gurney, t. c.* p. 155; *Shelley, B. Egypt*, p. 130 (1872); *Severtz. Turkest. Jevotn.* p. 67 (1873); *Adam, Str. F.* 1873, p. 384; *Stoliczka, Str. F.* 1874, p. 464; *Butler & Hume, Str. F.* 1875, p. 490; *Lilford, Ibis*, 1875, p. 20; *Blanf. Eastern Persia*, ii. p. 235 (1876); *Brooks, Ibis*, 1877, p. 208; *Butler, Str. F.* 1877, pp. 210, 230; *Blanf. t. c.* p. 246; *Homeyer, J. f. O.* 1878, p. 127; *Hume & Davison, Str. F.* 1878, p. 363; *Brooks, Str. F.* 1878, vol. ii. p. 138; *Ball, t. c.* p. 219; *Hume, Str. F.* 1879, pp. 65, 103; *Bogd. B. Cauc.* p. 109 (1879); *Butler, Cat. B. Sind &c.* p. 40 (1879); *id. Cat. B. S. Bomb. Pres.* p. 56 (1880); *Biddulph, Ibis*, 1881, p. 69; *Giglioli, t. c.* p. 200; *Davids. Str. F.* 1881, p. 310; *Reid, Str. F.* 1881, p. 48; *C. Swinh. Ibis*, 1882, p. 109; *Severtz. Ibis*, 1883, p. 80; *Sharpe, ed. Layard's B. S. Afr.* p. 551 (1884); *Radde, Orn. Cauc.* p. 222 (1884).

Motacilla kaleniczenkii, *Krynicki MSS.*; *Kaleniez. Bull. Mosc.* 1839, p. 231, tab. xx.

Motacilla flava dalmatica, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1840, p. 54.

Motacilla flava africana, *Sundev. t. c.* p. 54.

Motacilla flava, var. melanocephala, *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 239 (1840); *Shelley, Ibis*, 1871, p. 138.

Motacilla flava melanocephala, *Schl. Rev. Crit.* p. xxxviii (1844); *Heugl. Orn. N.O.-Afr.* i. p. 321 (1869).

Budytes nigricapilla, *Bp. Consp.* i. p. 249 (1850); *Brehm, Naum.* 1855, p. 280; *Fritsch, Vög. Eur.* pl. 17. fig. 15 (1870); *Salvad. Faun. Ital., Ucc.* p. 123 (1871); *Antin. & Salvad. Viagg. Bogos*, p. 110 (1873).

Motacilla nigricapilla, *Von Müll. J. f. O.* 1855, p. 386.

Motacilla atricapilla, *C. L. Brehm, Vogelf.* p. 141 (1855); *A. E. Brehm, Reis. Habesch*, p. 213 (1863).

Budytes paradoxa, *C. L. Brehm, Vogelf.* p. 141 (1855).
Motacilla flava, var. feldeggii, *Selys-Longch. Naum.* 1856, p. 390.
Motacilla viridis, pt., *Jerd. B. Ind.* ii. p. 222 (1863); *Hume, Str. F.* 1873, p. 202.
Budytes melanogriseus, *Homeyer, J. f. O.* 1878, p. 128.
Budytes aralensis, *Homeyer, t. c.* p. 128.
Budytes melanocervix, *Von Homeyer, Mitth. orn. Ver. Wien*, 1883, p. 86.

Adult male. General colour above olive-greenish, clearer and brighter olive-yellow on the lower back and rump; upper tail-coverts blackish brown, washed with olive-yellow, the lateral ones externally white; lesser wing-coverts brown, edged with ashy olive; median and greater coverts blackish, margined with olive-yellow and tipped with brighter yellow; bastard-wing blackish; primary-coverts and quills brown, edged with pale olive-yellowish, broader and more yellowish white on the inner secondaries; tail-feathers brown, edged with olive, the two outer ones white with a broad oblique mark of blackish brown on the inner web; crown of head and nape jet-black, including the lores, feathers below the eye, ear-coverts, and sides of nape; cheeks and entire under surface of body from the base of the bill to the under tail-coverts brilliant yellow; axillaries bright yellow, with ashy bases; under wing-coverts white, washed with bright yellow and mottled with ashy bases to the feathers near the edge of the wing; quills dusky below, whitish towards the base of the inner web. Total length 6·5 inches, culmen 0·55, wing 3·25, tail 2·75, tarsus 0·9.

Some males in fully adult plumage have the chin and cheeks white. I think that these are only the younger birds of the previous year, because the tint of the yellow is not so rich and the white on the chin is mixed with yellow, so that it looks as if the whole would ultimately become like the breast.

Adult female. Differs from the male in being duller above, with the black head less marked and very pale below, being white washed with bright yellow, instead of being entirely brilliant yellow. General colour above dull olive-brown; rump more ashy, and washed with bright yellow, especially on the lower rump; upper tail-coverts blackish, shaded with grey and edged with olive, the lateral ones narrowly edged with white; lesser wing-coverts ashy brown washed with olive; median and greater coverts blackish brown, edged with whity brown and tipped with yellowish white; bastard-wing blackish brown; primary-coverts and quills dark brown, edged with lighter brown, the inner secondaries rather more broadly edged with dull white, the innermost very broadly with pale olive; tail as in the male; crown of head black, but not pure as in the male, and mixed with ashy-brown feathers; lores, sides of face, and ear-coverts black, with a streak of white running from the base of the bill above the lores; cheeks, chin, and throat white, the latter washed with pale yellow, the breast and underparts being rather clearer pale yellow, especially on the under tail-coverts; under wing-coverts and axillaries white, washed with pale yellow, with

ashy-brown bases to the feathers; quills dusky brown below, white towards the base of the inner web. Total length 6·5 inches, culmen 0·55, wing 2·95, tail 2·6, tarsus 0·9.

Obs. The amount of black on the neck and mantle of this species varies in a remarkable degree, attaining its greatest development in eastern specimens. Specific characters, such as Von Homeyer has endeavoured to fix from this peculiarity, seem to us to be quite untrustworthy, as every possible gradation is exhibited in a large series.

Young. Brown tinged with olive, the head, hind neck, and sides of neck whity brown, much paler on the neck; a broad white eyebrow, surmounted by a broad line of black, along the sides of the crown; wing-coverts and quills dark brown, washed and edged with olive-yellow, the median series edged broadly with white; ear-coverts whitish mottled with black; throat white, thickly spotted with black along the sides and across the fore neck; remainder of under surface whitish, washed with yellow, clearer yellow on the vent and under tail-coverts.

Young specimens after their first moult so closely resemble immature *M. flava* and *M. viridis* as to render it difficult to define any characters for their separation. I think, however, that the ear-coverts in *M. melanocephala* are blacker in the winter plumage than in the other two species, which, moreover, have an underlying greyish shade on the head in winter. There is often a more or less distinct eyebrow in the first winter; it is either yellow or yellowish white and disappears when the black head is put on; the remains of this eyebrow have caused many ornithologists to remark that a supercilium is sometimes indicated.

Hab. South-eastern Europe, wintering in Africa, extending to Central Asia, wintering in the plains of India.

a. ♀ imm. sk.	Malta, May 5 (*Dr. A. L. Adams*).	Gould Collection
b. Juv. sk.	Dalmatia.	R. B. Sharpe, Esq. [P.].
c. Pull. sk.	Poland.	Gould Collection.
d, e. Ad. sk.	Crimea.	Gould Collection.
f, g. ♂ ♀ ad. sk.	Asia Minor.	T. Robson [C.].
h. ♂ ad. sk.	Asia Minor, April (*T. Robson*).	Salvin-Godman Collection.
i. ♂ juv. sk.	Asia Minor, Sept. 9 (*T. Robson*).	Salvin-Godman Collection.
k. ♂ ad. sk.	Smyrna.	Consul Merlin [P.]
l. ♂ ad. sk.	Smyrna.	Gould Collection.
m Ad. st.	Athens.	Consul Merlin [P.].
n. Ad. sk.	Erzeroum (*Dickson and Ross*).	Gould Collection.
o. Ad. sk.	Girgeh, Egypt, March 21 (*Hawkshaw*).	Gould Collection.
p. Ad. sk.	Egypt, April 15.	J. H. Gurney, Jun., Esq. [P.].
q. Ad.; *r.* Juv. sk.	Nubia.	Sharpe Collection.
s. ♂ ad. sk.	Senafe, Abyssinia, April (*Jesse*).	Sharpe Collection.

t. [♂] ad. sk.	Senafe, March 4.	W. T. Blanford, Esq. [C.].
u. Ad. sk.	Adigrat, April 8.	W. T. Blanford, Esq. [C.].
v, *w*. ♀ ad.; *x*. ♀ juv. sk.	Zoulla, Annesley Bay, Jan.	W. T. Blanford, Esq. [C.].
y. ♀ ad. sk.	Lake Ashangi, May 4.	W. T. Blanford, Esq. [C.].
z. ♀ ad. sk.	Transvaal (*T. Ayres*).	Sharpe Collection.
a'. ♂ ad. sk.	Caucasus, April 9.	R. B. Sharpe, Esq. [P.].
b'. ♂ ad. sk.	Shiraz, June.	Sir O. St. John [C.].
c'. ♂ ad. sk.	Jalk, Baluchistan, March 17.	W. T. Blanford, Esq. [C.].
d'–g'. Ad. sk.	Afghanistan (*Griffith*).	India Museum.
h', *i'*. ♂ ad. sk.	Candahar, Feb.	Col. C. Swinhoe [P.].
k'–m'. ♂ ad.; *n'–r'*. ♀ ad. sk.	Candahar, March.	Col. C. Swinhoe [P.].
s'. ♀ ad. sk.	Candahar, April.	Col. C. Swinhoe [P.].
t', *u'*. Imm. sk.	Scinde (*Dr. Gould*).	India Museum.
v'. Ad.; *w'*. Juv. sk.	Cashmere.	R. B. Sharpe, Esq. [P.].
x', *y'*, *z'*. Ad. sk.	N.W. India.	Gould Collection.
α, *β*. ♂ ad. sk.	Mhow, Dec. 31.	Col. C. Swinhoe [P.].
γ. Ad. sk.	Deccan (*Sykes*).	India Museum. (Type of *M. melanocephala*, Sykes.)
δ. Ad. sk.	[India.]	Gould Collection.

Subsp. *α*. **Motacilla paradoxa.** (Plate VIII. fig. 5.*)

Budytes paradoxus, *C. L. Brehm, Vogelf.* p. 142 (1855).
Motacilla kaleniczenkii (*non Krynicki*), *Blasius in Nachtr. Naum. Vög. Deutschl.* p. 126 (1860); *Gray, Hand-l. B.* i. p. 247, no. 3588 (1869); *Homeyer, J. f. O.* 1878, p. 129.
Motacilla flava kaleniczenkii, *Finsch, Verh. z.-b. Ges. Wien*, 1879, p. 63.

Adult male. General colour above olive-yellow, rather brighter on the lower back and rump; lesser wing-coverts brown with yellow edges; median and greater coverts dark brown, broadly tipped with pale yellow; bastard-wing blackish brown; primary-coverts and quills brown, edged with paler olive-yellow, yellowish white on the secondaries, which have broader margins; upper tail-coverts and tail-feathers blackish, edged with olive-yellow, the two outer ones white with an oblique black mark along the inner web; head, hind neck, and sides of the latter black, as well as the lores, feathers below the eye, and ear-coverts, the latter with a small patch of white on their anterior portion; over the eye a distinct line of white; chin and a line along the cheeks white; remainder of under surface of body bright yellow, paler on the under tail-coverts; thighs ashy white; axillaries yellow; under wing-coverts white, washed with yellow, with ashy bases; quills ashy brown below, whitish along the inner web. Total length 6 inches, culmen 0·5, wing 3·05, tail 2·75, tarsus 0·9.

Hab. From Hungary and Dalmatia to South Russia and the Crimea as far as long. 47° E.

a. ♂ ad. sk.	Karakal, near Sergiopol, May 8 (*Dr. Finsch*).	Geogr. Society of Bremen.

* Marked *M. kaleniczenkii* on the Plate by error.

23. Motacilla xanthophrys. (Plate VIII. fig. 6.)

Motacilla melanocephala, var., *Seebohm, Ibis*, 1884, p. 428.

Adult male. General colour above olive-green, becoming brighter and clearer olive-yellow towards the rump and upper tail-feathers, the latter with dusky blackish centres; lesser wing-coverts like the back; median and greater coverts blackish, the former edged with pale yellow, the latter with yellowish white; bastard-wing and primary-coverts dusky blackish, obsoletely fringed with olive; quills dusky blackish, edged with dusky brown, the first primary narrowly margined with dull whitish; the inner secondaries broadly margined with ashy olive, whitish towards the end of the feathers; tail-feathers black, the two outer ones white, with an oblique mark of blackish along the inner web, more extended on the penultimate feather, which has a little brown along the shaft; crown of head and nape jet-black; lores, feathers below the eye, and ear-coverts also black; upper and under edge of eyelid yellowish white; above the eye a narrow streak of bright yellow; cheeks and under surface of body bright golden yellow, including the thighs and under tail-coverts; sides of the body washed with olive-green; on the centre of the breast a few concealed black streaks; sides of the upper breast washed with greenish black; axillaries and under wing-coverts white, washed with yellow; quills dusky below, ashy along the inner web. Total length 5·7 inches, culmen 0·55, wing 3·1, tail 2·6, tarsus 0·95. (*Mus. H. Seebohm.*)

Hab. Lenkoran.

2. LIMONIDROMUS.

Type.

Nemoricola, *Blyth, J. A. S. Beng.* xvi. p. 429 (1847, *nec Hodgs.*) ..... L. indicus.
Limonidromus, *Gould, B. Asia*, iv. pl. 67 (1862) ..... L. indicus.
Nemorivaga, *Fitz. Sitz. Akad. Wien*, xlvi. p. 220 (1864) .. L. indicus.

Range. The same as that of the species.

1. Limonidromus indicus.

Bergeronette grise des Indes, *Sonn. Voy. Ind. Orient.* ii. p. 207 (1782).
Indian Wagtail, *Lath. Gen. Syn.* ii. pt. 2, p. 399 (1783).
Motacilla indica, *Gm. Syst. Nat.* i. p. 962 (1788); *Gray, Gen. B.* i. p. 203 (1847); *Pelz. Reis. Novara, Vög.* p. 68 (1865); *Gray, Hand-l. B.* i. p. 248, no. 3594 (1869).
Motacilla variegata, *Vieill. N. Dict. d'Hist. Nat.* xiv. p. 599 (1817); *Jerd. Madr. Journ.* xi. p. 10 (1849); *Kelaart, Prodr. Cat.* p. 121 (1852); *Layard, Ann. & Mag. Nat. Hist.* xii. p. 268 (1853).
Nemoricola indica, *Blyth, J. A. S. Beng.* xvi. p. 429 (1847); *id. Cat. B. Mus. As. Soc.* p. 136 (1849); *Bp. Consp.* i. p. 251 (1850); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 353 (1854); *Swinh. Ibis*, 1861, p. 333; *id. P. Z. S.* 1862, p. 317, 1863, p. 276; *id. Ibis*, 1863, p. 94; *Jerd. B. Ind.* ii. p. 226 (1863); *Swinh. P. Z. S.* 1870, p. 433; *Hume, Str. F.* 1873, p. 450, 1874, p. 479; *Fairb. Str. F.* 1875, p. 260; *Armstr. Str. F.* 1876, p. 329.
Limonidromus indicus, *Gould, B. Asia*, iv. pl. 67 (1862); *Swinh.*

P. Z. S. 1871, p. 364; *Holdsw. P. Z. S.* 1872, p. 458; *Walden, Ibis*, 1874, p. 239; *Salvad. Ucc. Born.* p. 261 (1874); *Hume, Str. F.* 1874, p. 239, 1875, p. 142; *Blyth & Wald. B. Burm.* p. 16 (1875); *Bourd. Str. F.* 1876, p. 401; *Tacz. Bull. Soc. Zool. France*, ii. p. 151 (1876); *David & Oustal. Ois. Chine*, p. 305 (1878); *Hume & Davison, Str. F.* 1878, p. 364; *Ball, Str. F.* 1878, vol. ii. p. 219; *Legge, B. Ceylon*, p. 614 (1879); *Hume, Str. F.* 1879, pp. 65, 103; *Vidal, Str. F.* 1880, p. 69; *Bingham, t. c.* p. 189; *Oates, B. Brit. Burm.* i. p. 164 (1883); *Davison, Str. F.* 1883, p. 397.

Nemorivaga indica, *Fitz. Sitz. Akad. Wien*, xlvi. p. 220 (1864).

Adult male. General colour above olive-brown, the upper tail-coverts blackish, the lateral ones pale ashy olive-brown with whitish margins; lesser wing-coverts like the back, the lower ones mottled with black bases; median and greater series blackish, broadly tipped with yellowish white, browner on the inner greater coverts; bastard-wing and primary-coverts blackish; quills blackish brown, with a yellowish-white base to the outer web of the primaries and inner secondaries, followed by a second bar of yellowish white, formed by the markings on the outer webs at about two thirds of their length; innermost secondaries olive-brown, darker brown on the inner web; two central tail-feathers ashy brown, washed externally with olive; remainder of the tail-feathers blackish, obsoletely tipped with white; outer tail-feathers white, with an oblique mark of dark brown on the inner web, the outer web slightly washed with olive-brown; penultimate feather dark brown, with the terminal third of the inner web white, the outer web olive, whitish at the extreme tip; crown of head a little more dingy than the back, with a dusky blackish line along the sides of the crown above the eyebrow, which extends from the base of the nostrils; lores and eyelid also yellowish white; ear-coverts olive-brown, mixed with white on the lower part; cheeks white, extending on to the sides of the neck; under surface of body entirely white, tinged faintly with yellow on the breast, thighs, and under tail-coverts; across the fore neck a crescentic band of black, extending upwards towards the hinder cheeks in the form of blackish-tipped feathers; on the sides of the upper breast a second crescentic band of black, not meeting in the centre; axillaries white, washed with olive-yellow; under wing-coverts dull white, washed with olive, those near the edge of the wing mottled with dusky bases; the lower greater coverts dusky brown; quills below dusky, with a good deal of white on the inner webs, forming a V-shaped mark on the under surface of the quills: "upper mandible dark brown, lower mandible fleshy pink; legs, feet, and claws flesh-colour; iris deep brown" (*Davison*). Total length 6·6 inches, culmen 0·55, wing 3·1, tail 2·85, tarsus 0·85.

Adult female. Similar to the male in colour. Total length 5·8 inches, culmen 0·55, wing 3, tail 2·6, tarsus 0·8.

There seems to be no difference in the winter and summer plumages of this species.

Hab. Eastern Siberia and Northern China, ranging in winter into the Indian peninsula and Ceylon, the Andaman Islands, Bur-

mese countries, Cochin China, down the Malayan peninsula to Java, Sumatra, and Borneo. It is supposed, however, to be resident in some of the Burmese countries.

a. ♂ ad. sk.	Island of Askold, May 17 (*H. Doerries*).	R. B. Sharpe, Esq. [P.].
b. Ad. sk.	Nuwara Eliya, Ceylon.	Mr. E. Boate [C.].
c. ♂ ad. sk.	Mynall, Travancore, Nov. 12.	F. W. Bourdillon, Esq. [C.].
d. Ad. sk.	Malabar.	Gould Collection.
e. ♂ ad. sk.	Coonoor, Nilghiris, Feb. 2.	W. Davison, Esq. [P.].
f. Ad. sk.	Assam (*McClelland*).	India Museum.
g, *h*. ♂ ad. sk.	Kjeikpadein, Lower Pegu, Jan. 13.	Oates Collection.
i. Ad. sk.	Cochin China.	M. E. Pierre [P.].
k, *l*. Ad. sk.	Malacca.	India Museum.
m. Ad. sk.	Malacca.	Capt. Stackhouse Pinwill [P.].
n. ♀ ad. sk.	Malacca.	Wallace Collection.
o. Ad. sk.	Java.	Purchased.

3. ANTHUS.

	Type.
Anthus, *Bechst. Naturg. Deutschl.* iii. p. 704 (1807) ..	A. trivialis.
Spipola, *Leach, Cat. Mamm. etc. Brit. Mus.* p. 22 (1816)	A. trivialis.
Corydalla, *Vigors, Zool. Journ.* ii. p. 397 (1826).....	A. richardi.
Pipastes, *Kaup, Natürl. Syst.* p. 33 (1829)	A. trivialis.
Leimoniptila, *Kaup, Natürl. Syst.* p. 39 (1829)	A. pratensis.
Agrodroma, *Swains. Classif. B.* ii. p. 241 (1837)	A. campestris.
Cichlops, *Hodgs. in Gray's Zool. Misc.* p. 83 (1844) ..	A. richardi.
Dendronanthus, *Blyth, J. A. S. Beng.* xvi. p. 432 (1847)	A. trivialis.
Cynædium, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1850, p. 100	A. lineiventris.
Pedicorys, *Baird, Review Amer. B.* p. 15 (1864)	A. bogotensis.
Notiocorys, *Baird, Review Amer. B.* p. 15 (1864)	A. rufus.

Range. Over the whole of the Old and New Worlds, with the exception of the Papuan islands and Oceania.

Key to the Species.*

A. With no yellow in the tail or wings.
  a. With the hind claw decidedly shorter than the hallux †.

* In a 'Key' to a genus such as *Anthus*, in which the young of one specie is often like the adult of another, it is very difficult to arrange the species in a natural sequence, and in the present instance the 'Key' is somewhat artificial; but in the description of the species I have endeavoured to group them naturally.

† In measuring these Pipits, the length of the hind toe has been taken from the base of the hinder tarsus along the ridge of the hallux to the actual base of the claw, and the latter has been measured in a straight line from base to tip, not following its curve.

Under wing-coverts and axillaries olive-yellow.

a''. Upper plumage mottled with dark centres to the feathers.

a'''. Smaller: a patch of yellow on the breast; under surface nearly uniform, with a few indistinct central marks of dusky ..... *chloris*, p. 539.

b'''. Larger: no yellow in the centre of the breast, which is streaked with black like the flanks ..... *lineiventris*, p. 540.

b''. Upper plumage uniform; no streaks on the flanks; on the chest a few streaks of light brown ..... *crenatus*, p. 541.

b'. Under wing-coverts and axillaries light tawny buff or smoky brown, not yellow.

c''. Flanks distinctly streaked with black like the breast.

c'''. Median and greater wing-coverts tipped with white, forming a double wing-bar; light pattern of outer tail-feather white or smoky white.

*a*⁴. Above clear brown, very distinctly streaked with dusky; spots on breast small ..... *trivialis*, p. 543.

*b*⁴. Dull olive-greenish above, with few dusky streaks, or none at all; spots on breast very large and distinct .. *maculatus*, p. 547.

d'''. No white tips to the wing-coverts, which consequently show no wing-bar; light pattern of outer tail-feather isabelline buff.

*c*⁴. Much larger; wing 2·9 inches: throat and abdomen fawn-buff, with a few triangular spots of black on the breast ..... *nilghiriensis*, p. 550.

*d*⁴. Smaller; wing 2·5–2·6 inches: throat and abdomen white, the breast only fulvescent, thickly streaked with black ..... *brachyurus*, p. 551.

d''. Flanks perfectly uniform or only obsoletely streaked with blackish.

e'''. Light pattern of outer tail-feather isabelline or pale fawn-colour or fulvous; no white wing-bar.

*e*⁴. Outer tail-feather fulvous, with the shaft black and the greater part of the inner web blackish; penultimate feather with a small spot of white at the tip, often confined to a narrow fringe along the outer web; upper surface mottled with dusky centres to the feathers ..... *nicholsoni*, p. 553.

*f*⁴. Outer tail-feather very pale smoky buff, or slightly rufescent, paler

at the tip and rather more dusky along the inner web; shaft very pale; penultimate tail-feather smoky brown, edged and tipped with whitish, both scarcely perceptible; upper surface uniform ..... } *pyrrhonotus*, p. 555. } *pallidiventris*, p. 560.

g^4. Outer tail-feather rufescent, with blackish shaft and the greater part of the inner web blackish; penultimate feather with a wedge-shaped mark of rufous white at the tip.

a^5. Upper plumage uniform or nearly so ..... *jerdoni*, p. 562.

b^5. Upper plumage mottled with blackish centres to the feathers..... *sordidus*, p. 560.

f'''. Light portion of outer tail-feather white; median and greater wing-coverts tipped with pale fulvous or buff ..... } *richardi*, p. 564. } *infuscatus*, p. 567.

b. With the hind claw exceeding the hind toe in length or equal to it.

c'. 2nd, 3rd, and 4th primaries emarginate.

e''. Rump uniform.

g'''. Chest streaked with black.

h^4. Flanks streaked with black.

c^5. Light pattern on tail-feathers white.

a^6. Wing-coverts edged with sandy rufous, but without conspicuous white; upper surface sandy rufous, thickly mottled with broad black centres to the feathers.

a^7. Penultimate tail-feather with a wedge-shaped mark of white on the inner web, extending about one third of the length of the feather. *striolatus*, p. 568.

b^7. Penultimate tail-feather with nearly as much white as the outer one, consisting of a long wedge-shaped mark reaching for half the length of the feather or more .... *rufulus*, p. 574.

b^6. Wing-coverts with dull white margins, generally very conspicuous.

c^7. Quills externally olive; upper surface olive, mottled with black centres; axillaries tinged with olive-yellow .. *pratensis* ad., p. 582.

d^7. No olive on quills or yellow tinge on axillaries.

a^8. Penultimate tail-feather brown along the end of the outer web.
a^9. Back mottled with black centres to the feathers; a large wedge-shaped mark of white on the penultimate feather, extending more than halfway down the inner web ..... *bertheloti*, p. 591.
b^9. Back nearly uniform, with only a small spot of white at the end of the penultimate feather .. } *spipoletta* imm., p. 594. } *japonicus* imm., p. 598.
b^9. Penultimate tail-feather white along the end of the outer web ..... *pennsylvanicus*, p. 596.
d^5. Light pattern on outer tail-feathers smoky brown ..... *obscurus* juv., p. 600.
i^4. Flanks uniform ..... *campestris* juv., p. 572.
h'''. Chest uniform, without blackish streaks.
k^4. Rump and upper tail-coverts uniform; back occasionally with dusky centres.
e^5. Throat white, the lower throat and fore neck pale sandy buff or tawny; wing-coverts edged with sandy buff ..... *campestris* ad., p. 571.
f^5. Throat and chest vinaceous; wing-coverts tipped with dull white.
c^8. Vinaceous colour of under surface extending over the entire abdomen and on to the upper tail-coverts; flanks slightly streaked with dull brown; light pattern of tail white.
e^7. Eyebrow and lores isabelline, the latter with a pale vinaceous tinge ..... *spipoletta* ad., p. 594.
f^7. Eyebrow, lores, and sides of face vinaceous like the underparts ..... *pennsylvanicus* ad., [p. 597.
d^8. Vinaceous colour of under surface not extending over the entire abdomen, which is dull white with an olive tinge; flanks thickly streaked with blackish brown; light pattern of tail smoky brown.
g^7. Larger; wing 3·35–3·45 inches: axillaries smoky brown .... *obscurus* ad., p. 600.
h^7. Smaller; wing 3·1–3·45 inches: axillaries sulphur-yellow.... *rosaceus* ad., p. 589.
l^4. Rump and upper tail-coverts mottled with black centres like the back .. *cervinus* ad., p. 586.

f''. Rump mottled with black centres like the rest of the upper surface.
i'''. Dorsal feathers broadly edged with sandy rufous like the head, but without any broad white streaks down the mantle.
*m*⁴. Median wing-coverts tipped with whitish, forming a more or less distinct wing-bar.
*g*⁵. Larger; wing 3·5 inches: flanks thickly spotted with black like the breast ..... *cervinus* juv., p. 587.
*h*⁵. Smaller; wing 2·35 inches: flanks uniform or with narrow lines of brown ..... *rufus*, p. 606.
*n*⁴. Median wing-coverts rufous at the ends like the rest of the coverts and feathers of the upper surface; flanks sandy rufous streaked with dark brown ..... *chii*, p. 608.
k'''. Dorsal feathers with broad inner edges of white, causing a broad streaked appearance on the mantle.
*o*⁴. Light pattern on tail smoky grey; wing 2·4–2·55 inches ..... *peruvianus*, p. 609.
*p*⁴. Light pattern on tail white.
*i*⁵. Wing-coverts edged with sandy buff, not forming a distinct wing-bar; chest spotted with triangular black marks ..... *correndera*, p. 610.
*k*⁵. Median and greater wing-coverts tipped with white, forming a conspicuous double wing-bar; chest streaked with black..... *gustavi*, p. 613.
d'. 2nd, 3rd, 4th, and 5th primaries distinctly emarginate.
g''. Light pattern of outer tail-feather white; under surface white.
l'''. Outer tail-feather white, without any brown on the outer web ..... *australis*, p. 615. / *novæ zealandiæ*, p. 616.
m'''. Outer tail-feather white, with an oblique black mark on the inner web and a line of pale brown along the outer web for about half of its length from the tip ..... *furcatus*, p. 605.
h''. Light pattern of outer tail-feather smoky brown; under surface of body rufescent.
n'''. Streaks on breast small; thighs fulvescent like abdomen ..... *bogotensis*, p. 603.
o'''. Streaks on breast broad; thighs conspicuously tawny rufous, contrasting with the abdomen ..... *antarcticus*, p. 604.

B. Quills and tail for the most part golden yellow *tenellus*, p. 618.

1. Anthus chloris.

Anthus chloris, *Licht. Verz. Samml. Kaffernl.* p. 13 (1842); *id. Nomencl. Av.* p. 38 (1854); *Bp. Consp.* i. p. 248 (1854); *Gray, Hand-l. B.* i. p. 250, no. 3639 (1869); *Finsch & Hartl. Vög. Ostafr.* p. 276, note (1870); *Sharpe, ed. Layard's B. S. Afr.* p. 541 (1884).
Cynædium chloris, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1850, p. 100.
Anthus limonellus (*lapsu*), *Hartl. Ibis*, 1882, p. 147.
Anthus butleri, *Shelley, P. Z. S.* 1882, p. 336, pl. 18; *Butler, Feilden, & Reid, Zool.* 1882, p. 336.



Foot of *Anthus chloris*.

Hind claw short and nearly straight, shorter than hind toe. *Tarsus* longer than hind toe and claw combined. *Primaries equal*, 2, 3, and 4; *first* about equal to the fifth; *fifth* longer than innermost secondaries. *Feet* reaching to about two thirds of the length of the tail (in skin). *Primaries emarginate*, 2, 3, 4, 5, all very distinct.

Adult female. General colour above dark brown, all the feathers with edgings of sandy buff, giving a Lark-like appearance to the upper surface; hind neck slightly ashy; head with longitudinal centres of dark brown; scapulars like the back, with a slight wash of yellow; least and median wing-coverts dark brown, with broad margins of pale olive-yellow, the greater series margined with sandy buff like the secondaries; primaries and their coverts dark brown, with narrow edgings of olive-yellow, the first primary whitish along the outer web; upper tail-coverts and tail-feathers dark brown, with distinct edgings of sandy buff, slightly washed with yellow towards the base, the penultimate feather tipped with white, the outermost one for the greater part white excepting a broad diagonal mark of brown on the inner web, widening towards the base; lores and a broad eyebrow dingy white, as also a ring of feathers round the eye; ear-coverts dull white, washed with dark brown on the upper and lower margins; cheeks sandy buff; throat dull white; the fore neck sandy buff, narrowly streaked with reddish-brown shaft-lines; centre of the breast pale yellow; abdomen dull

whitish; the sides of the body dull sandy buff, with distinct dark-brown shaft-streaks on the flanks; under tail-coverts fulvous, with dark brown centres; edge of the wing and axillary feathers light olive-yellow; remainder of under wing-coverts dark brown, broadly edged with white; quills ashy brown below, greyer along the inner web: "iris dark brown; upper mandible and tip of lower neutral tint; base of lower mandible purple flesh-colour; legs and toes light yellowish brown" (*Reid*). Total length 6·7 inches, culmen 0·6, wing 3·2, tail 2·7, tarsus 0·95, hind toe 0·45, claw 0·5.

The *male* resembles the female in plumage. Total length 6 inches, culmen 0·6, wing 3·2, tarsus 0·95.

Hab. South-eastern Africa, from Grahamstown to Natal and the Eastern Transvaal.

a. ♀ ad. sk.	Natal.	Dr. Gueinzius [C.].
b. ♂ ad. sk.	Near Newcastle, Natal, July 9, 1881.	Capt. Savile Reid [P.].

2. Anthus lineiventris.

Anthus lineiventris, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1850, p. 100; *Ayres, Ibis*, 1880, p. 104; *Bocage, Orn. Angola*, p. 296 (1881); *Sharpe, ed. Layard's B. S. Afr.* p. 540 (1884).
Cynædium lineiventre, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1850, p. 100.
Anthus obtusipennis, *Bp. Consp.* i. p. 248 (1850, *ex Sund. MSS.*); *Gray, Hand-l. B.* i. p. 250, no. 3625 (1869).
Anthus angolensis, *Bocage, Jorn. Lisb.* 1870, p. 341.

Hind claw short and very much curved, shorter than hind toe. *Tarsus* very much longer than hind toe and claw together. *Primaries equal*, 2, 3, and 4; *first* about equal to fifth, sometimes a trifle longer; *fifth* always longer than innermost secondaries. *Feet* rather long, nearly reaching to tip of tail (in skin). *Primaries emarginate*, 2, 3, 4, 5, the last scarcely perceptible.

Adult male. General colour above dull brown, with lighter brown edgings to the feathers; head lighter brown, with dark-brown centres to the feathers, producing a streaked appearance; hind neck more ashy brown with dark-brown centres, appearing streaked like the head; wings dark brown, all the feathers broadly margined with fulvous, washed with olive-yellow on the least and median wing-coverts, the quills also edged with olive-yellow; tail dark brown, margined with lighter brown, and with olive-yellow near the base; outermost feathers brown, with a large triangular wedge of white on the inner web, the outer web white also near the base; penultimate feather with a smaller triangle of white at the tip of the inner web, the third feather having one smaller still; lores and a narrow eyebrow dull whitish, the latter tinged with yellow; in front of the eye a dusky spot; round the eye a ring of yellowish-white plumes; ear-coverts dark brown; cheeks white, with small triangular spots of dark brown; throat dull white, unspotted; rest of under surface of body dull white, the throat marked with

small triangular spots of blackish brown, widening on the fore neck; breast and sides of the body longitudinally streaked with blackish brown; thighs dark brown; under tail-coverts dull white, with large centres of dark brown; under wing-coverts olive-yellow with brown bases; bill blackish, the lower mandible yellowish, the tip dusky; feet yellowish; iris dusky brown. Total length 7·4 inches, culmen 0·65, wing 3·5, tail 2·9, tarsus 1·1. (*Mus. Lisb.*)

Hab. Transvaal, extending across to Angola.

a. ♀ ad. sk.	Rustenberg, E. Transvaal, July 29, 1878 (*T. Ayres*).	R. B. Sharpe, Esq. [P.].
b. Ad. sk.	Pinetown, Natal, June 10 (*T. L. Ayres*).	R. B. Sharpe, Esq. [P.].

3. Anthus crenatus *.

Anthus lineiventris (*nec Sund.*), *Layard, B. S. Afr.* p. 123 (1868).
Anthus chloris (*nec Licht.*), *Layard, Ibis*, 1869, p. 368; *Tristr. t. c.* p. 437; *Sharpe, Cat. Afr. B.* p. 73 (1871).
Anthus crenatus, *Finsch & Hartl. Vög. Ostafr.* p. 275, note (1870); *Sharpe, ed. Layard's B. S. Afr.* p. 543.



Foot of *Anthus crenatus*.

Hind claw short and strongly arched, shorter than hind toe. *Tarsus* stout, much longer than hind toe and claw combined. *Primaries equal*, 3, 4; the *first* a little shorter than the second, the *third* longest of any; *fifth* shorter than *first*, and a trifle longer than inner secondaries. *Feet* reaching to about three quarters of the length of the tail (in skin). *Primaries emarginate*, 2, 3, 4, 5, all very distinct.

Adult male. Entire upper surface uniform brown, with more or

* I believe that this bird ought to bear the earlier name of *A. icterinus*, Hartl. (Ibis, 1862, p. 147), but have not been able to satisfy myself entirely as to the identity of the two species. Dr. Hartlaub informs me in a letter that the name "*A. limonellus*, Licht.," quoted by him, is a *lapsus calami* for "*A. chloris*."

less remains of olive edgings to the feathers; wings brown, all the coverts and quills with narrow olive-yellow margins, less pronounced on the inner greater coverts and the secondaries; tail-feathers dark brown, with narrow lighter edges more or less tinged with olive, the outermost feather with a tip of whity brown on the inner web, less distinct on the penultimate one; from the base of the bill above the eye a distinct whitish eyebrow; round the eye a ring of dingy white; lores dusky blackish; ear-coverts sandy buff, dark brown on the upper edge; cheeks and throat dingy whitish; rest of under surface sandy colour, with distinct reddish-brown shaft-streaks to the feathers of the fore neck, chest, and flanks; under tail-coverts dark brown, with ashy fulvous edges; edge of the wing and axillaries dull olive-yellow; the rest of the wing-coverts brown, with edgings of yellowish fawn-colour; quills brown below, much lighter on the inner webs.

The specimen described is a male in breeding-plumage, obtained on the 16th of November, 1865, by the late Mr. C. J. Andersson at Cape Town. This specimen was referred in my 'Catalogue of African Birds' to *A. chloris*; but the examination of a specimen of the true *A. chloris* shows that this bird is a very distinct species. It is larger, with a uniform upper surface as in *A. pyrrhonotus*, and has no yellow patch on the centre of the breast. The yellow of the axillaries is saffron-coloured instead of sulphur-yellow, while the under wing-coverts are dark brown, with fawn-coloured instead of white margins. Another difference is found in the tail-feathers, *A. crenatus* having simply a lighter tip to the inner web of the two outer feathers; while *A. chloris* has the outer tail-feather entirely white, with the exception of a diagonal brown mark on the inner web.

In winter plumage the present species is more ashy, and not so dark a brown, as the breeding-dress is evidently gained by the wearing-off of the edges to the feathers which are part of the winter plumage. All the other specific characters are preserved in the latter, with the exception that the colours are rather purer and the general appearance more mealy, with larger streaks on the chest. In the male bird there is distinct evidence of a moustachial streak, and the dusky loral spot forms a second streak through the eye when taken in a line with the dark-brown upper ear-coverts; this dark streak brings out the eyebrow in bolder relief. A pair of birds in the British Museum measure as follows:—

	Total length.	Culm.	Wing.	Tail.	Tarsus.	Hallux.	h.w.
a. ♂. Burghersdorp (*Atmore*)	7·3	0·65	3·5	2·95	1·1	0·5	0·4
b. ♀. Colesberg (*Atmore*) ..	6·7	0·7	3·25	2·7	1·1	0·55	0·4

A. crenatus has a differently shaped hind claw to *A. chloris*, which has the latter very long and nearly straight, whereas in *A. crenatus* the hind claw is rather stout, by no means long and strongly curved.

Hab. Southern Africa, not extending beyond the Cape Colony.

a. ♂ ad. sk.	Cape Town, Nov. 16 (*C. J. Andersson*).	Sharpe Collection.
b. ♀ ad. sk.	Colesberg (*Ortlepp*).	Salvin-Godman Coll.
c. ♀ ad. sk.	Colesberg (*T. C. Atmore*).	Sharpe Collection.
d. ♂ ad. sk.	Burghersdorp (*T. C. Atmore*).	Sharpe Collection.
e. Ad. st.	Cape Colony.	Sir A. Smith [C.].

4. Anthus trivialis.

The Pippit, or Lesser Lark, *Albin, Nat. Hist. B.* i. p. 42, pl. 43 (1738).
L'Alouette de Bois, ou Le Cujelier, *Briss. Orn.* iii. p. 340, pl. 20. fig. 1 (1760).
L'Alouette de buisson, *Briss. Orn.* iii. p. 347 (1760).
Alauda trivialis, *Linn. Syst. Nat.* i. p. 288 (1766, pt.); *Bechst. Orn. Taschenb.* i. p. 203 (1802–12).
La Farlouse ou L'Alouette de près, *Daubent. Pl. Enl.* v. pl. 660. fig. 1; *Montb. Hist. Nat. Ois.* v. p. 31 (1778).
Alauda plumata, *P. L. S. Müll. Natursyst., Anhang*, p. 137 (1776).
Field Lark, *Lath. Gen. Syn.* ii. pt. 2, p. 375 (1783).
Alauda minor, *Gm. Syst. Nat.* i. p. 793 (1788); *Lath. Ind. Orn.* ii. p. 494 (1790).
Alauda arborea, *Gm. Syst. Nat.* i. p. 793 (1788, pt.).
Anthus arboreus, *Bechst. Naturg. Deutschl.* iii. p. 706 (1806); *Temm. Man. d'Orn.* p. 271 (1820); *Naum. Vög. Deutschl.* iii. Taf. 84. fig. 2 (1823); *Roux, Orn. Prov.* pl. 187 (1825); *Werner, Atlas, Insectivores*, pl. 81 (1827); *Ménétr. Cat. Rais. Cauc.* p. 36 (1832); *Gould, B. Eur.* iii. pl. 139 (1837); *Macgill. Hist. Brit. B.* ii. p. 188 (1839); *Keys. u. Blas. Wirb. Eur.* p. 173 (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 100 (1840); *Selys-Longch. Faun. Belg.* p. 87 (1842); *Hewits. Eggs Brit. B.* i. p. 131, pl. 35 (1846); *Gray, Gen. B.* i. p. 206 (1847); *Thomps. B. Irel.* i. p. 224 (1849); *Bp. Consp.* i. p. 248 (1850); *Cab. Mus. Hein.* Th. i. p. 15 (1850); *Kjærb. Danm. Fugle*, pl. 17. fig. 5 (1852); *Schl. Vog. Nederl.* p. 97 (1854); *Tristr. Ibis*, 1859, p. 421; *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 283 (1859); *Sundev. Svensk. Fogl.* pl. 8. fig. 4 (c. 1860); *Powys, Ibis*, 1860, p. 229; *Linderm. Vög. Griechenl.* p. 78 (1860); *F. & P. Godm. Ibis*, 1861, p. 83; *Schl. Dier. Nederl. Vogels*, pl. 9. fig. 6 (1861); *Gray, List Brit. B.* p. 70 (1863); *Gould, B. Gt. Brit.* iii. pl. 14 (c. 1863); *Wright, Ibis*, 1864, p. 62; *Sperling, t. c.*, p. 280; *More, Ibis*, 1865, p. 123; *Lilford, Ibis*, 1866, p. 180; *Tristr. t. c.* p. 290; *Degl. & Gerbe, Orn. Eur.* i. p. 366 (1867); *Blyth, Ibis*, 1867, p. 32; *Malmgr. t. c.* p. 230; *Saunders, t. c.* p. 216; *Borggr. Vogelf. Deutschl.* p. 86 (1869); *Doderl. Avif. Sicil.* p. 98 (1869); *Heugl. Orn. N.O.-Afr.* i. p. 324 (1869); *Fritsch, Vög. Eur.* tab. 16. fig. 1 (1870); *Salvad. Faun. Ital., Ucc.* p. 124 (1871); *R. Gray, B. W. Scotl.* p. 114 (1871); *Harting, Handb. Br. B.* p. 24 (1872); *Severtz. Turkest. Jevotn.* pp. 67, 139 (1873); *Keulem. Onze Vogels*, p. 32 (1873); *Alston & Harvie Brown, Ibis*, 1873, p. 61; *Brooke, t. c.* p. 245; *Ball, Str. F.* 1874, p. 416, 1877, p. 417; *Fallon, Ois. Belg.* p. 73 (1875); *Bogd. B. Cauc.* p. 109 (1879); *Booth, Rough Notes*, pt. 4 (1883); *Seebohm, Ibis*, 1882, pp. 216, 376, 1883, p. 20; *id. Hist. Br. B.* ii. p. 219 (1883); *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 86; *Radde, Orn. Cauc.* p. 219 (1884).
Motacilla spipola, *Pallas, Zoogr. Rosso-Asiat.* i. p. 512 (1811).
Spipola sepiaria, *Leach, Syst. Cat. Mamm, &c. Brit. Mus.* p. 22(1816).
Alauda pratensis (*nec L.*), *Steph. Gen. Zool.* x. p. 540 (1817).

Anthus trivialis, *Fleming, Brit. An.* p. 75 (1828); *Yarr. Brit. B.* i. p. 384 (1843); *Smith, Ibis*, 1868, p. 443; *Elwes & Buckley, Ibis*, 1870, p. 195; *Newt. ed. Yarr. Brit. B.* i. p. 569 (1874); *Dresser, B. Eur.* iii. p. 309, pl. 132. fig. 2 (1875); *id. Ibis*, 1875, p. 179; *Danf. & Harvie Brown, t. c.* p. 310; *Irby, B. Gibr.* p. 111 (1875); *Blanf. East. Persia*, ii. p. 235 (1876); *Seebohm & Harvie Brown, Ibis*, 1876, p. 121; *Brooks, t. c.* p. 499; *Wharton, t. c.* p. 23; *Dresser, t. c.* p. 179; *Danf. Ibis*, 1878, p. 20; *Seebohm, t. c.* p. 343; *Ball, Str. F.* 1878, vol. ii. p. 220; *Cripps, t. c.* p. 288; *Hume, Str. F.* 1879, p. 103; *Butler, Cat. B. Sind &c.* p. 41 (1879); *id. Cat. B. S. Bomb. Pres.* p. 56 (1880); *Vidal, Str. F.* 1880, p. 69; *Wardlaw Ramsay, Ibis*, 1880, p. 60; *Seebohm, t. c.* p. 188; *Biddulph, Ibis*, 1881, p. 70; *Scully, t. c.* p. 452; *Reid, Str. F.* 1881, p. 49; *B. O. U. List Brit. B.* p. 33 (1883); *Swinh. Ibis*, 1882, p. 110; *Irby, Ibis*, 1883, p. 184; *Shelley, t. c.* p. 545; *Tristr. Faun. & Flor. Palest.* p. 56 (1884); *Sharpe, ed. Layard's B. S. Afr.* p. 852 (1884).

Pipastes arboreus, *Kaup, Natürl. Syst.* p. 33 (1829); *Jerd. B. Ind.* ii. p. 229 (1863); *Giglioli, Ibis*, 1865, p. 55; *Pelz. Ibis*, 1868, p. 312; *Hume, Ibis*, 1870, pp. 287, 400; *id. Ibis*, 1871, p. 35; *Brooks, J. A. S. Beng.* xli. p. 83 (1872); *Hayes Lloyd, Ibis*, 1873, p. 412; *Hume & Henders. Lahore to Yark.* p. 226 (1873); *Butler & Hume, Str. F.* 1875, p. 490; *Murray, Str. F.* 1878, vol. ii. p. 109.

Anthus foliorum, *Brehm, Vög. Deutschl.* p. 325 (1831).

Anthus juncorum, *Brehm, t. c.* p. 326 (1831).

Anthus herbarum, *Brehm, t. c.* p. 327 (1831).

Anthus agilis, *Sykes, P. Z. S.* 1832, p. 91; *Gray, Gen. B.* i. p. 206 (1847); *Bp. Consp.* i. p. 248 (1850); *Brooks, Str. F.* 1876, pp. 278, 499.

Anthus (Dendronanthus) trivialis, *Blyth, Cat. B. Mus. As. Soc.* p. 135 (1849).

Pipastes trivialis, *Blyth, Ibis*, 1867, p. 31; *Oates, B. Brit. Burm.* i. p. 172 (1883).

Dendronanthus arboreus, *Loche, Expl. Sci. Algér.* ii. p. 18 (1867); *Bettoni, Ucc. nidif. Lomb.* i. tav. 47 (c. 1870).

Anthus plumatus, *Gray, Hand-l. B.* i. p. 251, no. 3640 (1869); *Shelley, B. Egypt*, p. 130 (1872).

Pipastes plumatus, *Hume, Str. F.* 1873, p. 202; *id. Nests and Eggs Ind. B.* p. 383 (1873); *id. & Oates, Str. F.* 1875, p. 142.

Pipastes agilis, *Stoliczka, Str. F.* 1874, p. 463; *Fairb. Str. F.* 1876, p. 260.

Anthus microrhynchus, *Severtz. Ibis*, 1883, p. 63.



Foot of *Anthus trivialis*.

Hind claw short, much curved, much shorter than hind toe itself. *Tarsus* longer than hind toe combined with claw. *Primaries equal*, 1, 2, 3; *fourth* about equal to longest secondaries; *fifth* quite short, much less than longest secondaries. *Primaries emarginate*, 2, 3, 4. *Feet* not reaching beyond half the tail (in skin).

Adult male in breeding-plumage. General colour above sandy brown, streaked with black, a little more narrowly on the head, all the feathers mesially centred with black streaks; the mantle rather lighter sandy buff than the rest of the upper surface; rump rather more uniform than the back; upper tail-coverts sandy brown, edged with ashy fulvous and narrowly centred with blackish; least wing-coverts like the back; median series blackish, tipped with white, forming a wing-bar; greater series dark brown, edged externally with whity brown, more ashy towards the base; bastard-wing blackish brown, narrowly edged with white; primary-coverts and quills dusky brown, narrowly edged with whity brown, the first primary margined with whitish, the inner secondaries browner on the outer web and more broadly edged with dull whitish; tail-feathers brown, the two centre ones margined with whity brown, the outermost dull white, with a dark-brown shaft and a broad oblique mark of dark brown on the inner web, the outer web pale brown towards the end; penultimate tail-feather with a small wedge-shaped spot of white at the tip of the inner web; lores and a tolerably defined eyebrow sandy buff, as well as the eyelid and ear-coverts, the latter more dusky along the upper and hinder margins; cheeks sandy buff, with an indistinct superior line of black, and separated from the throat by a blackish malar line; throat, breast, and sides of body sandy buff, the chin whitish; the lower throat and fore neck broadly streaked with black, a little more narrowly on the breast, sides of body, and flanks; centre of breast and abdomen buffy white, clearer sandy buff on the under tail-coverts; axillaries and under wing-coverts sandy buff, those nearer the edge of the wing mottled with dusky bases; lower primary-coverts and quills ashy brown, lighter on the inner webs: bill dark brown, the lower mandible fleshy; legs pale brown; iris dark brown. Total length 5·8 inches, culmen 0·55, wing 3·45, tail 2·55, tarsus 0·9.

Adult female in breeding-plumage. Coloured like the male, but having the blackish streaks on the breast and sides of the body narrower. Total length 6 inches, culmen 0·55, wing 3·45, tail 2·5, tarsus 0·85.

Winter plumage. Only differs from the summer dress in being rather richer in colour and in having the margins to the wing-coverts and quills rather broader; underneath, the sandy-buff colour is much brighter and inclines to tawny buff.

A Bogos specimen obtained by Mr. Esler is in full moult and changing on the throat and breast to rich tawny buff. By the time the Tree-Pipit reaches England, however, this richer coloration seems to have disappeared, and as the summer progresses the plumage becomes duller and duller, forming a very strong contrast to the bright dress which the bird assumes in autumn.

Hab. Breeds in Northern and Central Europe, and as far east as Krasnoyarsk in Siberia; wintering throughout Africa and in the western portions of the Indian peninsula; of accidental occurrence east of the Bay of Bengal.

a. Ad. sk.	England, June.	Gould Collection.
b, *c*, *d*, *e*. Pull. st.	Cambridgeshire.	Mr. J. Baker [C.].
f. ♂ ad. sk.	Cambridgeshire, June 16 (*Farron*).	Salvin-Godman Coll.
g, *h*. Ad. sk.	Hampstead, Sept.	R. B. Sharpe, Esq. [P.].
i. ♂ ad. sk.	Hampstead, Sept.	J. E. Harting, Esq. [P.].
k. ♂ ad. sk.	Surrey, May.	Gould Collection.
l, *m*. ♂ juv. st.	Brighton, Oct. 1881.	Messrs. Swaysland [P.].
n. ♂; *o*, *p*, *q*. ♀ ad. sk.	Brighton, Sept. 1883 (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
r. Ad. sk.	Devonshire.	Col. Montagu [P.].
s. ♂ ad. sk.	Axmouth, Devonshire, April.	R. B. Sharpe, Esq. [P.].
t, *u*. ♂ ♀ ad. sk.	Lapland, June 12.	R. B. Sharpe, Esq. [P.].
v, *w*. ♂ ad. sk.	Norway, June (*J. Baker*).	Salvin-Godman Coll.
x, *y*. ♂ ad. sk.	Norway, May (*R. Collett*).	Christiania Museum [P.].
z. ♂ ad. sk.	Norway, Aug. (*R. Collett*).	Christiania Museum [P.].
a'. ♀ ad. sk.	Valkenswaard, Holland (*J. Baker*).	Salvin-Godman Coll.
b'. Juv. sk.	Utrecht, Holland, Sept. (*Van Dam*).	R. B. Sharpe, Esq. [P.].
c'. ♂ ad. sk.	Pomerania, May 12.	R. B. Sharpe, Esq. [P.].
d'. ♂ ad. sk.	Saxony, April 20.	R. B. Sharpe, Esq. [P.].
e', *f'*. ♂ ♀ ad. sk.	Florence, Italy, Oct.	Prof. Giglioli [P.].
g'. ♂ ad. sk.	South Spain, Sept. 13.	R. B. Sharpe, Esq. [P.].
h'. Ad. sk.	Morocco.	R. B. Sharpe, Esq. [P.].
i'. Ad. sk.	Tangier (*Drummond Hay*).	Gould Collection.
k'. ♂ ad. sk.	Asia Minor, April 18 (*T. Robson*).	Gould Collection.
l'. ♀ ad. sk.	Mount Tabor, Palestine.	Canon Tristram [C.].
m'. ♂ ad. sk.	Plain of Acre.	Canon Tristram [C.].
n'. ♂ ad. sk.	Nubia, April 10.	Capt. G. E. Shelley [P.].
o'. Imm.; *p'*. Ad. sk.	Eylet, Bogos (*Esler*).	Sharpe Collection.
q'. Ad. sk.	Dakar, Senegal (*Marche*).	M. A. Bouvier [P.].
r'. Ad. sk.	Shonga, R. Niger, Nov. 1882.	W. A. Forbes, Esq. [C.].
s'. Ad. sk.	Afghanistan (*Griffith*).	India Museum.
t'. ♂ ad. sk.	Candahar, April 2.	Col. C. Swinhoe [P.].
u'. Ad. sk.	Kattiawar, March 25.	Major J. Hayes Lloyd [C.].
v'. ♀ ad. sk.	Cashmere, May 6.	Col. Biddulph [C.].
w'. ♂ ad. sk.	Kondu district, Sept. 20.	Col. Biddulph [C.].
x'. ♂ ad. sk.	Gilgit, May.	Col. Biddulph [C.].
y'. ♀ ad. sk.	Gilgit, July.	Col. Biddulph [C.].
z', *a*. Ad. sk.	N.W. India.	Gould Collection.
β, *γ*. Ad. sk.	Punjab.	Gould Collection.
δ, *ε*. Ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
'. Ad. sk.	Murree.	Col. Biddulph [C.].
η. Ad. sk.	Kumaon (*Strachey*).	India Museum.
θ. Ad. sk.	Behar.	B. H. Hodgson, Esq. [P.]

ι. ♀ ad. sk.	Muddapur, Nov. 6 (*W. E. Brooks*).	Oates Collection.
κ, λ. ♂ ♀ ad. sk.	Mhow, Nov.	Col. Swinhoe [P.].
μ. Ad. sk.	Deccan (*Sykes*).	India Museum. (Type of *Anthus agilis*.)
ν. Ad. sk.	Madras.	T. C. Jerdon, Esq. [P.].
ξ. Ad. sk.	Madras (*Jerdon*).	Gould Collection.
ο. Ad. sk.	Assam (*MacClelland*).	India Museum.
π, ρ. Skulls.	S. Germany.	Dr. Günther [C.].
σ. Skeleton.	England.	Purchased.

5. Anthus maculatus.

Anthus maculatus, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 118A (no. 435); *id. in Gray's Zool. Misc.* p. 83 (1844); *Cab. Mus. Hein.* Th. i. p. 15 (1850); *Bp. Consp.* i. p. 248 (1850); *Ball, Str. F.* 1874, p. 416; *Brooks, Str. F.* 1876, p. 278; *id. Ibis*, 1876, pp. 499, 504; *Ball, Str. F.* 1877, p. 417; *id. Str. F.* 1878, vol. ii. p. 219; *Cripps, t. c.* p. 287; *Butler, Cat. B. Sind &c.* p. 41 (1879); *Seebohm, Ibis*, 1879, p. 34; *Hume, Str. F.* 1879, p. 103; *Brooks, t. c.* p. 484; *Seebohm, Ibis*, 1880, p. 189; *Reid, Str. F.* 1881, p. 48; *Davison, Str. F.* 1883, p. 396; *Blakist. Chrys.* ii. p. 425 (1882); *id. tom. cit.* p. 30 (1883); *id. & Pryer, B. Japan*, p. 153 (1882); *Jouy, Pr. U.S. Nat. Mus.* vi. p. 289 (1883); *Blakist. Amended List B. Japan*, p. 52 (1884).

Anthus arboreus (*nec Gm.*), *Jerd. Madr. Journ.* xi. p. 11 (1840); *Gray, Cat. Mamm. etc. Nepal pres. Hodgs.* p. 76 (1846); *Temm. & Schl. Faun. Jap., Aves*, p. 58 (1850); *Middend. Sibir. Reis.* p. 163 (1851); *Schrenck, Reis. Amurl.* p. 335 (1859); *Radde, Reis. Sibir., Vög.* ii. p. 223 (1863).

Anthus brevirostris, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 120. fig. 2 (no. 814); *id. in Gray's Zool. Misc.* p. 83 (1844).

Anthus trivialis (*nec L.*), *Blyth, J. A. S. Beng.* xvi. p. 432 (1847).

Anthus (Dendronanthus) maculatus, *Blyth, Cat. B. Mus. As. Soc.* p. 135 (1849).

Anthus agilis (*non Sykes*), *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 354 (1854, pt.); *Swinh. Ibis*, 1860, p. 55, 1861, pp. 36, 333, 1863, p. 310, 1865, p. 542; *Gray, Hand-l. B.* i. p. 251, no. 3641 (1869); *Swinh. Ibis*, 1870, p. 469, 1874, p. 442; *Dresser, Ibis*, 1876, p. 180; *Blakist. & Pryer, Ibis*, 1878, p. 236.

Anthus japonicus (*nec T. & S.*), *Swinh. Ibis*, 1861, pp. 333, 443; *Blyth, Ibis*, 1867, p. 32; *Whitely, t. c.* p. 198; *Tristr. Ibis*, 1871, p. 234; *Swinh. P. Z. S.* 1870, p. 366; *id. Ibis*, 1875, p. 449.

Anthus agilis (*non Sykes*), *Jerd. B. Ind.* ii. p. 229 (1863); *Gould, B. Asia*, iv. pl. 65 (1865); *Beavan, Ibis*, 1868, p. 78; *Pelz. t. c.* p. 312; *Brooks, Ibis*, 1869, p. 57; *Hume, Ibis*, 1870, p. 287; *Swinh. t. c.* p. 347; *Hume & Henders. Lahore to Yark.* p. 226 (1873); *Adams, Str. F.* 1873, p. 384; *Hume, Str. F.* 1874, p. 479; *id. Nests and Eggs Ind. B.* p. 382 (1873); *Swinh. Ibis*, 1874, p. 425; *Hume & Oates, Str. F.* 1875, p. 142; *Tacz. Bull. Soc. Zool. France*, i. p. 159 (1876); *Prjev. in Rowley's Orn. Misc.* ii. p. 195 (1877); *David & Oust. Ois. Chine*, p. 308 (1877); *Slater, Ibis*, 1882, p. 433.

Pipastes maculatus, *Hume, Ibis*, 1870, p. 287, 1871, p. 35; *id. Str. F.* 1873, p. 202; *Brooks, Str. F.* 1875, p. 250; *Hume & Butler, t. c.* p. 490; *Blyth & Wald. B. Burm.* p. 96 (1875); *Armstr. Str. F.*

1876, p. 330; *Butler, Str. F.* 1877, p. 230; *Anders. Zool. Exped. Yun-nan*, p. 608 (1878); *Hume & Davis. Str. F.* 1878, pp. 365, 519; *Davids. & Wenden. Str. F.* 1878, vol. ii. p. 84; *Murray, t. c.* p. 109; *Scully, Str. F.* 1879, p. 316; *Oates, B. Brit. Burm.* i. p. 171 (1883).

Pipastes agilis, *Blanf. J. A. S. Beng.* 1872, p. 60; *Dybowski, Bull. Soc. Zool. France*, viii. p. 261 (1883, *nec Sykes*).

Adult. General colour above nearly uniform olive-brown, with a few dusky streaks on the head, mantle, and back; the lower back and rump entirely uniform; the streaks most distinct on the crown; lesser wing-coverts like the back; median and greater wing-coverts dusky brown, externally olive-brown, the median series tipped with yellowish white; bastard-wing blackish brown; primary-coverts and quills dark brown, edged with olive-brown like the back, the first primary white along the margin of the outer web; centre tail-feathers dark brown, edged with olive, the remainder pointed, edged narrowly with olive and tipped with white; the penultimate feather with a wedge-shaped spot of white at the end of the inner web; the outer feathers white, smoky brown towards the tip of the outer web, and with an oblique mark of dark brown on the inner web; eyelid and a broad eyebrow fulvous, becoming whiter above the ear-coverts; lores, feathers below the eye, and ear-coverts sandy buff, the latter dusky on the hinder margin; cheeks and throat uniform sandy buff, separated by a narrow black malar streak; fore neck, chest, and flanks sandy buff, all broadly spotted with triangular black markings, more longitudinal on the sides of the body, which are washed with olive-brown; breast, abdomen, and under tail-coverts white, the former spotted with black, the latter unspotted; thighs white; under wing-coverts smoky brown, edged with olive-yellow; under wing-coverts also light smoky brown, washed with olive-yellow, and slightly mottled with dusky bases near the edge of the wing; quills dusky brown below, pale ashy along the inner web: "upper mandible black; lower mandible livid at tip, pale fleshy at base; feet pale reddish-fleshy; iris dark brown" (*Scully*); "feet light flesh-colour" (*Blakiston*). Total length 6 inches, culmen 0·55, wing 3·5, tail 2·6, tarsus 0·85.

This species maintains throughout its life the olive-green coloration, which, at any age or season, distinguishes it from *A. aboreus*. In summer, when the plumage is much worn, the throat is white below, the spots on the breast very black and distinct, and the back becomes very distinctly streaked with black, which is very pronounced on the head and over the eye.

In autumn plumage the black spots on the breast are somewhat less pronounced, and the throat is a beautiful buff-colour, almost tawny in some specimens.

Some individuals from the North-west Himalayas appear to me to be somewhat intermediate between *A. maculatus* and *A. trivialis*, partaking of the more distinct striping of the upper surface characteristic of the latter bird, but still retaining the green tinge of colour peculiar to *A. maculatus*.

Hab. Eastern Asia from Japan and Eastern Siberia, as far as the valley of the Yen-e-say. Winters in the plains of India, the Burmese countries, and Cochin China.

a. Ad. sk.	Himalayas.	Gould Collection.
b. Ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
c–i. Ad. sk.	Nepal.	B.H. Hodgson, Esq. [P.]. (Types of species.)
k–s. Ad. sk.	Nepal (*Hodgson*).	India Museum.
t. ♂ ad. sk.	Mogul Serai, Mar. 2 (*W. E. Brooks*).	Oates Collection.
u. Ad. sk.	Cawnpore, June 28 (*W. E. Brooks*).	India Museum.
v. ♂ ad. sk.	Behar.	B. H. Hodgson, Esq. [P.].
w. ♂ ad. sk.	Ootacamund, Nilghiri hills, April 19.	W. Davison, Esq. [P.].
x. Ad. sk.	Bootan (*Pemberton*).	India Museum.
y. Ad. sk.	Khasia hills (*Griffith*).	India Museum.
z. Ad. sk.	Bhamau, Feb. 22.	Dr. J. Anderson [C.].
a'. Ad. sk.	Mengoon, Upper Burmah, Jan. 14.	Dr. J. Anderson [C.].
b'. ♂ ad. sk.	Right bank of Tapeng River, March 5.	Dr. J. Anderson [C.].
c'. ♂ ad. sk.	Ponsee, Kakhyen hills, April 20.	Dr. J. Anderson [C.].
d'. Ad. sk.	Bassein, Pegu.	W.T. Blanford, Esq. [P.].
e'. ♀ ad. sk.	Pegu, Nov. 17.	Oates Collection.
f'. Ad. sk.	Pegu, Dec. 26.	Oates Collection.
g'. ♀ ad. sk.	Karen-nee, Jan. 26 (*Lloyd*).	Oates Collection.
h'. Ad. sk.	Tenasserim.	J. C. D. Packman, Esq. [P.].
i'. Ad. sk.	Amoy, Nov. 12 (*Swinhoe*).	Gould Collection.
k'. Ad. sk.	Amoy, Dec. (*Swinhoe*).	Gould Collection.
l'. Ad. sk.	Fokien.	Gould Collection.
m', *n'*. ♀ ad. sk.	Yokohama.	Prof. Milne [C.].
o'. Ad. sk.	Yokohama.	H. Pryer, Esq. [C.].
p', *q'*. ♂ ad. sk.	Sapporo, Yezo, Oct.	Capt. Blakiston [P.].
r'. ♀ ad. sk.	Izari, Yezo, Sept.	Capt. Blakiston [P.].
s'. ♂ ad. sk.	Fuji, July (*Jouy*).	Capt. Blakiston [P.].
t'. ♀ ad. sk.	Nagasaki, Nov.	F. Ringer, Esq. [P.].
u'. ♂; *v'*, *w'*. ♀ ad. sk.	Nagasaki, Dec.	F. Ringer, Esq. [P.].
x'. ♂; *y'*, *z'*. ♀ ad. sk.	Nagasaki, Jan.	F. Ringer, Esq. [P.].
a. ♂ ad. sk.	Amoor Land, June 12.	R. B. Sharpe, Esq. [P.].
β. ♂ ad. sk.	Island of Askold, April (*H. Doerries*).	R. B. Sharpe, Esq. [P.].
γ. ♀ ad. sk.	Island of Askold, May (*H. Doerries*).	R. B. Sharpe, Esq. [P.].
δ. Bones of trunk.	Nepal.	B.H. Hodgson, Esq. [P.].

a. Intermediate form.

a. ♂ ad. sk.	Gilgit, June 1.	Major Biddulph [P.].
b, *c*, *d*, *e*. Ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].

f. Var., sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
g. Ad. sk.	Himalayas.	
h. Ad. sk.	Nepal.	B.H. Hodgson, Esq. [P.].
i. Ad. sk.	Nepal (*Hodgson*).	India Museum.

6. Anthus nilghiriensis.

Anthus rufescens, *Jerd. Madr. Journ.* xi. p. 34 (1840, *nec Temm.*).
Anthus montanus (*nec Koch*), *Blyth, J. A. S. Beng.* xvi. p. 435 (1847, *ex Jerd. MSS.*); *id. Cat. B. Mus. As. Soc.* p. 136 (1849); *Bp. Consp.* i. p. 248 (1850); *Gray, Hand-l. B.* i. p. 251, no. 3643 (1869); *Hume, Str. F.* 1878, vol. ii. p. 461; *id. Str. F.* 1879, p. 103; *Davison, Str. F.* 1883, p. 397.
Pipastes montanus, *Jerd. B. Ind.* ii. p. 230 (1863); *Blyth, Ibis*, 1867, p. 312; *Hume, Nests and Eggs Ind. B.* p. 383 (1873); *Fairb. Str. F.* 1877, p. 407.
Anthus trivialis, pt., *Dresser, B. Eur.* iii. p. 309 (1874).



Foot of *Anthus nilghiriensis*.

Hind claw stout and strongly curved, much shorter than the hind toe. *Tarsus* considerably longer than the hind toe and claw combined. *Primaries equal*, 2, 4; *third* a trifle longer, *first* a trifle shorter, than second; *fifth* shorter than first, and equal in length to long secondaries. *Feet* reaching to three fourths of length of tail (in skin). *Primaries emarginate*, 2, 3, 4, 5, the last quite distinct. Sometimes the long secondaries exceed the tips of the primaries in the closed wing.

Adult male. General colour above light sandy buff, paler on the edges of the feathers of the mantle, the whole upper surface broadly streaked with black down the centre of the feathers, which have a slight tinge of olive. Rump more uniform, the black centres to the feathers less distinct; lesser wing-coverts and scapulars olive-brown, with indistinct blackish centres to the feathers; median and greater coverts blackish, externally sandy brown, paler at the end; bastard-wing and primary-coverts blackish, narrowly edged with ashy fulvous; quills blackish, edged with sandy buff, washed with olive, the edges to the inner secondaries much paler, the first primary

edged with buffy whitish; upper tail-coverts and tail blackish, edged with paler brown, the latter with pale sandy buff; the two outer feathers smoky brown, whitish at tip, the inner web with an oblique mark of dark brown; the third feather with an irregular wedge-shaped spot of white at the end of the inner web; a distinct eyebrow from the base of the nostril to above the ear-coverts; lores blackish; ear-coverts and feathers below the eye reddish brown, with whitish shaft-lines, the upper margin dusky brown; cheeks rich sandy buff, brighter on the throat and fore neck, as well as the sides of the body; the fore neck, chest, and sides streaked with black, the stripes more longitudinal on the latter; abdomen paler and more isabelline; under tail-coverts richer sandy buff; axillaries pale sandy buff, washed with olive; under wing-coverts sandy buff, tinged with olive near the edge of the wing; quills dusky below, ashy for two thirds of their length: "upper mandible and apical portion of lower mandible and claws dark brown; rest of lower mandible, legs, and feet pale fleshy brown; iris deep wood-brown" (*Davison*). Total length 6·5 inches, culmen 0·55, wing 2·95, tail 2·7, tarsus 0·95.

Adult female. Very similar to the male, but having the under-parts more feebly marked. Total length 6 inches, culmen 0·55, wing 2·9, tail 2·35, tarsus 0·95.

Obs. Some specimens have the throat richer and more tawny than others, but otherwise there is little variation in examples killed in the spring of the year.

Hab. Hills of Southern India.

a. Ad. sk.	Nilghiri hills.	T. C. Jerdon, Esq. [P.]. (Type of species.)
b, c. ♂ ♀ ad. sk.	Ootacamund, Nilghiris, Jan.	W. Davison, Esq. [P.].
d, e, f. ♂ ad. sk.	Ootacamund, Feb.	W. Davison, Esq. [P.].
g. ♂ ad. sk.	Ootacamund, March.	W. Davison, Esq. [P.].

7. Anthus brachyurus.

Anthus brachyurus, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1850, p. 100; *Gurney, Ibis*, 1863, p. 327; *Layard, B. S. Afr.* p. 122 (1867); *Gray, Hand-l. B.* i. p. 249, no. 3617 (1869); *Tristr. Ibis*, 1869, p. 437; *Sharpe, ed. Layard's B. S. Afr.* p. 539 (1884).
Anthus brevicaudus, *Bp. Consp.* i. p. 248 (1853, *lapsu cal.*).
Anthus calthropæ, *Layard, B. S. Afr.* p. 121 (1867); *Gray, Hand-l. B.* i. p. 250, no. 3627 (1869).

Hind claw slender, slightly curved, and not so long as the hind toe. *Tarsus* longer than hind toe and claw combined. *Primaries equal*, 2 and 3; *first* and *fourth* almost equal, so that practically they are all four subequal; *fifth* a little shorter than the fourth, but longer than the innermost secondaries. *Feet* not extending beyond the tail, but nearly reaching to the tip (in skin). *Primaries emarginate*, 2, 3, 4, 5, all distinct.

Adult male in breeding-plumage. General colour above dusky, somewhat Lark-like in appearance, the feathers being dark brown

edged with fulvous-brown, somewhat tinged with olive; lower back and rump uniform dark brown, washed with olive; upper tail-coverts dark brown, with fulvous-brown margins; lesser wing-coverts uniform dark sandy brown; median and greater coverts dark brown, broadly margined with tawny buff, with a slight tinge of olive; bastard-wing dark brown, the outer feather margined with white, slightly tinged with buff; primary-coverts dark brown, margined with olive; quills dark brown, edged with fulvous, the first primary white along the outer web; tail-feathers dark brown, edged with lighter brown, the outer ones smoky white, obliquely dark brown on the inner web; penultimate feather edged with smoky white externally and paler brown at tip; head like the back; lores tawny buff, extending a little above the eye; eyelid yellowish buff; ear-coverts dull tawny buff, streaked with dark brown; cheeks yellowish buff, spotted with dark brown; chin and throat yellowish buff, the former uniform, the lower throat spotted with dusky, these spots becoming larger and more distinct on the fore neck and chest, which is very broadly streaked with blackish centres to the feathers; lower breast and abdomen white, the sides of the body and flanks fulvous, very broadly streaked with dark brown or blackish; thighs olive-fulvous; under tail-coverts pale sandy buff, the basal ones with concealed dark-brown centres, the longer ones dark brown with lighter brown edges; under wing-coverts light sandy buff, slightly mottled with dusky bases; the axillaries white, washed with olive-yellow; quills pale dusky brown below, with a broad extent of ashy white along the inner web: "upper mandible dark brown, the lower one pale ashy colour; nostrils linear; tarsi and feet pale; iris dark hazel" (*T. Ayres*). Total length 4·6 inches, culmen 0·45, wing 2·6, tail 1·6, tarsus 0·65.

Adult female. Similar to the male in colour, with a strong shade of yellowish olive on the lores, eyebrow, sides of neck, and chest. Total length 4·7 inches, culmen 0·45, wing 2·5, tail 1·7, tarsus 0·65.

Young (Rustenburg, Nov. 16; W. Lucas). More Lark-like than the adults. Sandy rufous above, with broad black centres to the feathers and pale sandy tips; the rump uniform sandy rufous; the edgings to the wing-coverts, quills, and tail-feathers sandy rufous; under surface of body pale isabelline, the throat minutely and the breast and fore neck broadly streaked with black; the flanks uniform.

Winter plumage (Rustenburg, April 22; W. Lucas). Very similar to the foregoing immature plumage. Sandy rufous instead of olive-brown, as in summer, the margins to the wing-coverts and quills particularly broadly edged with sandy rufous, as are also the tail-feathers; lores and feathers round the eye white; under surface of body isabelline, with much narrower streaks of black on the fore neck and chest than in summer; flanks uniform sandy rufous; "upper mandible dusky, lower mandible pale; tarsi and feet pale brown; iris dark hazel" (*W. Lucas*). Total length 5·3 inches, culmen 0·5, wing 2·9, tail 2·2, tarsus 0·7.

Obs. It is with some hesitation that I refer these Rustenburg specimens to *A. brachyurus*. The larger size of the example obtained in November, *its uniform flanks*, general rufous colour, and the presence of a white wedge-shaped tip on the penultimate tail-feather are all characters which separate it from the Natal specimens. Furthermore, Mr. Lucas speaks of it as "perching on trees;" whereas Mr. T. Ayres says that in Natal, where *A. brachyurus* is only a summer visitor, it is "quite a terrestrial bird, never alighting on any twig or stem of grass, but always on the ground." On the other hand, there are many other characters, such as the white-edged first primary, in which the two birds agree.

Hab. Natal in summer, retreating in winter to the Eastern Transvaal districts.

a. ♀ ad. sk.	Umlaas River, Natal, Jan. 22, 1840 (*Wahlberg*).	Sharpe Collection.
b. ♀ ad. sk.	Natal.	Dr. Gueinzius [C.].
c, *d*. ♂ ♀ ad. sk.	Natal (*T. Ayres*).	J. H. Gurney, Esq. [P.].
e. Ad. sk.	Natal.	T. Ayres, Esq. [C.].
f. Juv. sk.	Rustenburg, Nov. 16 (*W. Lucas*).	R. B. Sharpe, Esq. [P.].
g. ♂ ad. sk.	Rustenburg, April 22 (*W. Lucas*).	R. B. Sharpe, Esq. [P.].

8. **Anthus nicholsoni.**

Anthus campestris (*nec V.*), *Gurney, in Anderss. B. Dam. Ld.* p. 114 (1872); *Bocage, Orn. Angola*, p. 292 (1881).
Anthus nicholsoni, *Sharpe, ed. Layard's B. S. Afr.* p. 536 (1884).



Foot of *Anthus nicholsoni*.

Hind claw stout and slightly arched, only a trifle shorter than hind toe, the two practically subequal. *Tarsus* stout, exceeding length of hind toe and claw combined. *Primaries equal*, 2, 3; fourth scarcely shorter than third; first shorter than fourth and

subequal to the long secondaries; fifth much shorter than first. *Feet* reaching to a little more than half the tail. *Primaries emarginate*, 2, 3, 4, 5, all very distinct.

Adult male in winter plumage (type of species). General colour above mottled, the feathers being dull ashy brown, washed with sandy buff, and having tolerably distinct blackish shaft-lines; rump-feathers with clearer sandy-rufous edgings, as also the upper tail-coverts, the long ones of which are edged with ashy whitish; lesser wing-coverts like the back; median and greater coverts blackish, edged with sandy rufous, inclining to isabelline towards the ends of the feathers; bastard-wing blackish, with sandy-buff margins; primary-coverts and quills blackish brown, edged with pale ashy brown, hoary whitish on the primaries, the first primary white along the edge of the inner web; the secondaries broadly margined with sandy rufous; tail-feathers blackish brown, with ashy-fulvous edges, the penultimate feather with a very narrow fringe of isabelline along the outer web, sometimes extending round the tip of the inner web; otherwise the penultimate feather is blackish; outer feather diagonally blackish on the inner web, the shaft dark brown, the outer web pale isabelline buff for its entire extent, somewhat paler towards the end, the inner web diagonally pale isabelline for its terminal third, becoming whiter towards the tip; head like the back, but slightly more mottled with blackish centres to the feathers; eyelid and a distinct eyebrow yellowish white; lores ashy; ear-coverts sandy rufous, with whitish shaft-lines; below the eye some dusky feathers; cheeks yellowish buff, followed by a distinct moustachial line of black; throat white, washed with pale sandy on the lower part; sides of neck sandy buff, mottled with dusky bases to the feathers; under surface of body from the fore neck downwards pale isabelline buff, deeper and more sandy buff on the sides of the body, thighs, and under tail-coverts; the fore neck very distinctly spotted with blackish, the sides of the upper breast streaked with brown shaft-lines; under wing-coverts and axillaries pale sandy buff, the latter with a distinct shade of olive; quills dusky below, ashy fulvous along the inner web. Total length 7·5 inches, culmen 0·7, wing 3·9, tail 3·1, tarsus 1·05.

A specimen from Mr. Andersson's last collection, which was probably obtained at Ondonga (as the ticket attached to it was the same as that which the Ovampo-Land specimens bore), is apparently in breeding-plumage. It differs from the specimen described in being altogether more rufous, with the feathers much worn (so that the mesial black markings on the dorsal plumage stand out in bolder relief), in the strongly-marked mystacal line of black, and in the less distinct spots on the chest.

This species is of about the same size and appearance as *A. pyrrhonotus*, but is mottled with dark centres to the feathers of the upper surface. In the tail, however, lies the chief difference. The outer feather has the outer web whitish for the most part, but is brown along the inner web, this colour running obliquely from the base upwards. The penultimate feather is almost entirely brown, with a narrow

edging of buffy whitish running along the outer web and slightly widening at the tip; the hind claw is stout and rather curved.

The shaft of the outer feather is generally *dark*, sometimes lighter towards the base. The breast is always distinctly streaked with brown, and there are generally indications of a double moustache, the ear-coverts being brown, with a dark-brown streak along their lower edge, skirting the cheeks above, just as the mystacal line does below.

Hab. South Africa, inhabiting the Cape Colony and extending into Natal and probably into Damara Land.

a. ♀ ad. sk.	Cape Town, May 1 (*C. J. Andersson*).	Sharpe Collection.
b. ♂ ad. sk.	Sigonell, Vaal River (*T. C. Atmore*).	Sharpe Collection. (Type of species.)
c. ♂ ad. sk.	Eland's Post, June (*T. C. Atmore*).	Sharpe Collection.
d. ♂ ad. sk.	Kingwilliamstown, May 24.	Capt. Trevelyan [P.].
e. ♂ ad. sk.	Near Newcastle, Natal, June.	Capt. Savile G. Reid [P.].
f. ♂ ad sk.	Rustenburg, Aug. 8 (*W. Lucas*).	R. B. Sharpe, Esq. [P.].
g. ♂ ad. sk.	[Ondonga] (*Andersson*).	Sharpe Collection.

9. Anthus pyrrhonotus.

L'Alouette à dos roux, *Levaill. Ois. d'Afr.* iv. pl. 197 (1805); *Sundev. Krit. Framst., Levaill.* p. 46 (1858) *.

Alauda pyrrhonotha, *Vieill. N. Dict. d'Hist. Nat.* i. p. 361 (1816, *ex Levaill.*).

Anthus leucophrys, *Vieill. N. Dict. d'Hist. Nat.* xxvi. p. 502 (1818) †; *id. & Oud. Gal. Ois.* i. p. 262 (1823); *Gray, Gen. B.* i. p. 206 (1847); *Bp. Consp.* i. p. 248 (1850); *Layard, Ibis*, 1869, p. 358, 1871, p. 228.

Anthus gouldi, *Fraser, P. Z. S.* 1843, p. 27; *Gray, Gen. B.* i. p. 206 (1847); *Hartl. Orn. Westafr.* p. 73 (1857); *Gurney, Ibis*, 1860, p. 208; *Hartl. J. f. O.* 1861, p. 162; *Tristr. Ibis*, 1869, p. 437; *Heugl. Orn. N.O.-Afr.* i. p. 328 (1869); *Sharpe, Ibis*, 1870, p. 461; *Shelley & Buckley, Ibis*, 1872, p. 290; *Hartl. Abhandl. nat. Ver. Bremen*, vii. p. 99 (1881), viii. p. 198 (1883).

Anthus sordidus (*nec Rüpp.*), *Bianc. Spec. Zool. Mosamb.* fasc. xvi. p. 122 (1865); *Gray, Hand-l. B.* i. p. 251, no. 3637 (1869).

Megalophonus pyrrhonotus, *Layard, B. S. Afr.* p. 211 (1867).

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* Prof. Sundevall does not consider Levaillant's plate to be really a representation of this Pipit; but I think that the description is fairly correct. Moreover Levaillant states that his bird is the "Enkelde Leewerk" of the colonists; and as this is the name for the Common Pipit of South Africa, it seems better to adopt it, and to make allowance for the slight inaccuracy of the figure.

† As with many of the older descriptions of Pipits, there is not a character in Vieillot's diagnosis which will enable us to determine the species with certainty. It agrees, however, so well with *A. pyrrhonotus*, that I believe it to have been taken from a specimen of the latter bird.

Anthus cinnamomeus (*nec Rüpp.*), *Gray, Hand-l. B.* i. p. 251, no. 3636 (1869); *Layard, Ibis*, 1871, p. 228.

Anthus pyrrhonotus, *Gurney, Ibis*, 1871, p. 150; *Layard, t. c.* p. 228; *Gurney, in Anderss. B. Dam. Ld.* p. 113 (1872); *Buckley, Ibis*, 1874, p. 384; *Shelley, Ibis*, 1875, p. 75; *Ayres, Ibis*, 1876, p. 246; *Sharpe, in Oates's Matabele Land, App.* p. 317 (1881); *Shelley, P. Z. S.* 1881, p. 573; *Butler, Feilden, & Reid, Zool.* 1882, p. 336; *Shelley, Ibis*, 1882, p. 349, 1883, p. 543.

Anthus erythronotus, *Sharpe, Cat. Afr. B.* p. 72 (1871); *Bocage, Orn. Angola*, p. 295 (1881).



Foot of *Anthus pyrrhonotus*.

Hind claw curved, not so long as the hind toe itself. *Tarsus* very much longer than the hind toe and claw. *Primaries equal*, 2 and 3; *first* primary equal to fourth; both of them only a shade shorter than the others, and practically about equal; *fifth* primary much shorter than the other four, about equal to longest secondaries and generally exceeding them by a little. *Feet* not reaching beyond end of tail (in skin). *Primaries emarginate*, 2, 3, 4, 5, the last obsolete.

Nestling (full-grown). General colour above Lark-like, the feathers dark brown or blackish, laterally margined with sandy buff and fringed at the tips with pale sandy buff, producing a strongly mottled appearance; the head like the back and similarly marked; the hind neck more ashy brown and the dark spots smaller; wing-coverts blackish, rather broadly edged with deep sandy buff; bastard-wing, primary-coverts, and quills blackish brown, edged with sandy rufous, broader on the secondaries, the first primary externally edged with isabelline; upper tail-coverts and tail-feathers blackish brown, rather broadly margined with sandy buff, the penultimate feather blackish brown along the inner web, paler and more smoky brown near the shaft, which again is blackish brown, forming with the adjoining portion of the feather a distinct blackish streak down the feather, reaching nearly to the tip, the outer web and the end of the inner web sandy buff; outer feather

smoky brown, the inner web obliquely blackish brown, the outer web pale sandy buff, the shaft yellowish white, rather browner towards the end; lores pale sandy buff, continued into a broad eyebrow of lighter sandy; eyelid, sides of face, and ear-coverts sandy buff, the latter slightly mottled with brown ends to the feathers; cheeks pale sandy buff, separated from the throat by a distinct moustache of dusky brown; throat pale sandy buff; remainder of under surface of body sandy buff, browner on the flanks and sides of body; the fore neck and breast distinctly mottled with triangular blackish spots, which extend down the sides of the body; axillaries and under wing-coverts sandy rufous, mottled with dusky bases near the edge of the wing; quills dusky below, pale rufous-buff along the inner web.

A female bird obtained by Mr. Andersson on the 20th of January is moulting from the plumage above described into its first winter dress, and we are able to trace what the latter will be like. It is evident that the bird passes at once into the uniform plumage of the adult, but with this difference, that the new dorsal feathers are obsoletely fringed with sandy buff, a little more distinct on the head, where the feathers have dusky centres, so that the head has a faintly striped appearance. It is at this season that the species might be mistaken for *A. nicholsoni*; but the absence of distinct streaks to the dorsal plumage and the sandy rufous axillaries effectually distinguish it. The under surface is strongly suffused with sandy buff, especially on the fore neck and chest, which have obscure dusky blackish streaks or spots in the centre of the feathers. The tail does not retain the markings on the penultimate feather so distinctly as in the nestling dress. The outer tail-feather is as before, excepting that the sandy-buff colour on the outer web is whiter.

Adult female in breeding-plumage. General colour above nearly uniform umber-brown, but slightly paler and more ashy on the hinder neck; least wing-coverts like the back, the remainder blackish, edged with dark sandy buff; the bastard-wing and primary-coverts blackish brown, narrowly margined with ashy fulvous, as also are the primaries, the secondaries, however, having rather broader edges of sandy buff; tail-feathers dark brown, narrowly edged with ashy fulvous, the two outer ones smoky brown, with an oblique mark of dark brown along the inner web, the tips of both feathers isabelline, as also the outer web of the external rectrix; head nearly uniform, like the back; lores and a distinct eyebrow as well as the feathers under the eye isabelline whitish, rather more sandy on the hinder part of the eyebrow; ear-coverts pale sandy buff, browner along the upper margin; cheeks whitish, with a dusky line along the upper margin and a plainer mystacal line of blackish; throat whitish; remainder of the under surface of the body pale sandy buff, inclining to isabelline on the centre of the breast, abdomen, thighs, and under tail-coverts; fore neck and breast slightly washed with ashy fulvous, with a few indistinct

streaks of dusky brown; flanks rather more strongly washed with sandy buff; axillaries and under wing-coverts smoky brown, washed with sandy buff; under surface of quills dusky, ashy isabelline along the inner web. Total length 6·4 inches, culmen 0·65, wing 3·6, tail 2·25, tarsus 1·1.

The specimen described is in breeding-plumage, which is consequently much worn. A specimen killed in March is in full moult into winter plumage, and has already assumed the broad sandy-buff edges to the wing-coverts and quills; the outside tail-feathers are more rufescent on the edges and tips than the bird described, which has the light portions of these feathers almost faded out to white.

A male obtained on the 20th of November by Mr. Andersson is in such worn and abraded plumage that the whole of the upper surface, including the wings, is nearly uniform, without any trace of light margins to the feathers. On the chest are some very distinct triangular spots of blackish brown.

This species presents a remarkable variation in colour in a large series—all these differences, however, appearing to be accounted for by the natural variations of age or season. In the extensive series contained in the British Museum are examples in nearly every stage of plumage and from nearly every habitat of the species.

The present bird differs from *A. nicholsoni* in its uniform upper surface and especially in the tail, which in the last-named bird has the penultimate feather blackish, with only a narrow outer edging of rufous-buff along the outer web and round the tip; sometimes a small wedge-shaped spot is present at the end of the inner web: the outer feather is of the same character in both the birds; but in *A. nicholsoni* the light portion of the feather is pale rufescent, becoming whiter at the tip, and the shaft appears to be always darker brown.

From *Anthus sordidus* it is also easily distinguished by its uniform upper surface and by the absence of the triangular reddish mark at the end of the penultimate feather.

In the winter plumage the colour of the upper parts is more ashy buff and the sandy-coloured edges to the wing-coverts and quills are much plainer and more distinct; the spots on the breast are less pronounced, being obscured by the sandy-coloured edges to the feathers, which resemble the rest of the under surface.

Anthus gouldi of Fraser is a small West-African form of *A. pyrrhonotus*, rather darker in colour above and deeper coloured underneath, especially on the under tail-coverts, which are deep tawny buff. The type measures:—Total length 6·6 inches, culmen 0·55, wing 3·55, tail 2·8, tarsus 1·06.

Hab. The whole of South Africa, from the Cape Colony to Benguela on the west coast and the Zambesi on the east, occurring in Eastern Africa as far north as Shoa. In Western Africa a small dark race occurs from the Niger to Senegambia, while the representative form of the Gaboon and Congo region is subspecifically distinct.

α. *A. pyrrhonotus.*

a. Ad. sk.	South Africa.	Zoological Society.
b. Ad. sk.	South Africa (*Andersson*).	R. B. Sharpe, Esq. [P.].
c. Ad. æstiv. sk.	South Africa.	Sir A. Smith [C.].
d. Ad. æstiv. sk.	South Africa.	Purchased.
e. Ad. æstiv. sk.	Cape Town (*Layard*).	Salvin-Godman Collection.
f. Ad. hiem. sk.	Swellendam (*Atmore*).	Sharpe Collection.
g. Ad. hiem. sk.	Swellendam (*Layard*).	Salvin-Godman Collection.
h. Ad. æstiv. sk.	Colesberg (*Layard*).	Salvin-Godman Collection.
i. ♀ ad. æstiv. sk.	Knysna, December (*Andersson*).	Sharpe Collection.
k. Pull. sk.	Knysna, January (*Andersson*).	Sharpe Collection.
l. Ad. hiem. sk.	Port Elizabeth (*Ortlepp*).	Sharpe Collection.
m. Juv. hiem. sk.	Port Elizabeth (*Ortlepp*).	Sharpe Collection.
n. ♀ ad. sk.	Grahamstown (*Layard*).	Sharpe Collection.
o. ♂ ad. æstiv. sk.	British Caffraria, Sept. (*F. A. Barratt*).	R. B. Sharpe, Esq. [P.].
p. ♂; *q*, *r*, *s.* ♀ ad. hiem. sk.	Pine Town, Natal, June (*T. L. Ayres*).	R. B. Sharpe, Esq. [P.].
t. ♀ ad. hiem. sk.	Pine Town, March (*T. L. Ayres*).	R. B. Sharpe, Esq. [P.].
u, *v.* ♂ ad. hiem. sk.	Pine Town, April (*T. L. Ayres*).	R. B. Sharpe, Esq. [P.].
w. Ad. æstiv. sk.	Natal.	T. Ayres, Esq. [C.].
x. Ad. hiem. sk.	Kaar Kloof Heights, May 19 (*F. Oates*).	W. E. and C. G. Oates, Esqrs. [P.].
y. Ad. hiem. sk.	Transvaal, June 15 (*T. Ayres*).	Sharpe Collection.
z, *a'*. ♂ ♀ ad. hiem. sk.	Transvaal, June 15 (*T. Ayres*).	Sharpe Collection.
b'. ♀ ad. æstiv. sk.	Lydenburg, Jan. 18 (*T. Ayres*).	J. H. Gurney, Esq. [P.].
c'. ♂ ad. hiem. sk.	Rustenburg, May 16 (*W. Lucas*).	R. B. Sharpe, Esq. [P.].
d'. Juv.; *e'*. Ad. æstiv. sk.	Damara Land (*Andersson*).	R. B. Sharpe, Esq. [P.].
f', *g'*. ♂ ad. æstiv. sk.	Elephant Vley, Nov. 20 (*Andersson*).	R. B. Sharpe, Esq. [P.].

β. *A. gouldi.*

a. ♂ ad. sk.	West Africa.	
b, *c.* Ad. sk.	River Gambia.	Sharpe Collection.
d. Ad. sk.	Sierra Leone.	Sir E. Sabine [P.].
e. Ad. sk.	Fantee (*Swanzy*).	Sharpe Collection.
f, *g.* Ad. sk.	Cape Palmas (*Fraser*).	Eyton Collection. (Types of *A. gouldi*.)
h. Ad. sk.	Cape Palmas.	L. Fraser, Esq. [C.].
i. ♂ ad. sk.	Shonga, River Niger.	W. A. Forbes, Esq. [P.].
k. Ad. sk.	Bembe, Angola.	J. J. Monteiro, Esq. [C.].

Subsp. *a*. Anthus pallidiventris.

Anthus gouldi (*non Fras.*), *Cass. Proc. Philad. Acad.* 1859, p. 41; *Hartl. J. f. O.* 1861, p. 162 (pt.); *Reichen. J. f. O.* 1875, p. 46, 1877, p. 30.
Anthus pyrrhonotus, *Sharpe & Bouv. Bull. Soc. Zool. France*, 1877, p. 477 (*nec V.*).

Adult male in breeding-plumage. General colour above nearly uniform umber-brown, with obsolete remains of ashy margins to the feathers; wing-coverts like the back, with slightly broader edgings of fulvous-brown; quills dark brown, edged with ashy brown, inclining to olivaceous brown near the base, the first long primary externally whitish; upper tail-coverts rather lighter brown than the back; tail-feathers dark brown with ashy edges; the two outer feathers lighter than the others, the outermost one smoky brown, obliquely darker brown from the base of the inner web, the outer web whitish; the penultimate feather lighter brown, whity brown at tip and obliquely darker brown from the base of the inner web; lores and a distinct eyebrow, as well as a ring round the eye and fore part of cheeks, dull whitish; sides of face buffy whitish, with terminal brown spots to many of the feathers; throat buffy whitish, with a tolerably distinct moustachial line of brown; rest of under surface of body ashy fulvous, the bases of the feathers brighter buff, the breast rather browner, with indistinct longitudinal spots of slightly darker brown; under wing-coverts darker than the breast, fulvous-brown with clearer buff edgings; quills brown below, smoky buff along the inner web. Total length 6·7 inches, culmen 0·75, wing 3·6, tail 2·6, tarsus 1·15.

Similar to *A. pyrrhonotus*, but more ashy brown above, and especially distinguished by its dull white breast, belly, and under tail-coverts, the breast obscurely mottled with dusky spots. Total length 6·8 inches, culmen 0·7, wing 3·8, tail 2·7, tarsus 1·35.

Hab. West Africa, from Gaboon to the Congo.

a. Ad. sk.	Gaboon (*Du Chaillu*).	Sharpe Collection.
b. Ad. sk.	River Danger, Gaboon.	H. T. Ansell, Esq. [P.].
c. Ad. sk.	Gaboon (*Skertchley*).	Sharpe Collection.

10. Anthus sordidus.

Anthus sordidus, *Rüpp. Neue Wirb., Aves*, p. 103, pl. 39. fig. 1 (1835); *id. Syst. Uebers.* p. 59 (1845); *Gray, Gen. B.* i. p. 206 (1847); *Bp. Consp.* i. p. 248 (1850); *Heugl. Syst. Uebers.* p. 29 (1856); *Finsch, Trans. Zool. Soc.* vii. p. 240 (1870); *Sel. & Hartl. P. Z. S.* 1881, p. 167.
Anthus similis, *Jerd. Madr. Journ.* xi. p. 36 (1840, pt.); *id. Ill. Ind. Orn.* pl. 45 (1847); *Gray, Gen. B.* i. p. 206 (1847).
Agrodroma cinnamomea, *Jerd. B. Ind.* ii. p. 237 (1863, *nec Rüpp.*).
Agrodroma similis, *Hume, Nests and Eggs Ind. B.* p. 385 (1873); *id. Str. F.* 1873, p. 203; *Fairb. Str. F.* 1876, p. 260; *Butler, B. S. Bomb. Pres.* p. 56 (1880); *Davison, Str. F.* 1883, p. 397.

Agrodroma sordida, *Antin. & Salvad. Viagg. Bogos*, p. 110 (1873); *Butler, Str. F.* 1878, vol. ii. p. 183; *Hume, Str. F.* 1879, p. 103; *Reid, Str. F.* 1881, p. 49; *Davidson, Str. F.* 1882, p. 311.



Foot of *Anthus sordidus*.

Hind claw strongly curved, but rather slender, shorter than hind toe. *Tarsus* considerably longer than hind toe and claw combined. *Primaries equal*, 3, 4; *second* a trifle shorter than third; *first* shorter than second, and a little longer than fifth, which is a little shorter than or equal to the long secondaries. *Feet* reaching to about three fourths of the tail. *Primaries emarginate*, 2, 3, 4, 5, all very distinct.

Adult male. General plumage above slightly mottled, the feathers of the upper surface being dark brown, edged with ashy fulvous or sandy buff, the upper tail-coverts long and plainly edged with rufescent buff; lesser wing-coverts like the back; median and greater coverts blackish, rather broadly edged with sandy-colour; bastard-wing feathers black, margined with ashy fulvous; primary-coverts and primaries blackish, narrowly fringed with ashy fulvous, the secondaries edged with sandy like the greater coverts, most of the quills with a narrow whitish fringe at the tip; tail-feathers blackish, margined with sandy buff like the back, the outermost feather sandy buff along the whole of the outer web, the same colour extending diagonally across the terminal third of the outer web, the penultimate feather with a triangular spot of sandy buff at the tip; a distinct superciliary streak of pale sandy buff from the lores to the hinder edge of the ear-coverts; in front of the eye a blackish spot; feathers below the eye and the ear-coverts sandy buff, tipped with dusky brown, the upper part of the ear-coverts dark brown; cheeks and throat sandy buff, whiter on the chin, with a few dusky spots along the moustachial line; remainder of under surface of body sandy buff, slightly washed with ashy fulvous, the fore neck and breast thickly streaked with triangular spots of black; flanks and sides of body browner, but not streaked with black; thighs and under tail-coverts deeper sandy buff, especially the latter, which have faintly indicated dusky centres and blackish shaft-lines; under wing-coverts light sandy buff, with dull ashy

centres and blackish shaft-streaks, those near the edge of the wing mottled with dusky bases; axillaries and under wing-coverts dusky, with sandy margins like the feathers on the sides of the upper breast; quills dusky brown below, ashy fulvous along the edge of the inner web: "upper mandible black, lower mandible fleshy, tip blackish; tarsi reddish fleshy, the feet darker, the claws dark reddish brown; gape yellow; iris wood-brown" (*Davison*). Total length 7 inches, culmen 0·65, wing 3·55, tail 3·1, tarsus 1.

There appears to be no specific difference between the true *A. sŏrdidus* of Abyssinia and its Indian representative; a pair from Coonoor measure:—

	Total length. in.	Culmen. in.	Wing. in.	Tail. in.	Tarsus. in.
a. ♂	7·8	0·75	3·7	3·05	1·05
b. ♀	7·5	0·75	3·4	2·85	1·1

The specimen from Palestine recorded below is in winter plumage, and was sent by Canon Tristram as *A. campestris*. It has not been recorded from this locality before.

Hab. North-eastern Africa as far as the Upper-Nile regions; Palestine; and occurring throughout North-western India as far as the Nilghiris, but everywhere sparingly.

a. Ad. sk.	Eylet, Bogos Land (*Esler*).	Sharpe Collection.
b. ♀ ad. sk.	Socotra, Feb. (*Prof. Balfour*).	Brit. Association [P.].
c, d. ♂ ♀ ad. sk.	Socotra, March (*Prof. Balfour*).	Brit. Association [P.].
e. ♂ ad. sk.	Ras el Abiad, Palestine.	Canon Tristram.
f, g. ♂ ♀ ad. sk.	Coonoor, Nilghiris, Feb. (*Davison*).	A. O. Hume, Esq. [P.].

11. Anthus jerdoni.

Anthus similis, *Jerd. Madr. Journ.* xi. p. 35 (1840, pt.); *Gray, Gen. B.* i. p. 206 (1847); *Blyth, Cat. B. Mus. As. Soc.* p. 135 (1849); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* p. 350 (1854).
Agrodroma sordida (*nec Rüpp.*), *Jerd. B. Ind.* ii. p. 236 (1863); *Pelz Ibis*, 1868, p. 312; *Brooks, Ibis*, 1869, p. 57; *Ball, Str. F.* 1875, p. 207; *Butler, Cat. B. Sind &c.* p. 42 (1879).
Corydalla richardi (*nec V.*), *Beavan, Ibis*, 1868, p. 79; *Hume, Ibis*, 1869, p. 120.
Agrodroma jerdoni, *Finsch, Trans. Z. S.* vii. p. 241 (1870); *Hume & Henders. Lahore to Yark.* p. 227, pl. xxi. (1873); *Hume, Nests and Eggs Ind. B.* p. 386 (1873); *Brooks, Str. F.* 1875, p. 252; *Ball, t. c.* p. 207; *Hume & Butler, Str. F.* 1875, p. 491; *Butler, Str. F.* 1877, p. 230; *Wardlaw Ramsay, Ibis*, 1880, p. 61.
Corydalla griseorufescens, *Hume, Ibis*, 1870, pp. 286, 400.
Agrodroma griseorufescens, *Cock & Marshall, Str. F.* 1873, p. 356.
Anthus sordidus, *Blanf. East. Pers.* ii. p. 237 (1876, *nec Rüpp.*).

Hind claw stout and curved, about equal to or a little less than the hind toe itself. *Tarsus* much longer than hind toe and claw combined. *Primaries equal*, 1, 2, 3; *fourth* scarcely shorter; *fifth*

primary shorter than fourth, about equal to the long secondaries. *Primaries emarginate*, 2, 3, 4, 5, all distinct. *Feet* reaching to about three quarters of length of tail (in skin).

Adult female. General colour above nearly uniform sandy brown, with lighter sandy margins to the dorsal feathers; the scapulars, lower back, and rump more ashy; head like the back, and streaked with dark brown in the centre, these mesial streaks not being very strongly pronounced; lesser wing-coverts ashy brown; median and greater series and bastard-wing dark brown, broadly edged with sandy rufous, inclining to whity brown on the greater coverts; primary-coverts and quills dark brown, edged with ashy, the first primary narrowly, and the secondaries broadly with sandy buff; upper tail-coverts brown, with sandy-buff edges; tail-feathers dark brown, edged with ashy brown; penultimate feather with a triangular spot of sandy buff through which a blackish shaft-line passes; the outer tail-feather pale sandy buff, inclining to isabelline towards the tip, the shaft dark brown or blackish, the inner web with a broad oblique mark of dark brown; eyelid, lores, and a tolerably distinct eyebrow pale sandy buff; in front of the eye a dusky spot; ear-coverts deep sandy buff, ashy on the upper margin like the sides of the neck; cheeks and under surface of body pale sandy buff or deep isabelline, with a few triangular dusky streaks and spots on the lower throat and fore neck; thighs and under tail-coverts like the abdomen; axillaries and under wing-coverts like the breast; quills dusky below, rufescent along the inner web. Total length 7·5 inches, culmen 0·65, wing 3·9, tail 3·5, tarsus 1·1.

Adult female in breeding-plumage. Differs very little from the winter plumage, but is decidedly more ashy, the sandy margins to the feathers much worn, and greatly reduced on the wing-coverts and quills; the eyebrow, ear-coverts, and throat become bleached to a very pale isabelline, and the under surface of the body is also light isabelline buff, much paler on the throat. The streaks on the fore neck are nearly obsolete.

The series in the Museum is insufficient to work out the full changes of plumages undergone by this species; but it would appear that the winter dress is more mealy and less ashy than the summer plumage, and that the streaks on the chest, which are tolerably plain in the autumn, become more so in the following spring, and then get worn out as the breeding-plumage becomes bleached.

Jerdon's Pipit differs from *Anthus sordidus* principally in its uniform coloration both above and below, and it is altogether more mealy in appearance. At first sight it would appear to be the winter plumage of *A. sordidus*; but this is clearly not the case, for on comparing birds of both species obtained in February, the differences between them are very apparent, though they are rather difficult to describe in words.

In size the two birds are very similar, but *A. jerdoni* is altogether paler and much more uniform, the dark mottlings, so conspicuous in *A. sordidus*, not being at all pronounced, and underneath, besides being much paler, there are scarcely any spots on the breast, and

these very small and indistinct. The pale markings on the outer tail-feathers are much less extended in *A. sordidus* than in *A. jerdoni*, both on the penultimate and outer tail-feathers.

Hab. From Persia to North-western India.

a. ♀ ad. sk.	Shiraz, Persia, June.	Sir O. St. John [C.].
b. Ad. sk.	Shikarpore, Afghanistan (*Griffith*).	India Museum.
c. Ad. sk.	Kurrachee, Scinde (*Dr. H. Gould*).	India Museum.
d, e. ♀ ad. sk.	Cashmere, May.	Col. J. Biddulph [C.].
f. ♂ ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
g, h. i. Ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
k. Ad. sk.	Kangra.	Capt. Stackhouse Pinwill [P.].
l. Ad. sk.	Meerut, Feb. 20.	Major J. Biddulph [C.].
m. Ad. sk.	India (*Jerdon*).	Gould Collection.
n. ♂ Ad. sk.	India (*Jerdon*).	Gould Collection.
o. Ad. sk.	Allygurh, Oct. 10.	Oates Collection.
p. ♀ Ad. sk.	Mhow, March 1.	Col. Swinhoe [P.].
q. Ad. sk.	Etawah, Feb. 18 (*W. C. Brooks*).	H. E. Dresser, Esq. [P.].
r. Ad. sk.	Deccan (*Burgess*).	Gould Collection.
s. Ad. sk.	Himalayas.	India Museum.
t. Ad. sk.	Kumaon (*Strachey*).	India Museum.

12. Anthus richardi.

Anthus richardi, *Vieill. N. Dict. d'Hist. Nat.* xxvi. p. 491 (1818); *Temm. Pl. Col.* iii. pl. 101 (1824); *Vig. Zool. Journ.* i. p. 411 (1825); *Roux, Orn. Prov.* pls. 189, 190 (1825); *Gould, B. Eur.* ii. pl. 135 (1837); *Macgill. Brit. B.* ii. p. 199 (1839); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 158 (1840); *Bouteille, Orn. Dauphiné*, pl. 29. fig. 1 (1843); *Yarr. Brit. B.* i. p. 308 (1843); *Von der Mühle, Orn. Griechenl.* p. 58 (1844); *Gray, Gen. B.* i. p. 206 (1847); *Blyth, Cat. B. Mus. As. Soc.* p. 85 (1849); *Layard, Ann. & Mag. N. H.* xii. p. 268 (1853); *Schl. Vog. Nederl.* pl. 93 (1854); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 355 (1854); *Blasius, in Naum. Vög. Deutschl. Nachtr.* xiii. p. 94, pl. 371 (1860); *Swinh. Ibis*, 1860, p. 55, 1861, p. 36; *Blasius, Ibis*, 1862, pp. 62, 71; *Swinh. Ibis*, 1863, p. 311; *Gray, List Brit. B.* p. 69 (1863); *Wright, Ibis*, 1864, p. 61; *Schomb. t. c.* p. 241; *Dybowski, J. f. O.* 1868, p. 234; *Hume, Ibis*, 1869, p. 120; *Saunders, t. c.* p. 392; *Borggr. Vogelf. Norddeutschl.* p. 86 (1869); *Doderl. Avif. Sicil.* p. 97 (1869); *Droste, Vogelw. Bork.* p. 104 (1869); *Gray, Hand-l. B.* i. p. 252, no. 3649 (1869); *Swinh. Ibis*, 1870, p. 83; *Sundev. Svensk. Fogl.* p. 42, pl. 66. fig. 5 (c. 1870); *Fritsch, Vög. Eur.* pl. 16. fig. 4 (1870); *Salvad. Faun. Ital., Ucc.* p. 128 (1871); *Harting, Handb. Brit. B.* p. 24 (1872); *Gould, B. Gt. Br.* iii. pl. 8 (c. 1870); *Newt. ed. Yarrell's Br. B.* i. p. 598 (1874); *Dresser, B. Eur.* iii. p. 325, pl. 138 (1875); *Irby, B. Gibr.* p. 111 (1875); *Cordeaux, Ibis*, 1865, pp. 173, 181; *Danf. & Harvie Brown, t. c.* p. 311; *Blanf. East. Persia*, ii. p. 236 (1876); *Seebohm, Ibis*, 1878, p. 343; *B. O. U. List Br. B.* p. 34 (1883).

Corydalla richardi, *Vigors, Zool. Journ.* ii. p. 397 (1826); *Bp. Consp.* i. p. 247 (1850); *Kelaart, Prodr. Faun. Zeyl. Cat.* p. 121 (1852); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 287 (1859); *Swinh. Ibis*, 1861, p. 265; *Jerd. B. Ind.* ii. p. 231 (1863); *Degl. et Gerbe, Orn. Eur.* i. p. 363 (1867); *Loche, Expl. Sci. Algér., Ois.* ii. p. 11 (1867); *Beav. Ibis*, 1868, p. 79; *Hume, Ibis*, 1869, p. 120; *Collett, J. f. O.* 1869, p. 393; *Blanf. Ibis*, 1870, p. 469; *Swinh. t. c.* p. 347; *id. P. Z. S.* 1871, p. 366; *Holdsw. P. Z. S.* 1871, p. 458; *Brooks, Str. F.* 1870, p. 358; *Hume, Str. F.* 1874, p. 239; *Ball, t. c.* pp. 416, 479, 496; *Blyth & Wald. B. Burm.* p. 95 (1875); *Armstr. Str. F.* 1876, p. 330; *Tacz. Bull. Soc. Zool. France*, i. p. 157 (1876); *Pcjev. in Rowley's Orn. Misc.* ii. p. 195 (1876); *David & Oust. Ois. Chine*, p. 310 (1877); *Anders. Zool. Exp. Yun-nan*, p. 365 (1878); *Hume & Davison, Str. F.* 1878, p. 365; *Ball, Str. F.* 1878, vol. ii. p. 220; *Cripps, t. c.* p. 288; *Legge, B. Ceylon*, p. 621 (1879); *Hume, Str. F.* 1879, p. 103; *Scully, t. c.* p. 316; *Oates, B. Brit. Burm.* i. p. 166(1883).

Anthus rupestris (*nec Nilss.*), *Ménétr. Cat. Rais. Cauc.* p. 37 (1832).

Anthus macronyx, *Gloger, Handb. Vög. Eur.* i. p. 269 (1834).

Anthus longipes, *Holandre, Faune de la Moselle*, p. 84 (1836).

Cichlops monticolus, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pls. 121, 124. fig. 1 (no. 431); *id. in Gray's Zool. Misc.* p. 83 (1844).

Corydalla sinensis, *Bp. Consp.* i. p. 247 (1850); *David & Oust. Ois. Chine*, p. 311 (1877).

Anthus maximus, *Blyth in White's Nat. Hist. Selborne*, p. 262 (1858).

Corydalla chinensis, *Swinh. P. Z. S.* 1871, p. 366.

Agrodromas richardi, *Saunders, Ibis*, 1871, p. 216; *Giglioli, Ibis*, 1881, p. 206.



Foot of *Anthus richardi*.

Hind claw long and straight, a trifle shorter than hind toe, but sometimes longer. *Tarsus* only a trifle longer than the hind toe and claw. *Primaries* equal and longest, 1, 2, 3, the fourth a little shorter; *fifth* primary shorter than fourth and less than long secondaries. *Feet* reaching in skin to three fourths of tail. *Primaries emarginate*, 2, 3, 4.

Adult male in breeding-plumage. General colour above dark brown, with sandy-buff edges to the feathers, producing a mottled and

Lark-like appearance; lower back and rump more uniform and ashy brown, with dusky centres to the feathers; lesser wing-coverts dull sandy rufous; median and greater coverts edged with sandy rufous; bastard-wing, primary-coverts, and quills dusky blackish, edged with sandy rufous, paler and broader on the inner secondaries, the first primary externally ashy whitish; tail-feathers dark brown with ashy-fulvous margins, the penultimate feather dark brown with a shaft of the same, the outer web white and the inner web with a long wedge-shaped white mark reaching down two thirds of the feather; lores and a distinct eyebrow sandy white; ear-coverts sandy rufous, with pale shaft-lines; cheeks sandy white, with a distinct line of blackish brown along the upper and lower margins; under surface of body pale sandy buff, isabelline on the throat and abdomen; lower throat and fore neck with numerous triangular spots of dusky blackish; axillaries and under wing-coverts sandy rufous, with dusky bases; quills dusky below, fulvescent along the inner web: "upper mandible black, the lower mandible fleshy, its base and gape yellow; feet reddish fleshy; claws horny brown; iris dark brown" (*Scully*). Total length 7 inches, culmen 0·6, wing 3·5, tail 2·8, tarsus 1·1.

A pair killed in winter, when the plumage is somewhat fuller, measure as follows:—

	Total length.	Culmen.	Wing.	Tail.	Tarsus.
	in.	in.	in.	in.	in.
a. ♂. Jaffna district	7·7	0·6	3·95	3·3	1·3
b. ♀. Pegu	7·2	0·6	3·55	2·8	1·1

The female, it will be seen, is much smaller than the male; and I strongly suspect that the specimen from Irkutsk is a female, notwithstanding that it is marked a male.

The description is taken from a specimen obtained near Irkutsk on the 19th of July. It is already beginning to moult into the winter plumage. The latter is very much more rufous than the breeding-dress, all the feathers being broadly edged with sandy buff, especially those of the wing-coverts and quills; the feathers of the mantle rather mottled with pale sandy-buff edges; the eyebrow is tawny buff, and the breast and flanks rich tawny, the spots on the fore neck very indistinct and obscured. This species goes through a double moult, that to the spring plumage commencing in February, before the bird leaves its winter-quarters.

Hab. Breeds in Central and Eastern Asia, migrating in winter into Southern China, the Moluccas, Burmese countries, India, and Ceylon, and occurring also at that season in Western and Southern Europe, occasionally visiting the British Islands.

a. Ad. st.	Bermondsey, near London.		
b. Ad. sk.	Europe.		
c. ♂ ad. sk.	Irkutsk, July 19.	R. B. Sharpe, Esq.	[P.].
d. ♂ ad. sk.	Jaffna district, Ceylon, Mar. 6 (*W. V. Legge*).	R. B. Sharpe, Esq.	[P.].
e. ♀ ad. sk.	Batticaloa, Ceylon, Oct. 8 (*W. V. Legge*).	R. B. Sharpe, Esq.	[P.].

f. ♀ ad. sk.	Calcutta, Feb. 1876.	Major J. Biddulph [C.].
g, *h*, *i*. Ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.]. (Types of *C. monticolus*.)
k–*n*. Ad. sk.	Nepal (*Hodgson*).	India Museum.
o. Ad. sk.	Pegu.	W. T. Blanford, Esq. [P.].
p, *q*. ♂ ♀ ad. sk.	Pegu, Nov.	Oates Collection.
r. ♂ ad. sk.	Pegu, Jan. 7.	Oates Collection.
s. ♂ ad. sk.	Lower Pegu, April 15.	Oates Collection.
t. ♂ ad. sk.	Lower Pegu, March 15.	Oates Collection.
u, *v*. ♂ ♀ ad. sk.	Lower Pegu, Oct. 20.	Oates Collection.
w. Ad. sk.	Tenasserim.	J. C. D. Packman, Esq. [P.].
x. Var. alb., sk.	Tenasserim (*Helfer*).	India Museum.
y. Ad. sk.	Pekin.	R. B. Sharpe, Esq. [P.].
z–*d'*. Ad. sk.	Tientsin, China, Nov.	R. B. Sharpe, Esq. [P.].
e', *f'*. Ad. sk.	Amoy, China, Feb.	R. B. Sharpe, Esq. [P.].
g', *h'*, *i'*. Ad. sk.	Amoy, China, May.	R. B. Sharpe, Esq. [P.].
k'. Ad. sk.	Amoy (*Swinhoe*).	Salvin-Godman Collection.
l', *m'*. ♂ ♀ ad. sk.	Amoy, Jan. 25 (*G. Schlegel*).	Salvin-Godman Collection.
n'. ♂ ad. sk.	Amoy, Nov. (*R. Swinhoe*).	Gould Collection.
o'. Ad. moulting sk.	Amoy.	R. B. Sharpe, Esq.
p'. Ad. sk.	Osukeo, Feb. 21 (*R. Swinhoe*).	Gould Collection.
q'. ♀ ad. sk.	Mysol.	Wallace Collection.
r'. Juv. sk.		Gould Collection.
s'. Skeleton.		

13. Anthus infuscatus.

Corydalla infuscata, *Blyth, J. A. S. Beng.* 1861, p. 96; *Swinh. P. Z. S.* 1863, p. 272.
Corydalla kiangsinensis, *David & Oust. Ois. Chine*, p. 311, pl. 37 (1877).

Upper parts dark brown, all the feathers fringed with olive; lower parts dirty white, almost dusky, with narrow black streaks on the belly and under tail-coverts, the spots larger and shorter on the breast and sides of the neck, with very fine striations on the throat, the sides of which have little brown moustachial lines; a yellowish superciliary streak spotted with brown; tail-feathers very narrow, the centre ones olive-brown, with a black streak along the shaft, the succeeding ones brown on the outer web, the lateral ones of the same colour, but with the edging clearer and broader, occupying nearly all the extent of the external webs and the terminal portion of the inner ones, excepting the shaft; quills and wing-coverts brown, margined with reddish: "bill brownish, with the lower mandible much clearer; feet yellowish brown; iris chestnut-brown." Total length 7·25 inches, culmen 0·5, wing 3·5, tail 2·55, tarsus 0·95. (*David & Oustalet.*)

Hab. China.

Described by MM. David and Oustalet as resembling *A. richardi*, but differing in its much shorter tarsus and less developed hind claw, which is strongly arched, and in its dusky coloration. I believe the species to be the same as *Anthus infuscatus* of Blyth, which was erroneously described by him as from the Philippines. Mr. Swinhoe, who sent the first specimen to Mr. Blyth, stated (*l. c.*) that it came from the hills of Foochow. He considered it to be a dusky form of *A. richardi*.

14. Anthus striolatus.

Cichlops thermophilus, *Hodgs. Icon. ined., Passeres*, pl. 122 *a* (no. 735); *id. in Gray's Zool. Misc.* p. 83 (1844, descr. nulla).
Anthus rufescens (*nec T.*), *Gray, Cat. Mamm. &c. Nepal pres. Hodgson*, p. 77 (1846).
Anthus striolatus, *Blyth, J. A. S. Beng.* xvi. p. 435; *id. Cat. B. Mus. As. Soc.* p. 136 (1849); *Bp. Consp.* i. p. 248 (1850); *Layard, Ann. & Mag. Nat. Hist.* xii. p. 268 (1853); *Gray, Hand-l. B.* i. p. 252, no. 3652 (1869); *Blanf. J. A. S. Beng.* xli. p. 61 (1872).
Corydalla striolata, *Kelaart, Prodr. Faun. Zeyl. Cat.* p. 121 (1852); *Jerd. B. Ind.* ii. p. 233 (1863); *Blyth, Ibis*, 1867, p. 31; *Holdsw. P. Z. S.* 1872, p. 453; *Brooks, Str. F.* 1873, p. 359; *Walden, Ibis*, 1874, p. 140; *Brooks, t. c.* p. 460; *Ball, Str. F.* 1874, p. 417; *Hume, t. c.* p. 496; *id. Str. F.* 1875, p. 323; *Fairb. Str. F.* 1876, p. 260; *Hume & Davison, Str. F.* 1878, p. 366; *Davids. & Wend. Str. F.* 1878, vol. ii. p. 95; *Ball, t. c.* p. 220; *Legge, B. Ceylon*, p. 628 (1879); *Hume, Str. F.* 1879, p. 103; *Butler, Cat. B. S. Bomb. Pres.* p. 56 (1880); *Oates, B. Br. Burm.* i. p. 167 (1883).
Anthus thermophilus, *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 356 (1854).

Adult male. General colour above sandy buff washed with ashy, the upper surface mottled with black centres to the feathers, producing a Lark-like appearance; lower back and rump uniform brown, with ashy-fulvous edgings to the feathers; hind neck rather more ashy than the back; lesser wing-coverts uniform brown washed with sandy; median and greater coverts dark brown, edged broadly with sandy rufous, rather whiter towards the ends; bastard-wing dark brown, edged with sandy rufous; bastard-wing and primary-coverts brown, narrowly edged with sandy buff, the secondaries more broadly with sandy rufous, the first primary whitish along the edge of the outer web; upper tail-coverts and centre tail-feathers dark brown, edged with sandy buff; remainder of the tail-feathers brown, the penultimate feather dark brown, as well as the shaft, the outer web white for its terminal half, as well as a wedge-shaped mark of white at the end of the inner web; the outer tail-feather white, including the shaft, with an oblique mark of dark brown on the inner web; head like the back, and similarly streaked; lores white; over the eye a distinct streak of sandy buff; ear-coverts deep sandy rufous, with a black line running along the upper edge of the cheeks, which are pale sandy buff, separated from the throat by a distinct mystacal line of black; under surface of

body rich sandy buff, paler and more isabelline on the throat, abdomen, and under tail-coverts; the sides of the lower throat, fore neck, and chest with small triangular spots of blackish; axillaries and under wing-coverts pale sandy buff, with smoky brown bases; quills light dusky brown below, ashy fulvous along the inner web: "upper mandible dark brown, the lower one fleshy yellow, the tip dusky; legs and feet yellow, claws dusky; iris brown" (*Legge*). Total length 6·8 inches, culmen 0·6, wing 3·6, tail 2·85, tarsus 1·05.

The specimen described is a Muddapore skin of Mr. Brooks's, obtained in January. One procured near Dinapore by the same gentleman, in March, is in full moult; but the breeding-plumage which is being donned does not seem to differ materially from the winter dress, beyond being rather richer sandy rufous on the breast and sides of the body.

Hab. Throughout India and Ceylon, occurring as far west as Scinde, and has been met with in the Burmese countries, as well as the Andaman Islands.

a. Ad. sk.	Madras (*Jerdon*).	India Museum.
b. Ad. sk.	Madras.	T. C. Jerdon, Esq. [P.].
c, d. Ad. sk.	Madras (*Jerdon*).	Gould Collection.
e. Ad. sk.	Travancore.	R. B. Sharpe, Esq. [P.].
f. Ad. sk.	Sultanpore.	Capt. Stackhouse Pinwill [P.].
g. ♂ ad. sk.	Muddapore (*W. E. Brooks*).	Oates Collection.
h. ♂ ad. sk.	Muddapore, Jan. 4 (*W. E. Brooks*).	Oates Collection.
i. Ad. sk.	Muddapore, April (*W. E. Brooks*).	Oates Collection.
k. ♂ ad. sk.	Dinapore, June 28 (*W. E. Brooks*).	Oates Collection.
l–o. Ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.]. (Types of *C. thermophilus.*)
p–v. Ad. sk.	Nepal (*Hodgson*).	India Museum.
w. Ad. sk.	Darjiling (*Pearson*).	India Museum.

15. Anthus campestris.

L'Alouette de champ, *Briss. Orn.* iii. p. 349 (1760).
Alauda campestris, *Linn. Syst. Nat.* i. p. 288 (1766); *Gm. Syst. Nat.* i. p. 794 (1788).
L'Alouette de Marais, *Daubent. Pl. Enl.* v. pl. 661. fig. 1.
La Fiste de Provence, *Daubent. Pl. Enl.* vi. pl. 654. fig. 1.
La Pivote Ortolanne de Provence, *Daubent. t. c.* pl. 654. fig. 2.
La Rousselline ou L'Alouette de Marais, *Montb. Hist. Nat. Ois.* v. p. 60 (1778).
La Fist de Provence, *Buff. Hist. Nat. Ois.* v. p. 194 (1778).
La Pivote Ortolane, *Buff. t. c.* p. 195 (1788).
Marsh Lark, *Lath. Gen. Syn.* ii. pt. 2, p. 377 (1783).
Meadow Lark, *Lath. t. c.* p. 378 (1783).
Provence Wheatear, *Lath. t. c.* p. 471 (1783).
Spotted Wheatear, *Lath. t. c.* p. 472 (1783).
Alauda mosellana, *Gm. Syst. Nat.* i. p. 794 (1788).
Motacilla maculata, *Gm. t. c.* p. 965 (1788).
Motacilla massiliensis, *Gm. t. c.* p. 965 (1788).
Sylvia massiliensis, *Lath. Ind. Orn.* ii. p. 531 (1790).
Sylvia maculata, *Lath. t. c.* p. 532 (1790).

Alauda paludosa, *Bonn. Orn.* i. p. 313 (1790).
Anthus campestris, *Bechst. Naturg. Deutschl.* iii. p. 722 (1807); *Naum. Vög. Deutschl.* iii. pl. 84. fig. 1 (1823); *Brehm, Vög. Deutschl.* p. 324 (1831); *Bp. Comp. List B. Eur. & N. Amer.* p. 18 (1838); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 161 (1840); *Schl. Rev. Crit.* p. xxxvi (1844); *Gray, Gen. B.* i. p. 206 (1847); *Blyth, Cat. B. Mus. As. Soc.* p. 136 (1849); *Kjærb. Orn. Dan.* pl. 17. fig. 4 (1852); *Schl. Vog. Nederl.* pl. 94 (1854); *Sundev. Svensk. Fogl.* pl. 8. fig. 5 (c. 1856); *Hartl. Orn. W.-Afr.* p. 73 (1857); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 286 (1859); *Tristr. Ibis*, 1859, pp. 31, 41; *Linderm. Vög. Griechenl.* p. 286 (1859); *Radde, Reis. Ost-Sibir., Vög.* p. 220 (1863); *Wright, Ibis*, 1864, p. 61; *Filippi, Viagg. Pers.* p. 348 (1865); *Sperling, Ibis*, 1868, p. 290; *Smith, t. c.* p. 442; *Gray, Hand-l. B.* i. p. 250, no. 3635 (1869); *Heugl. Orn. N.O.-Afr.* i. p. 325 (1869); *Borggr. Vogelf. Deutschl.* p. 86 (1869); *Gould, B. Gt. Br.* iii. pl. 9 (c. 1870); *Fritsch, Vög. Eur.* tab. xvi. fig. 8 (1870); *Wyatt, Ibis*, 1870, p. 15; *Elwes & Buckley, t. c.* p. 195; *Sharpe, t. c.* p. 481; *Blanf. Geol. & Zool. Abyss.* p. 383 (1870); *Salvad. Faun. Ital., Ucc* p. 128 (1871); *Sharpe, Cat. Afr. B.* p. 72 (1871); *Gurney, Ibis*, 1871, p. 85; *Shelley, t. c.* p. 139; *id. B. Egypt*, p. 134 (1872); *Harting, Handb. Brit. B.* p. 108 (1872); *Severtz. Turkest. Jevotn.* p. 67 (1873); *Brookes, Ibis*, 1873, p. 245; *Newt. ed. Yarr. Brit. B.* i. p. 592 (1874); *Dresser, B. Eur.* iii. p. 317, pl. 137 (1874); *Durnf. Ibis*, 1874, p. 404; *Irby, B. Gibr.* p. 111 (1875); *Danf. & Harvie-Brown, Ibis*, 1875, p. 3; *Gurney, t. c.* p. 141; *Cordeaux, t. c.* p. 181; *Dresser, Ibis*, 1876, p. 179; *Blanf. East. Pers.* ii. p. 237 (1877); *Danf. Ibis*, 1878, p. 20; *Biddulph, Ibis*, 1881, p. 70; *Seebohm, Ibis*, 1882, p. 216; *C. Swinh. t. c.* p. 210; *Dixon, t. c.* p. 571; *B. O. U. List Brit. B.* p. 33 (1883); *Seebohm, Ibis*, 1883, p. 20; *Irby, t. c.* p. 184; *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 86; *Seebohm, Hist. Br. B.* ii. p. 239 (1883); *Sharpe, ed. Layard's B. S. Afr.* p. 535 (1884); *Tristr. Faun. & Flor. Palest.* p. 55 (1884).
Anthus grandior, *Pall. Zoogr. Rosso-Asiat.* i. p. 525 (1811).
Vitiflora massiliensis, *Steph. Gen. Zool.* x. p. 570 (1817).
Vitiflora maculata, *Steph. t. c.* p. 571 (1817).
Anthus rufus (*nec Bodd.*), *Vieill. N. Dict. d'Hist. Nat.* xxvi. p. 503 (1818); *Roux, Orn. Prov.* pl. 191. figs. 1, 2 (1825).
Anthus massiliensis, *Vieill. t. c.* p. 503 (1818).
Anthus maculatus, *Vieill. t. c.* p. 504 (1818, *nec Hodgs.* 1844).
Anthus rufescens, *Temm. Man. d'Orn.* i. p. 267 (1820); *Werner, Atlas, Insectivores*, pl. 80 (1827); *Gould, B. Eur.* p. 18 (1837); *Salvin, Ibis*, 1859, p. 310; *Schl. Dier. Nederl. Vog.* pl. 9. fig. 2 (1861); *Rowley, Ibis*, 1863, p. 37; *Sperling, Ibis*, 1864, p. 280; *Rowley, Ibis*, 1865, p. 113.
Anthus brachycentrus, *Hempr. & Ehr. Symb. Phys.* fol. dd (1828); *Dresser & Blanf. Ibis*, 1874, p. 342.
Anthus agrorum, *Brehm, Vög. Deutschl.* p. 324 (1831).
Anthus subarquatus, *Brehm, t. c.* p. 325 (1831).
Anthus flavescens, *Brehm, t. c.* p. 325 (1831).
Agrodroma rufescens, *Swains. Classif. B.* ii. p. 241 (1837).
Agrodroma rufula, *Jerd. Madr. Journ.* xi. p. 34 (1840).
Agrodroma campestris, *Bp. Consp.* i. p. 247 (1850); *Jerd. B. Ind.* ii. p. 234 (1863); *Degl. et Gerbe, Orn. Eur.* i. p. 361 (1867); *Loche, Expl. Sci. Algér., Ois.* ii. p. 13 (1867); *Doderl. Avif. Sicil.*

p. 96 (1869); *Hume, Ibis*, 1871, p. 35; *Adam, Str. F.* 1873, p. 384; *Butler & Hume, Str. F.* 1875, p. 491; *Fairb. Str. F.* 1876, p. 260; *Prjev. in Rowley's Orn. Misc.* ii. p. 195 (1877); *Butler, Str. F.* 1877, p. 230; *id. Cat. B. Sind &c.* p. 41 (1879); *Hume, Str. F.* 1879, p. 103; *Butler, Cat. B. S. Bomb. Pres.* p. 56 (1880); *Davids. Str. F.* 1882, p. 310.

Corydalla striata, C. arvensis, C. septentrionalis, C. arenaria, C. agrorum, C. subarquata, C. rufescens, *Brehm, Naum.* 1855, p. 279.

Corydalla vierthaleri et C. gracilis, *Brehm, Vogelf.* p. 137 (1855).

Corydalla orientalis, *Brehm, Naum.* 1856, p. 337; *Heugl. Orn. N.O.-Afr.* i. p. 329, note (1869).

Agrodromas campestris, *Hume, Ibis*, 1871, p. 35; *Saunders, t. c.* p. 216; *Bogd. B. Cauc.* p. 110 (1879).

Anthus campestris, β. orientalis, *Severtz. Turkest. Jevotn.* pp. 67, 141 (1873).

Anthus campestris, γ. brachycentrus, *Severtz. t. c.* pp. 67, 141 (1873).

Agrodroma godlewskii, *Tacz. Bull. Soc. Zool. France*, ii. p. 158 (1876); *David & Oust. Ois. Chine*, p. 312 (1877); *Seebohm, Ibis*, 1880, p. 188.



Foot of *Anthus campestris*.

Hind claw stout and slightly curved, equal to, and sometimes exceeding, hind toe. *Tarsus* very long, nearly double the length of hind toe and claw. *Primaries* equal, 1, 2, 3, 4, the latter a shade shorter. *Primaries* emarginate, 2, 3, 4; *fifth primary* much shorter than fourth, and less than long secondaries, which come between fourth and fifth. *Feet* reaching to about two thirds of tail.

Adult male. General colour above sandy, mottled with darker centres to the feathers, less distinct on the hind neck, and imparting a somewhat streaked appearance to the head; the rump nearly uniform; least wing-coverts like the back; greater and median series dark brown, very broadly edged with clear sandy buff, inclining to whitish on the extreme margin of the feather; primary-coverts and primaries dark brown, narrowly margined with sandy buff, the secondaries broadly edged with the latter colour, exactly like the greater wing-coverts; upper tail-coverts and two centre

tail-feathers sandy brown, darker brown in the middle of the feathers; remainder of the tail blackish brown, with narrow, almost obsolete, edgings of sandy buff; penultimate feather blackish brown along the inner web, the outer web entirely light fulvous, this colour extending obliquely along the inner web to the tip, the shaft brown; outer feather nearly entirely white, excepting a brown edging to the inner web, the shaft pure white; lores and a very broad eyebrow buffy white; in front of the eye a small dusky spot; round the eye a ring of buffy-white feathers; sides of face whitish, with a slight indication of a dusky streak along the upper edge of the cheeks, below the eye; ear-coverts sandy brown, rather darker on the upper margin; cheeks, throat, and under surface of body whitish, the breast and sides of the body washed with fulvous, the sides of the neck and sides of breast slightly streaked with brown; under wing-coverts whitish, with light ash-coloured bases to the feathers; quills light brown below, ashy whitish along the inner webs. Total length 7 inches, culmen 0·65, wing 3·6, tail 2·8, tarsus 1.

Young. Much more mottled above than the adult, the feathers being all dark brown, with narrow margins of sandy brown; wings and tail very much as in the adults, the brown colour on the inner web of the penultimate feather rather darker; a slight moustache, composed of little triangular spots; fore neck and chest also marked with triangular spots of brown.

The *adult female* does not differ from the *adult male* in plumage, excepting that the mystacal stripe is not so strongly pronounced, and the sides of the breast are somewhat streaked with dusky brown. Total length 6·5 inches, culmen 0·7, wing 3·3, tail 2·6, tarsus 1.

The *winter plumage* of the adults only differs from the summer plumage in being paler; the mystacal stripe is obsolete, and all the feathers of the upper surface, and especially the quills, are edged, rather broadly, with sandy buff.

Young birds of the year after their first moult are distinguished by having spots on the fore neck and chest; these spots are generally blackish and of a triangular form, and vary both in size and intensity of colour. A pair measure as follows:—

	Total length.	Wing.	Tail.	Tarsus.
	in.	in.	in.	in.
a. ♂. Haskeuy, Sept. 15	6·75	3·7	3·0	1·05
b. ♀. Haskeuy, Sept. 15	6·5	3·5	2·75	1·05

The mystacal streaks and the spotting on the breast vary with individuals. The latter seems to be characteristic of the young bird, for it is most distinct in the specimen described above, which cannot long have left the nest. In the adults it is almost or entirely absent, and in a moulting specimen (Sept. 15, 1876) it is disappearing, the new feathers being much less spotted.

The double moustache is a character less easily accounted for. In most specimens the streak of blackish below the eye is tolerably

distinct, but in the adult male described there is no trace of a second, malar, stripe. Some examples, however, have a very strongly characterized malar streak, which gives the appearance of a double moustache. It is just possible that this may also disappear with age, but at present it looks like a character which varies with individuals.

Specimens from Eastern Siberia are much smaller than European examples, and have been separated as *A. godlewskii* by Dr. Taczanowski. It is probable, however, that this is the same bird as *A. orientalis* of Brehm, if, indeed, it be not the *A. grandior* of Pallas. The range of this small race is apparently from Central Asia to Eastern Siberia.

Hab. Southern and Central Europe, occasionally visiting Northern Europe and Great Britain, ranging eastwards into Turkestan and Eastern Siberia, wintering in the plains of N.W. India and in N.E. Africa and Senegambia.

a. ♂ juv. st.	Brighton, Sussex, Oct. 1882.	Messrs. Swayeland [P.].
b. Imm. sk.	Bordeaux.	Gould Collection.
c. Juv. sk.	South France.	R. B. Sharpe, Esq. [P.].
d. ♂ ad. sk.	Florence, April.	Prof. Giglioli [P.].
e. ♂ juv. sk.	Florence, August.	Prof. Giglioli [P.].
f, *g*. ♀ ad. sk.	Kef Laks, Algeria, April (*O. S.*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Turkey, April 18 (*T. Robson*).	Gould Collection.
i. ♀ ad. sk.	Chick Salem, Turkey, May 9 (*W. Pearce*).	R. B. Sharpe, Esq. [P.].
k, *l*. ♂; *m*. ♀ ad. sk.	Haskeuy, Turkey, Sept. (*W. Pearce*).	R. B. Sharpe, Esq. [P.].
n. ♂ ad. sk.	Asia Minor (*C. G. Danford*).	Salvin-Godman Coll.
o. ♀ ad. sk.	Urtas, Palestine.	Canon Tristram [P.].
p. ♂ ad. sk.	Egypt, Feb. 26, 1868.	Capt. Shelley [P.].
q. Ad. sk.	Farshoot, Egypt, March 12.	J. H. Gurney, Jun., Esq. [P.].
r, *s*. Ad. st.	Egypt.	Sir John Bowring [P.].
t. Ad.; *u*. Juv. sk.	Nubia (*Verreaux*).	R. B. Sharpe, Esq.
v. Ad. sk.	Dolo, Tigré, March 27.	W. T. Blanford, Esq. [C.].
w. ♀ ad. sk.	Lake Ashangi, April 3.	W. T. Blanford, Esq. [C.].
x. Ad. sk.	Senafe, March 10.	W. T. Blanford, Esq. [C.].
y. ♀ ad. sk.	Senafe, Feb. 24.	W. T. Blanford, Esq. [C.].
z. ♂ ad. sk.	Adigrat, Tigré, April 10.	W. T. Blanford, Esq. [C.].
a'. Ad. sk.	Persia.	Purchased.
b'. Ad. sk.	Erzeroum, Aug. 11 (*Dickson & Ross*).	Gould Collection.
c'. ♂ ad. sk.	Sergiopol, Turkestan, May 7 (*Dr. Finsch*).	Geogr. Soc., Bremen.
d'. ♂ ad. sk.	Dizak, Baluchistan, March 24.	W. T. Blanford, Esq.
e'. ♂ ad. sk.	Candahar, March 23.	Col. C. Swinhoe [C.].
f', *g'*, *h'*. ♀ ad. sk.	Dubrai and Gatai, Afghanistan, April 25.	Col. C. Swinhoe [C.].
'. Ad. sk.	Kutch, Jan.	Oates Collection.

k'. Ad. sk.	N.W. India.	Capt. Stackhouse Pinwill [P.].
l'. ♂ ad. sk.	Goorgaon, Jan. 28 (*G. F. L. Marshall*).	Capt. Bingham [P.].
m'. ♂ ad. sk.	Mhow, Dec.	Col. Swinhoe [P.].
n', *o'*. Skulls.	Silesia.	Dr. Günther [C.].

16. Anthus rufulus.

Anthus rufulus, *Vieill. N. Dict. d'Hist. Nat.* xxvi. p. 494 (1818); *Gray, Gen. B.* i. p. 206 (1847); *Blyth, J. A. S. Beng.* xvi. p. 437 (1847); *id. Cat. B. Mus. As. Soc.* p. 135 (1849); *Bp. Consp.* i. p. 248 (1850); *Layard, Ann. & Mag. Nat. Hist.* xii. p. 268 (1853); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 356 (1854); *Schomb. Ibis*, 1864, p. 249; *Gray, Hand-l. B.* i. p. 252, no. 3651 (1869); *C. Swinh. Ibis*, 1882, p. 110.

Alauda pratensis, *Raffl. Trans. Linn. Soc.* xiii. p. 315 (1820).

Anthus cinnamomeus, *Rüpp. Neue Wirb.* p. 103 (1835); *id. Syst. Uebers.* p. 59 (1845); *Gray, Gen. B.* i. p. 206 (1847); *Bp. Consp.* i. p. 248 (1850); *Heugl. Syst. Uebers.* p. 29 (1856); *id. Orn. N.O.-Afr.* i. p. 329 (1869).

Anthus malayensis, *Eyton, P. Z. S.* 1839, p. 104; *Blyth, J. A. S. Beng.* xi. pp. 797, 885 (1842), xvi. p. 436 (1847); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 357 (1854); *Gray, Hand-l. B.* i. p. 252, no. 3653 (1869); *Hume, Str. F.* 1874, p. 497; *Tweedd. Ibis*, 1877, p. 310; *Hume & Davison, Str. F.* 1878, p. 366; *Hume, Str. F.* 1879, pp. 65, 103.

Agrodroma agilis, *Jerd. Madr. Journ.* xi. p. 33 (1840).

Cichlops ubiquitarius, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 122. figs. 1, 2 (no. 433); *id. in Gray's Zool. Misc.* p. 83 (1844).

Cichlops fortipes, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 122 *a*. fig. 2 (no. 738); *id. in Gray's Zool. Misc.* p. 83 (1844).

Anthus ubiquitarius, *Gray, List Mamm. & B. Nepal. pres. Hodgs.* p. 77 (1846).

Anthus caffer, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1850, p. 100; *Layard, B. S. Afr.* p. 123 (1867); *Gray, Hand-l. B.* i. p. 249, no. 3624 (1869); *Layard, Ibis*, 1869, p. 368; *Tristr. t. c.* p. 437; *Sharpe, Cat. Afr. B.* p. 72 (1871); *Ayres, Ibis*, 1871, p. 156; *Gurney in Anderss. B. Dam. Ld.* p. 113 (1872); *Buckley, Ibis*, 1874, p. 384; *Heugl. J. f. O.* 1874, p. 48; *Ayres, Ibis*, 1880, p. 104; *Sharpe in Oates's Matabele Land*, App. p. 317 (1881); *Shelley, Ibis*, 1882, p. 350; *Butler, Feilden, & Reid, Zool.* 1882, p. 335; *Schalow, J. f. O.* 1883, p. 367; *Boehm, t. c.* p. 207; *Sharpe, ed. Layard's B. S. Afr.* p. 434 (1884).

Anthus raalteni, *Bp. Consp.* i. p. 248 (1850, *ex Temm. MSS. in Mus. Lugd.*); *Licht. Nomencl. Av. Berol.* p. 38 (1854); *Hartl. P. Z. S.* 1867, p. 825; *Layard, B. S. Afr.* p. 123 (1867); *Gray, Hand-l. B.* i. p. 249, no. 3616 (1869); *Cab. in Von der Decken's Reis.* iii. p. 22 (1869); *Finsch & Hartl. Vög. Ost-Afr.* p. 274 (1870); *Shelley, B. Egypt*, p. 133 (1872); *Gurney in Anderss. B. Dam. Ld.* p. 113 (1872); *Gadow, J. f. O.* 1876, p. 431; *Fischer, J. f. O.* 1877, p. 207; *id. J. f. O.* 1878, pp. 268, 269; *Cab. t. c.* p. 220; *Nichols. P. Z. S.* 1878, p. 356; *Fischer, J. f. O.* 1879, pp. 294, 299, 303; *id. & Reichen. t. c.* p. 355; *Shelley, P. Z. S.* 1881, p. 573.

Anthus euonyx, *Cab. Mus. Hein.* Th. i. p. 14 (1850); *Gray, Hand-l. B.* i. p. 252, no. 3659 (1869).

Corydalla rufula, *Kelaart, Prodr. Faun. Zeyl. Cat.* p. 121 (1852); *Jerd. B. Ind.* ii. p. 232 (1863); *Blyth, Ibis*, 1867, p. 31; *Pr. Ibis*, 1868, p. 312; *Blanf. Ibis*, 1870, p. 469; *Holdsw. P. Z. S.* 1872, p. 458; *Hume, Nests and Eggs Ind. B.* p. 384 (1873); *Brooks, F.* 1873, p. 359; *Adam, t. c.* p. 384; *Ball, Str. F.* 1874, p. 413; *Hume, t. c.* p. 497, 1875, p. 142; *Brooks, t. c.* p. 252; *Butler & Hume, t. c.* p. 490; *Blyth & Wald. B. Burm.* p. 96 (1875); *Fairb. Str. F.* 1876, p. 260; *Armstr. t. c.* p. 330; *Bourd. t. c.* p. 401; *Hume, t. c.* p. 458; *Fairb. Str. F.* 1877, p. 407; *Hume & Davis. Str. F.* 1878, p. 366; *Davids. & Wenden, Str. F.* 1878, vol. ii. p. 84; *Ball, t. c.* p. 220; *Cripps, t. c.* p. 288; *Butler, Cat. B. Sind &c.* p. 41 (1879); *Legge, B. Ceylon*, p. 625 (1879); *Hume, Str. F.* 1879, p. 103; *Scully, t. c.* p. 317; *Butler, t. c.* p. 386; *id. Cat. B. S. Bomb. Pres.* p. 56 (1880); *Vidal, Str. F.* 1880, p. 69; *Reid, Str. F.* 1881, p. 49; *Davids. Str. F.* 1882, p. 310; *Oates, B. Brit. Burm.* i. p. 168 (1813); *Davison, Str. F.* 1883, p. 397.

Corydalla hasselti, *Brehm, Naum.* 1856, p. 463; *Salvad. Ucc. Born.* p. 262 (1874).

Corydalla rasselti, *Brehm, Naum.* 1856, p. 463.

Anthus hasselti, *Schl. Handl. Dierk.* p. 263 (1857, *ex Temm. MSS.*); *Gray, Hand-l. B.* i. p. 252, no. 3655 (1869).

Anthus medius, *Wall. P. Z. S.* 1863, p. 488; *Gray, Hand-l. B.* i. p. 252, no. 3654 (1869).

Anthus, sp., *Antin. & Salvad. Viagg. Bogos*, p. 110 (1873).

Corydalla malayensis, *Tweedd. Ibis*, 1877, p. 310; *Hume & Davis. Str. F.* 1878, p. 366; *Hume, Str. F.* 1879, p. 65; *Kelham, Ibis*, 1881, p. 518.

Corydalla lugubris, *Tweedd. P. Z. S.* 1877, pp. 547, 696, 762, 828; *id. P. Z. S.* 1878, pp. 286, 380, 710; *Wardlaw Ramsay, Orn. Works Tweedd.* p. 658 (1881).

Corydalla ubiquitaria, *Anders. Zool. Yun-nan Exped., Aves*, p. 366 (1878).

Hind claw slender and curved, a trifle longer than the hind toe itself; when the claw is worn they are about equal. *Tarsus* much longer than hind toe and claw combined. *Primaries equal*, 2, 3, 4; the *first* almost of the same length, and scarcely perceptibly shorter; *fifth* primary much shorter, *less* than the long innermost secondaries. *Feet* not reaching to the end of the tail (in skin). *Primaries emarginate*, 2, 3, 4.

Adult male. General aspect above mottled, the plumage rather clear sandy brown, with distinct blackish centres to all the feathers, the margins of the mantle-plumes slightly ashy; lower back and rump perfectly uniform sandy ash-brown; wing-coverts more strongly mottled than the back, the feathers with blackish bases and broad sandy rufous margins, edged with creamy whitish at their ends; inner, median, and greater coverts, bastard-wing and primary-coverts blackish, edged with ashy rufous; quills blackish, externally sandy rufous, the primaries narrowly edged with whitish; inner secondaries very broadly margined with pale sandy buff; upper tail-coverts sandy brown, with dusky brown centres; tail-feathers blackish, narrowly edged with sandy brown, the two centre feathers more broadly edged with sandy buff, inclining to white near the tips, the outermost feather almost entirely white, excepting a dusky

patch for two thirds of the inner web along its edge, the penultimate tail-feather also for the most part white, but having the dusky patch on the inner web darker and extending nearer to the tip, the shaft of this feather being blackish; head and neck clear sandy brown, mottled with blackish centres to the feathers, like the back; lores dusky; a well-defined eyebrow of yellowish buff; ear-coverts clear sandy brown, darker on the upper margin; cheeks yellowish buff, separated from the whitish throat by an indistinct mystacal line of black; lower throat, fore neck, breast, and flanks bright sandy buff, a little browner on the latter; centre of the breast and abdomen isabelline white; on the lower throat and fore neck some very distinct longitudinal spots of black; thighs and under tail-coverts pale sandy buff; under wing-coverts smoky brown, the lower ones slightly tinged with sandy buff; axillaries smoky brown, with sandy-buff margins; quills below dusky brown, inner edges ashy fulvous: "bill brown, with the basal portion of the lower mandible flesh-colour; legs and feet yellowish clay-colour; iris brown" (*Reid*). Total length 6·5 inches, culmen 0·6, wing 3·5, tail 2·5, tarsus 1·1.

Young. General colour above Lark-like, the feathers brown, with pale sandy-buff or whitish edges, the hind neck rather paler and more varied with sandy-buff margins to the feathers; rump rather more rufescent; wing-coverts and quills dark brown, broadly edged with sandy buff, inclining to sandy rufous on the bastard-wing, primary-coverts, and quills, the inner greater coverts and secondaries edged and tipped with whitish; tail-feathers dark brown, the centre ones broadly edged with sandy buff, the penultimate feather almost entirely dark brown, excepting for an external border of sandy rufous and a small wedge-shaped mark of the same at the end of the inner web; the outer tail-feather entirely pale sandy rufous, including the shaft, the inner web obliquely dark brown for two thirds of its length; a distinct eyebrow of dull white, as well as the eyelid; in front of the eye a dusky spot; cheeks and ear-coverts pale sandy buff, browner along the upper edge of the latter; a broad mystacal line of dark brown; throat dull white; remainder of under surface of body sandy buff, the chest and fore neck thickly spotted with dark brown; thighs and under tail-coverts like the breast and abdomen; axillaries and under wing-coverts sandy rufous; quills dusky brown below, rufescent along the inner web.

The winter plumage is much more ashy than the summer dress, which is assumed by a direct moult, and the appearance of the bird becomes everywhere more tawny. The pale edges to the feathers become very much worn during the nesting-season, so much so that occasionally the upper surface appears almost uniform, and the spots on the breast, though small, are very distinct; in the winter plumage the latter are rather obscured. I believe that the young birds in their first winter plumage are much more tawny than the adult specimens.

With regard to the dusky outer web of the penultimate feather, alluded to below, it is evident that this is a sign of age and that it gradually disappears. A specimen from Nepal has the white on

this feather as in the adult, but with a blackish mark near the tip of the outer web, evidently the remains of the dark line which runs down the whole outer web in immature specimens. In this example the two penultimate feathers are differently marked, the inner web of one of them being blackish mottled with white towards the end, showing that a gradual change of feather takes place. The bird in question appears to be a bird of the previous year in winter plumage.

After careful comparison of a very large series in the collections of the British Museum, Capt. Shelley, Mr. F. Nicholson, and Mr. Seebohm, I find it impossible to draw a specific distinction between *Anthus caffer* of Africa and *A. rufulus* of India. Mr. Oates has also united *A. malayensis*; and I am inclined not only to agree with him, but to unite even the Timor bird (*A. medius* of Wallace).

At the same time a curious variation is seen in the tail-feathers of *A. malayensis*, the penultimate feather being blackish along the outer web for its entire extent, with a narrow external fringe of white. It is remarkable that this peculiarity should occur in most of the Malaccan specimens; but it is certain that it is only a stage of the changes through which the feather passes, and other examples show it in process of disappearance until the tail becomes the same as in ordinary specimens of *A. rufulus*, perfectly typical specimens of which are seen from Malacca.

The Lombock skins are greyer than any of the others from the neighbouring islands, being very white beneath, with a broad white eyebrow. The absence of buff or tawny in the plumage of this specimen may, however, be exceptional, and it is desirable that others from Lombock should be examined.

Hab. The whole of Southern Africa, extending up the eastern side of that continent to N.E. Africa, and even occurring in Egypt. Throughout India and Ceylon, the Burmese countries, Malayan peninsula, extending to Java, Sumatra, Borneo, and the Philippines, and even to Lombock and Timor.

a. Pull. sk.		
b. Ad. sk.	South Africa (*Andersson*).	R. B. Sharpe, Esq. [P.].
c. Ad. sk.	South Africa.	Purchased.
d. Imm. sk.	South Africa (*Layard*).	Salvin-Godman Coll.
e. Ad. sk.	Swellendam (*Layard*).	Sharpe Collection.
f, g. Ad. sk.	Port Elizabeth, Aug. (*Ortlepp*).	Sharpe Collection.
h, i. ♂ ad. sk.	Elands Post (*T. C. Atmore*)	Sharpe Collection.
k. Ad. sk.	Grahamstown, July (*T. C. Atmore*).	Sharpe Collection.
l. Ad. sk.	Kingwilliamstown (*F. A. Barratt*).	R. B. Sharpe, Esq. [P.].
m. Ad. sk.	Kingwilliamstown, June 4 (*C. Newby*).	Capt. Trevelyan [P.].
n. Ad. sk.	S.E. Africa (*F. Oates*).	W. E. and C. G. Oates, Esqrs. [P.].
o. Ad. sk.	Pietermaritzburg, May (*F. Oates*).	W. E. and C. G. Oates, Esqrs. [P.].

p. ♂ ad. sk.	Pinetown, Natal, July 19 (*T. L. Ayres*).	R. B. Sharpe, Esq. [P.].
q. Ad. sk.	Potchefstroom, June (*T. Ayres*).	Sharpe Collection.
r. ♀ ad.; *s*. Juv. sk.	Potchefstroom, July (*T. Ayres*).	Sharpe Collection.
t. ♂ ad. sk.	Transvaal (*T. Ayres*).	Sharpe Collection.
u. Ad.; *v*. ♂ ad. sk.	Rustenburg, Aug. (*W. Lucas*).	R. B. Sharpe, Esq. [P.].
w. ♂ Ad. sk.	Rustenburg, Sept. (*W. Lucas*).	R. B. Sharpe, Esq. [P.].
x–*a'*. Ad. sk.	Tete, Zambesi (*Sir J. Kirk*).	Zambesi Expedition.
b', *c'*. Ad. sk.	Damara Land (*Andersson*).	R. B. Sharpe, Esq. [P.].
d'. Ad. sk.	Onani's Mouth, May (*Andersson*).	Sharpe Collection.
e', *f'*, *g'*. ♂ ad. sk.	Otjimbinque, Feb. 3 (*Andersson*).	Sharpe Collection.
h', *i'*, *k'*. ♂ ad.; *l'*, *m'*. ♀ ad. sk.	Otjimbinque, March (*Andersson*).	Sharpe Collection.
n', *o'*. ♂ ad. sk.	Otjimbinque, June (*Andersson*).	Sharpe Collection.
p', *q'*. Ad. sk.	Zanzibar.	Sir John Kirk [C.].
r'. Ad. sk.	Cape Seas.	
s', *t'*. Ad. sk.	Ceylon (*Thwaites*).	H. Cuming, Esq.
u'. Ad. sk.	Kandy.	A. White, Esq. [C.].
v'. Ad. sk.	Newara Eliya.	Mr. E. Boate [C.].
w', *x'*. ♂ ♀ ad. sk.	Rawul Pindee.	Col. J. Biddulph [C.].
y', *z'*. ♀ ad. sk.	Meerut, Jan. & Feb.	Col. J. Biddulph [C.].
α. Ad. sk.	N. India (*Tweedie*).	Gould Collection.
β. Ad. sk.	N.W. India (*Jerdon*).	Gould Collection.
γ–*ζ*. Ad. sk.	N.W. India.	Capt. Stackhouse Pinwill [P.].
η. Ad. sk.	Dinapore.	Capt. Stackhouse Pinwill [P.].
θ. Ad. sk.	N. India (*Major Franklin*).	Gould Collection.
ι. Ad. sk.	N. India.	Eyton Collection.
κ–*ν*. Ad. sk.	Dacca (*Tytler*).	India Museum.
ξ. Ad. sk.	Canara (*Ward*).	India Museum.
o. ♂ ad. sk.	Mhow, April 4.	Col. Swinhoe [P.].
π. ♂ ad. sk.	Mhow, June 26.	Col. Swinhoe [P.].
ρ. ♀ ad. sk.	Mhow, Nov. 28.	Col. Swinhoe [P.].
σ, *τ*. Ad. sk.	Kamptee, C. P.	Dr. R. Hinde [P.].
υ, *φ*. Ad. sk.	Madras.	T. C. Jerdon, Esq. [P.].
χ. ♀ ad. sk.	Mysore, Nov. (*Marshall*).	R. B. Sharpe, Esq.
ψ. ♂ ad. sk.	Brahmagirri Hills, Coorg, Feb. 10.	W. Davison, Esq. [P.].
ω. ♂ juv. sk.	Ootacamund, Nilghiris, July.	W. Davison, Esq. [P.].
α'. ♂ ad. sk.	Kotagherry, Nilghiris, July (*Miss Cockburn*).	Oates Collection.
β'. Ad. sk.	Travancore, Feb.	F. W. Bourdillon, Esq. [C.].
γ'. ♀ ad. sk.	Behar.	B. H. Hodgson, Esq. [P.].
δ'. Ad. sk.	Kumaon (*Strachey*).	India Museum.
ε'–*o'*. Ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.]. (Types of *C. ubiquitarius*.)

π'. Ad. pull. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
ρ'–ζ'. Ad. sk.	Nepal (*Hodgson*).	India Museum.
η'. Pull. sk.	Nepal (*Hodgson*).	India Museum.
θ''. Ad. sk.	Upper Assam (*Reid*).	R. B. Sharpe, Esq. [P.].
ι''. Ad. sk.	Bhamo, Feb. 1868.	Dr. J. Anderson [C.].
κ''. Ad. sk.	Mandalay, Sept. 26.	Dr. J. Anderson [C.].
λ''. Ad. sk.	Mungla, Sanda valley, May 1.	Dr. J. Anderson [C.].
μ''. ♀ ad. sk.	Pegu, Feb. 14.	Oates Collection.
ν''. ♂ ad. sk.	Pegu, May 14.	Oates Collection.
ξ''. ♂ ad. sk.	Pegu, July 22.	Oates Collection.
o'', π''. ♂ ♀ ad. sk.	Pegu, Sept.	Oates Collection.
ρ''. Ad. sk.	Pegu, Oct. 10.	Oates Collection.
σ''. ♀ ad. sk.	Pegu, Dec. 13.	Oates Collection.
τ''. Ad. sk.	Tenasserim.	J. C. D. Packman, Esq. [P.].
υ''. Juv. sk.	Malacca.	Capt. Stackhouse Pinwill [P.].
ϕ''. Ad. sk.	Malacca.	Gould Collection.
χ''. Ad. sk.	Malacca.	R. B. Sharpe, Esq. [P.].
ψ''–β'''. Ad. sk.	Malacca (*Cantor*).	India Museum.
γ'''. Ad. sk.	Malacca (*Griffith*).	India Museum.
δ''', ϵ'''. Ad. sk.	Malacca.	India Museum.
ζ'''. Ad. sk.	Malacca.	Eyton Collection. (Type of *A. malayensis*.)
η'''. Ad. sk.	Singapore.	Dr. McKinlay [P.].
θ'''. Ad. sk.	Sumatra.	Eyton Collection.
ι'''. ♀ ad. sk.	Borneo.	M. Verreaux.
κ''', λ'''. ♂ ♀ ad.; μ'''. ♀ juv. sk.	E. Timor.	Wallace Collection.
ν'''. Ad. sk.	E. Timor.	Wallace Collection.
ξ'''. Ad. sk.	E. Timor (*Wallace*).	Salvin-Godman Collection.
o'''. Ad. sk.	Lombock (*Wallace*).	Gould Collection.
π'''. ♂ ad. sk.	Lombock.	Wallace Collection.
ρ'''. ♂ ad. sk.	Timor.	Gould Collection.
σ'''. ♀ ad. sk.	Timor.	H. O. Forbes, Esq. [P.].
τ'''. Ad. sk.	Philippines.	Hugh Cuming, Esq. [C.].
υ'''. ♂ ad. sk.	Ilo Ilo, Panay.	Voy. H.M.S. 'Challenger.'

Subsp. *a*. Anthus bocagii.

Anthus pallescens, *Bocage* (*nec Vigors & Horsf.*), *Jorn. Lisb.* 1874, p. 52; *Gadow, J. f. O.* 1876, p. 431; *Bocage, Orn. Angola*, p. 294, pl. 8. fig. 2 (1881).
Anthus bocagii, *Nicholson, Ibis*, 1884, p. 469.

Female (type of species). General colour above pale ashy brown with darker centres to the feathers, producing a mottled appearance; wing-coverts pale brown, margined with white, slightly isabelline on the greater coverts and bastard-wing; primary-coverts and quills light brown, externally edged with isabelline or whitish, a little tinged with sandy buff near the base of the outer webs; rump and upper tail-coverts nearly uniform ashy brown, with faintly indicated darker centres on the latter, which are slightly washed with pale

sandy buff; tail-feathers dark brown, the two centres ones margined with pale sandy buff and tipped with white; the two outer ones white with an oblique brown mark on the inner web; the shaft of the outer feather white, of the penultimate one brown, the outer webs being also marked with brown; crown of the head like the back and mottled with longitudinal centres to the feathers; hind neck a little lighter and more fulvous than the head; lores and a distinct eyebrow, as well as the feathers round the eye, isabelline white; in front of the eye a few dusky feathers; ear-coverts light fulvous brown, isabelline whitish below the eye; cheeks white, with a slight dusky line along the upper edge, and separated from the throat by a more distinct line of blackish composed of spots; sides of the neck isabelline whitish, with a few dusky spots; throat white; fore neck and rest of the under surface of the body isabelline, whiter on the thighs and under tail-coverts; the chest with a few small triangular black spots; sides of the body and flanks a little more washed with sandy buff; under wing-coverts and axillaries ashy isabelline, with a few brown spots near the edge of the wing; quills below pale brown, inner edges ashy rufous. Total length 6·6 inches, culmen 0·6, wing 3·25, tail 2·25, tarsus 1·05.

This race, of which I have, through the kindness of Professor Barboza du Bocage, been allowed to examine the typical specimen, can only be considered a pale-grey form of *Anthus rufulus*, which it would appear to replace in certain parts of South-western Africa. I have referred three specimens in the Museum Collection to this race, the measurements being as follows:—

	Total length.	Wing.	Tail.	Tarsus.
	in.	in.	in.	in.
a. Ad. hiem. Damara Land	6·2	3·35	2·3	1·0
b. Ad. Otjimbinque (*Andersson*) ..	6·0	3·7	2·6	1·1
c. Kinsembo	6·25	3·25	2·4	1·1

Hab. South-western Africa.

a. Ad.	Kinsembo, Angola.	Purchased.
b. Ad. hiem.	Otjimbinque, Jan. 6 (*Andersson*).	R. B. Sharpe, Esq. [P.].
c. Ad. hiem.	Damara Land (*Andersson*).	R. B. Sharpe, Esq. [P.].

17. Anthus pratensis.

The Titlark, *Albin, Nat. Hist. B.* i. p. 41, pl. 43 (1738); *Lath. Gen. Syn.* ii. pt. 1, p. 374 (1783).
Alouette de pré ou La Farlouse, *Briss. Orn.* iii. p. 343 (1760).
Parus ignotus, *Brünn. Orn. Bor.* p. 73 (1764); *Gm. Syst. Nat.* i. p. 1006 (1788); *Strickl. Contr. Orn.* 1852, p. 44.
Alauda pratensis, *Linn. Syst. Nat.* i. p. 287 (1766); *Gm. Syst. Nat.* i. p. 792 (1788); *Forst. Cat. Brit. B.* p. 76 (1817).
Le Cujelier, *Daubent. Pl. Enl.* v. pl. 660. fig. 2; *Montb. Hist. Nat.* v. p. 25, pl. 2 (1778).
Norway Titmouse, *Lath. Gen. Syn.* ii. pt. 2, p. 537 (1783).
Anthus sepiarius, *Vieill. N. Dict. d'Hist. Nat.* xxvi. p. 486 (1818); *Roux, Orn. Prov.* pl. 188 (1825).

Anthus pratensis, *Bechst. Naturg. Deutschl.* iii. p. 732 (1807); *Temm. Man. d'Orn.* i. p. 269 (1820); *Naum. Vög. Deutschl.* iii. taf. 84. fig. 3 (1823); *Werner, Atlas, Insectivores*, pl. 80 (1827); *Gould, B. Eur.* ii. pl. 136 (1837); *Macgill. Brit. B.* ii. p. 181 (1839); *Keys. u. Blas. Wirb. Eur.* p. 172 (1840); *Selys-Longch. Faun. Belg.* p. 87 (1842); *Yarr. Brit. B.* i. p. 389 (1843); *Hewits. Eggs Brit. B.* i. p. 133, pl. 36. fig. 1 (1846); *Gray, Gen. B.* i. p. 206 (1847); *Thomps. B. Irel.* i. p. 225 (1849); *Bp. Consp.* i. p. 248 (1850); *Cab. Mus. Hein.* Th. i. p. 14 (1850); *Kjærb. Orn. Dan.* pl. xvii. fig. 3 (1852); *Schl. Vog. Nederl.* pl. 96 (1854); *Sundev. Svensk. Fogl.* pl. 8. fig. 7 (1856); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 284 (1859); *Tristr. Ibis*, 1859, pp. 31, 421; *Salv. t. c.* p. 310; *Powys, Ibis*, 1860, p. 229; *Linderm. Vög. Griechenl.* p. 77 (1860); *Reinh. Ibis*, 1861, p. 6; *Godm. t. c.* p. 343; *Schl. Dier. Nederl. Vög.* pl. 9. fig. 5 (1861); *Godman, Ibis*, 1862, p. 343; *Gray, List Brit. B.* 1863, p. 69; *Wright, Ibis*, 1864, p. 61; *More, Ibis*, 1865, p. 124; *Tristr. Ibis*, 1866, p. 124; *Blyth, Ibis*, 1867, p. 31; *Baird, t. c.* p. 281; *Degl. et Gerbe, Orn. Eur.* i. p. 367 (1867); *Loche, Expl. Sci. Algér., Ois.* ii. p. 16 (1867); *Smith, Ibis*, 1868, p. 442; *Hume, Str. F.* 1869, p. 355; *Borggr. Vogelf. Deutschl.* p. 86 (1869); *Doderl. Avif. Sicil.* p. 97 (1869); *Gray, Hand-l. B.* i. p. 251, no. 3645 (1869); *Heugl. Orn. N.O.-Afr.* i. p. 323 (1869); *Elwes & Buckley, Ibis*, 1870, p. 195; *Hume, t. c.* p. 288; *Gould, B. Gt. Br.* iii. pl. 13 (c. 1870); *Fritsch, Vög. Eur.* tab. 16. fig. 7 (1870); *R. Gray, B. W. Scotl.* p. 115 (1871); *Salvad. Faun. Ital. Ucc.* p. 125 (1871); *Hume, Ibis*, 1871, p. 36; *Saunders, t. c.* p. 216; *Shelley, B. Egypt*, p. 131 (1872); *Harting, Handb. Brit. B.* p. 24 (1872); *Alst. & Harvie-Brown, Ibis*, 1873, p. 61; *Brooke, t. c.* p. 245; *Severtz. Turkest. Jevotn.* pp. 67, 139 (1873); *Wright, Ibis*, 1874, p. 234; *Durnf. t. c.* pp. 392, 404; *Newt. ed. Yarr. Brit. B.* i. p. 575 (1874); *Dresser, B. Eur.* iii. p. 285, pl. 132. fig. 1 (1874); *Danf. & Harvie-Brown, Ibis*, 1875, p. 310; *Irby, B. Gibr.* p. 110 (1875); *Fallon, Ois. Belg.* p. 72 (1875); *Stoliczka, Str. F.* 1875, p. 219; *Blanf. East. Persia*, ii. p. 236 (1876); *Wharton, Ibis*, 1876, p. 23; *Seebohm & Harvie-Brown, t. c.* p. 121; *Finsch, Ibis*, 1877, p. 54; *Danf. Ibis*, 1878, p. 20; *Seebohm, t. c.* p. 342; *Hume, Str. F.* 1878, vol. ii. pp. 402, 455; *id. Str. F.* 1879, pp. 104, 455; *Bogd. B. Cauc.* p. 110 (1879); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 15 (1881); *Seebohm, Ibis*, 1882, p. 376; *Dixon, t. c.* p. 571; *Seebohm, Ibis*, 1883, p. 20; *Irby, t. c.* p. 184; *B. O. U. List Br. B.* p. 32 (1883); *Booth, Rough Notes*, pt. 4 (1883); *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 86; *Radde, Orn. Cauc.* p. 217 (1884); *Tristr. Faun. & Flor. Palest.* p. 55 (1884); *Coues, Key N. Amer. B.* 2nd ed. p. 285 (1884).

Spipola pratensis, *Leach, Syst. Cat. Mamm. &c. Brit. Mus.* p. 21 (1816).

Anthus palustris, *Brehm, Lehrb.* p. 244 (1823); *id. Vög. Deutschl.* p. 334 (1831).

Leimoniptera pratensis, *Kaup, Natürl. Syst.* p. 39 (1829).

Anthus stagnatilis, A. danicus, A. pratorum, A. alticeps, A. tenuirostris, A. musicus, A. virescens, A. lichtensteini, A. desertorum, A. montanellus, *Brehm, Vög. Deutschl.* pp. 332–339 (1831).

Anthus tristis, *Bailly, Mém. Soc. d'Emul. Abbeville*, p. 14 (1833).

Anthus communis, *Blyth, ed. White's N. H. Selborne*, p. 261 (1850).

Anthus intermedius, *Severtz. in Dresser, Ibis*, 1876, p. 179.

Hind claw long, and only slightly curved, longer than hind toe

itself. *Tarsus* equal to hind toe and claw combined. *Primaries* equal, 1, 2, 3, 4. *Primaries* emarginated, 2, 3, 4; *fifth primary* shorter than secondaries, which are nearly equal to long primaries. *Feet*, in skin, not reaching beyond half of the tail.



Foot of *Anthus pratensis*.

Adult male in breeding-plumage. General colour above olive-brown, all the feathers broadly centred with black, some of the mantle-feathers edged with whity brown; lower back and rump more uniform olive-brown, with obscure blackish centres to the feathers; upper tail-coverts olive-brown, with longitudinal dusky blackish centres and paler olive margins; lesser wing-coverts like the back; median and greater series dusky brown, edged with olive-brown or ashy olive, and tipped with paler sandy buff, inclining to whitish on the inner coverts of both series; bastard-wing blackish; primary-coverts and quills dark brown, edged with ashy olive, paler on the secondaries, the innermost of which are clearer olive-brown on their edges, the first primary white along the edge of the outer web; tail-feathers dark brown, edged with olive, the outer feather white, smoky brown towards the end of the outer web, the inner web with an oblique mark of dark brown, the penultimate feather with a large wedge-shaped spot of white at the tip of the inner web; head like the back, and streaked in the same manner, but somewhat more narrowly; the dark streaks less distinct on the hind neck, which is more dusky; eyelid and a streak over the eye pale sandy buff; ear-coverts dark olive-brown; feathers below the eye blackish; cheeks pale sandy buff, extending back on to the sides of the neck, separated from the throat by a black malar streak; throat uniform tawny buff; breast also tawny buff, thickly streaked with broad triangular spots of black, becoming more narrowly streaked on the lower breast; sides of the body and flanks washed with olive and broadly streaked with black; abdomen, vent, and under tail-coverts isabelline white; thighs sandy buff; axillaries smoky brown, washed with olive-yellow; under wing-coverts isabelline, mottled with dusky bases near the edge of the wing, which is more strongly shaded with olive-yellow than the rest of the under wing-coverts; lower primary-

coverts and quills below dusky brown, paler on the inner web of the latter. Total length 6·2 inches, culmen 0·5, wing 3·15, tail 2·45, tarsus 0·85.

Adult female in breeding-plumage. Similar to the male, but less richly spotted below. Total length 6 inches, culmen 0·45, wing 2·95, tail 2·25, tarsus 0·8.

The buff colour on the throat and breast is very pronounced in spring, recalling *A. cervinus* in appearance. It seems to last but a very short time, being assumed by a spring moult, and rapidly wears off, leaving the whole under surface of the body dull whitish, and the entire aspect of the bird very plain.

The specimens of the Meadow-Pipit which arrive in England in March and April from the continent are very bright buff on the throat and breast, in some instances nearly as bright as in *A. cervinus*. The resident Meadow-Pipits have already begun breeding before these bright-plumaged individuals arrive, and present a very worn appearance, the breast being dull white by the end of March; they appear, however, to go through a buff-throated stage like the Continental migrants, but lose it sooner.

Young. Recalls the colour of the adults, but is rather more dusky above, without the olive shade, the central black markings to the feathers being much broader, with sandy-buff edges; wings and tail as in the adult, but the edges to the feathers more sandy, and without any white at the tips of the median and greater coverts; under surface of body yellowish or sandy buff, with distinct black streaks and spots as in the adult, but rather narrower; the black malar streak very distinct, as well as two more on the sides of the throat.

Autumn plumage. Much more olive-brown than the summer dress, the wing-coverts and quills much more plainly margined; underneath sandy buff, isabelline on the lower breast and abdomen, the black spots very distinct on the sides of the throat, breast, and flanks; olive-yellow on the axillaries very distinct.

I cannot perceive any difference between the winter plumage of the young and old birds of the Meadow-Pipit. The sandy-buff colour sometimes extends over the abdomen as well as the breast.

Small specimens are sometimes met with in the autumn with a wing of not more than 2·9 inches. They are probably females in every instance.

Hab. The whole of Europe, ranging south into Northern and North-eastern Africa in the winter, and extending westwards to the valley of the Ob and Turkestan. Occasionally wanders into Greenland.

a, b, c. ♂; *d.* ♀ juv. sk.	Fermanagh, Sept. 9.	Ireland,	Earl of Enniskillen [P.].
e, f. ♂; *g, h.* ♀ ad. sk.	Fermanagh, Nov. 6.	Ireland,	Earl of Enniskillen [P.].
i, k. ♂ ♀ ad. st.	Hebrides.		Theodore Walker, Esq. [P.].

l, *m*. ♂ ♀ ad. sk.	Dunrobin, Sutherlandshire, May.	W. R. Ogilvie Grant, Esq. [P.].
n, *o*. Ad. sk.	Perthshire, May.	W. R. Ogilvie Grant, Esq. [P.].
p, *q*, *r*, *s*, *t*. ♂ ad. sk.	Crieff, Perthshire, May.	W. R. Ogilvie Grant, Esq. [P.].
u, *v*, *w*. Ad. sk.	St. Davids, Pembrokeshire, Sept.	Dr. Günther [P.].
x. Ad. sk.	Carlisle, Cumberland, April 5.	Rev. H. A. Macpherson [P.].
y, *z*. ♂ ♀ ad.; *a'*, *b'*. Pull. st.	Cambridgeshire.	Mr. J. Baker [C.].
c'. Juv. sk.	Cambridgeshire, Nov. 14 (*P. Godman*).	Salvin-Godman Coll.
d', *e'*. ♂ ♀ ad. sk.	Cambridgeshire, April 21 (*O. Salvin*).	Salvin-Godman Coll.
f'. Ad. sk.	Hampstead, Middlesex.	Gould Collection.
g', *h'*. ♂ ad. sk.	Near London, April.	Gould Collection.
i'. Alb. sk.	London market.	
k'. ♂ ad. sk.	Kingsbury, Oct. 3.	J. E. Harting, Esq. [P.].
l'. ♂ ad. sk.	Cookham, Berks, April 2.	R. B. Sharpe, Esq.
m'. ♀ ad. sk.	Cookham, Berks, April 16.	R. B. Sharpe, Esq. [P.].
n'. ♀ ad. sk.	Cookham, Berks, May.	R. B. Sharpe, Esq. [P.].
o'. ♂ ad. sk.	Cookham, Berks, Jan. 27.	R. B. Sharpe, Esq. [P.].
p'. Var., alb. sk.	Surrey.	
q'. Ad. sk.	Surrey (*F. G.*).	Salvin-Godman Coll.
r'. ♂ ad. sk.	Churt, Surrey, March 17 (*Smither*).	Gould Collection.
s', *t'*. ♂ ad. sk.	Romney Marsh, May.	R. B. Sharpe, Esq. [P.].
u. ♂ juv. sk.	Romney Marsh, Sept.	R. B. Sharpe, Esq. [P.].
v'–*y'*. ♂; *z'*–*β*. ♀ ad. st.	Lancing, March (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
γ, *δ*. ♂ ♀ ad.; *ε*–*ι*. Pull. st.	Lancing, April (*H. S.*).	R. B. Sharpe, Esq. [P.].
κ–*o*. ♂; *π*. ♀ ad. sk.	Lancing, March (*H. S.*).	R. B. Sharpe, Esq. [P.].
ρ–*υ*. ♂; *φ*, *χ*. ♀ ad. sk.	Lancing, April (*H. S.*).	R. B. Sharpe, Esq. [P.].
ψ, *ω*. ♂; *a'*. ♀ ad. sk.	Falmer, Sussex, June 16 (*H. S.*).	R. B. Sharpe, Esq. [P.].
β', *γ'*, *δ'*. Juv. sk.	Hove, Sussex, Aug. (*H. S.*).	R. B. Sharpe, Esq. [P.].
ε', *ζ'*, *η'*. ♂ ad. sk.	Brighton, March (*H. S.*).	R. B. Sharpe, Esq. [P.].
θ'. ♀ ad. sk.	Brighton, April.	R. B. Sharpe, Esq. [P.].
ι', *κ'*. Juv. sk.	Brighton, August (*H. S.*).	R. B. Sharpe, Esq. [P.].
λ', *μ'*, *ν'*. Ad. sk.	Brighton, Oct. (*H. S.*).	R. B. Sharpe, Esq. [P.].
ξ', *o'*. Ad. sk.	Brighton, Nov. (*H. S.*).	R. B. Sharpe, Esq. [P.].
π', *ρ'*. Ad. sk.	Brighton, Dec. (*H. S.*).	R. B. Sharpe, Esq. [P.].
σ'. Ad. st.	Brighton, Dec.	Mr. H. Swaysland [C.].
τ'. Ad. sk.	Brighton, March 5 (*Brazenor*).	Gould Collection.
υ'. Juv. sk.	Pagham, Sussex, Sept.	Dr. Günther [P.].
φ'. ♀ juv. sk.	Pagham, Sussex, Sept. 4.	R. B. Sharpe, Esq. [P.].
χ', *ψ'*. Ad. sk.	Wiltshire.	Colonel Montagu [P.].
ω', *a''*, *b''*. ♂ ♀ ad. sk.	Axmouth, Devon (*H. S.*).	R. B. Sharpe, Esq. [P.].

c'', *d''*. ♂ ad. sk.	Plymouth, Nov. (*J. Gatcomb*).	Gould Collection.
e''. Ad. sk.	Padstow, Cornwall, Jan. 23.	R. B. Sharpe, Esq. [P.].
f''. Ad. sk.	Belgium, May 2.	Brussels Museum [P.].
g'', *h''*. ♂ ad. sk.	Holstein, March 25.	R. B. Sharpe, Esq. [P.].
i''. Ad. autumn. sk.	Heligoland.	R. B. Sharpe, Esq. [P.].
k''. ♂ ad. sk.	Pomerania, March 16.	R. B. Sharpe, Esq. [P.].
l''. ♀ ad. sk.	Pomerania, April 28.	R. B. Sharpe, Esq. [P.].
m''. ♂ ad. sk.	Bödö, Norway, May 26.	Salvin-Godman Coll.
n''. ♀ ad. sk.	Norway, April (*R. Collett*).	Christiania Museum [P.].
o''. ♂ ad. sk.	Norway, May (*R. Collett*).	Christiania Museum [P.].
p''. ♀ ad. sk.	Norway, June (*R. Collett*).	Christiania Museum [P.].
q''. Juv. sk.	Norway, Aug. (*R. Collett*).	Christiania Museum [P.].
r''. Juv. sk.	Norway, Sept. (*R. Collett*).	Christiania Museum [P.].
s''. Ad. sk.	Archangel.	R. B. Sharpe, Esq. [P.].
t''. ♂ ad. sk.	Novija, Ob River, Sept. 15 (*Dr. Finsch*).	Geogr. Soc. Bremen.
u''. ♀ ad. sk.	Kaoschka, Sept. 21 (*Dr. Finsch*).	Geogr. Soc. Bremen.
v''. ♂ ad. sk.	Schtschutschja, Aug. 6 (*Dr. Finsch*).	Geogr. Soc. Bremen.
w'', *x''*. ♂ ♀ ad. sk.	Sidon, Palestine.	Canon Tristram [C.].
y'', *z''*. ♀ ad. sk.	Florence, Italy, Feb.	Prof. Giglioli [P.].
a''. Ad. sk.	Malta, Feb. 3.	Gould Collection.
β'', *γ''*. Ad. sk.	Morocco.	R. B. Sharpe, Esq. [P.].
δ'', *ε''*. Skulls.	S. Germany.	Dr. Günther [P.].
ζ''. Skeleton.	England.	Purchased.
η''. Skull.	England.	

18. Anthus cervinus.

Motacilla cervina, *Pall. Zoogr. Rosso.-Asiat.* i. p. 511 (1811); *Eversm. Bull. Soc. Mosc.* xxiii. pt. 2, p. 570 (1850).

Anthus cervinus, *Naum. Vög. Deutschl.* iii. pl. 85. fig. 1 (1823); *Keys. u. Blas. Wirb. Eur.* p. 172 (1840); *Gray, Gen. B.* i. p. 206 (1847); *Bp. Consp.* i. p. 248 (1850); *Middend. Sibir. Reis.* p. 165 (1851); *Sundev. Svensk. Fogl.* pl. 8. fig. 6 (c. 1858); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 184, pl. (1859); *Blasius, Isis*, 1861, p. 291, 1862, p. 71; *Swinhoe, Ibis*, 1863, pp. 311, 443; *Wright, Ibis*, 1864, p. 61; *Sperling, t. c.* p. 279; *Tristr. Ibis*, 1866, p. 290; *Blyth, Ibis*, 1867, p. 31; *Degl. & Gerbe, Orn. Eur.* i. p. 369 (1867); *Loche, Expl. Sci. Algér., Ois.* ii. p. 17 (1867); *Beavan, Ibis*, 1867, p. 328; *Doderl. Avif. Sicil.* p. 99 (1869); *Gray, Hand-l. B.* i. p. 251, no. 3646 (1869); *Gould, B. Asia*, iv. pl. 66 (1869); *Fritsch, Vög. Eur.* pl. 16. fig. 5 (1870); *Swinh. Ibis*, 1870, p. 83; *Elwes & Buckley, t. c.* p. 195; *Hume, Ibis*, 1871, p. 35; *Tristr. t. c.* p. 233; *Swinh. P. Z. S.* 1871, p. 365; *Salvad. Faun. Ital., Ucc.* p. 126 (1871); *Heugl. Ibis*, 1872, p. 61; *Vian, Rev. et Mag. Zool.* (2) xxiii. p. 44 (1872); *Harting, Handb. Brit. B.* p. 100 (1872); *Shelley, B. Egypt*, p. 121 (1872); *Alst. & Harvie Brown, Ibis*, 1873, p. 61; *Brooke, t. c.* p. 245; *Ball, Str. F.* 1873, p. 74; *Hume, t. c.* p. 310;

Hume, Str. F. 1874, pp. 239, 479; *Lilford, Ibis*, 1875, p. 21; *Cordeaux, t. c.* p. 181; *Danf. & Harvie Brown, t. c.* p. 310; *Stoliczka, Str. F.* 1875, p. 310; *Blyth & Walden, B. Burm.* p. 96 (1875); *Seebohm & Harvie Brown, Ibis*, 1876, p. 122; *Dresser, t. c.* p. 180; *Brooks, t. c.* p. 500; *Tacz. Bull. Soc. Zool. France*, i. p. 159 (1876); *David & Oust. Ois. Chine*, p. 306 (1877); *Finsch, Ibis*, 1877, p. 59; *Hume & Davison, Str. F.* 1878, p. 367; *Danf. Ibis*, 1878, p. 20; *Seebohm, t. c.* p. 342, 1879, p. 34; *Gätke, t. c.* p. 103; *Finsch, Verh. z.-b. Gesellsch. Wien*, 1879, p. 66; *Hume, Str. F.* 1879, p. 103; *Seebohm, Ibis*, 1880, p. 188; *Biddulph, t. c.* p. 70; *Giglioli, Ibis*, 1881, p. 300; *Ridgw. Bull. U.S. Nat. Mus.* vi. p. 156 (1881); *Belding, t. c.* p. 350; *Seebohm, Ibis*, 1882, p. 216; *Biddulph, t. c.* p. 280; *Seebohm, t. c.* p. 376; *B. O. U. List Brit. B.* p. 32 (1883); *Seebohm, Hist. Brit. B.* ii. p. 229 (1883); *Dybowski, Bull. Soc. Zool. France*, viii. p. 361 (1883); *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 86; *Sharpe, P. Z. S.* 1884, p. 206; *Tristr. Faun. & Flor. Palest.* p. 55 (1884); *Radde, Orn. Cauc.* p. 219 (1884).

Anthus cecilii, *Audouin, Descr. Egypte*, p. 360, pl. 5. fig. 6 (1828); *Blanf. Geol. & Zool. Abyss.* p. 382 (1870).

Anthus pratensis rubicus, *Hempr. & Ehr. Symb. Phys.* fol. dd (1828).

Anthus rufogularis, *Brehm, Vög. Deutschl.* p. 340 (1831); *Gould, B. Eur.* ii. pl. 140 (1837); *Bp. Comp. List B. Eur. & N. Amer.* p. 18 (1838); *Middend. Sibir. Reis.* p. 164 (1851); *Licht. Nomencl. Av.* p. 38 (1854); *Adams, Ibis*, 1864, p. 20; *Tristr. Ibis*, 1871, p. 233; *Hanf, Verh. z.-b. Gesellsch. Wien*, xxii. p. 400 (1873); *Tacz. Bull. Soc. Zool. France*, i. p. 159 (1876).

Anthus pratensis (*nec L.*), *Eversm. Add. Pall. Zoogr.* p. 15 (1835); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 159 (1840); *Finsch, Trans. Z. S.* vii. p. 239 (1870); *Nelson, Cruise R.S. 'Corwin,'* p. 62 (1883).

Anthus pratensis rufogularis, *Schl. Rev. Crit.* p. xxxvi (1840); *Gould, P. Z. S.* 1859, p. 151; *Blyth, Ibis*, 1867, p. 31.

Anthus rufosuperciliaris, *Blyth, J. A. S. Beng.* 1860, p. 105.

Anthus thermophilus, *Swinh. Ibis*, 1860, pp. 55, 429, 1861, pp. 36, 411.

Anthus japonicus, *Swinh. Ibis*, 1861, p. 333, 1863, p. 443.

Anthus ruficollis, *Heugl. Orn. N.O.-Afr.* i. p. 323 (1869).

Anthus cervinus, var. rufogularis, *Severtz. Turkest. Jevotn.* pp. 67, 140 (1873).

Hind claw rather straight and long, about equal to hind toe. *Tarsus* about equal to hind toe and claw combined, or even a trifle longer when the claw is worn. *Primaries subequal*, 1, 2, 3, 4; *first* a little the longest, and the others gradually a trifle shorter. *Primaries emarginate*, 2, 3, 4; *fifth primary* much shorter than fourth, and much less than long secondaries, which are nearly equal to long primaries.

Adult male in breeding-plumage. General colour above sandy brown, with blackish centres to the feathers, narrower on the head, and equally distinct on the lower back and rump; the mantle with paler and more sandy-buff edgings; lesser wing-coverts sandy buff with black centres; median wing-coverts black, with broad edgings of sandy buff or creamy white; greater wing-coverts blackish brown, with paler-brown edges, inclining to buffy whitish at the ends;

bastard-wing blackish, narrowly edged with buffy white; primary-coverts and quills dark brown, edged with sandy buff, the secondaries more broadly with creamy white towards the ends; upper tail-coverts like the back and with dark centres to the feathers, the long ones broadly centred with black, the edges rather sandy rufous; tail-feathers dark brown, edged with sandy brown, whiter towards the tips, the outer feather smoky white, the outer web light brown, the inner web obliquely dark brown from the base upwards; penultimate feather with a wedge-shaped spot of white at the end of the inner web; head like the back, but more narrowly centred with black; a narrow but distinct eyebrow of deep vinous red, the eyelid and feathers below the eye of the same colour; ear-coverts sandy brown; lores ashy; sides of neck distinctly washed with vinous; cheeks, throat, and breast deep vinous, with a few black streaks on the centre of the breast, the sides of the upper breast being a little more distinctly striped; remainder of under surface of body rich sandy buff, including the thighs; the under tail-coverts deeper coloured, the longer ones with blackish bases; the sides of the body streaked with black, more broadly on the sides of the breast; axillaries dusky brown, with olive-yellowish edges, not very distinctly pronounced; under wing-coverts dull whitish, with dusky bases to the feathers near the edge of the wing; quills dusky brown below, ashy along the inner web: "bill dark brown, the gape and base of lower mandible yellowish; legs yellowish flesh-colour; claws horn-colour; iris brown" (*Oates*). Total length 5·6 inches, culmen 0·55, wing 3·5, tail 2·5, tarsus 0·85.

Adult female in breeding-plumage. Similar to the male on the upper surface, but differing below in having the throat alone vinous chestnut, the rest of the body from the fore neck downwards being sandy buff; the fore neck broadly spotted with blackish centres to the feathers, a little narrower and longer on the sides of the body and flanks, and quite narrow and linear on the breast. Total length 5·3 inches, culmen 0·6, wing 3·2, tail 2·4, tarsus 0·8.

Winter plumage (Amoy, November; R. Swinhoe). General colour sandy olive-brown, with fulvous edges to the feathers of the mantle and back; all the upper parts broadly streaked with black centres to the feathers, the rump and upper tail-coverts equally distinctly centred as the back; lesser wing-coverts like the back; median and greater series blackish brown, edged with sandy buff and tipped with whitish; bastard-wing blackish brown, with sandy-whitish edges; primary-coverts and quills brown, edged with ashy olive, more fulvescent on the secondaries, the innermost of which are rather broadly margined with yellowish white; tail-feathers blackish brown, edged with ashy olive, the outer ones white, brown along the outer web, and obliquely dark brown on the inner web; the penultimate feathers with a triangular-shaped mark of white at the end; a distinct eyebrow yellowish white, as also the eyelid; ear-coverts brown, streaked below the eye with yellowish white; cheeks and under surface of body yellowish buff, with a distinct malar line of black, the fore neck and breast very distinctly

spotted with black and the sides of the body also streaked with black; centre of breast, abdomen, and under tail-coverts uniform yellowish buff; under wing-coverts ashy, edged with olive; quills ashy below, lighter on the face of the inner webs. Total length 5·3 inches, culmen 0·55, wing 3·15, tail 2·3, tarsus 0·9. (*Mus. H. Seebohm.*)

Obs. From the winter plumage above described the bird moults in the following spring to the red-throated stage with a rufous eyebrow; but it seems certain that not every male bird has the chest rufous as well as the throat: some are densely spotted on the breast like the old females and have only the throat itself rufous; these are, as Mr. Seebohm surmises, very probably young males of the previous year in their first breeding-dress.

It seems equally certain that some males, perhaps very old birds, retain the red throat in winter and have the breast and sides of the body very densely spotted and streaked with black. Mr. Seebohm has such a male from Turkey, obtained on the 7th of October; the Museum has one from Asia Minor (date lost); and a third, from the River Ob, is in Mr. Seebohm's collection, and was procured by Dr. Finsch as early as the 7th of September.

The female in winter plumage does not have the rufous throat seen in some males; the throat is yellowish white like the abdomen, the breast and sides of the body very thickly and broadly spotted and streaked with black as in the summer plumage. During the breeding-season the rufous of the throat gets more and more worn, and is sometimes completely washed out and becomes yellowish white.

Nestling. Recalls the feathering of the adult winter plumage, but is light sandy coloured with an olive tinge; edges to the wing-coverts very strongly marked with black centres; eyelid and eyebrow yellowish buff mottled with black spots; under surface of body sandy buff, with distinct black spots on the breast and streaks on the flanks.

Hab. Breeds throughout Northern Europe and Siberia, above the limits of forest-growth. Occasional in England and Western Europe on migration. Winters in Egypt and North-eastern Africa, Persia, and North-western India, but principally in Southern China and the Burmese countries, extending at least to Borneo. Its northern range to the eastward appears to be Kamtschatka and as far as Bering Island; not as yet recorded from Alaska, but has been met with in winter as far south as California.

a. ♂ ad. sk.	Ust Zylma, Petchora River, May 23.	Henry Seebohm, Esq. [P.].
b. ♀ ad. sk.	Alexievka, Petchora, June 17.	Henry Seebohm, Esq. [P.].
c. ♂ ad. sk.	Ust Zylma, May (*J. A. H. B.*).	Major Feilden and J. A. Harvie-Brown, Esq. [P.].
d. ♀ ad. sk.	Schtschutschja, Ob River, July (*Dr. Finsch*).	Geogr. Soc. Bremen.

e. ♂ juv. sk.	Schtschutschja, August (*Dr. Finsch*).	Geogr. Soc. Bremen.
f. ♂ ad. sk.	Finmark, June 28 (*R. Collett*).	Christiania Museum.
g, *h*, *i*. ♂; *k*. ♀ ad. sk.	Finmark, June 28 (*R. Collett*).	Christiania Museum.
l. ♂ ad. sk.	Sarepta, May 2.	R. B. Sharpe, Esq. [P.]
m. ♀ ad. sk.	Russia, May 14.	Moscow Museum.
n, *o*. ♂; *p*. ♀ ad. sk.	Crimea, April.	Gould Collection.
q, *r*. Ad. sk.	Asia Minor.	T. Robson, Esq. [C.].
s. ♂ ad. sk.	Turkey, April 28 (*Robson*).	Salvin-Godman Coll.
t. ♀ ad. sk.	Fano, Italy, May.	Prof. Giglioli [P.].
u. Ad. sk.	5th Cataract of the Nile.	F. Galton, Esq. [P.].
v. Ad.; *w*. Imm. sk.	Nubia.	Sharpe Collection.
x. ♀ ad. sk.	Senafe, Tigré, March 7.	W. T. Blanford, Esq. [C.].
y. ♀ ad. sk.	Island of Askold, E. Siberia (*H. Doerries*).	R. B. Sharpe, Esq. [P.].
z. ♀ ad. sk.	Dizak, Baluchistan, March 24.	W. T. Blanford, Esq. [C.].
a'. ♂ ad. sk.	Pegu, October 23.	Oates Collection.
b', *c'*. ♂ ad.; *d'*. ♀ ad. sk.	Pegu, March.	Oates Collection.
e'. ♂ ad. sk.	Pegu, April.	Oates Collection.
f'. ♂ ad. sk.	Malewoon, S. Tenasserim.	Oates Collection.
g'. ♂ juv. sk.	Bintulu, Nov. 6.	A. Everett, Esq. [C.].

19. Anthus rosaceus.

Anthus rosaceus vel rufogularis, *Hodgs. Icon. ined. in Brit. Mus.*, *Passeres*, pl. 118 (no. 734); *id. in Gray's Zool. Misc.* p. 83 (1844).
Anthus cervinus (*nec Pall.*), *Gray, Cat. Mamm. etc. Nepal pres. Hodgs.* p. 77 (1846); *Blyth, Cat. B. Mus. As. Soc.* p. 136 (1849); *Jerd. B. Ind.* ii. p. 237 (1863); *Beavan, Ibis*, 1867, p. 328, 1868, p. 80; *Hume, Ibis*, 1871, p. 35.
Anthus aquaticus (*nec Bechst.*), *Blyth, J. A. S. Beng.* xvi. p. 437 (1847).
Anthus roseatus, *Blyth, J. A. S. Beng.* xvi. p. 437 (1847).
Anthus rosaceus, *Horsf. & Moore, Cat. B. E. I. Co. Mus.* i. p. 357 (1854); *Blyth, Ibis*, 1867, p. 32; *Gray, Hand-l. B.* i. p. 251, no. 3647 (1869); *Hume, Ibis*, 1870, p. 287; *Swinh. P. Z. S.* 1871, p. 366; *Tristr. Ibis*, 1871, p. 234; *Blanf. J. A. S. Beng.* xli. p. 61 (1872); *Brooks, t. c.* p. 83 (1873); *Hume, Nests and Eggs Ind. B.* p. 386 (1873); *id. Str. F.* 1874, p. 241; *Brooks, Ibis*, 1874, p. 460; *Brooks, Str. F.* 1875, p. 252; *Blyth & Wald. B. Burm.* p. 96 (1875); *Brooks, Ibis*, 1876, p. 500; *Prjev. in Rowley's Orn. Misc.* ii. p. 194 (1877); *David & Oust. Ois. Chine*, p. 308 (1877); *Hume, Str. F.* 1879, p. 103; *Scully, t. c.* p. 317; *Biddulph, Ibis*, 1881, p. 70; *Scully, t. c.* p. 452; *Biddulph, Ibis*, 1882, p. 280; *Oates, B. Brit. Burm.* i. p. 170 (1883).
Anthus rufosuperciliaris, *Blyth, J. A. S. Beng.* xxix. p. 185 (1860).

Hind claw stout and gently arched, decidedly longer than the hind toe. *Tarsus* decidedly longer than hind toe and claw combined. *Primaries* subequal, 2, 3, 4, 5; *sixth* primary shorter than

long secondaries, which are again considerably shorter than the longest primaries. *Primaries emarginate*, 2, 3, 4. *Outstretched feet* (in skin) reaching a little beyond half the tail.

Adult male in breeding-plumage. General colour above ashy, streaked with black in the centre of the feathers, the head more narrowly, the hind neck less distinctly, and the back very broadly; the back and mantle mottled with edges of ashy white, faintly tinged with olive; rump more uniform olive-brown; upper tail-coverts dusky brown, edged with ashy fulvous; lesser wing-coverts dark brown, strongly washed with olive-yellow; median and greater coverts blackish brown, edged with fulvous or olive-brown and tipped with dull white; bastard-wing dark brown, edged with ashy; primary-coverts and quills dusky brown, margined with olive-yellowish, the secondaries with whity-brown, whiter on the inner secondaries, which are blackish; upper tail-coverts and tail blackish brown, edged with ashy or olive-brown; penultimate feather with a white spot at the tip of the outer web, the outer feather white, smoky brown towards the end of the outer web, the inner one with a broad oblique mark of blackish brown; eyelid and a broad eyebrow, running from the base of the nostrils to above the ear-coverts, dull white with a fulvous tinge; lores blackish; ear-coverts dusky blackish, mottled with white below the eye; cheeks, throat, and breast pale vinous; abdomen, vent, and under tail-coverts dull white; sides of body and flanks dull whitish, washed with olive and broadly streaked with black; axillaries pale olive-yellow; under wing-coverts dull white, washed with yellow and mottled near the edge of the wing with dusky bases; quills dusky below, pale ashy along the inner web: "bill dusky, blackish on the culmen and fleshy brown at the base of the lower mandible; feet brownish fleshy, the claws dusky; iris dark brown" (*Scully*). Total length 5·7 inches, culmen 0·55, wing 3·45, tail 2·45, tarsus 0·8.

Adult female in breeding-plumage. Similar in colour to the male, but with remains of a few obsolete blackish streaks on the fore neck. Total length 5·9 inches, culmen 0·5, wing 3·1, tail 2·35, tarsus 0·8.

Owing to the absence of properly dated specimens, I am unable to follow the present species through all its changes of plumage. It appears to have a perfectly distinct winter plumage, when the under surface is thickly spotted with black, and in which it somewhat resembles the winter dress of *A. maculatus* and *A. trivialis*. The sulphur-yellow axillaries, however, are always strongly pronounced, and the shape of the hind claw also distinguishes it from the two above-mentioned species at all ages.

A specimen killed at Etawah in March is moulting from the spotted dress into the summer rufous-throated stage; but in some individuals it would appear as if the colour of the feather changed to rosy without an actual moult. The Museum series, however, is not extensive enough to determine the sequence of plumages satisfactorily.

Hab. Himalayan region from Afghanistan to Bootan and the

Khasia hills, extending into Moupin and Kansu in China; wintering in the plains of India.

a. Ad. hiem. sk.	Olipore, Afghanistan (*Griffith*).	India Museum.
b, *c*. ♂; *d*, *e*. ♀ ad. æstiv. sk.	Gilgit, May.	Col. J. Biddulph [C.].
f. ♀ ad. æstiv. sk.	Gurais, May.	Col. J. Biddulph [C.].
g. ♂ ad. æstiv. sk.	Darel, July.	Col. J. Biddulph [C.].
h, *i*. ♂ ♀ ad. æstiv. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [C].
k. Ad. æstiv. sk.	Himalayas.	Gould Collection.
l. Ad. æstiv. sk.	Himalayas.	India Museum.
m. ♂ ad. æstiv. sk.	Etawah, March 7.	Col. J. Biddulph.
n. Ad. æstiv.; *o*. Ad. hiem. sk.	Kumaon (*Strachey*).	India Museum.
p. Ad. hiem. sk.	Darjiling.	Gould Collection.
q, *r*. Ad. æstiv.; *s*, *t*. Ad. hiem. sk.	Nepal (*Hodgson*).	India Museum.
u, *v*, *w*, *x*. Ad.; *y*. Juv. sk.	Nepal.	B. H. Hodgson, Esq. [P.]. (Types of species.)
z–*c'*. Ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
d'. Ad. hiem. sk.	Bootan (*Pemberton*).	India Museum.
e'. Juv. sk.	Khasia hills (*Griffith*).	India Museum.
f'. Juv. sk.	Khasia hills (*Jerdon*).	Gould Collection.

20. Anthus bertheloti.

Anthus trivialis (*nec L.*), *Webb & Berth. Orn. Canar.* p. 16 (1841).
Anthus pratensis (*nec L.*), *Vernon Harc. Ann. & Mag. Nat. Hist.* xii. p. 58 (1853), xv. p. 433 (1855).
Anthus aquaticus (*nec Bechst.*), *Bolle, Ibis*, 1862, p. 347.
Anthus bertheloti, *Bolle, J. f. O.* 1862, p. 357; *A. Newton, Ibis*, 1863, p. 186; *Vern. Harc. t. c.* p. 230; *Godman, Ibis*, 1872, pp. 163, 176; *Dresser, B. Eur.* iii. p. 291, pl. 133 (1874).

Hind claw rather curved, about equal to hind toe. *Tarsus* longer than hind toe and claw combined. *Primaries* subequal, 1, 2, 3, 4; *fourth* primary shorter than long secondaries, which are nearly equal to long primaries. *Primaries emarginate*, 2, 3, 4.

Adult. General colour above dark ashy brown, streaked with blackish down the centre of the feathers of the head and mantle, the lower back and rump uniform; the upper tail-coverts lighter brown, with longitudinal streaks of black; lesser wing-coverts like the back; median and greater coverts dark brown, edged with pale sandy buff, whiter towards the ends; bastard-wing, primary-coverts, and quills dark brown, edged with pale sandy buff, whiter on the margins of the primaries; tail-feathers dark brown, with paler edges, the outer feathers white, with an oblique mark of blackish along the inner web, the shaft also blackish; the penultimate feather blackish brown, white at the tip of the outer web, and having a wedge-shaped mark of white at the end of the inner web, extending nearly halfway down the feather; lores, eyelid, and a

distinct eyebrow dull white, as also the feathers below the eye and the fore part of the ear-coverts, the hinder part of the latter dull brown like the sides of the neck; cheeks, throat, and under surface of body dull white, with a slight tinge of sandy buff on the breast and sides of the body, the latter washed with dull brown; a malar streak composed of blackish spots; fore neck and chest minutely marked with triangular black spots; sides of the breast and flanks streaked with blackish; thighs pale sandy buff; axillaries and under wing-coverts dull smoky white; quills dusky below, ashy fulvous along the inner web. Total length 5·6 inches, culmen 0·55, wing 2·85, tail 2·25, tarsus 0·85.

Young female. Much more rufous than the adult and much more strongly mottled, the centres of the feathers black, with pale sandy-rufous margins, especially distinct on the wing-coverts, quills, and tail-feathers; penultimate and outer tail-feathers as in the adult, but with a larger wedge-shaped mark of white on the former, and a tinge of sandy buff along the outer webs of both; under surface as in the adult, but the lower flanks and under tail-coverts washed with sandy buff, and having the breast very thickly streaked with black: "legs almost white" (*F. D. Godman*). Total length 5·2 inches, culmen 0·55, wing 2·85, tail 2·15, tarsus 0·85.

This specimen bears a remark by Mr. Godman to the effect that it "has nested," and he evidently believes it to have been an adult bird. If this were the case, then Madeira would possess two species of Pipits; and certainly in appearance there is a great difference between the two specimens described above. I can, however, trace a tinge of sandy rufous on some of the wing-coverts in the adult birds, and therefore consider the rufous bird to be young. Further information on the sequence of plumage in this species is much to be desired.

Hab. Madeira and the Canary Islands.

a, b. Ad. sk.	Madeira (*Temple Godman*).	Salvin-Godman Coll.
c. Ad. sk.	Orotava, Teneriffe, April 7 (*F. D. Godman*).	Salvin-Godman Coll.
d. ♀ juv. sk.	Madeira, July 1, 1871 (*F. D. Godman*).	Salvin-Godman Coll.

21. Anthus spipoletta.

Alauda spinoletta, *Linn. Syst. Nat.* i. p. 288 (1766); *Gm. Syst. Nat.* i. p. 794 (1788).

L'Alouette Pipi, *Daubent. Pl. Enl.* v. pl. 661. fig. 2; *Montb. Hist. Nat. Ois.* v. p. 34 (1778).

Anthus aquaticus, *Bechst. Naturg. Deutschl.* iii. p. 745 (1807); *Temm. Man. Orn.* ii. p. 265 (1820); *Naum. Vög. Deutschl.* iii. pl. 85. figs. 2, 3, 4 (1823); *Werner, Atlas, Insectivores*, pl. 84 (1827); *Gould, B. Eur.* ii. pl. 138 (1837); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 150 (1840); *Schl. Rev. Crit.* p. xxxv (1844); *Severtz. Turkest. Jevotn.* p. 67 (1873); *Fallon, Ois. Belg.* p. 70 (1875); *Finsch, Ibis*, 1877, p. 54; *Dixon, Ibis*, 1882, p. 571; *Seebohm, Ibis*, 1883, p. 20.

Anthus montanus, *Koch, Syst. baier. Zool.* i. p. 179 (1815).
Anthus coutellii, *Audouin, Descr. Egypte*, p. 360, pl. 5. fig. 5 (1828); *Severtz. Ibis*, 1883, p. 61.
Anthus aquaticus seu coutellii, *Hempr. & Ehr. Symb. Phys.* fol. dd (1828).
Anthus alpinus, *Brehm, Vög. Deutschl.* p. 329 (1831); *id. Naum.* 1855, p. 279.
Anthus hiemalis, *Brehm, t. c.* p. 329 (1831).
Anthus major, *Brehm, Naum.* 1855, p. 279.
Anthus minor, *Brehm, t. c.* p. 279.
Anthus orientalis, *Brehm, Vogelf.* p. 138 (1855).
Anthus spinoletta, *Bp. Comp. List B. Eur. & N. Amer.* p. 18 (1838); *Keys. u. Blas. Wirb. Eur.* p. xlviii (1840); *Selys-Longch. Faun. Belg.* p. 85 (1842); *Gray, Gen. B.* i. p. 206 (1847); *Bp. Consp.* i. p. 247 (1850); *Linderm. Vög. Griechenl.* p. 77 (1860); *Tristr. Ibis*, 1861, p. 414; *Wright, Ibis*, 1864, p. 62; *Tristr. Ibis*, 1866, p. 289; *Degl. & Gerbe, Orn. Eur.* i. p. 371 (1867); *Loche, Expl. Sci. Algér., Ois.* ii. p. 14 (1867); *Gould, Ibis*, 1868, pp. 114, 237; *Pelz. t. c.* p. 312; *Smith, t. c.* p. 443; *Walden, Ibis*, 1869, p. 213; *Hume, t. c.* p. 355; *Borggr. Vogelf. Norddeutschl.* p. 85 (1869); *Doderl. Avif. Sicil.* p. 100 (1869); *Heugl. Orn. N.O.-Afr.* i. p. 325 (1869); *Gray, Hand-l. B.* i. p. 214, no. 3614 (1869); *Wyatt, Ibis*, 1870, p. 15; *Gould, B. Gt. Br.* iii. pl. 11 (c. 1870, right-hand fig.); *Fritsch, Vög. Eur.* tab. 16. fig. 2 (1870); *Elwes & Buckley, Ibis*, 1870, p. 195; *Salvad. Faun. Ital., Ucc.* p. 127 (1871); *Hume, Ibis*, 1871, p. 36; *Tristr. t. c.* p. 234; *Swinh. P. Z. S.* 1871, p. 365; *Saunders, Ibis*, 1871, p. 216; *Harting, Handb. Brit. B.* p. 24 (1872); *Shelley, B. Egypt*, p. 132 (1872); *Brooke, Ibis*, 1873, p. 245; *Wyatt, Ibis*, 1874, p. 234; *Dresser, B. Eur.* iii. p. 335, pl. 140 (1874); *Irby, B. Gibr.* p. 110 (1875); *Butler & Hume, Str. F.* 1875, p. 491; *Stoliczka, t. c.* p. 219; *Scully, Str. F.* 1876, p. 152; *Blanf. East. Persia*, ii. p. 236 (1876); *Tacz. Bull. Soc. Zool. France*, ii. p. 159 (1876); *Prjev. in Rowley's Orn. Misc.* ii. p. 194 (1877); *Brooks, Ibis*, 1877, p. 206; *David & Oust. Ois. Chine*, p. 306 (1877); *Butler, Str. F.* 1877, p. 230; *Hume, Str. F.* 1878, vol. ii. p. 521, 1879, p. 103; *Danf. Ibis*, 1878, p. 20; *Butler, Cat. B. Sind &c.* p. 42 (1879); *Bogd. B. Cauc.* p. 109 (1879); *Seebohm, Hist. Brit. B.* ii. p. 248 (1883); *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 86; *Radde, Orn. Cauc.* p. 215 (1884).
Anthus spipoletta, *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 285 (1859); *Newton, ed. Yarr. Brit. B.* i. p. 589 (1874); *Cordeaux, Ibis*, 1875, p. 181; *Danf. & Harvie Brown, t. c.* p. 310; *B. O. U. List Brit. B.* p. 34 (1883); *Tristr. Faun. & Flor. Palest.* p. 56 (1884).
Anthus blakistoni, *Swinh. P. Z. S.* 1863, p. 90, 1867, p. 389; *Gray, Hand-l. B.* i. p. 251, no. 3644 (1869); *Brooks, Ibis*, 1877, pp. 206, 207; *Butler, Str. F.* 1878, vol. ii. p. 177; *id. Cat. B. Sind &c.* p. 42 (1879); *Hume, Str. F.* 1879, p. 103; *Brooks, t. c.* p. 484; *Biddulph, Ibis*, 1881, p. 70; *Scully, t. c.* p. 453; *C. Swinh. Ibis*, 1882, p. 110.
Anthus neglectus, *Brooks, Ibis*, 1876, p. 501; *Hume, Str. F.* 1877, p. 345.

Hind claw rather long and straightened, about equal to or a little longer than the hind toe itself. *Tarsus* longer than hind toe and claw combined. *Primaries subequal* and longest, 2, 3; *first* a trifle

shorter; *fourth* a trifle shorter still; *fifth primary* much shorter than fourth and less than long secondaries. *Primaries emarginate*, 2, 3, 4. *Feet* when outstretched reaching to about three quarters of the length of the tail.

Adult male in breeding-plumage. General colour above light brown, shaded with ashy grey on the mantle, which is slightly mottled with dusky brown centres to the feathers; the lower back, rump, and upper tail-coverts uniform brown; lesser wing-coverts light ashy brown, median and greater coverts dark brown, margined with paler and rather rufescent brown, whiter at the ends of the inner coverts; bastard-wing blackish brown, narrowly fringed with whitish at the tips; primary-coverts and quills blackish brown, margined with paler brown and fringed with whitish at the tips; tail-feathers blackish brown, edged with ashy brown, the penultimate feather with a conspicuous white tip, the outer one white, smoky brown along the outer web, the inner feather obliquely blackish brown for the greater part of its length; head and hind neck ashy grey, slightly streaked with dusky on the crown; a broad whitish eyebrow, pale rosy on the anterior part near the base of the nostrils; eyelid rosy white; lores dull ashy; ear-coverts dull ashy brown, mottled with whitish below the eye; cheeks and under surface of body uniform pale rosy, whiter on the lower abdomen and under tail-coverts; flanks browner; sides of breast ashy brown; axillaries and under wing-coverts dull white with ashy bases; quills dull ashy below, brighter along the inner web. Total length 6·6 inches, culmen 0·55, wing 3·55, tail 2·75, tarsus 0·95.

Young in winter plumage. General colour above brown, slightly mottled with darker brown centres to the feathers of the mantle and back; rump uniform brown; lesser wing-coverts light ashy brown; median and greater coverts blackish brown, margined with paler brown, whitish on the inner webs; bastard-wing feathers blackish brown, edged with pale brown near their ends; primary-coverts and quills blackish brown, edged with paler brown, the primaries with dull olive; inner secondaries edged with dull white; upper tail-coverts brown, slightly mottled with darker brown centres; tail-feathers blackish brown, edged with ashy olive; the penultimate feather with a wedge-shaped spot of white at the tip; the outer feather white, with a slight shade of smoky brown near the end of the outer web, the inner web obliquely blackish brown for the greater part of its length; crown of head rather more ashy than the back and slightly mottled with darker centres to the feathers; lores dusky, surmounted by a distinct white eyebrow, fulvescent anteriorly; feathers round the eye and eyelid also dull white; ear-coverts dusky brown, as also the feathers below the eye; cheeks and throat dull white, with a moustachial line of brown; remainder of under surface of body dull white, spotted with brown centres to the feathers on the sides of the throat, fore neck, and chest, becoming less distinct on the sides of the body and flanks; under tail-coverts rather whiter; axillaries and under wing-coverts dull white, with ashy bases; quills ashy brown below, the inner edge

lighter ashy. Total length 6·5 inches, culmen 0·55, wing 3·55, tail 2·5, tarsus 0·9.

Hab. Southern and Central Europe, not extending into Scandinavia or Northern Europe, wintering in the countries bordering the Mediterranean. Eastward its range extends to the Altai Mountains and Turkestan as well as the high ranges of Persia and Baluchistan, wintering in Afghanistan. A smaller race, named *A. blakistoni*, breeds in Eastern Siberia and China, wintering in the latter country as well as in Scinde and North-western India. Mr. Seebohm has taken the measurements of an extensive series, and finds that the length of wing in European examples varies from 3·6 down to 3·3 inches, and the length of the tail from 2·85 down to 2·55 inches. Indian birds (*A. blakistoni*) have the wing 3·4 inches to 3·1 inches, and the tail from 2·65 to 2·45 inches.

a. A. spipoletta.

a, b. Juv. hiem. sk.	Near Paris, Nov.	Gould Collection.
c. ♀; *d, e.* ♂ ad. hiem. sk.	South France.	R. B. Sharpe, Esq. [P.].
f. Ad. æstiv. sk.	South France.	Gould Collection.
g. ♀ hiem. sk.	Florence, Italy, Oct.	Prof. Giglioli [P.].
h, i. ♂; *k.* ♀ ad. sk.	Carpathian Mts., May 4.	R. B. Sharpe, Esq. [P.].
l. ♂ ad. sk.	Transsylvania (*Danford & Harvie-Brown*).	Major Feilden and J. A. Harvie-Brown, Esq. [P.].
m. ♀ ad. sk.	Asia Minor, April 10 (*T. Robson*).	Salvin-Godman Coll.
n. ♂ juv. sk.	Asia Minor, Dec. 10 (*T. Robson*).	Gould Collection.
o, p. ♀ imm. sk.	Smyrna, Dec. 1 (*C. G. Danford*).	Salvin-Godman Coll.
q. ♂ ad. sk.	Anascha, Taurus, Asia Minor, Mar. (*C. G. D.*).	Salvin-Godman Coll.
r. ♂ ad. sk.	Abadeh, Persia, July.	Sir O. St. John [C.].
s. ♂ ad. æstiv. sk.	Mashkid River, Baluchistan, March.	W. T. Blanford, Esq. [C.].
t–w. Imm. hiem. sk.	Yarkand (*Chapman*).	R. B. Sharpe, Esq. [P.].
x. Imm. hiem. sk.	Shikarpore, Afghanistan (*Griffith*).	India Museum.
y, z. ♂ ♀ imm. hiem. sk.	Candahar, Dec.	Col. Swinhoe [P.].
a'. ♂ ad. hiem. sk.	Candahar, Jan.	Col. Swinhoe [P.].
b', c'. ♂ ♀ ad. æstiv. sk.	Candahar, March.	Col. Swinhoe [P.].
d', e'. Skeletons.	S. Europe.	Purchased.
f'. Skeleton.	Tübingen.	Dr. Günther [C.].
g'. Skull.	Tübingen.	Dr. Günther [C.].

β. A. blakistoni.

a. ♀ imm. hiem. sk.	Gilgit, Oct. 21.	Col. J. Biddulph [C.].
b. ♂ imm. hiem. sk.	Gilgit, Dec.	Col. J. Biddulph [C.].
c, d. ♂ imm. hiem. sk.	Gilgit, Feb.	Col. J. Biddulph [C.].
e. ♂; *f.* ♀ ad. hiem. sk.	Gilgit, Feb.	Col. J. Biddulph [C.].
g. ♂; *h, i.* ♀ ad. æstiv. sk.	Gilgit, March.	Col. J. Biddulph [C.].
k. Imm. hiem. sk.	Gilgit, Jan.	Dr. J. Scully [P.].

l. Imm. hiem. sk.	Gilgit, March.	Dr. J. Scully [P.].
m. ♂ imm. sk.	Sehwan, Scinde, Jan. 27 (*W. E. Brooks*).	Oates Collection.
n. Imm. hiem. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
o. Imm. sk.	Shanghai.	Shanghai Museum [C.].

Subsp. α. Anthus pennsylvanicus.

The Lark from Pensilvania, *Edwards, Gleanings*, ii. p. 185, pl. 297 (1760).
L'Alouette de Pensilvanie, *Briss. Orn.* vi. App. p. 94 (1760).
La Farlouzanne, *Montb. Hist. Nat. Ois.* v. p. 38 (1778).
L'Alouette aux joues brunes de Pensilvanie, *Montb. t. c.* p. 58 (1778).
Louisiane Lark, *Lath. Gen. Syn.* ii. pt. 2, p. 376 (1783).
Red Lark, *Lath. Gen. Syn.* ii. pt. 2, p. 377 (1783); *Penn. Arctic Zool.* ii. p. 393 (1785).
Anthus pennsylvanicus, *Lath. Gen. Syn. Suppl.* i. p. 287 (1787); *Thien. Rhea*, ii. p. 171 (1849); *Zander, J. f. O.* 1853, Extrah. 1854, p. 63; *Gätke, J. f. O.* 1856, p. 71; *Stejn. Auk*, i. p. 168 (1884).
Alauda ludoviciana, *Gm. Syst. Nat.* i. p. 793 (1788).
Alauda rubra, *Gm. Syst. Nat.* i. p. 794 (1788).
Alauda migratoria, *Bartr. Trav. Florida*, p. 293 *bis* (1791).
Hudsonian Wagtail, *Lath. Gen. Syn. Suppl.* ii. p. 231 (1801).
Motacilla hudsonica, *Lath. Ind. Orn. Suppl.* ii. p. 503 (1801); *Vieill. Ois. Amér. Sept.* ii. p. 47 (1807).
Alauda rufa, *Wils. Amer. Orn.* v. p. 89, pl. 42. fig. 4 (1812).
Anthus ludovicianus, *Licht. Verz. Doubl.* p. 37 (1823); *Bp. Comp. List B. Eur. & N. Amer.* p. 18 (1838); *Audub. Syn.* p. 94 (1839); *id. B. Amer.* iii. p. 40, pl. 150 (1841); *Giraud, B. Long Isl.* p. 94 (1844); *Gray, Gen. B.* i. p. 146 (1847); *Bp. Consp.* i. p. 249 (1850); *Reinh. J. f. O.* 1854, p. 439; *Scl. P. Z. S.* 1857, p. 126; *Baird, B. N. Amer.* p. 232 (1858); *Scl. & Salv. Ibis*, 1859, p. 9; *Reinh. Ibis*, 1861, p. 6; *Scl. Cat. Amer. B.* p. 24 (1862); *Blasius, Ibis*, 1862, p. 71; *Blakist. t. c.* p. 4, 1863, p. 60; *Baird, Review Amer. B.* p. 153 (1864); *Coues, Ibis*, 1865, p. 163; *Dresser, t. c.* p. 476; *Lawr. Ann. Lyc. N. Y.* viii. p. 283 (1866); *Baird, Ibis*, 1867, pp. 285, 286, 289; *Dugès, La Nat.* i. p. 140 (1868); *Brown, Ibis*, 1868, p. 420; *Dall & Bann. Trans. Chicago Acad.* i. p. 277 (1869); *Gray, Hand-l. B.* i. p. 250, no. 3619 (1869); *Cooper, B. Calif.* p. 78 (1870); *Allen, Bull. Mus. Comp. Zool. Cambr.* ii. p. 267 (1871), iii. pp. 161, 175 (1872); *R. Gray, B. West Scotl.* p. 116 (1871); *Coues, Key N. Amer. B.* p. 91 (1872); *Harting, Handb. Brit. B.* p. 107 (1872); *Snow, B. Kansas*, p. 4 (1873); *Scl. & Salv. Nomencl. Av. Neotr.* p. 8 (1873); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 268 (1874); *Coues, B. N.-West*, p. 40 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 171, pl. 10. fig. 3 (1874); *Dresser, B. Eur.* iii. p. 331, pl. 139 (1874); *Cordeaux, Ibis*, 1875, p. 181; *Hensh. List B. Arizona*, p. 156 (1875); *id. Zool. Expl. W. 100th Merid.* p. 187 (1875); *Seebohm, Ibis*, 1877, p. 165; *Merrill, Proc. U.S. Nat. Mus.* i. p. 122 (1878); *Coues, B. Color. Vall.* p. 193 (1878); *id. Bull. U.S. Geol. Surv.* iv. p. 557 (1878); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 108 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 15 (1881); *B. O. U. List Brit. B.* p. 34 (1883); *Hartl. J. f. O.* 1883, p. 208; *Nelson, Cruise R.S. 'Corwin,'* p. 62 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 286 (1884).
Anthus rubens, *Merrem in Ersch u. Grub. Encycl.* iv. p. 290 (1820).

Anthus spinoletta (*nec L.*), *Bp. Journ. Philad. Acad.* ii. p. 90 (1826).
Anthus aquaticus, *Audub. B. Amer.* pl. 10; *Swains. & Richards. Faun. Bor.-Amer., Birds*, p. 231, pl. 44 (1831).
Anthus pipiens, *Audub. B. Amer.* pl. 80; *id. Orn. Biogr.* i. p. 408 (1832), v. p. 449 (1839); *Bp. Comp. List B. Eur. & N. Amer.* p. 28 (1838).
Anthus reinhardti, *Holböll, Faun. Grœnl.* p. 25 (1854).
Anthus hypogæus, *Bp. C. R.* xxxviii. p. 65 (1854).
Anthus spinoletta, var. ludovicianus, *Seebohm, Hist. Brit. B.* ii. p. 248 (1883).

Adult male. General colour above pale ashy grey, a little browner towards the rump and upper tail-coverts and clearer on the head; lesser wing-coverts ashy brown; median and greater coverts dark brown, edged with ashy brown and tipped with white, less distinct on the greater series; bastard-wing dark brown, with narrow ashy-white margins; primary-coverts and quills dark brown, edged with ashy brown, the primaries narrowly edged with whitish, the inner secondaries with broad white edgings, the innermost externally ashy; tail-feathers dark brown edged with ashy, the outer feathers pure white, including the shaft, excepting an oblique mark of dark brown on the inner web; the penultimate feather like the outer one, but with a much larger mark of dark brown on the inner web; lores, eyebrow, feathers round the eye, and sides of face clear pale vinous; ear-coverts ashy grey like the head; cheeks and entire under surface of body pale vinous, the under tail-coverts paler and more isabelline; lower abdomen dull whitish; sides of upper breast washed with ashy grey; a few dusky streaks on the flanks; axillaries and under wing-coverts dull ashy whitish, with smoky-brown bases; quills dusky below, pale ashy vinous along the inner webs: "bill dark brown, the under mandible orange at the base; feet brownish black; iris hazel" (*Audubon*). Total length 6·2 inches, culmen 0·5, wing 3·55, tail 2·7, tarsus 0·85.

Adult female. Similar to the male, but with the throat and chest spotted with blackish brown. Total length 6·2 inches, culmen 0·55, wing 3·3, tail 1·5, tarsus 0·9.

Young in autumn plumage. Dark olive-brown above instead of ashy grey, the feathers of the back and crown slightly mottled with dusky centres; lesser wing-coverts like the back; median and greater coverts blackish brown, edged with sandy rufous, paler on the median series; bastard-wing, primary-coverts, and quills dark brown edged with sandy buff, somewhat whiter on the tips of the median coverts and the inner secondaries; tail as in the adult, but the white on the penultimate feather much reduced and forming a large wedge-shaped spot for about one third of its length; under surface of body rich isabelline buff; the sides of the lower throat, the fore neck, and breast spotted with triangular marks of black, becoming smaller on the latter; sides of body and flanks more tawny, with longitudinal streaks of blackish brown; axillaries and under wing-coverts buffy white, mottled with black bases near the edge of the wing.

The adult bird in full grey-and-vinous plumage is seldom seen in

collections; it is figured by Swainson in the 'Fauna Boreali-Americana,' but the only specimen I have seen is one in the Sclater collection from Western Mexico, probably shot in full plumage just before its departure for its breeding-haunts. All the other specimens collected in northern latitudes are more brown on the upper surface and show more or less spotting on the breast, which is a dull fawn-buff. It may be surmised therefore that only very old males gain the uniform vinous-breasted dress, and the females in all probability are always spotted on the breast.

Hab. North America everywhere, migratory. Breeds in high latitudes and in the Rocky Mountains above timber-line as far south as Colorado. Winters in Central America, from Mexico to Guatemala. Accidental in Europe.

a. Ad. sk.	Arctic America.	Sir G. Back [P.].
b, c. ♂ ♀ ad. sk.	Repulse Bay.	Dr. Rae [P.].
d. ♀ ad. sk.	Hudson's Bay Territory, May 22.	Gould Collection.
e. ♀ ad. sk.	Labrador (*Coues*).	Sclater Collection.
f. ♂ ad. sk.	Fort Simpson, May.	B. R. Ross, Esq. [P.].
g, h. Juv. sk.	Fort Simpson, September.	B. R. Ross, Esq. [P.].
i. Ad. sk	Rocky Mountains, Canada (*Blakiston*).	Gould Collection.
k. Juv. sk.	Souris River, Dakota, Sept. 2 (*E. Coues*).	Salvin-Godman Coll.
l. Juv. sk.	United States.	Sclater Collection.
m. ♂ imm. sk.	District of Columbia, Oct. 29 (*E. Coues*).	Salvin-Godman Coll.
n. ♀ ad. sk.	Fort Bridger, Utah, May 6 (*Drexler*).	Gould Collection.
o. Imm. sk.	British Columbia.	J. K. Lord, Esq. [C.].
p, q. Imm. sk.	W. side of Rocky Mountains.	J. K. Lord, Esq. [C.].
r. ♀ juv. sk.	Petaluma, California (*Baird*).	Sclater Collection.
s. Juv. sk.	California.	Lord Walsingham [P.].
t. ♂ ad. sk.	Western Mexico.	Sclater Collection.
u. Juv. sk.	Dueñas, Guatemala, Feb. (*Salvin*).	Sclater Collection.
v, w, x. Imm. sk.	Dueñas, Dec. & Jan. (*O. S.*).	Salvin-Godman Coll.

Subsp. β. **Anthus japonicus.**

Anthus pratensis japonicus, *Temm. & Schl. Faun. Japon., Aves*, p. 59, pl. 24 (1850).

Anthus japonicus, *Bp. Consp.* i. p. 248 (1850); *Whitely, Ibis*, 1867, p. 198; *Gray, Hand-l. B.* i. p. 251, no. 3648 (1869); *Dybowski, J. f. O.* 1873, p. 85; *Taez. J. f. O.* 1876, p. 194; *id. Bull. Soc. Zool. France*, ii. p. 158 (1876); *Prjev. in Rowley's Orn. Misc.* ii. p. 194 (1877); *Brooks, Ibis*, 1877, p. 207; *Blakist. & Pryer, Ibis*, 1878, p. 286; *Seebohm, Ibis*, 1879, p. 34; *Dybowski, Bull. Soc. Zool. France*, 1883, p. 361; *Blakist. Chrys.* ii. p. 30 (1883); *id. Amended List B. Japan*, p. 52 (1884).

Anthus pratensis, var. japonicus, *Schrenck, Reis. Amurl.* p. 336 (1859); *Radde, Reis. Sibir., Vög.* p. 222 (1863).

Anthus ludovicianus, *Seebohm, Ibis*, 1884, p. 38.

Said by Mr. Seebohm to be the same as *A. pennsylvanicus*. 1

have never seen the vinous-plumaged adult of this species; but the immature birds and winter-plumaged specimens in the Museum differ in the black spotting of the under surface, which is much more pronounced than in *A. pennsylvanicus* at similar periods of its life. A pair measure as follows, both being apparently in autumn plumage:—

	Total length. in.	Culmen. in.	Wing. in.	Tail. in.	Tarsus. in.
a. ♂. Japan (*Milne*)	6·5	0·55	3·4	2·65	0·91
b. ♀. Japan (*Milne*)	6·0	0·55	3·25	2·5	0·85

Although belonging to the same group of Pipits as *A. pennsylvanicus*, the Japanese bird differs in the less amount of white on the penultimate tail-feather, and I believe that when all the phases of its plumage are understood it will be found to be more closely allied to the Eastern race of the Water-Pipit, *A. blakistoni*.

Hab. Eastern Siberia and Kamtschatka, wintering in Japan and China (according to Mr. Seebohm, even in the Himalayas and the valley of the Indus).

a. ♂ autumn. sk.	Hakodate, Japan, Oct. 18, 1864.	H. Whitely, Esq. [C.].
b. Juv. autumn. sk.	Japan.	Gould Collection.
c, *d*. ♂ ♀ autumn. sk.	Yokohama.	Prof. Milne [C.].

22. Anthus obscurus.

Tit-Lark, *Penn. Brit. Zool.* p. 94, pl. P. 1. fig. 3 (1766).
Alauda obscura, *Lath. Ind. Orn.* ii. p. 494 (1790).
Alauda petrosa, *Mont. Trans. Linn. Soc.* iv. p. 41 (1798).
Spipola obscura, *Leach, Syst. Cat. Mamm. & Birds Brit. Mus.* p. 22 (1816).
Anthus rupestris, *Nilss. Orn. Suec.* i. p. 245, pl. 9. figs. 1, 2 (1817); *Bp. Comp. List B. Eur. & N. Amer.* p. 18 (1838); *Schl. Rev. Crit.* p. xxxv (1844); *Schl. Vog. Nederl.* pl. 95 (1854); *Blas. in Naum. Vög. Deutschl.* xiii. p. 108, pl. 371. fig. 2 (1860); *Powys, Ibis*, 1860, p. 229, *Ibis*, 1865, p. 237; *Cordeaux, Ibis*, 1875, p. 181.
Anthus aquaticus (*nec Bechst.*), *Roux, Orn. Provenç.* pl. 192 (1825); *Selby, Brit. B.* i. p. 258 (1833); *Macgill. Brit. B.* ii. p. 194 (1839); *Kjærb. Danm. Fugle*, pl. xvii. fig. 2 (1852); *Hewits. Eggs Br. B.* i. p. 174, pl. 44. fig. 3 (1856); *F. & P. Godm. Ibis*, 1861, p. 83.
Alauda campestris, *Bewick, Brit. B.* p. 217 (1826).
Anthus petrosus, *Fleming, Brit. An.* p. 74 (1828); *Thomps. B. Irel.* i. p. 227 (1849); *R. Gray, B. West Scotl.* p. 117 (1871).
Anthus littoralis, *Brehm, Vög. Deutschl.* p. 331 (1831).
Anthus obscurus, *Temm. Man. d'Orn.* iv. p. 628 (1840); *Werner, Atlas, Insectiv.* pl. 51; *Keys. u. Blas. Wirb. Eur.* p. xlviii (1840); *Selys-Longch. Faun. Belg.* p. 86 (1842); *Yarr. Brit. B.* i. p. 394 (1843); *Gray, Gen. B.* i. p. 206 (1847); *Bp. Consp.* i. p. 247 (1850); *Sundev. Svensk. Fogl.* pl. 9. fig. 3 (1856); *Schl. Dier. Nederl. Vogels*, pl. 9. figs. 3, 4 (1861); *Tristr. Ibis*, 1861, p. 414; *Gray, List Brit. B.* p. 71 (1863); *Gould, Ibis*, 1865, p. 114; *More, t. c.* p. 124; *Degl. & Gerbe, Orn. Eur.* i. p. 373 (1867); *Borggr. Vogelf. Norddeutschl.* p. 86 (1869); *Wright, Ibis*, 1869, p. 246; *Gray, Hand-l. B.* i. p. 249, no. 3615 (1869); *Gould, B. Gt. Br.* iii.

pl. 10 (c. 1870); *Elwes & Buckley, Ibis*, 1870, p. 195; *Fritsch, Vög. Eur.* tab. 16. fig. 6 (1870); *Salvad. Faun. Ital., Uce.* p. 127 (1871); *Harting, Handb. Brit. B.* p. 24 (1872); *Newt. ed. Yarr. Brit. B.* i. p. 586 (1874); *Dresser, B. Eur.* iii. p. 343, pl. 141 (1874); *Irby, B. Gibr.* p. 110 (1875); *Fallon, Ois. Belg.* p. 71 (1875); *Clifton, Ibis*, 1879, p. 369; *Seebohm, Ibis*, 1882, p. 376; *B. O. U. List Brit. B.* p. 35 (1883); *Seebohm, Hist. Br. B.* ii. p. 244 (1883); *Booth, Rough Notes*, part iv. with fig. (1883); *Radde, Orn. Cauc.* p. 219 (1884).

Anthus spinoletta (*nec L.*), *Macgill. Man. Brit. B.* i. p. 169 (1846); *Gould, B. Gt. Br.* iii. pl. 11 (hind figure).

Anthus immutabilis, *Degl. Orn. Eur.* i. p. 429 (1849).

Hind claw very strongly curved, about equal to the hind toe. *Tarsus* longer than hind toe and claw combined. *Primaries* subequal and longest, 1, 2, 3, 4; *fourth* a trifle shorter than the second and third; *fifth primary* considerably shorter than the long secondaries, which are almost as long as the primaries. *Primaries* emarginate, 2, 3, 4. *Feet* (in skin) reaching to about two thirds of length of tail.

Young. General colour above nearly uniform olive-brown, the feathers of the back slightly mottled with dusky centres; lesser wing-coverts like the back; the median and greater coverts blackish brown, broadly edged with pale olive; bastard-wing blackish; primary-coverts dusky, edged with olive; quills dusky brown, narrowly margined with olive-yellow, the inner secondaries externally brown like the back; tail-feathers blackish brown, margined with olive, the penultimate feather smoky brown at the end, the outer feather smoky brown, rather darker towards the end of the outer web, the inner web with an oblique mark of blackish brown; head like the back and nearly uniform; lores dusky blackish; eyelid yellowish white; ear-coverts uniform olive-brown; cheeks yellowish white, thickly spotted with dusky; centre of throat dull white, washed with olive; fore neck and chest light olive-yellow, broadly streaked with mesial spots of dark brown; centre of breast and abdomen yellowish white; thighs light ashy brown; flanks washed with olive; under tail-coverts yellowish white, with olive-brown ends to the feathers.

The *autumn plumage* is very similar to the young bird described above, being nearly uniform olive-brown, with slightly indicated dusky centres to the feathers, the mantle slightly varied with paler olive edges to the feathers of this part and the upper back; lower back, rump, and under tail-coverts nearly uniform dull olive-brown; lesser wing-coverts like the back; median and greater coverts blackish brown, edged externally with olive-yellow, inclining to olive-whitish at the ends of the feathers, very distinct on the median series; bastard-wing blackish brown; primary-coverts and quills dusky brown, margined with dull olive, the edges broader and browner on the inner secondaries; centre tail-feathers brown edged with olive, the remainder blackish brown margined with olive, the penultimate feather with a small spot of smoky white at the tip, the outer feather smoky brown, whiter at the end of the feather, the outer web rather darker smoky brown towards the

end, with a broad oblique mark of blackish brown on the inner web; head like the back and very slightly streaked with dusky-brown centres to the feathers; eyelid and a narrow line over the eye from the base of the nostrils yellowish white; lores dusky; ear-coverts uniform olive-brown; cheeks yellowish white, mottled with dusky tips to the feathers; a narrow moustachial line of blackish brown, widening out on to the sides of the lower throat; throat dull white, washed with olive; fore neck and breast olive, the feathers broadly centred with spots and streaks of dark brown; the flanks olive-brown, with longitudinal centres of darker brown; centre of lower breast and abdomen, as well as the under tail-coverts, dull white, washed with pale olive-yellow; the long under tail-coverts with olive-brown centres; thighs olive-brown externally, yellowish white internally; axillaries whitish, washed with pale olive-yellow and with dusky bases; under wing-coverts ashy white, with dusky bases and slightly washed with olive-yellow; quills dusky brown below, more ashy along the inner web. Total length 6·5 inches, culmen 0·65, wing 3·35, tail 2·5, tarsus 0·9.

Adult male in breeding-plumage. Similar in colour and marking to the winter plumage, but browner and more mottled, the olive tinge on the back being worn off as the plumage becomes abraded; the light tips to the wing-coverts almost obsolete; the general appearance of the upper surface more ashy brown, and the dark centres to the feathers very distinct; facial markings as in the winter plumage, but more abraded, and the olive tint rendered obsolete; throat dull white; remainder of under surface very thickly mottled with dark brown, the centres to the feathers having become very distinct, while the light margins have worn off and the olive-yellow tinge of the abdomen has almost disappeared: bill brown, the base of the lower mandible yellowish or orange, both mandibles being entirely black in the breeding-season; legs fleshy brown; iris brown. Total length 6·8 inches, culmen 0·7, wing 3·45, tail 2·6, tarsus 0·95.

Adult female in breeding-plumage. Similar to the male, but not so thickly spotted underneath. Total length 6·4 inches, culmen 0·6, wing 3·35, tail 2·45, tarsus 0·85.

The resident Rock-Pipit of the British Islands is certainly distinct from the Scandinavian bird, but whether it is confined to Great Britain or inhabits also some part of Continental Europe, I have not been able to determine with certainty; and I have therefore joined all the synonyms under one heading until such time as the distribution of the two forms is satisfactorily determined. The plumages of both Rock-Pipits are alike in their immature stages, and in the winter garb both of young and adult birds. I fancy, however, that the hind claw of the Scandinavian Rock-Pipit is always longer than that of the British bird.

In the breeding-season, however, the British Rock-Pipit assumes a plumage not very different from that of its winter dress, while the Scandinavian bird becomes vinous on the underparts, so as to resemble closely the Alpine Pipit (*A. spipoletta*), from which, however, it can be told by the smoky-brown colour of the light pattern

of the outer tail-feather. No such vinous-breasted birds have ever been found breeding in Great Britain, but the Scandinavian Rock-Pipit occurs on its autumn migration on certain parts of the east coast of England, and passes regularly along the south coast both in autumn and spring. Should the two Rock-Pipits be deemed worthy of separation, the name of *obscurus* must be retained for the British and that of *rupestris* for the Scandinavian form.

In the Scandinavian Rock-Pipit a complete change from the winter plumage takes place in February and March by a moult, the new feathers being dark ashy above, while the breast also changes into a dark rosy colour, with black centres to the feathers; these dark centres diminish by degrees and apparently disappear, leaving the breast uniform rosy. That such a moult occurs I am certain, it being proved by specimens procured by Mr. Henry Swaysland in Sussex on the 12th of February and the 17th of March last year. These birds were evidently on their return migration; but as some of the specimens from the continent have the breast uniform rosy in the breeding-season, I am not yet certain whether the spots on the breast disappear gradually. It may be that the very old birds have the uniform breast, and that it is the younger birds which retain spots to a greater or less extent after their first spring moult.

In the spotted-breasted birds, as the summer wears on, the rosy tinge becomes obliterated and the spots greatly merged by the abrasion of the light edges to the feathers, so that the fore neck and chest become almost uniform. The same may be said of the upper surface, which becomes nearly uniform dark ashy, slightly mottled with remains of the blackish centres to the feathers; the light tips to the wing-coverts become obsolete. The strong olive-yellow tint on the belly of freshly-moulted spring-plumaged birds becomes faded until the belly is quite white.

Hab. The coasts of Northern Europe from the White Sea to the Bay of Biscay; everywhere resident, except in the extreme north. Numbers visit Heligoland on migration in spring and autumn, and the same may be said of the British Islands, where a resident race occurs.

a. A. rupestris.

a. Juv. sk.	Europe.	Gould Collection.
b. Ad. sk.	France.	Gould Collection.
c. ♀ ad. sk.	Normandy.	J. E. Harting, Esq. [P.].
d. Ad. sk.	England.	Gould Collection.
e, f. Imm. sk.	Brighton, Oct. 10, 1867 (*G. Swaysland*).	Gould Collection.
g–m. Imm. sk.	Brighton, Nov. 18 (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
n. Imm. sk.	Rottendean, Sussex, Nov. 18 (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
o. ♀ ad. st.	Lancing, Sussex, March 17 (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
p. Imm. sk.	Lancing, Sussex, Nov. 4 (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
q. Ad. sk.	Newhaven, Sussex, Feb. 12 (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].

r, *s*. ♂; *t*. ♀ ad. sk.	Near Southampton, Jan. 26.	Col. Irby [P.].
u. ♀ ad. sk.	Near Southampton, Feb. 9.	Col. Irby [P.].
v, *w*, *x*. ♂; *y*. ♀ ad. sk.	Devonshire, March.	Mr. H. Swaysland [C.].
z. Imm. sk.	Plymouth, Nov. (*J. Gatcombe*).	Gould Collection.
a', *b'*. ♂ ad. sk.	Plymouth, March (*J. Gatcombe*).	Gould Collection.
c'. ♀ imm. sk.	Breydon Harbour, Norfolk, Oct. 24.	J. E. Harting, Esq. [P.].
d'. Ad. sk.	Norway, May 31 (*R. Collett*).	Christiania Museum [P.].
e'–*h'*. ♂; *i'*. ♀ ad. sk.	Norway, June (*R. Collett*).	Christiania Museum [P.].
k'. ♂ ad.; *l'*, *m'*. Pull. sk.	Norway, July (*R. Collett*).	Christiania Museum [P.].
n'. ♂; *o'*, *p'*. ♀ juv. sk.	Norway, August (*R. Collett*).	Christiania Museum [P.].
q', *r'*. ♂ ad. sk.	Sweden, July.	R. B. Sharpe, Esq. [P.].
s'. ♂ ad. sk.	Sweden, Oct. 8.	R. B. Sharpe, Esq. [P.].
t', *u'*. ♂ ♀ ad. sk.	Heligoland, March (*L. Gätke*).	R. B. Sharpe, Esq. [P.].

β. A. obscurus.

a. ♂ ad. sk.	Orkneys (*Dunn*).	J. H. Gurney, Esq., Jun. [P.].
b. Imm. sk.	Stromness, Orkneys.	J. E. Harting, Esq. [P.].
c, *d*. Ad. sk.	Orkneys, June.	Gould Collection.
e. Ad. st.	England.	Mr. Baker [C.].
f. Juv. sk.	England.	Gould Collection.
g. ♀ ad. sk.	Coquet Island, Northumberland, June 16 (*P. Godman*).	Salvin-Godman Coll.
h, *i*, *k*. ♂; *l*. ♀ ad. sk.	Coquet Island, Northumberland (*O. Salvin*).	Salvin-Godman Coll.
m, *n*. Pull. st.	Fern Islands.	W. D. Chase, Esq. [P.].
o. Juv. sk.	Kingsbury, Middlesex.	Salvin-Godman Coll.
p. ♀ imm. sk.	Killarney, Ireland, Aug.	J. E. Harting, Esq. [P.].
q, *r*. Sterna.	England.	Purchased.

23. Anthus bogotensis.

Anthus rufescens, *Lafr. & d'Orb. Syn. Av.* p. 27 (1837, *nec T.*).
Anthus bogotensis, *Sclater, P. Z. S.* 1855, p. 109, pl. ci.; *id. P. Z. S.* 1858, p. 550; *id. Cat. Amer. B.* p. 24 (1862); *Gray, Hand-l. B.* i. p. 250, no. 3632 (1869); *Scl. & Salv. P. Z. S.* 1870, p. 780; *Wyatt, Ibis*, 1871, p. 322; *Scl. & Salv. Nomencl. Av. Neotr.* p. 8 (1873); *Tacz. P. Z. S.* 1874, p. 508; *Baird, Brewer, & Ridgw. N. Amer. B.* i. p. 170 (1876); *Sclater, Ibis*, 1878, p. 357; *Tacz. P. Z. S.* 1880, p. 191; *id. Orn. Pérou*, p. 457 (1884).
Pediocorys bogotensis, *Baird, Review Amer. B.* p. 157 (1864).

Hind claw long, only gently curved, about equal to hind toe, even a little longer. *Tarsus* about equal to hind toe and claw combined. *Primaries subequal*, 1, 2, 3, 4; *fifth* only a trifle shorter than the fourth, and about equal to longest secondaries, which in closed wing are nearly equal to long primaries. *Primaries emarginate*, 2, 3, 4, 5. *Feet* slight, but nearly reaching to end of tail.

Adult. General colour above Lark-like, the feathers strongly marked, black in the centre with fulvous-brown edgings, inclining to buffy white on the extreme margins of the feathers, especially on those of the hind neck; scapulars somewhat more uniform and darker brown, the blackish centres not quite so strongly pronounced; least wing-coverts like the scapulars; median series and greater coverts and quills dark brown, with broad margins of dull fulvous, rather paler and whiter on the edges of the secondaries; upper tail-coverts and tail-feathers dark brown, edged with dull fulvous, and tipped with smoky brown, more distinctly on the penultimate feather, the outer tail-feathers smoky brown, inclining to whity brown on the outer web and at the tip, and obliquely dark brown on the inner web; lores, an indistinct eyebrow, and sides of face deep fulvous, mottled with spots of blackish brown at the tips of the ear-coverts and cheek-feathers; throat and under surface of body deep fulvous, paler on the chin, the fore neck marked with large triangular spots of black, the sides of the body deeper fulvous and marked with broad longitudinal streaks of black; under wing-coverts dull fulvous, those near the edge of the wing mottled with brown; quills brown below, dull rufescent along the inner web; "bill black, the base of the lower mandible whitish; legs, feet, and nails delicate flesh-colour; iris dark hazel" (*L. Fraser*). Total length 5·5 inches, culmen 0·6, wing 3·35, tail 2·45, tarsus 0·95.

Hab. Andes of Peru, Bolivia, Ecuador, Colombia, and Venezuela.

a. ♀ ad.	Upper Paramo Region, Merida, Venezuela, August (*A. Goering*).	Salvin-Godman Coll.
b. ♂ ad.	Paramo, Pamplona, Colombia, 10,500 feet (*C. W. Wyatt*).	Salvin-Godman Coll.
c. Juv. sk.	Colombia.	Purchased.
d. Ad. sk.	Bogotá.	J. Gould, Esq.
e. Ad. sk.	Bogotá.	Sclater Collection. (Type of species.)
f. ♀ ad. sk.	Titiacun, Ecuador, June (*L. Fraser*).	Sclater Collection.
g, *h.* Ad. sk.	Ecuador.	Sclater Collection.
i. Ad. sk.	Ecuador.	Salvin-Godman Coll.
k. Ad. sk.	Pasto, Ecuador (*Lehmann*).	Salvin-Godman Coll.
l, *m.* Ad. sk.	Sical, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
n. ♂ ad. sk.	Junin, Peru, May 21 (*Jelski*).	Sclater Collection.

24. Anthus antarcticus.

Anthus antarcticus, *Cab. J. f. O.* 1884, p. 254.

Adult male. General colour above dark sandy rufous, broadly streaked with black, the feathers of the mantle edged with pale sandy buff; head a little lighter than the back, and streaked with black in the same manner, the hind neck less strongly streaked; lesser and median wing-coverts dark sandy rufous, with blackish bases; greater coverts blackish, edged with sandy rufous, paler at

tips; bastard-wing and primary-coverts and quills blackish, margined with sandy buff, whitish on the edges of the primaries; upper tail-coverts and tail-feathers blackish, edged with sandy rufous, the outer feather smoky brown, fulvescent whitish towards the base, with an oblique mark of blackish on the inner web; over the eye a streak of lighter fulvous, lined with black; ear-coverts dark sandy rufous, with a broad black line along the lower margin; lores and eyelid pale sandy buff; cheeks sandy buff, separated from the throat by a distinct malar line of black; under surface of body rich sandy buff, paler on the throat, the abdomen and under tail-coverts isabelline; thighs uniform tawny rufous, contrasting strongly with the rest of the under surface; the throat slightly streaked with black, the fore neck, breast, and sides of the body with very broad black centres to the feathers, the breast less broadly streaked with black; under wing-coverts and axillaries dark sandy rufous; quills dusky below, ashy rufous along the inner web. Total length 6·4 inches, culmen 0·65, wing 3·15, tail 2·75, tarsus 0·95.

Hab. South Georgia.

a. ♂ ad. sk.	South Georgia (*ex Hamb. Mus.*).	Sclater Collection.	(One of the typical specimens.)

25. Anthus furcatus.

Anthus furcatus, *Lafr. & d'Orb. Syn. Av.* 1837, p. 27; *d'Orb. Voy. Amér. Merid.* p. 227 (1835–44); *Gould in Darwin's Voy.* 'Beagle,' *Birds*, p. 85 (1841); *Gray, Gen. B.* i. p. 206 (1847); *Bp. Consp.* i. p. 249 (1850); *Scl. Ibis*, 1878, p. 364; *Tacz. Orn. Pérou*, p. 459 (1884).

Anthus brevirostris, *Tacz. P. Z. S.* 1874, p. 507.

Hind claw short and only slightly curved, about as long as hind toe or a little shorter than it. *Tarsus* slightly exceeding the length of the hind toe and claw combined. *Primaries subequal*, 1, 2, 3, 4; *fifth* about equal to long secondaries and a little shorter than fourth. *Primaries emarginate*, 2, 3, 4, 5.

Adult male. General colour above Lark-like and strongly mottled, the feathers being black in the centre, with pale sandy-rufous edgings; the hind neck rather paler, and the black centres smaller and more spotted; wing-coverts nearly uniform sandy rufous, with dusky-blackish bases, mostly concealed, the greater coverts with slight ashy-fulvous edgings near their ends; bastard-wing and primary-coverts and quills dusky brown, edged with dull sandy rufous, paler and more ashy fulvous on the secondaries, the primaries white along the margin, the first one being conspicuously white externally; lower back and rump marked like the back, but the black centres not so pronounced; upper tail-coverts blackish, with ashy margins; tail-feathers blackish brown, the inner ones washed with ashy whitish externally; outer tail-feather white, with the shaft white for more than half way, brownish towards the end, with a light-brown shade toward the tip of the outer web and an

oblique mark of blackish at the base of the inner web; penultimate feather white, but the shaft and the basal portion of the outer web brown, the greater part of the inner web blackish nearly to the tip of the feather, so that the white is a long wedge-shaped insertion between the shaft and the black on the inner web; head like the back, mottled with small black centres to the feathers; lores and a ring round the eye creamy white; ear-coverts rufescent, rather browner on the upper margin, and a double line of black along the upper and lower edge of the cheeks, which are isabelline-buff; throat white; the lower throat and chest clear sandy buff, spotted with distinct black centres to the feathers; entire breast and abdomen, as well as the under tail-coverts, white; thighs sandy whitish; sides of body brown, broadly streaked with black; axillaries and under wing-coverts pale sandy buff, with whitish edgings and smoky-brown bases to the feathers; quills dusky brown below, ashy along the inner web: "bill blackish brown, the lower mandible mostly whitish; feet flesh-colour, with the toes and claws of a dirty shade; iris dark brown" (*Jelski*). Total length 6 inches, culmen 0·45, wing 3·25, tail 2·4, tarsus 0·75.

Hab. From Patagonia to the La-Plata region, Bolivia and Peru.

a. ♀ ad. sk.	La Plata, Sept. (*W.H. Hudson*).	Sclater Collection.
b. ♂ ad. sk.	Junin, Peru (*Jelski*).	Sclater Collection.
c. Ad. sk.	South America.	Sir W. Burnett and Admiral Fitzroy [P.].

26. Anthus rufus *.

Petite Alouette de Buénos-Ayres, *Daubent. Pl. Enl.* v. pl. 738. fig. 1.
La Variole, *Montb. Hist. Nat. Ois.* v. p. 63 (1778).
Rufous Lark, *Lath. Gen. Syn.* ii. pt. 2, p. 388 (1783).
Alauda rufa, *Gm. Syst. Nat.* i. p. 798 (1788).
Alauda bonariensis, *Bonn. et Vieill. Enc. Méth.* i. p. 317 (1823).
Anthus chii, *Spix, Av. Bras.* i. p. 75, pl. 76. fig. 2 (1824); *Neuwied, Beitr. Naturg. Bras.* iii. p. 631 (1830); *Scl. Cat. Amer. B.* p. 24 (1862); *Pelz. Orn. Bras.* p. 69 (1871).
Anthus rufus, *Merr. in Ersch u. Grub. Encycl.* iv. p. 290 (1820); *Gray, Gen. B.* i. p. 206 (1847); *Bp. Consp.* i. p. 249 (1850); *Burm. Th. Bras.* iii. p. 118 (1856); *Lawr. Ann. Lyc. N. Y.* vii. p. 322 (1861); *Baird, Review Amer. B.* p. 156 (1864); *Scl. & Salv. Nomencl. Av. Neotr.* p. 8 (1873); *Scl. Ibis*, 1878, p. 360; *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 108 (1880).
Anthus lutescens, *Less. Traité*, p. 424 (1831); *Pucher. Arch. Mus.* vii. p. 343 (1855).

* The name of *rufus* is founded on Daubenton's plate (*l.c.*). As in the case of many other Pipits, the figure is very inaccurate, and the description of Montbeillard does not agree well; but, on the whole, it seems to have been taken from a specimen of the small American Pipit, which is common in Brazilian collections. The colour of the tail, which ought, of course, to be the distinguishing characteristic, is described as follows:—"Tail-feathers brown, edged, the right centre ones with clear rufous, the two outer pairs with white;" and the entire length is given as "five inches and a quarter." In Daubenton's plate the tail has only seven feathers, and none of the external ones are present.

Anthus (Notiocorys) parvus, *Lawr. Proc. Philad. Acad.* 1865, p. 106.
Anthus parvus, *Salv. P. Z. S.* 1867, p. 135.
Anthus niger (*nec Bodd.*), *Gray, Hand-l. B.* i. p. 250, no. 3633 (1869).

Hind claw rather straight, not exceeding the hind toe in length. *Tarsus* exceeding the length of the hind toe and claw combined, or about equal to it. *Primaries subequal*, 1, 2, 3, 4; the *fifth* shorter than fourth, and apparently not exceeding the long secondaries, which are less than the long primaries. *Primaries emarginate*, 2, 3, 4.

Adult. General colour above dark sandy brown, with blackish centres to the feathers, giving a strongly mottled appearance to the mantle; the lower back, rump, and upper tail-coverts not so strongly mottled, the black centres to the feathers less defined; wing-coverts dark brown, edged with dull white, tinged with sandy near the base; bastard-wing, primary-coverts, and quills dark brown, edged with dull sandy rufous, whitish on the first primary; tail-feathers blackish brown, edged with sandy rufous; the two outer feathers white, with a large mark of blackish brown on the inner web, increasing on the penultimate feather, the outer web of both the external feathers pale isabelline-brown, not strongly marked; head like the mantle, and equally strongly mottled with black centres to the feathers; lores, eyelid, and a narrow eyebrow dull isabelline; ear-coverts sandy rufous, slightly mottled with black; cheeks and throat pale yellowish white, with a malar line of blackish spots; remainder of under surface dull yellowish white, washed with sandy buff on the breast; the sides of the body brown; fore neck and chest marked with triangular spots of black, smaller and more linear on the upper breast; the sides of the body with scarcely distinguishable blackish streaks; lower abdomen and under tail-coverts dull white; axillaries and under wing-coverts dull ashy white; quills dusky below, ashy along the inner web: "bill blackish brown, paler at base of lower mandible; feet pale yellowish brown; iris brown" (*Burmeister*). Total length 5 inches, culmen 0·55, wing 2·35, tail 1·8, tarsus 0·8.

Young. Only differs from the adult in being more strongly mottled above, especially on the rump, where the dark mesial marks contrast strongly with the pale edges; the wing-coverts broadly edged with sandy rufous, white towards the ends.

Specimens from Guiana and Panama are rather more strongly marked than those from Brazil, especially on the under surface, the throat and breast being strongly suffused with sandy rufous, which colour is also intensified on the sides of the body.

Hab. The whole of Brazil and Bolivia, extending into Guiana, Trinidad, and even to Panama.

a. Ad. sk.	Bolivia.	W. Bridges, Esq. [C.].
b. Ad. sk.	Brazil.	J. Gould, Esq.
c, *d*. Ad. sk.	Brazil.	Gould Collection.
e, *f*. Ad. sk.	Brazil.	Sclater Collection.

g. ♂ ad. sk.	Pelotas, Rio Grande do Sul (*Joyner*).	Salvin-Godman Coll.
h. Ad. sk.	Rio (*C. Darwin*).	Voy. H.M.S. 'Beagle.'
i. Ad. sk.	Rio (*Natterer*).	Sclater Collection.
k. Ad. sk.	Rio.	Sclater Collection.
l. Ad. sk.	Bahia (*Wucherer*).	Salvin-Godman Coll.
m. Ad. sk.	Pernambuco (*W. A. Forbes*).	Sclater Collection.
n. Ad. sk.	Pernambuco (*W. A. Forbes*).	Salvin-Godman Coll.
o. Ad.; *p*. Juv. sk.	Para.	R. Graham, Esq. [P.].
q. Ad. sk.	Island of Mexiana (*A. R. Wallace*).	Sclater Collection.
r. ♂ ad. sk.	Island of Mexiana, Dec. (*Wallace*).	Salvin-Godman Coll.
s. Ad. sk.	R. Amazon (*Wallace*).	Salvin-Godman Coll.
t. ♀ ad. sk.	Merume Mountains, British Guiana, July 15 (*H. Whitely*).	Salvin-Godman Coll.
u. ♀ ad. sk.	Roraima, Sept. 28 (*H. W.*).	Salvin-Godman Coll.
v. ♂ ad. sk.	Roraima, Oct. 3 (*H. W.*).	Salvin-Godman Coll.
w, *x*. ♂ ♀ ad. sk.	Roraima, Nov. (*H. W.*).	Salvin-Godman Coll.
y. ♀ ad. sk.	Roraima, Dec. 16 (*H. W.*).	Salvin-Godman Coll.
z. Ad. sk.	Trinidad.	Sclater Collection.
a'. Ad. sk.	Panama.	Sclater Collection.
b'. Ad. sk.	Panama.	J. Gould, Esq.
c'. Ad. sk.	Santa Fé, Veragua (*E. Arcé*).	Salvin-Godman Coll.

27. Anthus chii.

Alondra chii, *Azara, Apunt.* ii. p. 6 (1805).
Anthus chii, *Vieill. N. Dict. d'Hist. Nat.* xxvi. p. 490 (1818); *Licht. Verz. Doubl.* p. 37 (1823); *Gray, Gen. B.* i. p. 206 (1847); *Hartl. Ind. Azara*, p. 10 (1847); *Burm. Th. Bras.* iii. p. 119 (1855); *Scl. Ibis*, 1878, p. 359.
Anthus turdinus, *Merrem, in Ersch u. Grub. Encycl.* iv. p. 290 (1820).
Anthus rufus (*nec Gm.*), *Pelz. Orn. Bras.* p. 69 (1871).

Hind claw rather long, almost equal to hind toe. *Tarsus* not exceeding hind toe and claw, and about equal to them. *Primaries subequal*, 1, 2, 3, 4; *fifth primary* a little shorter than fourth, apparently not quite so long as longest secondaries, which are subequal to the primaries. *Primaries emarginate*, 2, 3, 4, 5.

Adult. General colour above sandy rufous, mottled with black centres to the feathers, and with slight indications of lighter sandy buff on the margins of some of the feathers of the mantle and upper tail-coverts; scapulars sandy rufous, with dusky-blackish centres; lesser wing-coverts sandy rufous; median and greater coverts sepia-brown, edged broadly with sandy rufous, somewhat paler fulvous on the margins; bastard-wing and primary-coverts dusky brown, fringed with dull sandy rufous; quills dark sepia-brown, margined

with sandy rufous, paler and more isabelline on the primaries; tail-feathers dark sepia-brown, edged with isabelline-buff, the outer feather pale sandy buff, with a mark of dark brown towards the base of the inner web; the penultimate feather similarly marked, but having the brown on the inner web much more extended and reaching nearly to the end of the feather; the third feather with a small tip of whitish; head like the back, sandy rufous, with black centres to the feathers; the hind neck a little paler, and the black markings smaller; lores, eyebrow, and eyelid dull isabelline; sides of face, ear-coverts, and cheeks pale sandy rufous, slightly mottled with blackish spots on the former; throat isabelline-whitish, separated from the cheeks by a malar streak of dusky blackish; remainder of under surface of body pale sandy rufous; the abdomen and under tail-coverts isabelline; fore neck and chest with a few triangular spots of black not extending on to the chest; sides of body narrowly striped with black; axillaries and under wing-coverts pale sandy rufous; quills dusky below, pale ashy rufous along the inner web. Total length 5·5 inches, culmen 0·5, wing 2·85, tail 2·1, tarsus 0·85.

Hab. Brazil.

a. Ad. sk.	Brazil (*Sello*).	Sclater Collection.
b. Ad. sk.	Steppes near Curytiba, Brazil (*Natterer*).	Sclater Collection.

28. Anthus peruvianus.

Anthus rufus (*nec Gm.*), *Scl. & Salv. P. Z. S.* 1868, p. 173; *Tacz. Orn. Pérou*, p. 460 (1884, pt.).
Anthus chii, *Tacz. P. Z. S.* 1874, p. 506.
Anthus peruvianus, *Nicholson, P. Z. S.* 1878, p. 390.

Hind claw about equal to hind toe. *Tarsus* about equal to hind toe and claw combined. *Primaries subequal*, 1, 2, 3, 4; *fifth* about equal to long secondaries, which, again, are not quite so long as the longest primaries. *Primaries emarginate*, 2, 3, 4.

Adult male (type of species). General colour above light brown, mottled with black centres to the feathers; the feathers of the mantle dull white on their inner webs, forming two broad bands down the centre of the back; rump and upper tail-coverts slightly more rufescent, and mottled with black centres to the feathers; scapulars and lesser wing-coverts uniform brown; median and greater coverts blackish brown, with broad edgings of ashy whitish, slightly tinged with sandy buff on the outer ones; bastard-wing and primary-coverts dusky brown, with ashy-fulvous edges; quills dark brown, edged with sandy rufous, the inner secondaries with dull white; tail-feathers dark brown, edged with pale sandy buff or dull white, the two outer feathers pale smoky brown, with white shafts and pale white tips, and having a mark of dull brown along the outer web, confined to the terminal third of the external feather; head like the back, but rather darker, the black centres to the feathers being more prominent; a distinct eyebrow of dull

white; ear-coverts pale brown, uniform; cheeks and throat dull white, separated by a narrow malar stripe of blackish spots; remainder of under surface dull white, the fore neck and breast with a slight wash of sandy rufous, more distinct on the sides of the body and flanks; the fore neck and breast spotted with triangular markings of blackish brown, taking the form of longitudinal broad streaks on the sides of the body and flanks; thighs and under tail-coverts buffy white; axillaries and under wing-coverts dull white, the former slightly tinged with fulvous; quills dusky below, ashy along the inner web: "bill brown, with a large yellowish mark on the base of the lower mandible; feet and claws clear yellowish; iris dark brown" (*Jelski*). Total length 5·25 inches, culmen 0·5, wing 2·55, tail 1·75, tarsus 0·8.

Adult female. Similar to the male. Total length 5·25 inches, culmen 0·45, wing 2·4, tail 1·65, tarsus 0·8.

Hab. Peru.

a. ♂ ad. sk.	Catarindo Valley, Peru, Sept. 12, 1867.	Henry Whitely, Esq. [C.]. (Type of species.)
b. ♀ ad. sk.	Islay, Sept. 17, 1867.	Henry Whitely, Esq. [C.].
c. ♂ ad. sk.	Islay, Sept. 17 (*H. Whitely*).	Salvin-Godman Coll.
d. ♀ sk.	Tinta, Sept. 1867 (*Whitely*).	Sclater Collection.
e, f. ♂ ♀ ad. sk.	Lima (*Nation*).	Sclater Collection.

29. Anthus correndera.

Alondra correndera, *Azara, Apunt.* ii. p. 2 (1805).
Anthus correndera, *Vieill. N. Dict. d'Hist. Nat.* xxvi. p. 491 (1818); *D'Orb. Voy. Amér. Mérid.* p. 225 (1834–44); *Gould, in Darw. Voy. 'Beagle,' Birds*, p. 85 (1841); *Hartl. Ind. Azara*, p. 10 (1847); *Gray, Gen. B.* i. p. 206 (1847); *Bp. Consp.* i. p. 249 (1850); *Gould, P. Z. S.* 1859, p. 95; *Scl. P. Z. S.* 1860, p. 384; *Abbott, Ibis*, 1861, p. 153; *id. Cat. Amer. B.* p. 24 (1862); *id. P. Z. S.* 1867, p. 321; *Scl. & Salv. P. Z. S.* 1868, p. 139; *Gray, Hand-l. B.* i. p. 250, no. 3621 (1869); *Scl. P. Z. S.* 1872, p. 548; *Hudson, P. Z. S.* 1873, p. 371; *Scl. & Salv. Nomencl. Av. Neotr.* p. 8 (1873); *Pelz. Ibis*, 1876, p. 331; *Durnf. Ibis*, 1877, pp. 32, 168; *Scl. Ibis*, 1878, p. 362; *Durnf. Ibis*, 1880, p. 424; *Barrows, Bull. Nutt. Orn. Club*, viii. p. 87 (1883); *Tacz. Orn. Pérou*, p. 458 (1884).
Corydalla chilensis, *Less. Descr. Mamm. et Ois.* p. 298 (1838).
Anthus rufus, *Baird, Review Amer. B.* p. 474 (1861); *Durnf. Ibis*, 1876, p. 158.
Anthus furcatus (*nec Lafr. & D'Orb.*), *Sclater, Cat. Amer. B.* p. 24 (1862).
Anthus sp., *Baird, Review Amer. B.* p. 168 (1864).
Anthus calcaratus, *Tacz. P. Z. S.* 1874, p. 507.

Hind claw rather straight, equal to hind toe in length (when worn about equal), often a little longer when not worn. *Tarsus* a little shorter than hind toe and claw combined; when the latter is worn, a little longer or about equal. *Primaries subequal*, 1, 2, 3, 4; *fifth* decidedly shorter and about equal to the long secon-

daries. *Primaries emarginate*, 2, 3, 4, 5; the last not distinctly so. *Outstretched feet* (in skin) not nearly reaching to end of tail.

Adult male. General colour above pale sandy buff, mottled with black centres to the feathers, the mantle appearing very black, with broad bands of ashy white or pale sandy buff, with which colours some of the feathers are very broadly margined on their inner webs; hind neck rather more tawny, the mesial black streaks being narrower; lower back, rump, and upper tail-coverts like the rest of the back, but not showing the longitudinal whitish bands which are seen on the mantle; lesser wing-coverts sandy buff; median and greater coverts sepia-brown, broadly edged with sandy buff, whiter towards the end of the feathers; bastard-wing and primary-coverts dusky brown, narrowly fringed with dull whitish; quills dark sepia-brown, margined with sandy buff, whiter towards the end of the quills, the primaries distinctly edged with dull white; tail-feathers dark brown, edged with sandy buff; the penultimate feather dark brown, with a white tip, and a long wedge-shaped streak of white extending along the inner edge of the shaft for nearly the entire length of the feather; the outer tail-feather white, with a mark of light brown along the inner web, and a small line of very pale brown near the end of the outer web; crown of head sandy buff, the feathers broadly centred with black, some of them slightly whitish on their edges; lores, eyelids, and a tolerably plain eyebrow pale sandy buff; ear-coverts brown, washed with sandy buff on the lower parts, and slightly mottled with spots of blackish brown; cheeks pale sandy buff, enclosed between two narrow lines of black, one running from the base of the bill below the ear-coverts, and the other a malar streak, separating the cheeks from the throat, which is uniform whitish; fore neck and breast clear sandy buff, with large and distinct triangular black spots, becoming longitudinal streaks on the flanks, which are also washed with sandy buff; thighs pale sandy buff; abdomen and under tail-coverts isabelline; under wing-coverts and axillaries yellowish buff; quills dusky below, pale ashy fulvous along the inner webs: "bill blackish brown, paler on lower mandible, especially at the base; feet dirty yellowish, the claws dark brown; iris dark brown" (*Jelski*). Total length 6 inches, culmen 0·55, wing 2·9, tail 2·3, tarsus 0·8.

Adult female. Similar to the male. Total length 6 inches, culmen 0·55, wing 2·9, tail 2·3, tarsus 0·85.

Adult in winter plumage. Is considerably lighter in appearance than in summer, the pale edgings to the feathers of the upper surface being broader and more pronounced; otherwise as in summer.

As the nesting-season advances the plumage becomes much worn, the light edgings to the feathers get worn off, and a more dingy and uniform appearance supervenes; the scapulars become nearly uniform brown, the mantle blackish, but the latter always retains some traces of the white longitudinal bands which are characteristic of the species.

These white bands are especially distinct in the *young birds*,

which differ from the adults only in having much paler edgings to the feathers of the upper surface, and in having the quills and tail-feathers broadly edged with whitish; the lores, eyelid, and eyebrow are dull whitish; the ear-coverts also dull white, slightly spotted with black, and washed with sandy buff on the upper parts; cheeks dull white, with a well-defined malar streak of black; throat and under surface of body dull white, washed with sandy buff on the fore neck, breast, and flanks, which are narrowly streaked with black.

The long wedge-shaped mark of white on the second tail-feather, reaching from the tip nearly to the base, is the best distinguishing character of this species; but it is apparently very gradually assumed, and is not therefore always well marked. In the Salvin-and-Godman collection is a specimen from Coquimbo (Capt. Markham) which has the penultimate tail-feather entirely dark brown, with only a tiny white spot at the tip, and not a sign of the wedge-shaped white mark beyond a certain pallor of the region of the shaft. Many specimens have only a broad wedge-shaped spot on the inner web, and its extent down the whole feather seems to be so gradual that often the two sides of the tail are asymmetrical in their markings, one side having the white on the penultimate feather far more extended than the other.

The young birds have more white on the outer tail-feather than the old ones, the outermost feather being whitish with a blackish mark along the inner edge of the inner web, without any brown along the outer web; the penultimate feather, however, has the outer web brownish.

Hab. Falkland Islands; Chili and Patagonia, ranging as high as Southern Brazil, Bolivia, and Peru.

a, b. Ad. sk.	East Falkland.	Lieut. A. Smith [P.].
c, d. Ad. sk.	East Falkland.	Antarctic Expedition.
e. Ad. sk.	Chili.	Zoological Society.
f, g. ♂ ♀ ad.; *h, i.* ♂ ♀ juv. sk.	Santiago, Chili (*Landbeck*).	Sclater Collection.
k. Ad. sk.	[Chili.]	Sir E. Burnett and Admiral Fitzroy [P.].
l. Ad. sk.	Chili.	Sclater Collection.
m. Ad. sk.	Valparaiso.	Charles Darwin, Esq. [P.].
n. ♀ ad. sk.	Coquimbo, Chili (*A. H. Markham*).	Salvin-Godman Coll.
o. Ad. sk.	Mendoza.	Herr Weisshaupt [C.].
p. ♂ ad. sk.	Rio Negro, Patagonia, June 1871.	W. H. Hudson, Esq. [C.].
q. Ad. sk.	Maldonado (*C. Darwin*).	Voy. H.M.S. 'Beagle.'
r. ♀ ad. sk.	Conchitas, Buenos Aires, April (*W. H. Hudson*).	Sclater Collection.
s, t. Ad. sk.	Buenos Aires (*Haslehurst*).	Salvin-Godman Coll.
u. Ad. sk.	Buenos Aires.	Henry Durnford, Esq. [C.].
v. Skeleton.		Purchased.

30. Anthus gustavi.

Anthus arboreus, var., *Gray, P. Z. S.* 1860, p. 350; *Finsch, Neu-Guinea*, p. 167 (1865).

Anthus gustavi, *Swinh. P. Z. S.* 1863, p. 90; *Gray, Hand-l. B.* i. p. 251, no. 3638 (1869); *Swinh. Ibis*, 1874, p. 442; *Brüggem. Abhandl. nat. Ver. Bremen*, v. p. 67 (1876); *Sharpe, Trans. Linn. Soc.* 2nd ser. *Zool.* i. p. 338 (1876); *Seebohm, Ibis*, 1877, pp. 129, 258, 1878, p. 341; *Tweedd. P. Z. S.* 1878, p. 430; *Finsch, Reis. West-Sibir.* p. 69 (1879); *Sharpe, Ibis*, 1879, p. 262; *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 86; *Dybowski, Bull. Soc. Zool. France*, 1883, p. 361.

Anthus (Agrodroma) gustavi, *Swinh. P. Z. S.* 1863, p. 273.

Anthus batchianensis, *Gray, Hand-l. B.* i. p. 251, no. 3642 (1869).

Corydalla gustavi, *Swinh. P. Z. S.* 1871, p. 366; *Walden, Trans. Z. S.* viii. p. 117 (1872); *Meyer, J. f. O.* 1873, p. 405; *David & Oust. Ois. Chine*, p. 309 (1877); *Salvad. Ann. Mus. Civic. Genov.* xvi. p. 191 (1880); *id. Orn. Papuasia etc.* ii. p. 432 (1881).

Anthus seebohmi, *Dresser, B. Eur.* iii. p. 295, pl. 134 (1875); *Seebohm & Harvie Brown, Ibis*, 1876, pp. 120, 180; *Brooks, Ibis*, 1876, p. 501; *Finsch, Ibis*, 1877, p. 58; *Seebohm, t. c.* p. 128.

Hind claw moderately long and curved, about equal to hind toe. *Tarsus* a little longer than hind toe and claw combined. *Primaries subequal*, 1, 2, 3; *fourth* much shorter than third; *fifth* primary slightly shorter than long secondaries, which do not equal the longest primaries. *Primaries emarginate*, 2, 3, the fourth almost imperceptibly.

Adult male in breeding-plumage. General colour above pale sandy brown, mottled with black centres to the feathers, the mesial streaks being narrower on the head, plainer on the hind neck, which is paler, and most pronounced on the mantle and back, where the black occupies the greater part of the feathers, which are conspicuously white on the outer webs of many of them; lower back and rump sandy brown, with blackish centres to the feathers, but in general aspect more uniform and slightly tinged with olive; upper tail-coverts dark brown, with paler-brown edges; lesser wing-coverts like the back, with blackish centres; median coverts black, conspicuously edged and tipped with white; greater series blackish, edged with paler brown; bastard-wing and primary-coverts and quills brown, margined with paler brown, inclining to whity brown on the inner secondaries, the innermost of the latter being blackish; tail-feathers dark brown, edged with paler brown, the outer feather smoky brown, whiter along the outer web and across the tip of the inner web, which is obliquely dark brown near the base; the penultimate feather dark brown, mottled with pale brown on the inner web, which is whiter at the tip; lores and a distinct eyebrow white, the latter narrowly streaked with blackish; ear-coverts pale rufescent brown, whiter below the eye; sides of neck pale whitish, streaked with blackish centres to the feathers; cheeks white, thickly mottled with black on their hinder parts, and separated from the throat by an obsolete blackish line; entire throat white, slightly tinged with yellow towards the fore neck, the latter and the breast

pale yellowish buff, distinctly streaked with blackish centres to the feathers, these streaks longer and less triangular in shape on the sides of the body and flanks, which are slightly washed with yellowish olive; centre of breast, abdomen, and under tail-coverts white, faintly tinged with yellow; thighs ashy brown, white behind; axillaries smoky brown, with white edgings; under wing-coverts whitish, mottled with brown bases near the edge of the wing; quills pale dusky below, lighter along the inner web: "bill brownish above; feet whity brown; iris chestnut" (*David*). Total length 6 inches, culmen 0·55, wing 3·3, tail 2·3, tarsus 0·95.

Adult female in breeding-plumage. Similar to the male in colour, but a trifle smaller. Total length 5 inches, culmen 0·55, wing 3·2, tail 2·15, tarsus 0·9. (*Mus. H. Seebohm.*)

Young (Bering Island, July; Wosnessensky). Recalls the colours of the adult, but the plumage is softer; underneath, the breast is more thickly spotted, and the black spots extend up the greater part of the throat, leaving the chin white. (*Mus. H. Seebohm.*)

Adult in winter plumage. Rather more olive than the summer dress, the head slightly more rufescent; the broad white edgings to the feathers of the mantle very distinct; blackish malar line also well pronounced; underneath as in summer, the young birds in their first winter plumage being apparently more thickly spotted on the breast than the adults.

Some of the specimens from Amoy in Mr. Seebohm's collection are very rufescent above, and are strongly tinged with tawny buff on the throat and breast. They were obtained in May by Mr. Swinhoe, and apparently show that this Pipit is more richly coloured on its return to its breeding-quarters; the tawny-buff tinge, however, appears to wear off quickly, and the breast in breeding-time is more tinged with yellow.

Hab. In summer spread over the whole of Siberia, from Kamtschatka westwards to the Petchora River in N.E. Russia and southwards to the Altai Mountains; passing through China on migration, and wintering in the Philippine Islands, Borneo, Timor, Celebes, and the Moluccas.

a. ♂ ad. sk.	Schtschutschja, July 18 (*Dr. Finsch*).	Geogr. Soc. Bremen.
b. Ad. sk.	Philippine Islands.	Gould Collection.
c, *d.* Ad.; *e.* Juv. sk.	N.W. Borneo.	Hugh Low, Esq. [C.].
f. Ad. sk.	Lumbidan.	Governor Ussher [C.].
g. ♂ ad. sk.	Boné, Celebes, Nov. 16 (*Von Rosenberg*).	Salvin-Godman Coll.
h. ♀ ad. sk.	Batchian.	Wallace Collection. (Type of *A. batchianensis*.)
i. ♂ ad. sk.	E. Timor.	Wallace Collection.
k. Ad. sk.	[N.W. India.] *	Capt. Stackhouse Pinwill [P.].

* This skin is not marked with the exact locality, and may have been obtained in Burmah or Malacca, where Capt. Pinwill also made collections. The specimens from the last-named places, however, were always exactly

31. Anthus australis.

Anthus australis, *Vig. & Horsf. Trans. Linn. Soc.* xv. p. 229 (1826); *Gray, Gen. B.* i. p. 206 (1847); *Gould, B. Austr.* fol. iii. pl. 73 (1848); *Bp. Consp.* i. p. 249 (1850); *Cab. Mus. Hein.* Th. i. p. 15 (1850); *Reichenb. Vög. Neuholl.* p. 64 (1850); *Gould, Handb. B. Austr.* i. p. 392 (1865); *Ramsay, P. Z. S.* 1865, p. 690; *Gray, Hand-l. B.* i. p. 252, no. 3656 (1869); *Von Müll. P. Z. S.* 1869, p. 279; *Ramsay, P. Z. S.* 1875, p. 590; *id. Proc. Linn. Soc. N. S. W.* ii. p. 186 (1878).

Anthus pallescens, *Vig. & Horsf. Trans. Linn. Soc.* xv. p. 229 (1826).

Adult male. General colour above fawn-buff, the feathers distinctly mottled with dark-brown centres, especially on the head; scapulars and lower back and rump more uniform, the darker bases more indistinct; least wing-coverts uniform with the scapulars; median and greater coverts blackish, with broad edgings of tawny buff, inclining to whitish at the tips of the latter; secondaries broadly edged with tawny buff, whitish at the tips and on the extreme margins; primary-coverts and primary-quills dark brown, narrowly edged with white, the inner primaries also tipped with white; upper tail-coverts more tawny than the rump; tail-feathers dark brown, edged with fulvous, more distinct on the two centre feathers; outer feather entirely white, excepting an oblique mark of dark brown along the inner web; penultimate feather white for the outer half of the inner web, the inner part of the latter and the shaft dark brown; lores and a distinct eyebrow white, more or less tinged with fulvous; round the eye a ring of buffy-white feathers; in front of the eye a few dusky plumes, those below the eye whitish; ear-coverts pale fulvous, mottled with dark-brown edges to the feathers; cheeks and throat dull white, separated by a distinct malar line of dusky brown; rest of under surface dull white, rather more fulvescent on the thighs and under tail-coverts; breast and sides of body light tawny buff; the fore neck and chest distinctly spotted with triangular markings of dark brown, becoming narrow shaft-streaks on the sides of the body; under wing-coverts and axillaries light buff, with greyish bases to the feathers, the edge of the wing mottled with brown spots; quills dark brown below, shaded with ashy fulvous along the inner web: "bill and legs fleshy brown; iris very dark brown" (*J. Gould*). Total length 6·2 inches, culmen 0·56, wing 3·45, tail 2·75, tarsus 0·95.

Obs. Tasmanian specimens are more rufous than those from the continent of Australia; and the spots on the breast are more distinct as well as the malar stripes and the markings on the ear-coverts. The type belongs to the rufous form, and may have come from Tasmania.

The absence of dates to the specimens in the British Museum prevents me from following out the sequence of plumages.

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labelled, and the probability is that the bird in question really came from the N.W. Himalayas. In either case any of the three localities would be a new one for the species.

The male is very much larger than the female, having the wing 3·3–3·45 inches instead of 3·1.

Young (type of *A. pallescens*). More rufous than the adults, and everywhere broadly edged with deep tawny buff; ear-coverts rufous, spotted with brown; under surface deep yellowish buff, with several indistinct triangular spots of dusky brown on the breast and sides of the body; outer tail-feathers as in the adult, the penultimate one brown along the shaft and at the tip of the outer web.

The colouring of the penultimate feather seems to me to be a very fair test of the age of the bird, for in young individuals it is for the most part brown, with a triangular patch of white inserted at the tip of the inner web, this patch gradually extending with age until it occupies the entire outer web, leaving only the shaft and an oblique mark on the inner web brown.

Hab. The whole of Australia and Tasmania.

a. Ad. sk.	Australia.	Linnean Society [P.]. (Type of species.)
b. Juv. sk.	Australia.	Linnean Society [P.]. (Type of *A. pallescens*.)
c. Ad. sk.	Australia.	J. Gould, Esq. [P.].
d. Ad. sk.	Australia.	Sir D. Cooper [P.].
e. Ad. sk.	Australia.	India Museum.
f, *g*. ♂ ♀ ad. sk.	South Australia.	Sir George Grey [P.].
h, *i*. ♂ ad. sk.	South Australia.	Gould Collection.
k. Ad. sk.	River Darling.	Gould Collection.
l. Ad. sk.	Melbourne.	Gould Collection.
m, *n*. ♂ ♀ ad. sk.	Moreton Bay (*F. Strange*).	Gould Collection.
o, *p*, *q*. Ad. sk.	Tasmania.	J. B. Jukes, Esq. [P.].
r. Ad. sk.	Tasmania.	Ronald Gunn, Esq. [P.].
s. Ad. sk.	Tasmania.	Antarctic Expedition [C.].
t. Ad. sk.	Tasmania.	J. Gould, Esq. [C.].
u. Skeleton.	Australia.	Purchased.

32. Anthus novæ zealandiæ.

New-Zealand Lark, *Lath. Gen. Syn.* ii. pt. 2, p. 284, pl. li. (1783).
Alauda novæ zealandiæ, *Gm. Syst. Nat.* i. p. 799 (1788, *ex Lath.*); *Gray, App. to Dieffenb. Voy. New Zealand*, ii. p. 192 (1843).
Anthus novæ zealandiæ, *Gray, Voy. Erebus & Terror, Birds*, p. 4 (1844); *id. Gen. B.* i. p. 206 (1847); *Bp. Consp.* i. p. 249 (1850); *Gray, Ibis*, 1862, p. 224; *Pelz. Reis. Novara, Vög.* p. 69 (1865); *Buller, Essay Orn. New Zeal.* p. 9 (1865); *Gray, Hand-l. B.* i. p. 252, no. 3658 (1869); *Potts, Trans. New-Zeal. Inst.* ii. p. 61 (1869), iii. p. 76 (1870); *Hutton, Cat. B. New Zeal.* p. 13 (1871); *Finsch, J. f. O.* 1872, p. 162; *id. Trans. New-Zeal. Inst.* v. p. 208 (1872); *H. & W. Travers, t. c.* p. 216; *Buller, B. New Zeal.* p. 132 (1873); *Finsch, J. f. O.* 1874, p. 132; *Sharpe, Voy. Ereb. & Terr., Birds, App.* p. 26 (1876); *Bull. Man. New-Zeal. Birds*, p. 24 (1882); *Finsch, Ibis*, 1882, p. 395.
Alauda littorea, *Forster, Descr. Anim.* p. 90 (1844).
Anthus grayi, *Bp. Consp.* i. p. 249 (1850); *Gray, Hand-l. B.* i. p. 252, no. 3660 (1869); *Hutton, Cat. B. New Zeal.* p. 13 (1871).

Anthus aucklandicus, *Gray, Ibis*, 1862, p. 224; *id. Hand-l. B.* i. p. 252, no. 3657 (1869).

Hind claw very stout, rather curved, about equal to hind toe. *Tarsus* longer than hind toe and claw combined. *Primaries subequal*, 1, 2, 3, 4; *fifth* primary about equal to long secondaries, which are not equal to long primaries. *Primaries sinuated*, 2, 3, 4, 5.

Adult. Above brown, mottled with dark-brown centres, and with olivaceous margins to the feathers, the hind neck rather paler, and the head slightly more streaked than the back; rump rather more uniform than the back; wing-coverts and quills brown, with paler and more whity-brown edges to the feathers, the secondaries broadly edged with olivaceous like the back; upper tail-coverts and centre tail-feathers brown, edged with greyish buff; rest of the tail brown, narrowly edged with lighter brown, the two outer feathers pure white, with an oblique mark of brown along the inner web, this brown mark darker and broader on the penultimate feather, which has a brown shaft; the outermost feather with a fainter brown mark and a white shaft; lores and a broad eyebrow white, as also a ring of feathers round the eye; a dusky-brown streak drawn from the base of the bill through the eye, and continued along the upper edge of the ear-coverts; sides of face dull white, mottled with brown edgings to the feathers; under surface of body dull white, the breast with triangular spots of dusky brown, developing into longitudinal streaks on the sides and flanks, the sides of the body being brown; under wing-coverts light fulvous, with greyish bases to the feathers; quills brown below, shaded with ashy on the inner webs: "bill and legs yellowish brown; iris dark brown" (*Buller*). Total length 6·6 inches, culmen 0·6, wing 3·45, tail 2·8, tarsus 0·95.

The winter plumage appears to differ in having broader edges to the feathers, thus presenting a more uniform upper surface, especially on the scapulars, lower back, and rump.

Young. Differs from the adult in being paler and more mealy, the hind neck especially so; the feathers of the back dark brown, with pale straw-yellow margins, less distinct on the lower back and rump; wing-coverts and quills broadly edged with straw-colour; below dull white, the brown spots on the breast and sides of the body narrow and indistinct.

Hab. New Zealand; Auckland Islands; Chatham Islands.

a. Ad. sk.	New Zealand, June 20 (*J. Macgillivray*).	Gould Collection.
b. ♂ juv.; *c.* ♀ ad. sk.	New Zealand (*F. Strange*).	Capt. Stokes [P.].
d. Juv. sk.	New Zealand.	Sir George Grey [P.].
e, f. Ad. sk.	New Zealand.	Antarctic Expedition.
g, h. Ad. sk.	New Zealand.	Lieut. A. Smith [P.].
i, k, l. Ad. sk.	New Zealand.	Sir E. Home [P.].
m, n, o, p. Ad. sk.	Auckland Islands.	Antarctic Expedition [C.].

33. Anthus tenellus.

Macronyx tenellus, *Cabanis, J. f. O.* 1878, pp. 205, 220, pl. 2. fig. 1; *Fischer, J. f. O.* 1879, p. 299; *id. & Reichen. t. c.* p. 355; *Cab. t. c.* p. 438; *Shelley, P. Z. S.* 1881, p. 574.

Adult. General colour above dark brown, the feathers edged with pale yellow, imparting a mottled appearance to the back and mantle; the lower back and rump more uniform olive-yellowish; upper tail-coverts dark brown, edged with yellow, the lateral ones almost entirely yellow with dusky centres; wing-coverts with concealed black bases to the median and lesser series; the greater coverts, bastard-wing, and primary-coverts yellow, with more or less black on the outer web, varying in extent; quills yellow, with black shafts, the primaries black at the ends, increasing in extent towards the outer edge of the wing; the innermost secondaries brown, margined with ashy brown; centre tail-feathers blackish brown, edged with yellow; remainder of the tail yellow, the two outer feathers entirely so, the others black along the end of the outer webs and at the tip of the inner one, increasing in extent towards the centre of the tail; head like the back, but streaked with dusky centres to the feathers; lores and a narrow eyelid bright yellow; feathers below the eye and cheeks yellow; ear-coverts brown washed with yellow; under surface of body yellow, with a black collar across the fore neck; under wing-coverts, axillaries, and lower surface of quills yellow, the primaries black at their ends; "upper mandible horn-brown, under mandible greyish blue; feet yellowish grey; iris brown" (*Fischer*). Total length 6 inches, culmen 0·55, wing 3·4, tail 2·3, tarsus 1. (*Mus. G. E. Shelley.*)

Young. Browner above than the adult, with sandy-whitish edges to the feathers instead of yellow, the margins to the wing-coverts more conspicuous, the greater series with a tinge of yellow at the end; bastard-wing and primary-coverts blackish, fringed with olive-yellow; quills brown, edged with olive-yellow, bright yellow at the base and along the outer edge of the primaries; the inner secondaries edged with dull whitish like the back; tail-feathers dark brown, edged with olive-yellow, the outer feather yellow, excepting a large dark-brown mark on the inner web; the penultimate feather brown, with a large wedge-shaped mark of pale yellow on the inner web; head brown like the back, with longitudinal blackish centres to the feathers; a superciliary streak of sandy fulvous; ear-coverts brown; chin dull white; remainder of under surface of body sandy isabelline, washed with yellow on the abdomen and under tail-coverts; throat and fore neck reddish brown; under wing-coverts, axillaries, and quill-lining bright yellow. (*Mus. G. E. Shelley.*)

Hab. Zanzibar district, E. Africa.

a. Ad. sk. Lamo, E. Africa. Capt. G. E. Shelley [P.].

4. XANTHOCORYS.

Range. Brazil.

1. Xanthocorys nattereri.

Anthus correndera, *Pelz. Orn. Bras.* p. 60 (1871, *nec V.*).
Anthus nattereri, *Sclater, Ibis*, 1878, p. 366, pl. x.

Hind claw very long, only gently curved, equal to hind toe. *Tarsus* much shorter than hind toe and claw combined. *Primaries* subequal and longest, 1, 2, 3, 4; *first* a trifle shorter than the rest; *fifth* primary shorter than fourth and not so long as inner secondaries, which nearly equal the primaries in length. *Primaries emarginate*, 2, 3, 4. *Feet* in skin reaching nearly to tip of tail.

Adult male (type of species). General colour above pale sandy rufous, mottled with blackish-brown centres to the feathers of the mantle and upper back; lower back and rump rufous-brown, less distinctly centred with black, and nearly uniform in appearance, the upper tail-coverts again streaked with blackish centres to the feathers; wing-coverts sandy rufous, with concealed dusky bases, only apparent on the median series; bastard-wing and primary-coverts dusky brown, margined with ashy fulvous; quills dusky brown, edged with sandy rufous, inclining to yellowish white on the first primary and inner secondaries; tail-feathers narrow and somewhat pointed, dark brown, edged with sandy rufous, the two outer ones pale smoky brown, with a long mark of dark brown on the inner web, more developed on the penultimate feather, which has a dark-brown shaft and is white at the tip, the outer feather also white at the tip but having the shaft pale brown; both the external feathers tinged with sandy buff externally; head like the back, but more distinctly streaked with black centres to the feathers; the central markings on the hind neck much smaller and in the form of spots; lores dull whitish, as well as the feathers below the eye; eyelid pale sandy yellowish, as well as a narrow but distinct superciliary line; ear-coverts pale sandy yellowish, with minute black spots; cheeks uniform sandy yellowish, with a narrow line of black above running from the gape to below the eye, and a second narrow line of black below the hinder part of the cheeks, connected with the spots on the throat; the latter white, with a slight yellowish tinge; lower throat, breast, sides of body, thighs, and under tail-coverts pale sandy buff, tipped with yellow on the lower throat, and paler buff on the thighs and under tail-coverts; the fore neck and chest with narrow streaks of black, longer and more distinct on the sides of the body and flanks, which are deeper sandy rufous; abdomen white, with a slight pinkish tinge; axillaries dull white, with a yellowish tinge; under wing-coverts yellowish buff, the lower ones ashy, like the quills below, the latter pale ashy rufous along the inner web. Total length 5·8 inches, culmen 0·55, wing 2·85, tail 2·3, tarsus 0·95.

Hab. Brazil.

a. ♂ ad. sk. Rio Verde (*Natterer*). Sclater Collection.

5. NEOCORYS.

Neocorys, *Sclater, P. Z. S.* 1857, p. 5 ..... Type. N. spraguii.



Foot of *Neocorys spraguii*.

Range. Upper Missouri River and Saskatchewan in North America. Brazil in South America.

1. Neocorys spraguii.

Alauda spragueii, *Audub. B. Amer.* viii. p. 217, pl. 486 (1844).
Otocorys sprangeri, *Bp. Consp.* i. p. 246 (1850).
Agrodroma spraguei, *Baird in Stansb. Rep.* p. 329 (1852).
Neocorys spraguei, *Scl. P. Z. S.* 1857, p. 5; *Baird, B. N. Amer.* p. 234 (1858); *Blak. Ibis*, 1862, p. 4; *id.* 1863, p. 61; *Coues, Key N. Amer. B.* p. 91 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 175, pl. 10. fig. 5 (1874); *Coues, B. N.-West*, p. 42 (1874); *id. B. Color. Vall.* p. 193, note (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 286 (1884).
Anthus spraguei, *Baird, Rev. Amer. B.* p. 155 (1864); *Gray, Hand-l. B.* i. p. 250, no. 3634 (1869).

Hind claw rather long and only gently curved, not quite so long as the hind toe itself. *Tarsus* equal to hind toe and claw combined. *Primaries* subequal and longest, 2, 3, 4; *fifth primary* much shorter than the fourth, and about equal to longest secondaries. *Primaries* emarginate, 2, 3, 4. *Feet* in skin reaching to three fourths of the tail.

Adult. General colour above ashy brown, mottled with dark-brown centres to the feathers; the mantle and upper back blackish brown, with narrow margins of ashy white; wing-coverts dusky brown, with ashy-whitish edges, tinged with sandy rufous at the tips of the median and greater coverts; bastard-wing and primary-coverts dusky brown, fringed with dull ashy; quills dusky brown, edged with ashy brown, whitish along the outer web of the first primary and also at the ends of the inner secondaries; tail-feathers

dark brown, edged with ashy fulvous, the outer feather almost entirely white, with a white shaft and having a small mark of brown near the base of the inner web; the penultimate feather similar, but the brown mark on the inner web much larger; head like the back, and distinctly mottled with black centres; the hind neck whity brown like the sides of the neck, mottled with small black centres to the feathers, and thus forming a more or less distinct collar; lores, feathers round the eye, a tolerably distinct eyebrow, ear-coverts, sides of face, cheeks, and under surface of body dull white, with a slight tinge of sandy buff on the ear-coverts, chest, and sides of body; the ear-coverts slightly mottled with black spots; the fore neck with a few tiny streaks or triangular spots of black; sides of body and flanks tinged with sandy brown: "bill brownish above, pale below; legs, feet, and claws yellowish flesh-colour and transparent" (*Audubon*). Total length 5·5 inches, culmen 0·55, wing 3·05, tail 2·1, tarsus 1·85.

Adult female. Precisely similar to male, but a little smaller. (*Audubon.*)

Young. Much more handsomely marked than the adult, the black feathers on the upper surface having narrow fringes of ashy white, the scapulars and wing-coverts being strongly tinged with sandy rufous; the upper tail-coverts rufous-brown, with broad black centres to the feathers; the centre tail-feathers black, with broad margins of sandy rufous; the rest of the tail as in the adult, excepting that there is a tinge of isabelline along the outer web of the penultimate and outer feathers; head mottled with black, the feathers being black with narrow edges of ashy white; hind neck paler, spotted with black; a narrow eyebrow, lores, and eyelid dull ashy white; ear-coverts pale sandy, with a few dusky-blackish spots on the hinder margin; cheeks and throat dull white, with a distinct line of dusky-blackish spots along the upper line of the cheeks and a malar stripe of blackish, forming a moustache; fore neck, chest, and sides of body pale sandy buff, with triangular black spots on the fore neck and chest and sides of upper breast, where the spots are a little larger; the lower flanks longitudinally streaked with blackish; centre of breast, abdomen, and under tail-coverts dull white.

Hab. Region of the Upper Missouri and Saskatchewan; east to the Red River (*Coues*).

a. Ad. sk.	North America (*Audubon*).	Sclater Collection
b. Ad. sk.	Papillion, Nebraska, Sept. (*L. Belding*).	U.S. Nat. Museum [P.].
c, d. Juv. sk.	Souris River, Dakota, Aug. (*E. Coues*).	U.S. Nat. Museum [P.].
e. ♀ ad.; *f, g.* Juv. sk.	Souris River, Aug. 9 (*E. Coues*).	Salvin-Godman Coll.

5. NEOCORYS.

Neocorys, *Sclater, P. Z. S.* 1857, p. 5 ..... Type. N. spraguii.



Foot of *Neocorys spraguii*.

Range. Upper Missouri River and Saskatchewan in North America. Brazil in South America.

1. Neocorys spraguii.

Alauda spragueii, *Audub. B. Amer.* viii. p. 217, pl. 486 (1844).
Otocorys sprangeri, *Bp. Consp.* i. p. 246 (1850).
Agrodroma spraguei, *Baird in Stansb. Rep.* p. 329 (1852).
Neocorys spraguei, *Scl. P. Z. S.* 1857, p. 5; *Baird, B. N. Amer.* p. 234 (1858); *Blak. Ibis*, 1862, p. 4; *id.* 1863, p. 61; *Coues, Key N. Amer. B.* p. 91 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 175, pl. 10. fig. 5 (1874); *Coues, B. N.-West*, p. 42 (1874); *id. B. Color. Vall.* p. 193, note (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 16 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 286 (1884).
Anthus spraguei, *Baird, Rev. Amer. B.* p. 155 (1864); *Gray, Hand-l. B.* i. p. 250, no. 3634 (1869).

Hind claw rather long and only gently curved, not quite so long as the hind toe itself. *Tarsus* equal to hind toe and claw combined. *Primaries* subequal and longest, 2, 3, 4; *fifth primary* much shorter than the fourth, and about equal to longest secondaries. *Primaries* emarginate, 2, 3, 4. *Feet* in skin reaching to three fourths of the tail.

Adult. General colour above ashy brown, mottled with dark-brown centres to the feathers; the mantle and upper back blackish brown, with narrow margins of ashy white; wing-coverts dusky brown, with ashy-whitish edges, tinged with sandy rufous at the tips of the median and greater coverts; bastard-wing and primary-coverts dusky brown, fringed with dull ashy; quills dusky brown, edged with ashy brown, whitish along the outer web of the first primary and also at the ends of the inner secondaries; tail-feathers

dark brown, edged with ashy fulvous, the outer feather almost entirely white, with a white shaft and having a small mark of brown near the base of the inner web; the penultimate feather similar, but the brown mark on the inner web much larger; head like the back, and distinctly mottled with black centres; the hind neck whity brown like the sides of the neck, mottled with small black centres to the feathers, and thus forming a more or less distinct collar; lores, feathers round the eye, a tolerably distinct eyebrow, ear-coverts, sides of face, cheeks, and under surface of body dull white, with a slight tinge of sandy buff on the ear-coverts, chest, and sides of body; the ear-coverts slightly mottled with black spots; the fore neck with a few tiny streaks or triangular spots of black; sides of body and flanks tinged with sandy brown: "bill brownish above, pale below; legs, feet, and claws yellowish flesh-colour and transparent" (*Audubon*). Total length 5·5 inches, culmen 0·55, wing 3·05, tail 2·1, tarsus 1·85.

Adult female. Precisely similar to male, but a little smaller. (*Audubon.*)

Young. Much more handsomely marked than the adult, the black feathers on the upper surface having narrow fringes of ashy white, the scapulars and wing-coverts being strongly tinged with sandy rufous; the upper tail-coverts rufous-brown, with broad black centres to the feathers; the centre tail-feathers black, with broad margins of sandy rufous; the rest of the tail as in the adult, excepting that there is a tinge of isabelline along the outer web of the penultimate and outer feathers; head mottled with black, the feathers being black with narrow edges of ashy white; hind neck paler, spotted with black; a narrow eyebrow, lores, and eyelid dull ashy white; ear-coverts pale sandy, with a few dusky-blackish spots on the hinder margin; cheeks and throat dull white, with a distinct line of dusky-blackish spots along the upper line of the cheeks and a malar stripe of blackish, forming a moustache; fore neck, chest, and sides of body pale sandy buff, with triangular black spots on the fore neck and chest and sides of upper breast, where the spots are a little larger; the lower flanks longitudinally streaked with blackish; centre of breast, abdomen, and under tail-coverts dull white.

Hab. Region of the Upper Missouri and Saskatchewan; east to the Red River (*Coues*).

a. Ad. sk.	North America (*Audubon*).	Sclater Collection
b. Ad. sk.	Papillion, Nebraska, Sept. (*L. Belding*).	U.S. Nat. Museum [P.].
c, *d*. Juv. sk.	Souris River, Dakota, Aug. (*E. Coues*).	U.S. Nat. Museum [P.].
e. ♀ ad.; *f*, *g*. Juv. sk.	Souris River, Aug. 9 (*E. Coues*).	Salvin-Godman Coll.

Th. i. p. 15 (1850); *Grill, Zool. Anteckn.* p. 25 (1858); *Finsch & Hartl. Vög. Ostafr.* p. 278, note (1870); *Sharpe, Cat. Afr. B.* p. 73 (1871); *Ayres, Ibis*, 1873, p. 282; *Buckley, Ibis*, 1874, p. 384; *Shelley, Ibis*, 1875, p. 73; *Sharpe, in Oates's Matabele Land*, App. p. 317 (1881); *Holub & Von Pelzeln, Beitr. Orn. Südafr.* p. 86 (1882); *Shelley, Ibis*, 1882, p. 349; *Butler, Feilden, & Reid, Zool.* 1882, p. 335; *Sharpe, ed. Layard's B. S. Afr.* p. 530 (1884).
Corydalla capensis, *Bouvier, Cat. Coll. Orn.* p. 54 (1874).

Adult. General colour above brown, the feathers dark brown in the centre, broadly edged with fulvous or whity brown; crown coloured like the back, the dark centres somewhat more longitudinal, the forehead washed with orange; hind neck ashy brown; lower back and rump nearly uniform brown, the feathers subterminally rather darker brown; upper tail-coverts brown, broadly edged with fulvous brown, inclining to whitish towards the tips; wing-coverts dark brown, with broader margins of paler and more fulvous brown, the least series margined with orange, the median series slightly washed with the same, the greater series whitish at the tips; quills dark brown, broadly edged with fulvous brown, broader and paler on the secondaries, the primaries externally edged with yellow, the first primary white on the outer web; two centre tail-feathers brown, with whity-brown margins, the rest of the feathers dark brown, tipped with white, increasing much in extent towards the outermost, which is white along the outer web also; from the nostril a distinct eyebrow of orange-yellow; lores and a ring of plumes round the eye whitish, washed with yellow; ear-coverts light brown, slightly washed with yellow, with whitish shaft-streaks to many of the feathers; entire throat bright orange; cheeks black, running in a broad band along the sides of the throat and uniting on the fore neck so as to form a collar; sides of the neck ashy brown; rest of under surface of body orange-yellow, the sides of the body light ashy brown; below the black collar a few irregular streaks and mottlings of black; thighs yellow; under tail-coverts pale whity buff, slightly washed with yellow, the concealed basal half dark brown; under wing-coverts and axillaries orange, the greater series light ashy with whitish edgings, slightly washed with yellow; the quills light ashy below, paler along the inner web. Total length 8 inches, culmen 0·7, wing 3·8, tail 3·3, tarsus 1·4.

Obs. The female is similar to the male, but has not such a wide black gorget, the black-tipped feathers forming a more or less broken line on the fore neck. Total length 7 inches, culmen 0·7, wing 3·75, tail 2·4, tarsus 1·35.

In breeding-plumage the feathers become much worn, and the orange of the throat and yellow under surface much bleached, the latter often appearing ashy. The sides of the neck become hoary grey, skirting the black collar.

The *winter plumage* is much more mottled than the summer dress, and the fresh-moulted feathers are much darker.

The *winter plumage* of the *young birds* is dingier than that of the adults, and the jugular gorget is scarcely perceptible.

Young. Much blacker than the adult, the feathers narrowly fringed with whity brown; throat isabelline, with a few orange feathers here and there, the black gorget of the adult represented only by a few black spots; centre of breast and abdomen pale yellow; sides of body isabelline brown, with dark-brown streaks on the lower flanks.

Hab. South Africa.

a. Ad. sk.	Cape Colony.	
b. Ad. sk.	Cape Colony.	Mrs. Butler [P.].
c, *d*. Ad. sk.	Cape Colony (*Layard*).	Salvin-Godman Coll.
e [♀] ad. sk.	Cape Colony (*Layard*).	Sharpe Collection.
f. ♀ ad. sk.	Cape Town, April 24 (*C. J. Andersson*).	Sharpe Collection.
g. Juv. sk.	Grahamstown (*Layard*).	Sharpe Collection.
h. ♀ ad. sk.	Kingwilliamstown, June 4 (*C. Newby*).	Capt. Trevelyan [C.].
i. Ad. sk.	S.E. Africa.	John Rocke, Esq. [P.].
k. Ad. sk.	Natal.	T. Ayres, Esq. [C.].
l, *m*. ♂ ad. sk.	Pinetown, Natal (*T. L. Ayres*).	Sharpe Collection.
n, *o*. Ad. sk.	Between Ladysmith and Newcastle, May (*F. Oates*).	W. E. and C. G. Oates, Esqrs. [P.].
p, *q*. ♂; *r*, *s*. ♀ ad. sk.	Transvaal (*T. Ayres*).	Sharpe Collection.

2. Macronyx flavicollis.

Macronyx flavicollis, *Rüpp. Neue Wirb., Vög.* p. 102, Taf. 38. fig. 2 (1835); *id. Syst. Uebers.* p. 79 (1845); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 358 (1854); *Heugl. Syst. Uebers.* p. 44 (1856); *id. Orn. N.O.-Afr.* i. p. 330 (1869); *Blanf. Geol. & Zool. Abyss.* p. 384 (1870); *Finsch, Tr. Z. S.* vii. p. 324 (1870); *id. & Hartl. Vög. Ostafr.* p. 278, note (1870); *Heugl. Orn. N.O.-Afr.* iv. App. p. xciii (1871).

Macronyx capensis, pt., *Bp. Consp.* i. p. 247 (1850).

Anthus flavicollis, *Gray, Hand-l. B.* i. p. 252, no. 3663 (1869).

Adult. General colour above tawny buff, the feathers black in the centre, edged with ochraceous all round; crown of head black, with only slightly indicated ochraceous edges to a few of the feathers: hind neck dull ochraceous buff, with dusky-brown centres to the feathers; lesser wing-coverts dark brown with ashy margins, some of the innermost edged with dull whitish, the outermost washed with yellow like the edge of the wing; bastard-wing and primary-coverts also washed with yellow; median and greater coverts edged with light tawny, shading off into white towards the tips; quills dark brown, the primaries edged with fulvous, the inner ones washed externally with yellow, the secondaries externally fawn-buff, shading off into whitish towards the end of the feather; tail-feathers dark brown with fulvous edgings, the outermost feather yellow along the outer web and for the terminal third of the inner web, the next three with a large spot of white towards the tips of the inner web,

decreasing in size towards the centre of the tail; lores and a distinct eyebrow yellow, shading off into buffy whitish above the ear-coverts; feathers in front of the eye greyish; sides of face buffy whitish; the ear-coverts dark brown on their upper parts; cheeks black, forming a broad moustache which extends down the sides of the throat, becoming gradually broader till it unites on the fore neck and forms a broad circular collar; throat orange-yellow; sides of neck buffy whitish, streaked with black; rest of under surface pale fawn-buff, shading off lighter on the under tail-coverts; under wing-coverts white with dusky bases, the edge of the wing yellow: "bill blackish, the lower mandible ashy; feet brown; iris brown" (*Blanford*). Total length 6·7 inches, culmen 0·5, wing 3·6, tail 2·6, tarsus 1·3.

Hab. North-eastern Africa.

a. Ad. sk.	Abyssinia.	Dr. Rüppell [C.].
b, *c*. Ad. sk.	Shoa (*Harris*).	India Museum.
d. ♂ ad. sk.	Wadala plateau, April 9.	W. T. Blanford, Esq. [C.].

3. Macronyx croceus.

Alauda crocea, *Vieill. N. Dict. d'Hist. Nat.* i. p. 365 (1816).
Cape Lark, var. β, *Lath. Gen. Hist. B.* vi. p. 294 (1823).
Macronyx flavigaster, *Swains. B. W. Afr.* i. p. 215 (1837); *Jard. & Selby, Ill. Orn.* (new ser.), i. pl. xxii. (c. 1838); *Bp. Consp.* i. p. 247 (1850); *Cass. Proc. Philad. Acad.* 1856, p. 317; *Bocage, Jorn. Lisb.* 1868, p. 48.
Anthus flavigaster, *Gray, Gen. B.* i. p. 206 (1847); *Layard, B. S. Afr.* p. 121 (1867).
Macronyx croceus, *Hartl. Beitr. Orn. W.-Afr.* p. 23 (1844); *id. Orn. W.-Afr.* pp. 73, 271 (1857); *Gurney, Ibis*, 1860, p. 208; *Monteiro, Ibis*, 1862, p. 334; *Kirk, Ibis*, 1864, p. 318; *Cab. in Von der Decken's Reis.* iii. p. 22 (1869); *Heugl. Orn. N.O.-Afr.* i. p. 331 (1870); *Finsch & Hartl. Vög. Ostafr.* p. 276 (1870); *Sharpe, Cat. Afr. B.* p. 73 (1871); *Ussher, Ibis*, 1874, p. 70; *Shelley, Ibis*, 1875, p. 73; *Bouvier, Cat. Ois. Marche etc.* p. 16 (1875); *Reichen. J. f. O.* 1875, p. 46; *id. Corresp. Afrik. Gesellsch. Berlin*, 1875, p. 177; *Barratt, Ibis*, 1876, p. 208; *Sharpe & Bouvier, Bull. Soc. Zool. France*, i. p. 43 (1876); *Reichen. J. f. O.* 1877, p. 30; *Cab. J. f. O.* 1878, p. 220; *Fischer & Reichen. J. f. O.* 1879, p. 355; *Bocage, Orn. Angola*, p. 297 (1881); *Gurney, Ibis*, 1881, p. 125; *Shelley, P. Z. S.* 1881, p. 573; *Hartl. Abhandl. nat. Ver. Bremen*, vii. pt. 2, p. 99 (1881); *Shelley, Ibis*, 1883, p. 543.
Macronyx flavicollis (*non Rüpp.*), *Bianc. Spec. Zool. Mosamb.* fasc. iv. p. 50 (1850); *Sperling, Ibis*, 1868, p. 290.
Macronyx striolatus, *Heugl. J. f. O.* 1863, p. 164; *Nichols. P. Z. S.* 1878, p. 356; *Sharpe, ed. Layard's B. S. Afr.* p. 532 (1884).
Macronyx capensis (*non L.*), *Antin. Cat. descrr. Uce.* p. 41 (1864); *Hartm. J. f. O.* 1867, p. 241; *Salvad. Rivist. Crit. Antin.* p. 734 (1870).
Anthus croceus, *Gray, Hand-l. B.* i. p. 252, no. 3662 (1869).
Anthus striolatus, *Gray, t. c.* p. 252, no. 3665 (1869).
Corydalla croceus, *Bouvier, Cat. Coll. Orn.* p. 54 (1874).

Adult. General colour above dark brown, the feathers edged with fulvous brown, causing a slightly streaked appearance, which is not so apparent on the head, where the feathers are not so broadly lined; hind neck ashy brown, with indistinct darker-brown centres to the feathers; lower back and rump ashy brown, the feathers nearly uniform, being only subterminally darker brown; upper tail-coverts brown, with fulvous-brown edgings; tail-feathers dark brown, margined with fulvous brown, the four outer feathers tipped with white, increasing in extent towards the outermost, which is also edged with white along the outer web, these lateral tail-feathers also slightly edged with olive-yellow towards the base; quills dark brown, with paler or more buffy-whitish edgings; the least wing-coverts externally washed with olive-yellow; the bastard-wing, primary-coverts, and primaries dark brown, narrowly edged with olive-yellow; the secondaries dark brown, with whity-brown margins; lores and a streak of feathers over the eye bright yellow; round the eye a ring of somewhat paler-yellow feathers; ear-coverts light brown; throat and cheeks bright lemon-yellow, encircled by a very distinct band of black, which runs from the lower part of the eye down the sides of the neck and joins across the fore neck; sides of neck ashy brown, the feathers edged with white, giving a distinctly streaked appearance; rest of the under surface of body yellow, the chest streaked with black just below the broad collar; sides of the body light brown, streaked with blackish brown; thighs and under tail-coverts light yellow; under wing-coverts and axillaries yellow, the lower series white, dusky brown at the base; lower surface of the quills light brown, ashy brown along the inner webs. Total length 7·6 inches, culmen 0·75, wing 3·9, tail 2·2, tarsus 1·45.

Considerable differences are to be observed in a series of this Pipit; and Dr. von Heuglin was at one time inclined to regard the bird from Central Africa as a distinct species, which he named *Macronyx striolatus*. This, however, he afterwards united to *M. croceus*, but Mr. Nicholson in 1878 dissented from that view and re-established Heuglin's species. After an examination of a large series we believe that the characters pointed out by Heuglin are solely due to age.

The bird when breeding gets its plumage very much worn, the head and rump become ashy, and a shade of hoary white extends down the sides of the neck along the sides of the black gorget. The winter plumage is darker and more mottled than the summer dress. The female resembles the male in colour, but has the black gorget less strongly developed. The young bird in winter plumage has scarcely any trace of the black gorget, which is represented by a few blackish streaks: the yellow of the throat and breast is less developed, and the dark stripes on the flanks are less pronounced.

Mr. T. L. Ayres has recently sent me a series of specimens from Natal, amongst which is a young male moulting into winter plumage, and killed on the 13th of March. Another male shot by him on the 27th of May is in full winter dress, and shows that the black

collar of the adult is not assumed at the first moult, the fore neck being brownish mottled with streaks of black; there is also no trace of the white streaks near the black collar: these are, however, evident enough in an adult male, procured by Mr. Ayres on the 12th of March, and which has nearly completed its moult; the black collar is also perfectly developed as in summer. A male obtained as late as the 23rd of April has not quite completed its moult.

Hab. The whole of the Ethiopian Region.

a. Ad. hiem. sk.	River Gambia.	Sharpe Collection.
b. [♀] ad. æstiv. sk.	Sea-shore near Elmina, April (*H. F. Blissett*).	Sharpe Collection.
c. ♂ ad. hiem. sk.	Shonga, River Niger.	W. A. Forbes, Esq. [P.].
d. [♀] ad. æstiv. sk.	Gaboon (*DuChaillu*).	Sharpe Collection.
e. [♂] ad. æstiv. sk.	Angola.	J. J. Monteiro, Esq. [C.].
f. [♂] ad. sk.	Natal.	T. Ayres, Esq. [C.].
g. ♂ ad. æstiv. sk.	Natal (*T. Ayres*).	Salvin-Godman Coll.
h. ♀ ad.; *i.* ♂ juv. hiem. sk.	Pinetown, Natal, May (*T. L. Ayres*).	R. B. Sharpe, Esq. [P.].
k, *l.* ♂ ad.; *m.* ♂ juv. sk.	Pinetown, March (*T. L. A.*).	R. B. Sharpe, Esq. [P.].
n. ♂ ad. sk.	Pinetown, April (*T. L. A.*).	R. B. Sharpe, Esq. [P.].
o, *p.* ♂ ♀ ad. sk.	Pinetown, June (*T. L. A.*).	R. B. Sharpe, Esq. [P.].
q. Ad. æstiv. sk.	Zambesi (*Meller*).	Sharpe Collection.
r. Ad. hiem. sk.	Dar-es-Salaam, Zambesi.	Messrs. Moir [C.].
s. ♂ ad. hiem. sk.	Bombo, near Mombasa, Aug. 1877.	J. M. Hildebrandt [C.].
t. Ad. hiem. sk.	Mombasa.	Rev. A. Fowell Buxton [P.].

4. Macronyx ameliæ.

Macronyx ameliæ, *De Tarragon, Rev. Zool.* 1845, p. 452; *Gray & Mitch. Gen. B.* i. pl. 54 (1848); *Bp. Consp.* i. p. 247 (1850); *Gurney, Ibis*, 1862, p. 28; *Finsch & Hartl. Vög. Ostafr.* p. 278, note (1870); *Holub & Von Pelz. Beitr. Orn. Sudafr.* p. 87 (1882); *Sharpe, ed. Layard's B. S. Afr.* p. 533 (1884).

Anthus ameliæ, *Gray, Gen. B.* i. p. 206 (1848); *Layard, B. S. Afr.* p. 124 (1867); *Gray, Hand-l. B.* i. p. 252, no. 3664 (1869).

Adult. General colour above sandy buff, all the feathers black in the centre, imparting a streaked appearance; the head and hind neck less plainly streaked, especially the latter, the sides of the neck being uniform fulvous, with a black collar running down the sides of the neck to the fore neck; lores whitish; over the eye a rather broad streak of sandy buff; sides of face fulvous, deepening into rich sandy buff on the hinder ear-coverts; wing-coverts blackish, edged with sandy buff, the outermost slightly washed with pink like the margins of the wing, the innermost of the least series rather broadly edged with white, forming a tolerably distinct shoulder-patch; the primary-coverts edged with sandy buff, inclining

to white at the tip; quills and tail-feathers blackish, externally sandy buff, the outermost tail-feather pure white, the penultimate one white only at the tip; under surface of body light pink; fore neck, upper breast, flanks, vent, and under tail-coverts sandy buff, the feathers mesially streaked with dark brown, the thighs uniform pale sandy; under wing-coverts white, dusky at their bases; the lower surface of the quills ashy brown, much paler along the inner webs: "upper mandible brown, the under one paler; iris dark brown" (*T. Ayres*). Total length 7·5 inches, culmen 0·65, wing 3·4, tail 2·95, tarsus 1·25.

Hab. South-eastern Africa.

a. Ad. sk. Natal (*R. S. Fellowes*). Sharpe Collection.

NOTE.

The following species of Pipits remain unidentified by me:—

1. ANTHUS FUSCUS.

Alondra parda, *Azara, Apunt.* ii. p. 6 (1805).
Anthus fuscus, *Vieill. N. Dict. d'Hist. Nat.* xxvi. p. 490 (1818); *Hartl. Ind. Azara*, p. 10 (1847).

Whether this is the same bird as the *Anthus fuscus* of Burmeister (Th. Bras. iii. p. 120) can only be proved by the receipt of specimens.

2. ANTHUS PAYTENSIS.

Anthus paytensis, *Less. Compl. Buff.* viii. p. 107 (1838); *Gray, Hand-l. B.* i. p. 250, no. 3630 (1869).

3. ANTHUS SCAPULARIS.

Anthus scapularis, *Licht. Verz. Samml. Vög. Kaffernl.* p. 13 (1842) *Gray, Hand-l. B.* i. p. 250, no. 3623 (1869).

4. ANTHUS PŒCILOPTERUS.

Anthus pœcilopterus, *Neuwied*; *Gray, Hand-l. B.* i. p. 250, no. 3629 (1869).

5. ANTHUS FULIGINOSUS.

Anthus fuliginosus, *Less.*; *Gray, Hand-l. B.* i. p. 250, no. 3626.

ADDENDA.

THE following additions and corrections have been made whilst the present volume was passing through the press.

Page 6. **Vestiaria coccinea.**

Add :—

h, *i*. Skeletons.		Purchased.

Page 87. **Chelidon urbica.**

Add :—

Cecropis urbica, *Kaup, Natürl. Syst.* p. 109 (1829).

Page 96. **Cotile riparia.**

Add :—

Cecropis riparia, *Kaup, Natürl. Syst.* p. 109 (1829).

r'. Ad. sk.	Washington City, D.C., Aug. 16 (*E. Coues*).	Salvin-Godman Coll.
s', *t'*. Imm. sk.	Dueñas, Guatemala, Sept. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
u'. ♀ ad. sk.	Bartica Grove, British Guiana, April 18 (*H. Whitely*).	Salvin-Godman Coll.
v'. ♂ ad. sk.	Nauta, Peruvian Amazons, April (*E. Bartlett*).	Salvin-Godman Coll.
w'. Skeleton.	England.	Purchased.
x'. Skull.	England.	Purchased.

Page 109. **Cotile rupestris.**

Add :—

Cecropis rupestris, *Kaup, Natürl. Syst.* p. 109 (1829).

Page 113. **Tachycineta albiventris.**

Add :—

s. ♂ ad. sk.	New Granada.	Salvin-Godman Coll.
t, *u*. Ad. sk.	Copataza River, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
v. ♂ ad. sk.	Bartica Grove, British Guiana, Sept. 3 (*H. W.*).	Salvin-Godman Coll.
w. ♂ ad. sk.	Camacusa, British Guiana, June 29 (*H. W.*).	Salvin-Godman Coll.
x. Ad.; *y*. Imm. sk.	Pernambuco, Brazil (*W. A. Forbes*).	Salvin-Godman Coll.
z. Ad. sk.	Para (*A. R. Wallace*).	Salvin-Godman Coll.
a. Ad. sk.	South Brazil (*Natterer*).	Salvin-Godman Coll.

Add :— **Page 114. Tachycineta leucorrhous.**

e. Ad.; *f.* Juv. sk.	Pelotas, Rio Grande do Sul (*Joyner*).	Salvin-Godman Coll.
g. ♀ ad. sk.	Conchitas, Buenos Aires Sept. (*W. H. Hudson*).	Salvin-Godman Coll.

Add :— **Page 115. Tachycineta albilinea.**

e. ♂ ad. sk.	Vera Cruz, Mexico, April (*A. Boucard*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Belize River, Honduras, April 23 (*O. S.*).	Salvin-Godman Coll. (Type of *H. littorea*. Salv.)
g. ♀ ad. sk.	Chiapam, Guatemala, Jan. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Punta Arenas, Costa Rica, March 18 (*O. S. & F. D. G.*).	Salvin-Godman Coll.
i. Ad. sk.	Panama (*E. Arcé*).	Salvin-Godman Coll.
k. ♂ ad. sk.	Lion Hill, Isthmus of Panama (*McLeannan*).	Salvin-Godman Coll.

Add :— **Page 116. Tachycineta meyeni.**

n. ♂ juv. sk.	Coquimbo, Chili, Nov. (*A. H. Markham*),	Salvin-Godman Coll.
o, p. Ad. et juv. sk.	Chili (*E. C. Reed*).	Salvin-Godman Coll.

Add :— **Page 117. Tachycineta bicolor.**

x. ♂ ad. sk.	The Commons, D.C., May 12 (*E. Coues*).	Salvin-Godman Coll.
y. Ad. sk.	San Gerónimo, Guatemala (*O. S.*).	Salvin-Godman Coll.
z. ♂ ad. sk.	Dueñas, Guatemala (*O. S.*).	Salvin-Godman Coll.

Add :— **Page 119. Tachycineta thalassinus.**

u. ♀ ad. sk.	Fort Bridger, Utah, June 3 (*C. Drexler*).	Salvin-Godman Coll.
v. ♀ ad. sk.	Vancouver Island, April 14 (*A. Forrer*).	Salvin-Godman Coll.
w. ♂ ad. sk.	Vancouver Island, May 19 (*A. F.*).	Salvin-Godman Coll.
x. ♂ ad. sk.	Ciudad Durango, Mexico, July 20 (*A. F.*).	Salvin-Godman Coll.
y, z. ♂ ♀ ad. sk.	Dueñas, Guatemala, March (*O. S.*).	Salvin-Godman Coll.
a'–b'. ♂ ♀ ad.; *c', d'.* ♂ imm. sk.	San Gerónimo, Guatemala, Jan. (*O. S. & F. D. G.*).	Salvin-Godman Coll.

Add :— **Page 121. Tachycineta cyaneoviridis.**

b. Ad.; *c.* Juv. sk.	Nassau (*C. B. Cory*).	Salvin-Godman Coll.

Add :— **Page 128. Hirundo rustica.**

ω''–δ'''. Skeletons.	England.	Purchased.
ϵ'''. Skeleton.	S. Germany.	Dr. Günther [C.].
ζ''', η'''. Skulls.	S. Germany.	Dr. Günther [C.].
θ'''. Sternum.		J. Ingall, Esq. [P.].
ι'''. Skeleton.		Purchased.

Add :— **Page 137. Hirundo erythrogastra.**

b'. ♂ ad. sk.	Unalaska, June 9 (*W. H. Dall*).	Salvin-Godman Coll.
c'. Juv. sk.	Hall's Barn, D.C. (*E. Coues*).	Salvin-Godman Coll.
d'. Ad. sk.	Washington, D.C. (*C. Drexler*).	Salvin-Godman Coll.
e'. ♂ ad. sk.	Dueñas, Guatemala, Sept. 2 (*O. S.*).	Salvin-Godman Coll.
f'. Juv. sk.	Dueñas, Guatemala, 1862 (*O. S. & F. D. G.*).	Salvin-Godman Coll.
g'. Ad.; *h'*, *i'*. Juv. sk.	Calobre, Veragua (*Arcé*).	Salvin-Godman Coll.
k'. Ad. sk.	Volcan de Chiriqui, Veragua (*Arcé*).	Salvin-Godman Coll.
l'. Imm. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.
m', *n'*. ♂ ♀ ad. sk.	Roraima, British Guiana, April (*H. Whitely*).	Salvin-Godman Coll.
o'. Juv. sk.	Island of Mexiana (*A. R. Wallace*).	Salvin-Godman Coll.
p'. ♂ ad. sk.	Cosnipata, Peru, Oct. 17 (*H. Whitely*).	Salvin-Godman Coll.

Add :— **Page 140. Hirundo tytleri.**

n. Ad. sk.	Dueñas, Guatemala (*O. S.*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Callao, Peru (*A. H. Markham*).	Salvin-Godman Coll.

Add :— **Page 160. Hirundo nipalensis.**

s. Bones of trunk.	Nepal.	B.H.Hodgson,Esq.[P.].

Add :— **Page 170. Hirundo euchrysea.**

f, *g*. Ad. et juv. sk.	Jamaica.	Salvin-Godman Coll.

Add :— **Page 173. Progne purpurea.**

y. ♂ ad. sk.	Fort Union (*Dr. Hayden*).	Salvin-Godman Coll.
z, *a'*. ♂ ♀ ad. sk.	Big Trees, California, May (*A. Forrer*).	Salvin-Godman Coll.
b'. ♂ ad. sk.	British Honduras (*Blancaneaux*).	Salvin-Godman Coll.
c', *d'*. ♂; *e'*. ♀ ad. sk.	Bahia (*Wucherer*).	Salvin-Godman Coll.
f'. ♂ ad. sk.	Barra do Rio Negro, Feb. 1 (*Natterer*).	Salvin-Godman Coll.

Add :— **Page 175. Progne furcata.**

h, i. ♂ ♀ ad. sk.	Mendoza, Feb. (*Weisshaupt*).	Salvin-Godman Coll.
k. ♂ ad. sk.	Rio Negro, Patagonia (*R. Hudson*).	Salvin-Godman Coll.

Add :— **Page 176. Progne dominicensis.**

m. ♂ ad. sk.	Spanishtown, Jamaica, May (*W. T. March*).	U.S. Nat. Museum [P.].
n. Pull. sk.	Spanishtown, Jamaica, May (*W. T. March*).	U.S. Nat. Museum [P.].
o, p. ♂ ♀ ad. sk.	Jamaica.	Salvin-Godman Coll.
q. ♂ ad. sk.	Porto Rico (*Dr. Bryant*).	Salvin-Godman Coll.
r. ♂ ad. sk.	Porto Rico (*Swift*).	Salvin-Godman Coll.
s. ♂ ad. sk.	Porto Rico (*Latimer*).	Salvin-Godman Coll.
t. ♀ imm. sk.	Porto Rico (*Gundlach*).	Salvin-Godman Coll.
u. ♂ ad. sk.	S. Domingo, Sept. 16 (*McGregor*).	Salvin-Godman Coll.
v. Sternum.	Jamaica.	P. H. Gosse, Esq. [C.].

Add :— **Page 177. Progne domestica.**

e, f. ♂ ♀ ad. sk.	Santa Catarina, Brazil (*Rogers*).	Salvin-Godman Coll.

Add :— **Page 178. Progne chalybea.**

v. Imm. sk.	San Pedro, Honduras (*G. M. Whitely*).	Salvin-Godman Coll.
w. ♂ ad. sk.	Dueñas, Guatemala (*O. S.*).	Salvin-Godman Coll.
x. ♂ ad. sk.	San Gerónimo, Guatemala (*O. S. & F. D. G.*).	Salvin-Godman Coll.
y. ♀ ad. sk.	Cahabon, Guatemala (*O. S.*).	Salvin-Godman Coll.
z. Ad. sk.	Costa Rica (*Gabb*).	U.S. Nat. Museum [P.].
a'. ♂ ad. sk.	Nicoya, Costa Rica (*Arcé*).	Salvin-Godman Coll.
b'. ♂ ad. sk.	Volcan de Chiriqui, Veragua (*Arcé*).	Salvin-Godman Coll.
c'. Ad.; *d'.* Juv. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.
e'. Juv. sk.	Venezuela (*Spence*).	Salvin-Godman Coll.
f'. Juv. sk.	Maroni River, Surinam (*Kappler*).	Salvin-Godman Coll.
g'. ♂ ad. sk.	Albina, Surinam, May (*C. Bartlett*).	Salvin-Godman Coll.
h', i'. ♂; *k', l'.* ♀ ad. sk.	Bartica Grove, British Guiana, Feb. (*H. Whitely*).	Salvin-Godman Coll.
m'. Juv. sk.	Pará (*A. R. Wallace*).	Salvin-Godman Coll.
n', o'. ♂ ad. et juv. sk.	Island of Mexiana (*A. R. Wallace*).	Salvin-Godman Coll.

Add :— **Page 180. Progne tapera.**

z, a'. Ad. sk.	Santa Rita, Ecuador (*Villagomez*).	Salvin-Godman Coll.

b', *c'*. ♂ ♀ ad. sk.	Yquitos, July (*H. Whitely*).	Salvin-Godman Coll.
d, *e'*. Imm. sk.	Pernambuco (*W. A. Forbes*).	Salvin-Godman Coll.
f'. Ad. sk.	Bahia (*Wucherer*).	Salvin-Godman Coll.
g'. ♀ ad. sk.	Curityba, Brazil, Jan. 12 (*Natterer*).	Salvin-Godman Coll.
h'. Ad. sk.	River Tocantins, Amazon R. (*A. R. Wallace*).	Salvin-Godman Coll.

Add :— Page 183. **Atticora fasciata.**

m. Juv. sk.	Sarayacu, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
n, *o*. Ad. sk.	Copataza River, Ecuador (*C. B.*).	Salvin-Godman Coll.
p. ♂ ad. sk.	Cayenne.	Salvin-Godman Coll.
q, *r*. ♂ ♀ ad. sk.	Merume Mounts, British Guiana, July 5 (*H. Whitely*).	Salvin-Godman Coll.
s. ♂ ad. sk.	River Ataparow, British Guiana, Jan. 26 (*H. W.*).	Salvin-Godman Coll.
t. Ad. sk.	Rio Negro, Brazil (*A. R. Wallace*).	Salvin-Godman Coll.
u. Ad. sk.	Yurimaguas, E. Peru (*E. Bartlett*).	Salvin-Godman Coll.
v, *w*. Ad. sk.	Yuyo, Bolivia (*C. Buckley*).	Salvin-Godman Coll.
x. Juv. sk.	Cangalli, Bolivia (*C. Buckley*).	Salvin-Godman Coll.

Add :— Page 184. **Atticora cinerea.**

l. Ad. sk.	Bogotá, New Granada.	Salvin-Godman Coll.
m. ♀ ad. sk.	Quito, Ecuador, May (*L. Fraser*).	Salvin-Godman Coll.
n. Ad. sk.	Sical, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
o. ♀ ad. sk.	Arequipa, S.W. Peru, May 31 (*H. Whitely*).	Salvin-Godman Coll.
p. ♀ ad. sk.	Tinta, Peru, April 1 (*H. Whitely*).	Salvin-Godman Coll.

Add :— Page 185. **Atticora tibialis.**

d. ♂ ad. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.
e. Ad. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Remedios, Antioquia (*T. K. Salmon*).	Salvin-Godman Coll.

Add :— Page 186. **Atticora cyanoleuca.**

d'. Ad. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll
e', *f'*. Ad. sk.	Tucurriqui, Costa Rica (*E. Arcé*).	Salvin-Godman Coll.
g', *h'*. ♀ ad. et juv. sk.	Calovevora, Veragua (*E. Arcé*).	Salvin-Godman Coll.
i', *k'*, *l'*. Imm. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.

m'. ♀ juv. sk.	Frontino, U.S. Colombia (*T. K. Salmon*).	Salvin-Godman Coll.
n'. Ad.; *o'*. Juv. sk.	Ecuador.	Salvin-Godman Coll.
p'. Ad. sk.	Sical, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
q. Ad. sk.	Chiguinda, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
r'. ♂ ad. sk.	Arequipa, Peru, June 6 (*H. Whitely*).	Salvin-Godman Coll.
s'. Ad. sk.	Cangalli, Bolivia (*C. Buckley*).	Salvin-Godman Coll.
t. ♀ ad. sk.	Cosquin, Cordova, Argentine Republic, Aug. 17 (*E. W. White*).	Salvin-Godman Coll.
u'. Ad. sk.	Chili (*Reed*).	Salvin-Godman Coll.
v'. ♀ ad. sk.	Santiago, Chili (*Philippi*).	Salvin-Godman Coll.
w'. ♀ juv. sk.	Coquimbo, Chili, Nov. (*A. H. Markham*).	Salvin-Godman Coll.
x', *y'*. Ad. sk.	Bahia (*Wucherer*).	Salvin-Godman Coll.
z'. Juv. sk.	Roraima, British Guiana, Dec. 10 (*H. Whitely*).	Salvin-Godman Coll.
a. ♂ juv. sk.	Camacusa, May 8 (*H. W.*).	Salvin-Godman Coll.

Add :— Page 188. **Atticora pileata.**

f, *g*. ♂; *h*, *i*. ♀ ad. sk.	Coban, Guatemala, Feb. (*O. S. & F. D. G.*).	Salvin-Godman Coll.

Add :— Page 189. **Atticora fucata.**

e. ♀ ad. sk.	Ypanema, Brazil, July 9 (*Natterer*).	Salvin-Godman Coll.
f. Juv. sk.	Pampas Argentinas (*Leybold*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Mendoza, Feb. (*Weisshaupt*).	Salvin-Godman Coll.
h, *i*. ♂; *k*. ♀ ad. sk.	Roraima, British Guiana, Jan. (*H. Whitely*).	Salvin-Godman Coll.

Add :— Page 193. **Petrochelidon pyrrhonota.**

y. Ad. sk.	Washington, D.C. (*Drexler*).	Salvin-Godman Coll.
z. ♂ ad. sk.	Ytararé, Brazil (*Natterer*).	Salvin-Godman Coll.
a'. ♂ ad. sk.	Pelotas, Rio Grande do Sul (*Joyner*).	Salvin-Godman Coll.

Add :— Page 194. **Petrochelidon swainsoni.**

e. Ad. sk.	Mexico (*Boucard*).	Salvin-Godman Coll.
f. ♀ ad. sk.	Oaxaca, March (*Boucard*).	Salvin-Godman Coll.
g. Juv. sk.	Dueñas, Guatemala (*O. S.*).	Salvin-Godman Coll.

Add :— Page 195. **Petrochelidon fulva.**

f. ♀ ad. sk.	Jamaica.	Salvin-Godman Coll.
g. ♂ ad. sk.	Cuba.	Salvin-Godman Coll.

h–l. Ad. sk.	San Cristobal, Cuba (*G. F. Gaumer*).	Salvin-Godman Coll.
m. Ad. sk.	Northern Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
n. Imm. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.
o. Sternum.	Jamaica.	P. H. Gosse, Esq. [C.].

Add :— Page 196. **Petrochelidon ruficollaris.**

d. ♂ ad.; *e.* ♀ juv. sk.	Lima (*Nation*).	Salvin-Godman Coll.

Add :— Page 199. **Petrochelidon ariel.**

f. Skeleton.	Australia.	Purchased.

Add :— Page 206. **Stelgidopteryx serripennis.**

u. ♂ ad. sk.	Fort Bridger, Utah, May (*C. Drexler*).	Salvin-Godman Coll.
v, w. ♂ ♀ ad. sk.	Presidio, Mexico, Jan. and Feb. (*A. Forrer*).	Salvin-Godman Coll.
x. Ad. sk.	Dueñas, Guatemala, Oct. 17 (*O. S.*).	Salvin-Godman Coll.
y. ♂ ad. sk.	Dueñas, Guatemala, Feb. 12 (*O. S.*).	Salvin-Godman Coll.
z. ♀ ad.; *a'.* Juv. sk.	Dueñas, Guatemala, Dec. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
b'. Ad. sk.	Coban, Guatemala, Nov. (*O. S.*).	Salvin-Godman Coll.
c'. Ad. sk.	San Gerónimo, Guatemala, June 1 (*O. S. & F. D. G.*).	Salvin-Godman Coll.
d'. ♂ ad. sk.	Retalhuleu, Guatemala, Sept. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
e'. Ad. sk.	Irazu district, Costa Rica, (*H. Rogers*).	Salvin-Godman Coll.
f'. ♂ ad. sk.	Attiro, Costa Rica, May 13 (*J. Carmiol*).	Salvin-Godman Coll.
g', h'. Ad. sk.	Calovevora, Veragua (*E. Arcé*).	Salvin-Godman Coll.

Add :— Page 208. **Stelgidopteryx ruficollis.**

p. ♂ ad. sk.	Yquitos, E. Peru, April 18 (*H. Whitely*).	Salvin-Godman Coll.
q. ♀ ad. sk.	Yquitos, March 10 (*H. Whitely*).	Salvin-Godman Coll.
r, s. Ad. sk.	Yuyo, Bolivia (*C. Buckley*).	Salvin-Godman Coll.
t. Ad. sk.	Brazil.	Salvin-Godman Coll.
u, v. Ad. sk.	Bahia (*Wucherer*).	Salvin-Godman Coll.
w, x. Ad. sk.	Pernambuco (*W. A. Forbes*).	Salvin-Godman Coll.
y. Ad. sk.	Ecuador.	Salvin-Godman Coll.
z. Ad. sk.	River Napo (*Fraser*).	Salvin-Godman Coll.

Add:— Page 209. **Stelgidopteryx uropygialis.**

k. ♂ ad. sk.	Costa Rica (*J. Carmiol*).	Salvin-Godman Coll.
l. ♀ ad. sk.	Chitra, Veragua (*E. Arcé*).	Salvin-Godman Coll.
m. Ad. sk.	Panama (*E. Arcé*).	Salvin-Godman Coll.
n. ♂ ad. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.
o. Ad. sk.	Bogotá.	Salvin-Godman Coll.
p. ♂ ad. sk.	Santa Elena, U.S. Colombia (*T. K. Salmon*).	Salvin-Godman Coll.
q. Ad. sk.	Cayenne, April 9 (*Jelski*).	Salvin-Godman Coll.
r. Ad.; *s.* ♂ ad. sk.	Roraima, Nov. (*H. Whitely*).	Salvin-Godman Coll.
t, u. ♂ ad. sk.	Roraima, June 7 (*H. Whitely*).	Salvin-Godman Coll.
v. ♂ ad. sk.	Roraima, Jan. 5 (*H. Whitely*).	Salvin-Godman Coll.

Add:— Page 212. **Ampelis garrulus.**

m'. Ad. sk.	Esquimault, Brit. Columbia (*A. H. Markham*).	Salvin-Godman Coll.
n'. Ad. sk.	Camp Harney, Oregon (*C. Bendire*).	Salvin-Godman Coll.
o'. ♂ ad. sk.	Racine, Wisc. (*P. R. Hoy*).	Salvin-Godman Coll.

Add:— Page 215. **Ampelis cedrorum.**

s. ♂ juv. sk.	District of Columbia, Aug. 11 (*E. Coues*).	Salvin-Godman Coll.
t. ♀ juv. sk.	District of Columbia, Mar. 2 (*E. Coues*).	Salvin-Godman Coll.
u. Ad. sk.	Oaxaca, Mexico (*Fenochio*).	Salvin-Godman Coll.
v. Imm. sk.	Savana Grande, Guatemala, Feb. 2 (*O. S. & F. D. G.*).	Salvin-Godman Coll.
w. Ad. sk.	Dueñas (*O. S. & F. D. G.*).	Salvin-Godman Coll.
x. Ad. sk.	Choctum (*O. S. & F. D. G.*).	Salvin-Godman Coll.
y. Juv. sk.	Tactic (*O. S. & F. D. G.*).	Salvin-Godman Coll.
z. Juv. sk.	Pine ridge of Dolores, near Peten (*O. S. & F. D. G.*).	Salvin-Godman Coll.

Add:— Page 218. **Dulus dominicus.**

d. ♂ ad. sk.	La Vega, San Domingo, July 19 (*C. B. Cory*).	Salvin-Godman Coll.

Add:— Page 219. **Phainoptila melanoxantha.**

c. ♂; *d, e.* ♀ ad. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
f, g. ♂ juv. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
h. ♂ ad. sk.	San Francisco, Costa Rica (*H. Rogers*).	Salvin-Godman Coll. (Type of species.)

Add:— Page 220. **Phainopepla nitens.**

c. ♂ ad. sk.	Fort Yuma, Colorado River (*H. R. Mollhausen*).	Salvin-Godman Coll.
d, e. ♂ ♀ ad. sk.	La Paz, California, March (*A. Forrer*).	Salvin-Godman Coll.
f, g. ♂ ♀ ad. sk.	Near the City of Mexico (*Sallé*).	Salvin-Godman Coll.

Add:— Page 222. **Ptilogonys cinereus.**

k. ♂ ad. sk.	Parada, Mexico (*Boucard*).	Salvin-Godman Coll.
l, m. ♀ ad. sk.	Oaxaca (*Fenochio*).	Salvin-Godman Coll.
n. Ad.; *o.* Juv. sk.	Volcan de Fuego, Guatemala, July & Aug. (*O. S.*).	Salvin-Godman Coll.
p, q. Ad. sk.	Dueñas (*O. S. & F. D. G.*).	Salvin-Godman Coll.
r. ♂ ad. sk.	Barranco-Hondo (*O. S. & F. D. G.*).	Salvin-Godman Coll.

Add:— Page 224. **Ptilogonys caudatus.**

g, h. ♂ ♀ ad. sk.	Volcan de Cartago, Costa Rica (*Arcé*).	Salvin-Godman Coll.
i. ♂ ad. sk.	San Francisco, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
k. ♂ juv. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Irazu district, March (*Von Frantzius*).	Salvin-Godman Coll.
m, n. ♂; *o, p.* ♀ ad. sk.	Volcan de Chiriqui, Veragua (*E. Arcé*).	Salvin-Godman Coll.

Add:— Page 228. **Leucopeza semperi.**

c, d. Ad. et juv. sk.	Santa Lucia.	Salvin-Godman Coll.

Add:— Page 228. **Leucopeza bishopi.**

a. ♀ ad. sk.	St. Vincent (*C. E. Lister*).	Salvin-Godman Coll.

Add:— Page 230. **Helminthotherus vermivorus.**

n. Ad. sk.	Washington, D.C. (*W. Hutton*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Dueñas, Guatemala, Sept. 25 (*O. S.*).	Salvin-Godman Coll.
p. Ad. sk.	Choctum, Vera Paz, Feb. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
q. Ad. sk.	Tactic, Vera Paz (*O. S.*).	Salvin-Godman Coll.
r. Ad. sk.	Costa Rica (*Van Patten*).	Salvin-Godman Coll.
s. ♂ ad. sk.	Chitra, Veragua (*E. Arcé*).	Salvin-Godman Coll.
t. Ad. sk.	Chiriqui, Veragua (*Arcé*).	Salvin-Godman Coll.
u. Ad. sk.	Santa Fé, Veragua (*Arcé*).	Salvin-Godman Coll.

Add:— Page 235. **Helminthophila chrysoptera.**

p. ♂ ad. sk.	Choctum, Vera Paz, Feb. (*O. S. & F. D. G.*)	Salvin-Godman Coll.
q. ♀ ad. sk.	Coban, Vera Paz (*O. S. & F. D. G.*).	Salvin-Godman Coll.
r. ♂ ad. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
s. ♀ ad. sk.	Barranca, Costa Rica (*Carmiol*).	Salvin-Godman Coll.
t. ♂ ad. sk.	Dota Mountains, Costa Rica (*Carmiol*).	Salvin-Godman Coll.
u. ♂ ad. sk.	Calovevora, Veragua (*Arcé*).	Salvin-Godman Coll.
v. ♂ ad. sk.	Santa Fé, Veragua (*Arcé*).	Salvin-Godman Coll.
w. ♂ ad. sk.	Chiriqui, Veragua (*Arcé*).	Salvin-Godman Coll.
x. ♀ ad. sk.	Lion Hill, Panama (*McLeannan*).	Salvin-Godman Coll.
y. ♀ ad. sk.	Interior of Colombia (*Birchall*).	Salvin-Godman Coll.
z. ♂ ad. sk.	Bogotá (*Bowman*).	Salvin-Godman Coll.
a'. ♂ ad. st.	Medellin, U.S. Colombia (*T. K. Salmon*).	Salvin-Godman Coll.
b'. ♀ ad. sk.	Minca, U.S. Colombia, Feb. 8 (*F. Simons*).	Salvin-Godman Coll.

Add:— Page 237. **Helminthophila pinus.**

p. ♀ ad. sk.	Oyster Bay, Long Island, June 11 (*Roosevelt*).	Salvin-Godman Coll.
q. ♂ ad. sk.	Knox Co., Indiana, May 24 (*R. Ridgway*).	Salvin-Godman Coll.
r, s. Ad. et juv. sk.	Teleman, Vera Paz, Guatemala (*O. S.*).	Salvin-Godman Coll.
t, u. Ad. sk.	Coban, Vera Paz (*O. S. & F. D. G.*).	Salvin-Godman Coll.
v. Ad. sk.	Retalhuleu, Sept. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
w. Ad. sk.	Choctum, Vera Paz (*O. S.*).	Salvin-Godman Coll.

Add:— Page 239. **Helminthophila peregrina.**

x. ♂ juv. autumn. sk.	Grand Crossing, Illinois, Sept. 9, 1884 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
y. ♂ juv. autumn. sk.	Hyde Park, Ill., Oct. 6 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
z. ♂ ad. sk.	Pembina, Dakota, June 3 (*E. Coues*).	Salvin-Godman Coll.
a'. ♀ juv. sk.	Volcan de Agua above S. Diego, Guatemala, Nov. (*O. S.*).	Salvin-Godman Coll.
b', c'. Imm. sk.	Coban, Vera Paz, Nov. (*O. S.*).	Salvin-Godman Coll.

d'. ♂ ad. sk.	Volcan de Fuego, Nov. (*O. S.*).	Salvin-Godman Coll.
e'. ♂ ad. sk.	Medio Monte, Guatemala, Oct. 30 (*O. S.*).	Salvin-Godman Coll.
f'. Imm. sk.	Dueñas, Guatemala, Oct. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
g'. ♂ ad. sk.	San José, Costa Rica (*Von Frantzius*).	Salvin-Godman Coll.
h'. ♀ ad. sk.	San José (*Carmiol*).	Salvin-Godman Coll.
i'. Ad. sk.	Volcan de Chiriqui, Veragua (*Arcé*).	Salvin-Godman Coll.
k'. ♀ ad. sk.	Calovevora, Veragua (*Arcé*).	Salvin-Godman Coll.
l', *m'*. ♀ ad. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.
n'. ♀ ad. sk.	Minca, Sierra Nevada of Santa Marta, Jan. (*F. Simons*).	Salvin-Godman Coll.
o', *p'*. ♂ ♀ ad. sk.	Minca, Sierra Nevada of Santa Marta, March (*F. Simons*).	Salvin-Godman Coll.

Add:— Page 242. **Helminthophila ruficapilla.**

k. Ad. sk.	Nova Scotia (*W. G. Winter*).	Salvin-Godman Coll.
l. Ad. sk.	Massachusetts (*Dr. Brewer*).	Salvin-Godman Coll.
m. ♀ ad. sk.	Upper Klamath Lake, Oregon, May 18 (*A. Forrer*).	Salvin-Godman Coll.
n. Ad. sk.	Presidio, Mexico, Dec. 22 (*A. F.*).	Salvin-Godman Coll.
o. ♀ ad. sk.	Presidio, Mexico, Feb. 4 (*A. F.*).	Salvin-Godman Coll.
p, *q*. Juv. sk.	Ciudad Durango, Mexico, Oct. 20 (*A. F.*).	Salvin-Godman Coll.
r. Ad. sk.	Jalapa, Mexico (*De Oca*).	Salvin-Godman Coll.
s. Ad sk.	Jalapa, Mexico (*Höge*).	Salvin-Godman Coll.

Add:— Page 244. **Helminthophila celata.**

i. ♂ ad. sk.	Souris River, Dakota, Sept. 18 (*E. Coues*).	Salvin-Godman Coll.
k. ♂ ad. sk.	Fort Bridger, Utah, May 9 (*C. Drexler*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Vancouver Island, April 28 (*A. Forrer*).	Salvin-Godman Coll.
m. ♀ ad. sk.	Vancouver Island, May 9 (*A. F.*).	Salvin-Godman Coll.
n. Ad. sk.	San Francisco, Cal. (*E. F. Lorquier*).	Salvin-Godman Coll.
o. ♂ ad.; *p*. Juv. sk.	Mazatlan, Dec. (*A. Forrer*).	Salvin-Godman Coll.
q. ♂ ad. sk.	Presidio, Mexico, Jan. 12 (*A. F.*).	Salvin-Godman Coll.
r. ♀ ad. sk.	Presidio, Mexico, March 3 (*A. F.*)	Salvin-Godman Coll.
s. ♂ ad. sk.	La Parada, Feb. (*A. Boucard*).	Salvin-Godman Coll.
t. Ad. sk.	Chimay, Vera Paz, Guatemala (*Sarg*).	Salvin-Godman Coll.

Add:— **Page 247. Helminthophila virginiæ.**

a. ♀ ad. sk.	Great Salt Lake City, May 26 (*R. Ridgway*).	Salvin-Godman Coll.
b. ♂ ad. sk.	Colorado Springs, Colorado, May 13 (*W. Brewster*).	Salvin-Godman Coll.

Add:— **Page 248. Helminthophila luciæ.**

b. ♀ ad. sk.	Fort Whipple, Arizona, May 1 (*E. Coues*).	Salvin-Godman Coll.

Add:— **Page 249. Protonotaria citrea.**

g. ♂ ad. sk.	Mt. Carmel, Ill., April 30 (*R. Ridgway*).	Salvin-Godman Coll.
h. ♀ ad. sk.	Mt. Carmel, Ill., May 14 (*R. Ridgway*).	Salvin-Godman Coll.
i. [♀] ad. sk.	Savannah, Carolina (*S. F. Baird*).	Salvin-Godman Coll.
k. [♀] ad. sk.	N. Yucatan (*F. Gaumer*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Veragua (*E. Arcé*).	Salvin-Godman Coll.
m. ♂ ad. sk.	Antioquia, Sept. (*T. K. Salmon*).	Salvin-Godman Coll.
n. ♂ ad. sk.	Valle Dupar, U.S. Colombia, Sept. 25 (*F. Simons*).	Salvin-Godman Coll.
o. ♂ ad. sk.	South of Merida, Venezuela (*A. Goering*).	Salvin-Godman Coll.

Add:— **Page 251. Mniotilta varia.**

y. ♂ ad. sk.	Rock Creek, D.C., April 5 (*E. Coues*).	Salvin-Godman Coll.
z. ♀ ad. sk.	Haw's Woods, D.C., May 10 (*E. Coues*).	Salvin-Godman Coll.
a'. ♂ ad. sk.	Presidio, Mexico, Dec. 4 (*A. Forrer*).	Salvin-Godman Coll.
b'. ♂ ad. sk.	Belize, Honduras (*Blancaneaux*).	Salvin-Godman Coll.
c'. ♂ ad. sk.	Belize, Honduras, Dec. 14 (*O. S.*).	Salvin-Godman Coll.
d'. ♂ ad. sk.	Retalhuleu, Guatemala, Sept. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
e', f'. ♂ ad. sk.	Dueñas, Feb. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
g', h'. ♂ ♀ ad. sk.	Volcan de Agua, Nov. (*O. S.*).	Salvin-Godman Coll.
i'. ♀ ad. sk.	Volcan de Fuego, Aug 14 (*O. S.*).	Salvin-Godman Coll.
k'. Ad. sk.	San Gerónimo (*O. S.*).	Salvin-Godman Coll.
l'. ♂ ad. sk.	Vera Paz (*O. S. & F. D. G.*).	Salvin-Godman Coll.
m'. Imm. sk.	Coban, Nov. (*O. S.*).	Salvin-Godman Coll.
n'. Juv. sk.	Choctum (*O. S. & F. D. G.*).	Salvin-Godman Coll.

o'. Imm. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
p'. ♂ ad. sk.	Angostura, Costa Rica, Jan. 28 (*J. Carmiol*).	Salvin-Godman Coll.
q', *r'*. ♂ ♀ ad. sk.	Calovevora, Veragua (*E. Arcé*).	Salvin-Godman Coll.
s'. ♂ juv. sk.	Volcan de Chiriqui, Veragua (*E. Arcé*).	Salvin-Godman Coll.
t'. ♂ juv. sk.	Santa Fé, Veragua (*E. Arcé*).	Salvin-Godman Coll.
u', *v'*. ♂ ♀ ad. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.
w'. Imm. sk.	Bogotá.	Salvin-Godman Coll.
x', *y'*. ♂ ♀ ad. sk.	Minca, Sierra Nevada of Santa Marta, Jan. 18 (*F. Simons*).	Salvin-Godman Coll.
z'. ♂ imm. sk.	Santa Elena, Antioquia (*T. K. Salmon*).	Salvin-Godman Coll.
a. Juv. sk.	San Domingo, W. I. (*C. G. McGregor*).	Salvin-Godman Coll.

Add:— Page 255. **Parula superciliosa.**

g. ♂ ad. sk.	Near City of Mexico.	Salvin-Godman Coll.
h. ♂ ad.; *i*. ♀ juv. sk.	Ciudad Durango, Mexico, June (*A. Forrer*).	Salvin-Godman Coll.
k. ♂ ad. sk.	Oaxaca, W. Mexico (*A. Fenochio*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Volcan de Fuego, Sept. (*O. S.*).	Salvin-Godman Coll.
m. ♂ imm. sk.	Volcan de Fuego, Nov. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
n. ♀ ad. sk.	Calderas, Oct. 31 (*O. S.*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Santa Barbara, Vera Paz, Jan. (*O. S. & F. D. G.*).	Salvin-Godman Coll.

Add:— Page 256. **Parula americana.**

w. ♀ ad. sk.	Smith's Woods, D.C., May 10 (*E. Coues*).	Salvin-Godman Coll.
x. ♂ imm. sk.	Northern Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
y. ♀ ad. sk.	Northern Yucatan, Oct. (*G. F. Gaumer*).	Salvin-Godman Coll.
z, *a'*. ♂ ♀ ad. sk.	Coban, Vera Paz, Guatemala, Nov. (*O. S.*).	Salvin-Godman Coll.
b'. Juv. sk.	San Domingo, W. I. (*C. G. McGregor*).	Salvin-Godman Coll.
c'. ♀ juv. sk.	Samana, San Domingo, W. I., Jan. 20 (*C. G. McGregor*).	Salvin-Godman Coll.
d'. ♂ juv. sk.	Porto Rico (*Dr. Bryant*).	Salvin-Godman Coll.
e'. Skeleton.	N. America.	Purchased.

Add:— **Page 259. Parula pitiayumi.**

o. ♂ ad. sk.	Pelotas, Rio Grande do Sul (*Joyner*).	Salvin-Godman Coll.
p, q. ♂ ♀ ad. sk.	Rio Janeiro (*J. Vouds*).	Salvin-Godman Coll.
r, s. ♂ ♀ ad. sk.	Bahia (*Wucherer*).	Salvin-Godman Coll.
t. ♂ ad. sk.	Bolivia (*C. Buckley*).	Salvin-Godman Coll.
u. ♂ ad. sk.	San José, Ecuador (*C. B.*).	Salvin-Godman Coll.
v. ♂ ad. sk.	Balzar Mountains, Ecuador (*Illingworth*).	Salvin-Godman Coll.
w. ♂ ad. sk.	Bogotá.	Salvin-Godman Coll.
x. ♀ ad. sk.	Minca, Sierra Nevada of Santa Marta, Feb. 6 (*F. Simons*).	Salvin-Godman Coll.
y. ♀ ad. sk.	Venezuela.	Salvin-Godman Coll.
z. ♂ ad. sk.	Caripe, Venezuela, May (*A. Goering*).	Salvin-Godman Coll.
a', b'. ♂ ♀ ad. sk.	Roraima, British Guiana, Aug. (*H. Whitely*).	Salvin-Godman Coll.
c'. Skeleton.		Eyton Collection.

Add:— **Page 260. Parula inornata.**

f. ♂ ad. sk.	Guatemala (*Boucard*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Choctum, Vera Paz, Jan. (*O. S.*).	Salvin-Godman Coll. (Type of species.)
h. ♂; *i, k.* ♀ ad. sk.	Turrialba, Costa Rica (*E. Arcé*).	Salvin-Godman Coll.
l, m. ♂ ♀ ad. sk.	Volcan de Chiriqui, Veragua (*E. Arcé*).	Salvin-Godman Coll.
n, o. ♂ ♀ ad. sk.	Boquete de Chitra, Veragua (*E. Arcé*).	Salvin-Godman Coll.

Add:— **Page 261. Parula nigrilora.**

c. ♂ ad. sk.	Texas, Feb. 28 (*G. B. Sennett*).	Salvin-Godman Coll.
d. ♀ ad. sk.	Presidio, Mexico, Dec. 22 (*A. Forrer*).	Salvin-Godman Coll.

Page 262. Parula insularis.

In the synonymy:—

For "Parus insularis, *Lawr.*," *read* Parula insularis, *Lawr.*

Add:—

b, c. ♂ ♀ ad. sk.	Tres Marias Islands, Feb. (*A. Forrer*).	Salvin-Godman Coll.
d. Ad. sk.	Socorro Islands (*A. G. Grayson*).	Salvin-Godman Coll.

Add:— **Page 263. Parula gutturalis.**

c. Juv. sk.	Costa Rica (*Von Patten*).	Salvin-Godman Coll.
d, e. Ad. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
f, g. ♂ ♀ ad. sk.	Volcan de Chiriqui, Veragua (*E. Arcé*).	Salvin-Godman Coll.

Add:— Page 266. **Dendrœca eoa.**

c. Sternum.	Jamaica.	P. H. Gosse, Esq. [C.].

Add:— Page 273. **Dendrœca æstiva.**

v', w'. ♂ ♀ ad. sk.	Fort Bridger, Utah (*C. Drexler*).	Salvin-Godman Coll.
x'. ♂ ad sk.	Presidio, Mexico (*A. Forrer*).	Salvin-Godman Coll.
y', z'. ♂ ♀ ad.; *a.* ♀ juv. sk.	Presidio, Jan. (*A. Forrer*).	Salvin-Godman Coll.
β, γ. ♀ ad. sk.	N. Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
δ. Ad. sk.	British Honduras (*Blancaneux*).	Salvin-Godman Coll.
ε, ζ. ♂ ♀ ad. sk.	Dueñas, Guatemala, Aug. and Sept. (*O. S.*).	Salvin-Godman Coll.
η. Juv. sk.	Coban, Vera Paz (*O. S.*).	Salvin-Godman Coll.
θ. ♀ ad. sk.	Retalhuleu (*O. S.*).	Salvin-Godman Coll.
ι. Imm. sk.	Irazu district of Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
κ. ♂ imm. sk.	Santa Fé, Veragua (*E. Arcé*).	Salvin-Godman Coll.
λ. ♂ ad. sk.	Calovevora, Veragua *E. Arcé*).	Salvin-Godman Coll.
μ. ♀ imm. sk.	Bugaba, Chiriqui (*E. Arcé*).	Salvin-Godman Coll.
ν, ξ. ♂ ♀ ad. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.
π. ♂ ad. sk.	Panama (*Hicks*).	Salvin-Godman Coll.
ρ. ♂ ad. sk.	Colombia.	Salvin-Godman Coll.
σ, τ. ♂ ad. sk.	Medellin, Antioquia (*T. K. Salmon*).	Salvin-Godman Coll.
υ. Ad. sk.	Minca, Sierra Nevada of Santa Marta (*F. Simons*).	Salvin-Godman Coll.
φ. Ad. sk.	Venezuela.	Salvin-Godman Coll.
χ, ψ. ♂ ♀ ad. sk.	Bartica Grove, Nov. (*H. Whitely*).	Salvin-Godman Coll.
ω. Imm. sk.	Sarayacu, Ecuador (*C. Buckley*).	Salvin-Godman Coll.

Add:— Page 275. **Dendrœca ruficapilla.**

d. ♂ ad. sk.	S. Croix (*A. & E. Newton*).	Salvin-Godman Coll.

Add:— Page 277. **Dendrœca petechia.**

g. ♂ ad. sk.	Spanishtown, Jamaica, Aug. (*W. W. March*).	Salvin-Godman Coll.

Add:— Page 279. **Dendrœca melanoptera.**

c. ♂ ad. sk.	Guadeloupe (*F. A. Ober*).	Salvin-Godman Coll.

Add:— **Page 280. Dendrœca capitalis.**

c. Ad. sk.	Barbadoes (*Wildebor*).	Salvin-Godman Coll.

Add:— **Page 282. Dendrœca aureola.**

m, n. ♂; *o.* ♀ ad. sk.	Indefatigable Island (*Dr. A. Habel*).	Salvin-Godman Coll.
p, q. ♂; *r, s.* ♀ juv. sk.	Indefatigable Island (*Dr. A. Habel*).	Salvin-Godman Coll.
t. ♂ ad.; *u.* ♂ juv. sk.	Bindloe Island (*Dr. A. Habel*).	Salvin-Godman Coll.
v. Ad.; *w.* Juv. sk.	Charles Island (*A. H. Markham*).	Salvin-Godman Coll.
x. ♂ ad. sk.	Abingdon Island (*Dr. A. Habel*).	Salvin-Godman Coll.
y, z. [♂]; *a', b'.* [♀] ad. sk.	Puna Island, Gulf of Guayaquil (*Villagomez*).	Salvin-Godman Coll.

Add:— **Page 283. Dendrœca vieilloti.**

b, c. Ad. sk.	Veragua (*Arcé*).	Salvin-Godman Coll.

Add:— **Page 284. Dendrœca bryanti.**

b. ♂ ad. sk.	Progreso, Yucatan (*De Vis*).	Salvin-Godman Coll.
c, d. ♂ sk.	Progreso (*G. F. Gaumer*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Half-Moon Cay, Honduras, May 10 (*O. S.*).	Salvin-Godman Coll.
f, g. ♂ ♀ ad. sk.	Belize, British Honduras (*Blancaneaux*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Tempate, Nicoya, Costa Rica (*E. Arcé*).	Salvin-Godman Coll.

Add:— **Page 285. Dendrœca rufigula.**

b. ♂ ad. sk.	Martinique (*F. A. Ober*).	Salvin-Godman Coll.

Add:— **Page 285. Dendrœca pennsylvanica.**

v. ♂ ad. sk.	Massachusetts (*Dr. Brewer*).	Salvin-Godman Coll.
w. ♀ ad. sk.	Haw's Woods, D.C., May 16 (*E. Coues*).	Salvin-Godman Coll.
x. ♂ ad. sk.	Laurel, Maryland, May 10 (*R. Ridgway*).	Salvin-Godman Coll.
y. Ad. sk.	Jalapa, S. Mexico (*De Oca*).	Salvin-Godman Coll.
z. Juv. sk.	Coban, Vera Paz, Nov. (*O. S.*).	Salvin-Godman Coll.

a'. Juv. sk.	Choctum, Vera Paz (*O. S.*).	Salvin-Godman Coll.
b'. Juv. sk.	Dueñas (*O. S. & F. D. G.*).	Salvin-Godman Coll.
c'. ♂ ad. sk.	Angostura, Costa Rica, Feb. (*J. Carmiol*).	Salvin-Godman Coll.
d'. Imm. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
e'. Ad. sk.	Chiriqui (*Arcé*).	Salvin-Godman Coll.
f'. ♀ ad. sk.	Chitra, Veragua (*Arcé*).	Salvin-Godman Coll.
g'. Ad. sk.	Santa Fé, Veragua (*Arcé*).	Salvin-Godman Coll.
h'. ♂ ad.; *i'*. ♀ imm. sk.	Isthmus of Panama (*McLeannan*).	Salvin-Godman Coll.

Add:—

Page 288. Dendrœca blackburniæ.

c'. ♂ ad. sk.	Rock Creek, D.C., May 5 (*E. Coues*).	Salvin-Godman Coll.
d'. ♂ ad. sk.	Jalapa, S. Mexico (*De Oca*).	Salvin-Godman Coll.
e', *f'*. Imm. sk.	Dueñas, Guatemala, Sept. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
g'. Ad. sk.	Choctum, Vera Paz (*O. S.*).	Salvin-Godman Coll.
h'. Imm. sk.	Coban, Vera Paz (*O. S.*).	Salvin-Godman Coll.
i'. Ad. sk.	Chontales, Nicaragua (*T. Belt*).	Salvin-Godman Coll.
k'. Ad.; *l'*, *m'*. Imm. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
n'. ♂ ad. sk.	Barranca, Costa Rica, Oct. (*F. Carmiol*).	Salvin-Godman Coll.
o'. ♂ ad. sk.	Volcan de Chiriqui (*E. Arcé*).	Salvin-Godman Coll.
p'. ♂ juv. sk.	Calovevora, Veragua (*E. Arcé*).	Salvin-Godman Coll.
q'. ♀ juv. sk.	Santa Fé, Veragua (*E. Arcé*).	Salvin-Godman Coll.
r'. Juv. sk.	Paraiso Station, Panama (*A. Hughes*).	Salvin-Godman Coll.
s'. Ad. sk.	Bogotá.	Salvin-Godman Coll.
t'. ♂ ad. sk.	Medellin (*T. K. Salmon*).	Salvin-Godman Coll.
u'. ♂ ad. sk.	Intaj, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
v', *w'*. Ad. sk.	Pasto, Ecuador (*Lehmann*).	Salvin-Godman Coll.
x'. Ad. sk.	Quito (*Bruce*).	Salvin-Godman Coll.

Add:—

Page 291. Dendrœca nigrescens.

l. ♂ ad. sk.	Camp Apache, Arizona, Aug. (*H. W. Henshaw*).	Salvin-Godman Coll.
m. Ad. sk.	Utah (*McCarthy*).	Salvin-Godman Coll.
n. Ad. sk.	City of Mexico.	Salvin-Godman Coll.
o. Ad. sk.	Oaxaca (*A. Fenochio*).	Salvin-Godman Coll.
p. Imm. sk.	Presidio, Dec. 31 (*A. Forrer*).	Salvin-Godman Coll.
q. ♂ ad. sk.	Mazatlan, Dec. (*A. Forrer*).	Salvin-Godman Coll.
r. ♂ ad. sk.	La Parada, Feb. (*A. Boucard*).	Salvin-Godman Coll.

Add :— Page 293. **Dendrœca occidentalis.**

e. Ad.; *f.* Imm. sk.	Near the City of Mexico.	Salvin-Godman Coll.
g. Imm. sk.	Alotepeque, Guatemala (*O. S.*).	Salvin-Godman Coll.
h. Ad.; *i.* Imm. sk.	Pine Forest, Volcan de Fuego, 10,000 feet, Nov. (*O. S.*).	Salvin-Godman Coll.
k. Ad. sk.	San Gerónimo, Vera Paz, Jan. (*O. S. & F. D. G.*).	Salvin-Godman Coll. (Type of *D. niviventris.*)

Add :— Page 295. **Dendrœca chrysoparia.**

a. ♂ ad.; *b.* ♂ juv. sk.	Tactic, Vera Paz, Guatemala, Nov. (*O. S.*).	Salvin-Godman Coll. (Types of species.)

Add :— Page 297. **Dendrœca virens.**

t, u. ♂ ♀ ad. sk.	Washington, D.C. (*C. Drexler*).	Salvin-Godman Coll.
v. ♂ ad. sk.	Laurel, Maryland, May 10 (*R. Ridgway*).	Salvin-Godman Coll.
w. ♂ ♀ ad. sk.	N. Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
x, y. Ad. et imm. sk.	Coban, Vera Paz, Nov. (*O. S.*).	Salvin-Godman Coll.
z. ♂ ad. sk.	Dueñas, Guatemala, Feb. (*O. S.*).	Salvin-Godman Coll.
a', b'. ♀ ad. sk.	Barranca, Costa Rica, Feb. and March (*J. Carmiol*).	Salvin-Godman Coll.
c'. ♂ ad. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
d'. ♂ ad.; *e'.* ♂ imm. sk.	Volcan de Chiriqui (*E. Arcé*).	Salvin-Godman Coll.
f'. ♂ ad. sk.	Isthmus of Panama (*McLeannan*).	Salvin-Godman Coll.
g'. ♂ imm. sk.	Jamaica, Feb. (*E. Newton*).	Salvin-Godman Coll.

Add :— Page 299. **Dendrœca townsendi.**

i. ♂ ad. sk.	Sacramento, Cal., May (*L. Belding*).	Salvin-Godman Coll.
k. Ad. sk.	Oaxaca, W. Mexico (*A. Fenochio*).	Salvin-Godman Coll.
l. ♀ ad. sk.	Calderas, Volcan de Fuego, Guatemala, Sept. (*O. S.*).	Salvin-Godman Coll.
m. ♂ ad. sk.	Pine Forest, Volcan de Fuego, Nov., 10,200 feet (*O. S.*).	Salvin-Godman Coll.
n. ♂ ad.; *o.* Imm. sk.	Dueñas, Sept. (*O. S.*).	Salvin-Godman Coll.
p. ♂ ad. sk.	Dueñas, Oct. (*O. S. & F. D. G.*).	Salvin-Godman Coll.

Add :— Page 301. **Dendrœca dominica.**

α. D. albilora.

e. Ad. sk.	Southern United States.	Salvin-Godman Coll.
f, g. ♂ ad. sk.	Mt. Carmel, Ill., Aug. (*S. Turner*).	Salvin-Godman Coll.
h. ♀ ad. sk.	Mt. Carmel, Ill., Oct. (*S. Turner*).	Salvin-Godman Coll.
i. Ad. sk.	Mexico.	Salvin-Godman Coll.
k. ♂ ad. sk.	Mazatlan, Jan. (*A. Forrer*).	Salvin-Godman Coll.
l, m. Ad. sk.	Progreso, N. Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
n. Ad. sk.	Belize, British Honduras (*Blancaneaux*).	Salvin-Godman Coll.
o. Ad. sk.	Totonicapam, Guatemala (*O. S. & F. D. G.*).	Salvin-Godman Coll.
p, q. Ad. sk.	Dueñas (*O. S. & F. D. G.*).	Salvin-Godman Coll.
r. Ad. sk.	Choctum, Vera Paz, Jan. (*O. S.*).	Salvin-Godman Coll.
s. Ad. sk.	Jamaica.	Salvin-Godman Coll.

β. D. dominica.

h. ♂ ad. sk.	Enterprise, Florida (*G. A. Boardman*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Samaná, San Domingo, Sept. 16 (*C. G. McGregor*).	Salvin-Godman Coll.

Add :— Page 304. **Dendrœca graciæ.**

c. ♂ ad. sk.	Fort Whipple, Arizona, May (*E. Coues*).	Salvin-Godman Coll.

Add :— Page 307. **Dendrœca discolor.**

l. ♂ ad. sk.	Massachusetts (*Dr. Brewer*).	Salvin-Godman Coll.
m. ♂ ad. sk.	Rock Creek, D.C., May (*E. Coues*).	Salvin-Godman Coll.
n. Imm. sk.	"At sea between Jamaica and British Honduras," Sept. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
o, p. ♂ ad. sk.	Jamaica, Nov. (*E. Newton*).	Salvin-Godman Coll.
q. Ad. sk.	Jamaica (*E. Newton*).	Salvin-Godman Coll.
r. ♂ ad. sk.	Samaná, San Domingo, Jan. (*C. G. McGregor*).	Salvin-Godman Coll.

Add :— Page 309. **Dendrœca maculosa.**

y. ♂ ad. sk.	Massachusetts (*Dr. Brewer*).	Salvin-Godman Coll.
z. ♂ ad. sk.	Washington, D.C. (*C. Drexler*).	Salvin-Godman Coll.

a'. ♀ ad. sk.	District of Columbia, May (*E. Coues*).	Salvin-Godman Coll.
b'. ♀ juv. sk.	N. Yucatan, Feb. (*G. F. Gaumer*).	Salvin-Godman Coll.
c'. Imm. sk.	Choctum, Vera Paz, Guatemala (*O. S.*).	Salvin-Godman Coll.
d'. Imm. sk.	Coban, Vera Paz, Nov. (*O. S.*).	Salvin-Godman Coll.
e'. Ad. sk.	Coban, Jan. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
f'. Ad.; *g'*. Juv. sk.	Belize, British Honduras (*Blancaneaux*).	Salvin-Godman Coll.
h'. ♂ ad.; *i'*. ♂ juv. sk.	Isthmus of Panama (*McLeannan*).	Salvin-Godman Coll.

Add :— Page 311. **Dendrœca coronata.**

z. Ad. sk.	Souris River, Dakota, Sept. 16 (*E. Coues*).	Salvin-Godman Coll.
a'. ♂ ad. sk.	Washington, D.C. (*C. Drexler*).	Salvin-Godman Coll.
b'. ♂ imm. sk.	Rock Creek, District of Columbia, March 23 (*E. Coues*).	Salvin-Godman Coll.
c'. ♀ ad. sk.	Laurel, Maryland, May 10 (*R. Ridgway*).	Salvin-Godman Coll.
d'. ♀ ad. sk.	Ciudad Durango, Mexico, July 27 (*A. Forrer*).	Salvin-Godman Coll.
e'. ♂ imm. sk.	Mazatlan, W. Mexico, Nov. (*A. Forrer*).	Salvin-Godman Coll.
f'. Ad. sk.	N. Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
g'. Ad. sk.	Progreso, Yucatan (*E. C. Devis*).	Salvin-Godman Coll.
h'. Ad. sk.	Dueñas, Guatemala (*O. S. & F. D. G.*).	Salvin-Godman Coll.
i'. Juv. sk.	Coban, Vera Paz, Nov. (*O. S.*).	Salvin-Godman Coll.
k'. Ad. sk.	Coban, Jan. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
l'. Ad. sk.	Belize, British Honduras (*Blancaneaux*).	Salvin-Godman Coll.
m', *n'*. Imm. sk.	San Pedro, Honduras (*G. M. Whitely*).	Salvin-Godman Coll.
o', *p'*. Juv. sk.	Volcan de Chiriqui (*E. Arcé*).	Salvin-Godman Coll.
q'. Ad. sk.	Lion Hill, Isthmus of Panama (*McLeannan*).	Salvin-Godman Coll.
r'. Ad. sk.	Lion Hill (*S. & T. Rhodes*).	Salvin-Godman Coll.
s'. Ad. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.
t'. Imm. sk.	Jamaica, Feb. (*E. Newton*).	Salvin-Godman Coll.
u'. Ad. sk.	San Domingo, W. I. (*C. G. McGregor*).	Salvin-Godman Coll.

Add :— **Page 315. Dendrœca auduboni.**

t. ♂ ad. sk.	Fort Bridger, Utah, May (*C. Drexler*).	Salvin-Godman Coll.
u. ♂ ad. sk.	Ciudad Durango, Mexico, Nov. (*A. Forrer*).	Salvin-Godman Coll.
v. ♂ ad. sk.	Presidio, Mexico, Jan. (*A. Forrer*).	Salvin-Godman Coll.
w. Ad. sk.	City of Mexico.	Salvin-Godman Coll.
x. Imm. sk.	Totonicapam, Guatemala, 10,000 feet, Feb. (*O. S.*).	Salvin-Godman Coll.
y. Imm. sk.	San Gerónimo, Vera Paz (*O. S.*).	Salvin-Godman Coll.

Add :— **Page 317. Dendrœca palmarum.**

s. ♀ juv. sk.	Grand Crossing, Illinois, May 3 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
t. ♂ ad. sk.	Massachusetts (*Dr. Brewer*).	Salvin-Godman Coll.
u. Juv. sk.	Philadelphia (*J. Krider*).	Salvin-Godman Coll.
v. ♂ juv. sk.	Jamaica (*Osburn*).	Salvin-Godman Coll.
w. ♀ imm. sk.	Samaná, San Domingo, Oct. (*C. G. McGregor*).	Salvin-Godman Coll.
x. ♀ ad. sk.	Arenoso, San Domingo, March (*C. G. McGregor*).	Salvin-Godman Coll.

Add :— **Page 320. Dendrœca castanea.**

y. ♂ ad. sk.	Massachusetts (*Dr. Brewer*).	Salvin-Godman Coll.
z, *a'.* ♂ ♀ ad. sk.	Carlisle, Pa., May.	Salvin-Godman Coll.
b'. ♂ ad. sk.	Laurel, Maryland, May (*R. Ridgway*).	Salvin-Godman Coll.
c'. ♂ ad. sk.	Veragua (*E. Arcé*).	Salvin-Godman Coll.
d'. Imm. sk.	Chepo, Panama (*E. Arcé*).	Salvin-Godman Coll.
e', *f'.* ♀ imm. sk.	Isthmus of Panama (*McLeannan*).	Salvin-Godman Coll.
g'. ♂ ad. sk.	Remedios, Antioquia (*T. K. Salmon*).	Salvin-Godman Coll.

Add :— **Page 323. Dendrœca pinus.**

l, *m.* ♂ ♀ ad. sk.	Massachusetts (*Dr. Brewer*).	Salvin-Godman Coll.

Add :— **Page 325. Dendrœca striata.**

x. ♂ ad. sk.	Massachusetts (*Dr. Brewer*).	Salvin-Godman Coll.
y. ♂ ad. sk.	Meridian Hill, D.C., May (*E. Coues*).	Salvin-Godman Coll.
z. Imm. sk.	Bogotá.	Salvin-Godman Coll.
a'. Imm. sk.	Sarayacu, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
b'. ♀ imm. sk.	Roraima, British Guiana, Nov. (*H. Whitely*).	Salvin-Godman Coll.
c'. ♀ imm. sk.	Roraima, Jan. (*H. Whitely*).	Salvin-Godman Coll.
d'. Imm. sk.	British Guiana (*H. Whitely*).	Salvin-Godman Coll.
e'. Imm. sk.	R. Oyapock, French Guiana (*Jelski*).	Salvin-Godman Coll.

Add :— Page 327. **Dendrœca cærulea.**

o. ♂ ad. sk.	United States.	Salvin-Godman Coll.
p. Imm. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
q, r. ♂ ad. et imm. sk.	Calovevora, Veragua (*E. Arcé*).	Salvin-Godman Coll.
s. ♂ ad. et imm. sk.	Isthmus of Panama (*McLeannan*).	Salvin-Godman Coll.
t, u. Imm. sk.	Bogotá.	Salvin-Godman Coll.
v. Imm. sk.	Interior of Colombia (*Birchall*).	Salvin-Godman Coll.
w. ♀ ad. sk.	Antioquia (*T. K. Salmon*).	Salvin-Godman Coll.
x. Ad. sk.	Ecuador.	Salvin-Godman Coll.
y, z. Imm. sk.	Sarayacu, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
a', b'. Imm. sk.	Nairapi, Bolivia (*C. Buckley*).	Salvin-Godman Coll.

Add :— Page 329. **Dendrœca cærulescens.**

z, a'. ♂ ♀ ad. sk.	Washington, D.C. (*C. Drexler*).	Salvin-Godman Coll.
b'. Imm. sk.	Vera Paz, Guatemala, Nov. (*O. S.*).	Salvin-Godman Coll.
c'. Ad.; *d'.* Juv. sk.	Jamaica.	Salvin-Godman Coll.
e'. Sternum.	Jamaica.	P. H. Gosse, Esq. [C.].

Add :— Page 332. **Dendrœca pharetra.**

g, h. ♂ ♀ ad. sk.	Jamaica, May (*E. Newton*).	Salvin-Godman Coll.

Add :— Page 333. **Dendrœca plumbea.**

c. ♀ ad. sk.	Dominica (*F. A. Ober*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Guadeloupe (*F. A. Ober*).	Salvin-Godman Coll.

Add :— Page 335. **Perissoglossa tigrina.**

t. Ad. sk.	Williamsport, Pa., May (*C. J. Maynard*).	Salvin-Godman Coll.
u. Ad. sk.	Carlisle, Pa., May.	Salvin-Godman Coll.
v. ♂ ad. sk.	Jamaica, Oct. (*E. Newton*).	Salvin-Godman Coll.

Add :— Page 337. **Peucedramus olivaceus.**

h. ♂ ad. sk.	Oaxaca, Mexico (*A. Fenochio*).	Salvin-Godman Coll.
i. Ad. sk.	South Mexico (*De Oca*).	Salvin-Godman Coll.
k. Ad. sk.	Near the City of Mexico.	Salvin-Godman Coll.
l. ♂ ad. sk.	Ciudad Durango, Mexico, Nov. 2 (*A. Forrer*).	Salvin-Godman Coll.
m. ♂ ad.; *n.* Juv. sk.	Ciudad Durango, July (*A. Forrer*).	Salvin-Godman Coll.

o. ♀ ad. sk.	Volcan de Agua, Guatemala, Dec. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
p, q. ♂ ad. sk.	Pine Forest, Volcan de Fuego, Guatemala, Nov. (*O. S. & F. D. G.*)	Salvin-Godman Coll.
r, s. ♂ ♀ ad. sk.	Pine Forest, Nov. (*O. S.*).	Salvin-Godman Coll.

Add :— Page 339. **Siurus auricapillus.**

q. Ad. sk.	Esquimault, British Columbia (*A. H. Markham*).	Salvin-Godman Coll.
r. ♂ ad. sk.	District of Columbia, May (*E. Coues*).	Salvin-Godman Coll.
s, t. Ad. sk.	N. Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
u. Ad. sk.	Cozumel Island (*E. C. Devis*).	Salvin-Godman Coll.
v. Ad. sk.	Volcan de Agua, Guatemala, Nov. (*O. S.*).	Salvin-Godman Coll.
w. ♀ ad. sk.	Dueñas, Feb. (*O. S.*).	Salvin-Godman Coll.
x. Ad. sk.	Escuinthla, Jan. (*O. S.*).	Salvin-Godman Coll.
y. Ad. sk.	Coban, Vera Paz, Jan. (*O. S. & F. D. G.*)	Salvin-Godman Coll.
z. ♂ ad. sk.	Choctum, Vera Paz, Feb. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
a'. Ad. sk.	Costa Rica (*Van Patten*).	Salvin-Godman Coll.
b'. ♂ ad. sk.	Volcan de Chiriqui (*E. Arcé*).	Salvin-Godman Coll.
c'. ♂ ad. sk.	Samaná, San Domingo, Sept. (*C. G. McGregor*).	Salvin-Godman Coll.

Add :— Page 342. **Siurus motacilla.**

h. ♂ ad. sk.	Peoria, Ill. (*Bishop*).	Salvin-Godman Coll.
i. Ad. sk.	Retalhuleu, Guatemala, Sept. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
k. Ad. sk.	Choctum, Vera Paz (*O. S.*).	Salvin-Godman Coll.
l. Ad. sk.	Coban, Vera Paz, Nov. (*O. S.*).	Salvin-Godman Coll.
m. Ad. sk.	Volcan de Fuego, 6000 feet, Aug. (*O. S.*).	Salvin-Godman Coll.
n. Ad. sk.	Dueñas, Oct. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Bugaba, Chiriqui (*E. Arcé*).	Salvin-Godman Coll.

Add :— Page 343. **Siurus nævius.**

w. Ad. sk.	Washington, D.C. (*C. Drexler*).	Salvin-Godman Coll.
x, y. Ad. sk.	Progreso, N. Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
z. ♂ ad. sk.	Belize, British Honduras, Dec. (*O. S.*).	Salvin-Godman Coll.
a'. ♀ ad. sk.	Retalhuleu, Guatemala, Sept. (*O. S. & F. D. G.*)	Salvin-Godman Coll.

b'. ♂ ad. sk.	Dueñas, Aug. (*O. S.*).	Salvin-Godman Coll.
c'. Ad. sk.	Dueñas, Sept. (*O. S.*).	Salvin-Godman Coll.
d'. Ad. sk.	Coban, Vera Paz, Dec. (*O. S.*).	Salvin-Godman Coll.
e'. Ad. sk.	Vera Paz (*O. S.*).	Salvin-Godman Coll.
f'. ♂ ad. sk.	Calovevora, Veragua (*E. Arcé*).	Salvin-Godman Coll.
g', *h'*. ♂ ♀ sk.	Lion Hill, Isthmus of Panama (*McLeannan*).	Salvin-Godman Coll.
i'. Ad. sk.	Paraiso, Panama (*A. Hughes*).	Salvin-Godman Coll.
k'. Ad. sk.	Bogotá.	Salvin-Godman Coll.
l'. ♂ ad. sk.	Medellin (*T. K. Salmon*).	Salvin-Godman Coll.
m'. ♂ ad. sk.	Minca, Sierra Nevada de Santa Maria, March (*F. Simons*).	Salvin-Godman Coll.
n'. Ad. sk.	Bartica Grove, British Guiana, Dec. (*H. Whitely*).	Salvin-Godman Coll.
o'. Ad. sk.	Roraima, Dec. (*H. Whitely*).	Salvin-Godman Coll.
p'. ♂ ad. sk.	Moneague, Jamaica, Aug. (*O. S. & F. D. G.*).	Salvin-Godman Coll.

Add :— Page 347. **Oporornis agilis.**

f. Ad. sk.	Cambridge, Mass., Sept. (*H. W. Henshaw*).	Salvin-Godman Coll.
g. ♂ imm. sk.	Stone's Lot, D.C. (*D. W. Prentiss*).	Salvin-Godman Coll.

Add :— Page 348. **Oporornis formosa.**

l. ♂ ad. sk.	Wagon-road to Bridger's Pass, May (*W. S. Wood*).	Salvin-Godman Coll.
m. Ad. sk.	Calderas, Volcan de Fuego, Guatemala, 7300 feet, Sept. (*O. S.*).	Salvin-Godman Coll.
n. Ad. sk.	Coban, Vera Paz, Jan. (*O. S. & F. D. G.*).	Salvin-Godman Coll.
o. Ad. sk.	Angostura, Costa Rica, Feb. (*J. Carmiol*).	Salvin-Godman Coll.
p. Imm. sk.	Costa Rica (*E. Arcé*).	Salvin-Godman Coll.
q, *r*. ♂ ♀ ad. sk.	Chiriqui (*E. Arcé*).	Salvin-Godman Coll.
s. Ad. sk.	SantaFé, Veragua (*E. Arcé*).	Salvin-Godman Coll.
t. ♀ ad. sk.	Chepo, Isthmus of Panama (*E. Arcé*).	Salvin-Godman Coll.
u. Ad. sk.	Isthmus of Panama (*McLeannan*).	Salvin-Godman Coll.

Add :— Page 389. **Basileuterus conspicillatus.**

Spec. *a*, *b*. Types of species.

Add :— Page 596. **Anthus pennsylvanicus.**

Alauda pensilvanica, *Lath. Gen. Syn. Suppl.* i. p. 287 (1787).

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EXPLANATION OF THE PLATES.

PLATE I.

Fig. 1. *Dicæum rubro-coronatum.* Fig. 2. *D. pulchrius.*
From the type specimens in the British Museum.

PLATE II.

Fig. 1. *Pholidornis rubrifrons.* Fig. 2. *Lobornis alexandri.*
From the type specimens in the British Museum.

PLATE III.

Petrochelidon ruficollaris. Adult and young. From specimens sent by Prof. Nation of Lima.

PLATE IV.

Figs. 1–4. *Motacilla lugens.*

Fig. 1. Adult male in nearly full summer plumage, the black falling short of the chin, and the back mixed with black.

Fig. 2. Adult male in full summer plumage, with the throat and back both entirely black.

Fig. 3. Young after first autumn moult.

Fig. 4. Adult in full winter plumage, resembling the adult of *M. ocularis*, but distinguished from the latter by its stouter bill.

Figs. 5, 6. *Motacilla ocularis.*

Fig. 5. Full winter plumage.

Fig. 6. Full summer plumage, showing the black throat with the grey back, which is persistent in this species.

Plate V.

Fig. 1. *Motacilla hodgsoni* in full summer plumage, showing the black back. (Sanda, May 15; Anderson.)

Fig. 2. The same species in winter plumage. (Salween River, July 23; Bingham.)

Fig. 3. *M. personata* in full summer plumage, with black throat and grey back. (Wernai, April 27; Severtzoff.)

Fig. 4. The same in winter plumage. (India; Gould Collection.)

Figs. 5, 6. Type specimens of *M. persica*, showing the variation in the extent of white on the sides of the neck.

Plate VI.

Fig. 1. *Motacilla campestris*. Adult male of Western race in breeding-plumage. (Cookham, May 14.)

Fig. 2. *M. campestris*. Eastern race in full plumage, before quitting South-eastern Africa. (Tete, Zambesi; Kirk.)

Fig. 3. *M. flava*. Adult male of the ordinary form, with dark ear-coverts and white chin. (Algeria; Salvin.)

Fig. 4. *M. flava*. Adult male, with white patch on ear-coverts and the yellow extending over the chin. (Florence; Giglioli.)

Fig. 5. *M. flava*. Pale race, with white patch on the cheeks (*B. fasciatus*, Brehm) and light-grey head. (Southern France.)

Fig. 6. *M. beema*. Showing the white cheeks and ear-coverts and pearly-grey head. (Arkad Mountains, Finsch.)

Plate VII.

Figs. 1–3. *Motacilla borealis*.

Fig. 1. An adult male from the Dovrefjeld (Gould), showing the blackish head, approaching *M. feldeggi*.

Fig. 2. Male from Lapland (June 6th), showing the yellow of the throat extending over the chin.

Fig. 3. A male from Saxony, showing the chin and cheeks white.

Figs. 4–6. *Motacilla cinereicapilla.*

Fig. 4. Adult male from Italy (Gould coll.), showing a faint white streak above the ear-coverts.

Fig. 5. Adult male from Tuscany (April 22; Giglioli), showing a greater amount of white eyebrow, extending also above the lores.

Fig. 6. Adult male (Tuscany, April 22; Giglioli), showing a still more pronounced white eyebrow, approaching the white-throated stage of *M. flava*.

Plate VIII.

Motacilla feldeggi.

Fig. 1. Adult male with the black extending over the whole back; the yellow on the throat also occupying the chin. (Candahar; Swinhoe.)

Fig. 2. Adult male with the black more restricted, but mottling the hind neck; the chin yellow like the throat, with white on the cheeks. (Candahar; Swinhoe).

Fig. 3. Adult male with the chin white, and the crown only black. (Himalayas; Gould coll.)

Fig. 4. Adult male with the chin yellow like the throat, and with the black restricted on the hind neck. (Smyrna; Merlin.)

Fig. 5. *Motacilla paradoxa* (*M. kaleniczenkii* in error on Plate), a form of *M. feldeggi* with a white eyebrow. ? A hybrid between the latter and *M. flava*. (Karakal; Finsch.)

Fig. 6. *Motacilla xanthophrys*. A form of *M. feldeggi* with a yellow eyebrow. ? A hybrid between the latter and *M. campestris*. (*Mus. H. Seebohm.*)

Plate IX.

Heads of Species of *Geothlypis*.

Fig. 1. Head of *G. trichas* in winter, to show white eyelid; from a Guatemalan specimen. (Gould coll.)

Fig. 2. Head of *G. melanops*, from a Mexican skin. (Sclater coll.)

Fig. 3. Head of *G. poliocephala*, from a Mexican specimen in winter plumage (Verreaux). Shows the white eyelid, corresponding to the similar plumage of *G. trichas* (fig. 1).

Fig. 4. Head of *G. poliocephala* in breeding-plumage (= *G. caninucha*, Ridgw.), from a Guatemalan specimen (Sclater coll.) showing black eyelid.

Fig. 5. Head of *G. velata*, from a Brazilian specimen. (Sclater coll.)

Fig. 6. Head of *G. chiriquensis* from the type in the Salvin-and-Godman collection, showing the greater extent of black on the forehead and face.

Fig. 7. Head of *G. æquinoctialis*, from a Cayenne specimen. (Sclater coll.)

Fig. 8. Head of *G. auricularis*, from the type in the Salvin-and-Godman collection, showing the greater extent of black on the forehead and face.

Plate X.

Geothlypis speciosa ♂ ♀ ad., from the typical specimens.

Plate XI.

Fig. 1. *Parula pitiayumi* ♂ ad., from a Brazilian specimen.

Fig. 2. *P. nigrilora* ♂ ad., from a specimen presented to the Museum by the Hon. G. B. Sennett.

Plate XII.

Fig. 1. *Teretistris fernandinæ*. Fig. 2. *T. fornsi*.

To show difference in colouring of head and throat in the two species.

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Mintern. Bros. imp.

1. *Dicæum rubrocoronatum.*
2. *Dicæum pulchrius.*



G. Keulemans del et lith.

1. *Pholidornis rubrifrons.*
2. *Lobornis alexandri.*

Mintern. Bros. imp.



Keulemans del et lith. Mintern Bros. imp.

Petrochelidon ruficollaris.



1.



2.



3.



4.



5.



6.

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Mintern Bros.

Figs. 1 4. Motacilla lugens.
Figs. 5,6. Motacilla ocularis.



J. G. Keulemans del et lith. Mintern

Figs. 1. 2. Motacilla hodgsoni. Figs. 3.4. Motacilla personata.
Figs. 5.6. Motacilla persica.













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Figs. 1. 2. Motacilla campestris. Figs. 3 4 5. Motacilla flava
Fig. 6. Motacilla beema.



1.



2.



3.



4.



5.



6.

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Figs.1-3. Motacilla borealis. *Figs.4-*



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Figs. 1–4. Motacilla feldeggii. *Fig. 5. M*

Fig. 6. Motacilla xanth

















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Fig. 1. Geothlypis trichas.
Figs. 3, 4 Geothlypis poliocephala.
Fig. 6. Geothlypis chiriquensis
Fig. 8. Geothlypis

Fig. 2. G
Fig 7



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Geothlypis spec.

