The Birds of West and Equatorial Africa

VOLUME TWO

The Birds of West and Equatorial Africa

By

David Armitage Bannerman

M.B.E., M.A., Sc.D., F.R.S.E.

Honorary Associate, British Museum (Natural History). Past Vice-President of the British Ornithologists Union. Hon. Fellow of the American Ornithologists Union and of the Société Ornithologique de France

with a Foreword by

Sir Alan Burns, G.C.M.G.

Late Governor and Commander-in-Chief of the Gold Coast

VOLUME TWO

Eurylaemidae to Ploceidae

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THE BIRDS OF WEST AND EQUATORIAL AFRICA

ORDER PASSERIFORMES

FAMILY EURYLAEMIDAE

Key to the Broadbills

1. Crown of head uniform slate-grey, size large (wing over 75 mm.), males with entire breast rufous chestnut, less marked and duller in females
   Smithornis sharpei sharpei and subsp., p. 799
   Crown of head not slate-grey, size smaller (wing under 75 mm.), rufous side patches either wanting or not overspreading breast 2
2. Patch of tawny-orange or rufous on each side of breast, which is whitish narrowly streaked with black; row of white spots on wing-coverts
   Smithornis rufolateralis rufolateralis, p. 798
   No patch of tawny-orange or rufous on each side of breast, which is buff with broad black centres to feathers; no white spots on wing-coverts
   Smithornis capensis delacouri and subsp., p. 797

DELACOUR'S BROADBILL

Smithornis capensis delacouri Bannerman
(see Plate 38, facing page 800)

Two races of this bird occur in our area; the above-mentioned is the one in Upper Guinea.

The exceptionally broad bill of this species, almost triangular in shape, black above and white underneath, is the best guide to identification. It is a small bird, about 6 in. from bill to tail with

neck extended, but usually has a rather squat appearance, the head appearing large for the body, the wings and tail both being short. The general colour is ochraceous brown above marked with black, the crown entirely black, throat white and the breast buff heavily streaked with black. The bird can at will expose a large white patch in the centre of the back, which is a characteristic feature of the whole group. From its perch it makes short circular flights, vibrating its wings fast, uttering its curious grinding note, a long-continued trilled *r*, and displaying the normally concealed white patch on the back. The wing measures 69–71 mm.

This is a bird of the second-growth thickets rather than the dense forest. It may be found in open country also, but invariably clings to thick bushes and never ventures away from cover save to make its short circular flight. The peculiar rattling call is only made during flight, and how it is made is not quite certain.

The nest is described as an exquisite pocket-shaped structure from which streamers are suspended and is placed usually in bushes. The eggs are glossy white; those of the Lower Guinea subspecies measure 22–24·5 × 15·5–16 mm. Not more than three are laid.

Distribution and Races. *S. c. delacouri* Bannerm. has been found in Sierra Leone, the Ivory Coast and Gold Coast. *S. c. camarunensis* Sharpe inhabits Cameroon and the western Congo. It differs from the Gold Coast bird in lacking the grey collar, in having the under parts more heavily streaked and the breast more heavily washed with tawny yellow. The wing measures 69–72 mm.

In western Kenya we have *S. c. meinertzhageni* and in the Nairobi district *S. c. medianus*.

RUFOUS-SIDED BROADBILL

Smithornis rufolateralis rufolateralis Gray

(see Plate 38, facing page 800)

VERY similar to the last species described, but may be recognised by the large patches of tawny orange on either side of the breast in the male, the two rows of white spots on the wing-coverts, the whole of the middle line of the back black, concealing the white bases, and the black tail. It is rather a smaller bird than Delacour's Broadbill and measures just under 5 in. in length; the wing measures 60–65 mm. and the tail 38–43 mm. The very broad flattened bill is black above, white below. Black bristles spring from the gape. The female has the head and mantle olive-brown instead of black, and much less black on the back than her consort.

This broadbill has a characteristic churring call, *kerr-kerr*, which is frequently heard, especially in late evening. The bird is more of a forest species than the last and seldom leaves the very thick undergrowth. It consistently keeps to the lowest level of the densest shrubs and only occasionally will it fly up to catch some insect, when it always appears to return to the same twig. At such times it rapidly vibrates its wings and tail.

It builds a nest of moss stems and lays pure white glossy eggs which measure 22–23 × 15·5–16 mm.

Distribution. The whole forest region of West Africa from Sierra Leone to Cameroon and the western Congo. Another subspecies, *S. r. budongoensis*, takes its place in the eastern Belgian Congo and in the forests of western Uganda.

GREY-HEADED BROADBILL

Smithornis sharpei zenkeri

(see Plate 38, facing page 800)

Two races occur in our area, one in Lower Guinea, the other an island form.

This is the largest of the broadbills in West Africa, fully 6 in. in total length, with a bill as broad as it is long. It may be recognised by the grey head and cheeks, bright tawny-orange breast, and white belly streaked conspicuously with black and olive-brown back. The bill is black above, whitish horn below; the legs and feet are greenish. The wing measures 79–84 mm., the tail 50–58 mm.

In the forests of Cameroon this bird may be seen about the small openings of the undergrowth, from which it makes short circular flights, at the same time uttering the rattling notes peculiar to the broadbills.

It nests in January, building a pocket-shaped mass of moss which it suspends from a twig or branch of a bush about 5 ft. from the ground. The nest is made of dry leaves inside the bunch of moss. The eggs are pure white, two in number, and measure 22–25 × 16–17·5 mm.

Distribution. *S. sharpei zenkeri* is found in British and French Cameroon from Cameroon Mountain to the Ja River. Its place is taken by *S. sharpei sharpei* on Fernando Po, which is restricted to the thickly wooded localities of that island. It has the rufous-chestnut under parts paler than in the mainland representative. *S. sharpei* has no representative in Kenya or Uganda.

FAMILY PITTIDAE

ANGOLA PITTA

Pitta angolensis angolensis

This brightly coloured bird is the size of a thrush but has a very short stumpy tail and stands on rather stout legs. It closely resembles the next species described. The wing measures 102–115 mm., the tail 36–42 mm. and the tarsus 33–37 mm. In colour the bill is greenish black; the legs are pinkish brown. The female is as brightly coloured as the male, but is slightly smaller. Her measurements are included in the above figures. See the next species for a comparison of the two birds.

It is partly a forest species, living on the floor of the forest and in the openings of the undergrowth and spending much of its time scratching among the fallen leaves and round about ant-hills. Termites, ants, beetles, slugs and worms form its food supply. It covers the ground in long easy hops and may be seen listening intently in the manner of a Song Thrush. It has a habit of bobbing the head and flirting the tail.

When examining anything they appear to be slim, upright birds, with every feather flat, but on the slightest sign of danger the feathers are puffed out and the body sinks low, covering the legs. Pittas fly easily and well, and there is some evidence that they are migratory. The usual note is a short liquid trill, *p-r-r-p*, accompanied by a flap of the wings and puffing out the feathers. The birds begin calling after a fall of rain and answer one another from a distance. Another call is louder and querulous.

The nest is built either on the ground, sometimes among fallen branches, or on the small branches of thorny trees 6–12 ft. above the ground. It is an untidy structure, large and domed, constructed of twigs and dry leaves, lined with leaves and tendrils. Two or three eggs are laid, almost round and cream-colour with small black blotches, lines and scrawls and underlying stone-coloured markings. They measure 26–28 × 23·2–25 mm.

Distribution. The whole forested area of West Africa from Sierra Leone to Angola and not uncommonly found in all British Colonies except Gambia. Another race, *P. a. longipennis*, takes its place in East Africa.

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CAMEROON GREY-HEADED BROADBILL.
Smithornis sharpei zenkeri.

DELACOUR'S BROADBILL.
Smithornis capensis delacouri ♂ & ♀.

GREEN-BREASTED PITTA.
Pitta reichenowi.

GOLD COAST RUFOUS-SIDED BROADBILL.
Smithornis rufolateralis rufolateralis.

FOREST ROBIN.
Stiphrornis erythrothorax erythrothorax.

CROSSLEY'S ORANGE GROUND-THRUSH.
Geokichla gurneyi crossleyi.

GREEN-BREASTED PITTA

Pitta reichenowi

(see Plate 38, facing page 800)

APART from having a green instead of a fawn-coloured breast, there is little difference between Reichenow's Pitta, as it is sometimes called, and the last species. The belly is deeper scarlet, the cobalt blue covers a larger area on the rump, and there is a black patch at the base of the throat. The wing measures 116–122 mm., the tail 40–45 mm. and the tarsus 34–37 mm.

A strictly forest species, this pitta is occasionally snared in traps baited with termites, but is seldom seen by Europeans.

A nest was found on the branch of a fallen tree about 6 ft. from the ground—a large structure of dried forest leaves with petioles and rootlets. Two eggs had a creamy-white ground with small spots and round blotches of vandyke brown and various shades of grey. They measured 28·5 × 21 mm. and 30 × 21 mm.

Distribution. The forest country of southern Cameroon from the Ja River extending across the Middle Congo to Uganda and Victoria Nyanza.

FAMILY ALAUDIDAE

Key to the Larks

1. Bill long and slender and slightly decurved (over 20 mm. in length) .. *Alaemon alaudipes alaudipes* and subsp., p. 811
   Bill short and usually finch-like (under 20 mm. in length) 2
2. Nostrils exposed, not covered with feathers, but with membraneous lid 3
   Nostrils concealed by short stiff feathers 4
3. Wing over 100 mm. in length; mantle uniform in colour, not spotted or mottled .. *Pinarocorys erythropygia*, p. 810
   Wing under 100 mm. in length; mantle always mottled or spotted .. *Mirafra*. See separate key to species, p. 803
4. Axillaries black in both sexes. Under parts (in males) black or (in females) with black (sometimes concealed) patch on belly* 5
   Axillaries never black. Under parts not black and without black patch on belly 10

* In the sandy-coloured female of *E. nigriceps* and its mainland race, *E. n. albifrons*, the bases of the feathers only are black, and consequently the black area does not show unless the feathers are disarranged or parted.

5. Under parts black almost entirely 6
Black on under parts restricted to patch on belly or, if sandy-coloured, to bases of feathers 8
6. Forehead white
Eremopterix nigriceps albifrons ♂ and subsp., p. 818
Forehead black 7
7. Mantle chestnut, no white patch on crown
Eremopterix leucotis melanocephala ♂, p. 817
Mantle sooty grey-brown; large white patch on crown
Eremopterix verticalis ♂, p. 819
8. Upper parts sandy-coloured, blackish bases to belly feathers concealed
Eremopterix nigriceps albifrons ♀ and subsp., p. 818
Upper parts not sandy-coloured; large blackish patch on belly 9
9. Upper parts inclining to rufous or chestnut; white collar round hind neck conspicuous
Eremopterix leucotis melanocephala ♀, p. 817
Upper parts brown, no tinge of rufous or chestnut
Eremopterix verticalis ♀, p. 819
10. Upper parts sand-colour, cinnamon-rufous or pinkish cinnamon, more or less uniform without any black or dark markings on the plumage 11
Upper parts various shades of brown marked or mottled with dark brown or black 13
11. Upper parts absolutely uniform without darker shaft-streaks or middles to the feathers 12
Upper parts pale rufous buff, feathers with bright cinnamon shaft-streaks contrasting with general tone of plumage .. .. *Eremalauda dunni*, p. 816
12. Broad tips to tail-feathers black; wing under 95 mm. in length .. *Ammomanes cinctura cinctura* and subsp., p. 812
No black tips to tail-feathers, contrasting with rest of tail; wing over 95 mm. in length
Ammomanes deserti and subsp., p. 812
13. Outermost tail-feathers mostly pure white 14
Outermost tail-feathers not mostly pure white 15
14. Dusky patch present on either side of breast; streaks on breast irregular, scanty and not clearly defined; upper surface browner
Calandrella brachydactila brachydactila and subsp., p. 820
No dusky patch on either side of breast; blackish shaft-streaks on breast uniformly spread over breast and each clearly defined; upper surface greyer *Razocorys razae*, p. 821

15. Crest long, central crest feathers narrow and elongated considerably beyond others; upper parts not heavily marked with black, wing usually over 90 mm.
Galerida cristata senegalensis and subsp., p. 813
Crest short, central crest-feathers not narrowed and elongated beyond others; upper parts heavily marked with black, wing usually under 90 mm.
Heliocorys modesta giffardi and subsp., p. 814

Key to the Bush-Larks (Mirafra)

1. Outer tail-feathers white or mostly white 2
No white on outer tail-feathers 4
2. Middle pair of tail-feathers sandy cinnamon like whole upper parts .. .. .. *Mirafra cordofanica*, p. 805
Middle pair of tail-feathers black or brown like general tone of upper parts 3
3. General colour of upper surface light earth-brown
Mirafra cantillans chadensis, p. 803
General colour of upper surface blackish
Mirafra albicauda, p. 804
4. Under wing-coverts and inner lining of wing light brown 5
Under wing-coverts and inner lining of wing cinnamon or rufous 6
5. Upper parts and middle pair of tail-feathers rufous
Mirafra rufa nigriticola, p. 807
Upper parts grey-brown and middle pair of tail-feathers dark brown .. .. *Mirafra sabota plebeja*, p. 809
6. Size larger (wing usually over 85 mm.), crest-feathers elongated .. .. *Mirafra africana* and subsp., p. 806
Size smaller (wing usually under 85 mm.), crest-feathers not elongated 7
7. Upper parts cinnamon-rufous
Mirafra buckleyi buckleyi and subsp., p. 808
Upper parts brown .. .. *Mirafra fischeri zombae*, p. 808

SINGING BUSH-LARK

Mirafra cantillans chadensis Alexander

This lark is about 5 in. in length, the general colour sandy brown with dark middles to the feathers and pale buff markings on the outer webs. The crown is heavily streaked; superciliary and lores are whitish buff. The outer tail-feather is almost entirely white; the next with the outer web and tip white, the next with a narrow white

outer border and the remainder dark brown. The under parts are white, the breast is sandy buff flecked with rufous and brown; wing lining and under wing-coverts are pale cinnamon-rufous, the under tail-coverts creamy white. Legs and feet are flesh-colour; the bill is horn, paler below. The wing measures 72–89 mm.

The Singing Bush-Lark has a habit of fluttering in the air before dropping into the grass, when the white in the tail is noticeable. Where it occurs it is a common species, frequenting open grassland with a mixture of low bushes. A bird of the dry plains and the borders of the desert, but not penetrating the desert itself.

It nests in the Sudan in summer—as late as August in Chad territory—making a nest of fine grass and plant stems, which may be situated by a grass tuft for protection from sun or rain. Four eggs are laid, white, finely spotted with dark brown and underlying greyish-brown spots. They measure 17·5–19·5 × 13·8–15 mm.

Distribution. From the Anglo-Egyptian Sudan to the French Sudan, French Niger and Chad territory, but not south of lat. 15° N.

WHITE-TAILED BUSH-LARK

Mirafra albicauda Reichenow

This very dark lark is 6¼ in. in length and appears almost blackish above, mottled with grey and brown, the brown wings with very distinct rufous margins. The tail is short and conspicuously marked,

the two outer feathers white, and the remainder almost black, the penultimate feather having a dark brown inner margin. The chin and throat are white, the rest of the under parts buff; the breast is heavily streaked and spotted with umber. Under wing-coverts and quill lining are rufous. The bill is dark above, pale below; the legs are horn-brown. The wing measures 75–85 mm., the tail 43–47 mm.

This and the last species, which are so different in colouring, are often found inhabiting the same territory, the dark plumage of *M. albicauda* enabling it to be picked out from its sandy-coloured companions. It soars high in the air and sings very beautifully.

Its nest and eggs have not yet been found.

Distribution. From Tanganyika this bird ranges north to the Kassala Province of the Sudan and the White Nile, then west to the Shari River and Lake Chad.

GOLDEN BUSH-LARK

Mirafra cordofanica Strickland

THE general colour of this bird is light cinnamon-rufous, the feathers of the upper parts with cream-coloured borders and a few dark streaks on the mantle; the lores and a streak over the eye are cream-colour. The middle two pairs of tail-feathers are cinnamon-rufous like the rump, the next two pairs blackish tipped with white, the penultimate feather white at the tip and along the outer web and the outermost feather white except at the base. The whole throat and under parts are white, the breast being washed with cinnamon-rufous and a few dusky spots. The bill is pinkish-clay colour, the legs pinkish-flesh. The wing measures 78–87 mm., the tail 55–60 mm.

Care must be taken not to confuse this bush-lark with Dunn's Lark, which has all the outer tail-feathers mostly black in colour. Their colouring is otherwise very similar.

The Golden Bush-Lark is a very local species and must be sought on reddish sandy soil where it lives among the feathery prairie grass common in the Sudan.

It is sexually active in May, but the nest has never been discovered.

Distribution. In West Africa recorded from the edge of the desert at Tawa and north of Timbuktu, its range extending eastwards to Darfur and Kordofan, in which latter province of the Anglo-Egyptian Sudan it was first discovered.

RUFOUS-NAPED BUSH-LARK

Mirafra africana kurrae Lynes

THE Rufous-naped Bush-Lark, of which several races occur within our limits, is about the same size as a sky-lark, with a short tail, and measures about 7 in. in total length, with an expanse of 11 in. All the races have rufous crowns heavily marked with black on the forecrown and streaked on the hind crown, which is crested. Their general colouring varies from cinnamon or rusty buff to bright rufous, and the upper parts are mottled with black and Indian red. The under parts vary from cream (in *occidentalis*) to rufous buff (in *stresemanni*), and the breast is heavily spotted with black drop-shaped spots. The dark brown wings are heavily bordered with rufous and the tail is similarly coloured without any white. The wing measures 88–99 mm., the tail 59–68 mm. Legs and feet are flesh-coloured.

Four races come within our limits; that which is named above lives among the rocks, grass and scrub of the high plateaux in northern Nigeria and all the other races are inhabitants of similar environment in other countries.

It hides during the daytime among the scrub and small bushes which clothe the plateaux and is exceedingly difficult to flush. When it does take wing it seldom flies far but soon drops down again to cover.

Although it is widely spread, it does not appear that its eggs have ever been described, and that applies equally to the other races to be mentioned in the next paragraph.

Distribution and Races

M. a. kurrae Lynes extends from the Bauchi Plateau of Nigeria to Darfur, where it was discovered on Kurra and Jebel Marra.

M. a. stresemanni Bannerman is a rich cinnamon-rufous race with chestnut-buff under parts, restricted to the highlands around Ngaundere and Fumban in northern Cameroon.

M. a. henrici Bates is decidedly darker than any of the other races, the upper parts being blackish with rufous margins. It is known only from the Mount Nimba area of French Guinea.

M. a. occidentalis Hartlaub has browner upper parts and lacks the pinkish-rufous tinge of *M. a. kurrae*. It is found from Gaboon to Angola.

In the grasslands of the French Congo a bush-lark has recently been discovered near Djambala which resembles *M. africana* in size and proportions, though much less noticeably streaked than any known race of that bird. Its back is greyish brown with dark shaft-streaks; the under parts are pale buff, changing to rufous buff on

the forethroat and buffy white on the throat. The wing measures 92–95 mm. and the tail 55–57 mm. It has been named *Mirafra malbranti* Chapin, but is not considered a race of *M. africana*, its nearest ally.

RUSTY BUSH-LARK

Mirafra rufa nigriticola Bates

THE text figure will give a better idea of this bird than any written description, but what appears in the illustration to be a white border to the outer tail-feather is not white but pale cinnamon-brown. Cinnamon-brown is the colour of the plumage of the upper parts, with dark middles to the feathers. The throat is white, the breast buffish, obscurely spotted with tawny brown. The middle

tail-feathers are brown, the remainder black except for the light edge to the outer feather. There is no white in the tail of this bush-lark. It has a comparatively longer tail than is usual in bush-larks, measuring 60–66 mm., and a finer, longer bill, more resembling that of a pipit. Above the eye is a conspicuous cream-coloured stripe. The bill measures 15 mm., the wing 83–88 mm.

This recently discovered race, which was not known prior to 1932, was found on an area of bare black rock in the vicinity of Tawa, French Niger, or on bushes growing nearby. It is essentially a bird of stony ridges, as was proved by finding it again in the Combretaceae country.

The food appears to be termites, insects and small seeds, upon which most of the larks appear to exist. This bird is more given to perching on bushes than many of its family, from which it will take little cruises in the air while uttering its pleasing song.

Nests have never been found.

Distribution. The race *nigriticola* is apparently restricted to a small area of French Niger Colony around Tawa and Tillabéry at the edge of the desert north of Sokoto. The typical subspecies is found in Darfur.

NYASALAND BUSH-LARK

Mirafra fischeri zombae Ogilvie-Grant

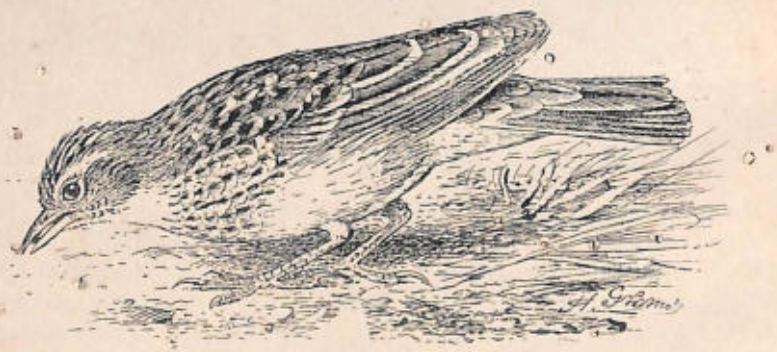
A SIMILARLY marked lark to *M. buckleyi tigrina*, described hereafter, but browner and the throat white with more pronounced smaller dark spots on the breast. The wing measures 76–85 mm., tail 55–61 mm.

Distribution. From the Lower Congo east to the Kasai and the Zomba plains in Nyasaland.

BUCKLEY'S BUSH-LARK

Mirafra buckleyi buckleyi (Shelley)

A SMALL bush-lark about 5½ in. in length, cinnamon-brown above, rich buff below, with breast spotted with brown; chin and throat are white. The outer tail-feathers are cinnamon, the central



feathers rufous with black shafts and the remainder black. The wings have pale edges to the inner quills, rufous to the outer ones. The bill has the upper mandible blackish, the lower white. Legs and feet are flesh-colour. The wing measures 72–80 mm., the tail 51–53 mm.

Buckley's Bush-Lark has a characteristic flight: the bird mounts skywards by a series of loops, each followed by a slight dip. At the approach to the top of each loop one hears the drumming. Having reached the desired height, the lark soars overhead, descending a little, to rise again, drumming as it mounts. From near the highest point reached it makes a sudden descent, almost a vertical dive, with a final drumming when within a few feet of the ground. Frequently this sound is the first sign of bird life in the early dawn or even before daybreak. On alighting, the bird runs about between the grass tussocks, and if flushed only flies a very short way.

The nest is built on the ground at the foot of a grass tuft; a cup-shaped bowl of dry grass with more dry grass woven into the growing grass to form a kind of roof. The eggs are dirty white heavily spotted and blotched with dark brown and mauve. Not more than two eggs have been found in a nest. They measure 19·75–22·50 × 13·75–14·00 mm.

Distribution. *M. buckleyi buckleyi* is widely distributed over the drier parts of West Africa from Gambia to the Shari River and is well represented from the Northern Territories of the Gold Coast and Nigeria, more numerous south of lat. 9° 30′ N. than north of it. Its favourite habitat is open country of the park-grassland type, but it occurs also on bare hilltops and in large open clearings in forested country.

Another race, *M. buckleyi tigrina* Oustalet, which is much more cinnamon-rufous on the upper side and has the breast more suffused with rufous, is found in north-eastern Cameroon and along the Ubangi and Uelle Rivers.

SABOTA BUSH-LARK

Mirafra sabota plebeja (Cabanis)

The technical description only of this lark will be given, as it barely comes within our limits. Lores and eye-stripe are white; general colour of upper parts is grey-brown, whitish on the nape and collar, all the feathers with broad dark brown streaks. Primaries and secondaries are brown with pale creamy tips and margins; the tail is blackish brown, the central feathers broadly margined on both webs with sandy brown, the remainder with narrow cream margins and white tips. The throat is white, the rest of the under parts whitish washed with cream, the breast with dark brown streaks. The eye is brown, the bill horn; the legs are flesh-coloured. The bill measures 14–15 mm., wing 80 mm., tail 50 mm., tarsus 22 mm.

Distribution. Known only from the Loango Coast, Portuguese Congo.

The food appears to be termites, insects and small seeds, upon which most of the larks appear to exist. This bird is more given to perching on bushes than many of its family, from which it will take little cruises in the air while uttering its pleasing song.

Nests have never been found.

Distribution. The race *nigriticola* is apparently restricted to a small area of French Niger Colony around Tawa and Tillabéry at the edge of the desert north of Sokoto. The typical subspecies is found in Darfur.

NYASALAND BUSH-LARK

Mirafra fischeri zombae Ogilvie-Grant

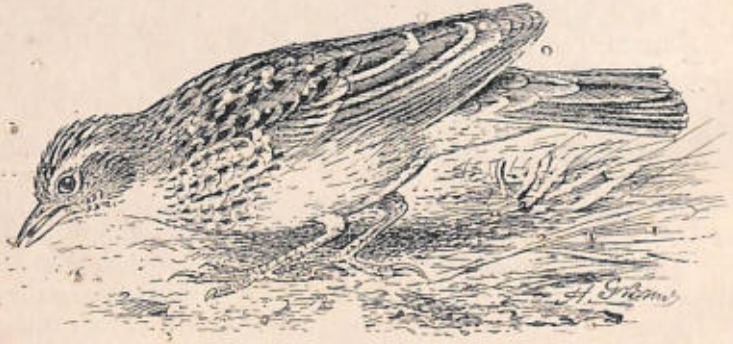
A SIMILARLY marked lark to *M. buckleyi tigrina*, described hereafter, but browner and the throat white with more pronounced smaller dark spots on the breast. The wing measures 76–85 mm., tail 55–61 mm.

Distribution. From the Lower Congo east to the Kasai and the Zomba plains in Nyasaland.

BUCKLEY'S BUSH-LARK

Mirafra buckleyi buckleyi (Shelley)

A SMALL bush-lark about 5½ in. in length, cinnamon-brown above, rich buff below, with breast spotted with brown; chin and throat are white. The outer tail-feathers are cinnamon, the central



feathers rufous with black shafts and the remainder black. The wings have pale edges to the inner quills, rufous to the outer ones. The bill has the upper mandible blackish, the lower white. Legs and feet are flesh-colour. The wing measures 72–80 mm., the tail 51–53 mm.

Buckley's Bush-Lark has a characteristic flight: the bird mounts skywards by a series of loops, each followed by a slight dip. At the approach to the top of each loop one hears the drumming. Having reached the desired height, the lark soars overhead, descending a little, to rise again, drumming as it mounts. From near the highest point reached it makes a sudden descent, almost a vertical dive, with a final drumming when within a few feet of the ground. Frequently this sound is the first sign of bird life in the early dawn or even before daybreak. On alighting, the bird runs about between the grass tussocks, and if flushed only flies a very short way.

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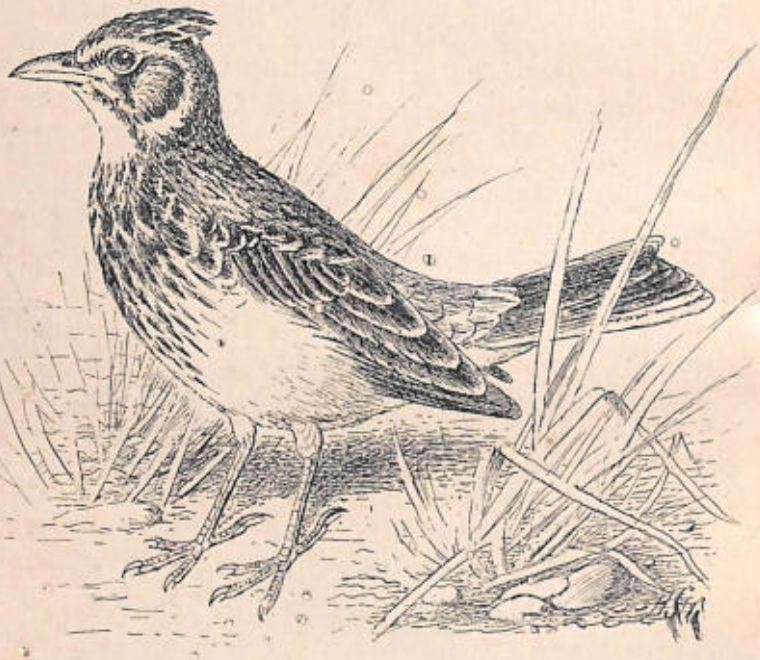
Distribution. Known only from the Loango Coast, Portuguese Congo.

RUFOUS-RUMPED BUSH-LARK

Pinarocorys erythropygia Strickland

A RATHER large, long-tailed lark, $6\frac{3}{4}$–$7\frac{1}{2}$ in. in total length, very blackish in appearance with rufous rump and rufous base and outer margin to the tail. Lores, cheeks and eye-stripe are whitish, the crown, back and wings dark brown, the wing-coverts tipped with pale buff, the primaries outwardly margined with rufous, broadly



so in females, less so in males; the secondaries broadly tipped with white washed with cinnamon. The middle tail-feathers are dark brown; the rest of the feathers rufous at the base and on the outer web of the outer feather, the terminal portion being blackish brown. Chin and under parts are white, with the breast heavily spotted with black and a black patch on each side of the throat. The bill is dark horn above, pale below; legs and feet are greyish white. The wing measures 102–113 mm., the tail 65–78 mm. and the tarsus 24–27 mm.

This lark stands high on its legs and when alarmed can run very swiftly over the bare ground upon which it is found. It is restricted to the dry belt which stretches across the whole continent. It scarts

that it is to some extent migratory. Records point to an early breeding season, February to April, but its eggs and nest have not been described.

Distribution. The hinterland of our Colonies from northern Sierra Leone eastwards to Darfur, Kordofan and the White Nile, occurring in the Northern Territories of the Ivory and Gold Coasts and in Nigeria (Plateau, Niger and Benue Provinces) and in the Northern Provinces.

BIFASCIATED LARK

Alaemon alaudipes alaudipes (Desfontaines)

THE entire upper parts of this lark are sandy buff or isabelline, the hind crown and neck tinged with grey; the lores and a stripe over the eye white, and the cheeks whitish. The entire under parts are white, with the breast tinged with buff and spotted with dark brown. When at rest an area of white is visible along the wing. In flight the bird is most conspicuous, the blackish band across the white secondaries being very striking. The tail is blackish brown except the central pair of feathers, which are sand-colour; the outer tail-feather is white on the whole outer web.

The Bifasciated Lark is about 9 in. in length with wing of 110–130 mm., tail 74–90 mm. and tarsus 30–35 mm. The legs and feet are white and the bill is dark horn-colour. On the ground it is extremely difficult to see until it runs, which it does incredibly fast. When it takes wing it seldom flies far, and its buoyant flight is curious. When nesting, the males rise in the air and utter a beautiful song, dropping to earth again beside the female, almost landing on her head.

The nest is built under the shelter of a bush or just off the ground and is made of fine bleached twigs and rootlets. Eggs are white with lilac and brown markings and measure 20–22 × 15–17 mm. Four complete the clutch.

Distribution. The Sahara, never likely to be seen beyond the edge of the desert, to which area it is restricted. Another race, *A. a. boavistae* Hartert, with darker and browner upper parts and more heavily spotted breast, inhabits the sandy islands of Boavista and Maio in the Cape Verde archipelago. A very pale race *A. alaudipes meridionalis* (Brehm) inhabits the Sudan and Egypt.

fam.

BLACK-TAILED SAND-LARK

Ammomanes cinctura cinctura (Gould)

A MUCH smaller lark than the last species described, about 5½ in. in length and very difficult to observe unless it moves. Uniform cinnamon-sand colour above, with blackish tips to the cinnamon-rufous wings and tail; the breast the same colour with a few dusky spots, throat and belly white. The wing measures 82–93 mm., tail 50–52 mm.

This lark inhabits the flat stony portions of the islands where it lives, ascending to the barren, more mountainous areas, but avoiding cultivation.

Distribution. *A. c. cinctura* inhabits the islands of Sal, Boavista, São Thiago and Maio in the Cape Verde group.

On the mainland a closely allied race, *A. c. arenicolor* (Sundevall), with paler upper parts and pale sandy-buff under parts, ranges from the desert country of northern Africa and the Egyptian Sudan to Aïr and probably over the whole desert area.

DAMERGU SAND-LARK

Ammomanes deserti geyri Hartert

The entire upper parts are sandy-greyish brown, shading into rufous brown on the rump, the middle pair of tail-feathers like the rump, the rest brown washed with cinnamon, the outer webs pale sandy cinnamon. The chin is white, the rest of the under side pale sandy buff with dusky spots on the throat and jugulum. The wing measures 97–103 mm., the tail 64–68 mm. The bill is yellow and the feet yellowish-flesh colour.

This little lark was discovered in the Damergu country on the cliffs of Farak, the only mountainous part of that area. It lives under similar conditions to the Sahara Sand-Lark (*A. d. mya*), which also comes into our area, on bare stretches of stones and pebbles on the plains and among the huge boulders in mountainous districts.

It makes its grass nest on the ground and surrounds it with small pebbles, lining it with strips from cotton garments, wool or fibre. The clutch consists of three or four eggs, pinkish white spotted and sprinkled with brown, and a few paler greyish underlying spots. The eggs measure 21–22 × 15·3–16·8 mm.

Distribution and Races

A. deserti geyri inhabits the Damergu country between Asben and Kano, extending into French Niger Colony (Tillia Wells).

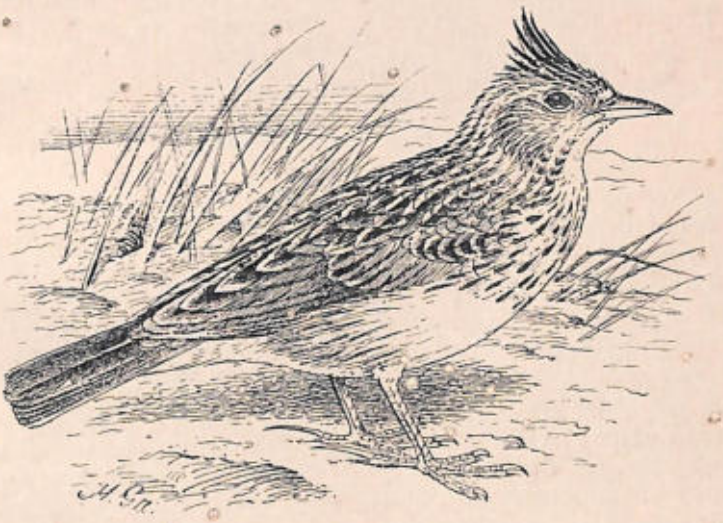
Another race, *A. deserti mya* Hartert, is paler, the upper parts

being sandy cinnamon, the rump and upper tail-coverts more rufous and the dusky spots on the breast more obscure. The margins of wings and tail are rufous. This subspecies inhabits the whole of the North African Saharan region, the Sudan and Arabia, ranging south to Aïr.

CRESTED LARK

Galerida cristata senegalensis (Müller)

Two races of the large-billed Crested Lark (*G. cristata*) are found in Upper Guinea in the dry belt. In appearance this lark looks like a British Sky-Lark—light brown in colour with dark middles to the feathers and with a very decided crest, a pale stripe over the eye and the sandy-buff breast heavily streaked with black. The wing measures 90–105 mm., the tail 51–63 mm. The legs and feet of this lark are very pale flesh-colour.



Crested Larks are very numerous on the grassy plains and alluvial flats of the French Sudan and French Niger and further south on cultivated soil. In Gambia it occurs mainly near the coast and is a resident wherever it is found. Its little song can be heard as it runs about on the ground and is not restricted to the breeding season. Occasionally a party of these larks will stray into the desert, and it is this race which is found in the vicinity of Timbuktu and Taberréshat Well. After breeding, which takes place in spring, little family parties may be seen together, the young birds recognisable

by the white tips to the feathers of the crown, back and wing-coverts and the sandy-rufous margins to the quills.

The nest is built on the ground in a circular hollow, often under the shelter of a tussock, and is made of dry grass with a finer grass lining and is rather loosely put together. The clutch usually numbers four. The eggs are creamy white or white, covered with flecks and speckles of pale brown and blotches of stone-colour. Measurements vary considerably: 20·5–22·3 × 15·7–16·5 mm.

Distribution and Races

G. cristata senegalensis (Müller) occurs in Senegal, Gambia, Portuguese Guinea, Sierra Leone, French Sudan and French Niger, ranging to the borders of the desert.

G. cristata alexanderi Neumann is paler and more sandy-coloured in plumage and occurs in all the northern provinces of Nigeria east to the Shari and Darfur. It was described first from the Bauchi Province of Nigeria.

A great many other races of the Crested Lark have been described from the dryer parts of the Palaearctic and Ethiopian regions.

NIGERIAN SUN-LARK

Heliocorys modesta giffardi Hartert

THREE races of the Sun-Lark (*H. modesta*) come within our limits; the above listed is the best known.

It is a small bird about 5½ in. in length and appears very dark, the sandy-rufous upper parts being conspicuously marked with black, the under parts buff, the breast heavily streaked with blackish markings and the throat white. The wings and tail are dark brown, the outer tail-feather is pale rufous, with a black diagonal mark down the inner web; the quills also are edged with rufous. The rump is tinged with cinnamon and is less heavily marked than the back. The legs and feet are dark brown, the bill is black above, whitish on the lower mandible. The wing measures in this race 80–87 mm., the tail 44–50 mm.

During the greater part of the year the sun-larks go about in small parties of three to six birds, frequenting open cultivated land, grass fields and dusty roads, ascending the rocky outcrops to the bare summit. They have a sweet little song which is uttered by the bird as it hovers in the air. These sun-larks live almost entirely upon seeds.

The breeding season is in the middle of the dry weather from November to March. The nest is placed on the ground, occasionally at the base of a tussock, or in a depression on rocky ground, and parts

scanty affair of grass fragments and rootlets. The eggs are creamy white, the ground almost completely obscured by reddish-brown spots. The clutch probably consists of four. A single egg measures 19·9 × 14·75 mm.

Distribution and Races

H. modesta giffardi Hartert inhabits northern Nigeria and the Northern Provinces of the Gold Coast south to about lat. 8° N. It occurs on the Upper Volta, and some local movements appear to take place. Eastward it extends from Adamawa to Darfur. It is the palest of the three races and is restricted to semi-arid country.

H. modesta strümpellli (Reichenow) has darker tawny under parts and brighter rufous margins to the feathers of the upper parts. The wing measures 80–90 mm. It is restricted to the highlands of western Cameroon and was described from Tibati.

H. modesta nigrita Grote is darker and smaller than the last named, black and dark rufous above and darker tawny below. The wing measures 78 mm. It inhabits French Guinea (Fout-Jalon) and the Karina district of Sierra Leone.

fam.

DUNN'S LARK

Eremalauda dunni (Shelley)

THE pale cinnamon-rufous plumage of this lark, slightly streaky on the upper parts, is very striking, and when flushed (no easy matter) all the feathers of the tail will be seen to be black except the central pair, which resemble the rest of the upper parts. This pattern in the tail enables Dunn's Lark to be distinguished from the Kordofan Bush-Lark, which is its double in the general colour of the plumage.

In the field *E. dunni* may be recognised from both *M. cordofanica* and *M. cantillans chadensis* by lacking the light outer tail-feathers of those species, and also from *M. c. chadensis*, which is very like it in size but browner in colour, by not hovering before dropping into the grass. It is a small bird, with wing measuring 76–85 mm. and tail 48–55 mm. The legs and feet are whitish.

It is only within recent years that the range of Dunn's Lark has been found to extend westwards to the borders of the Sahara in the French Sudan. Their habitat is the barren desert north of lat. 17° N., and there they have been met with singly or two or three in company with the Finch-Larks. It was found that they had been living on the seeds of *Panicum turgidum*, the birds occasionally varying their diet of seeds with small insects.

Far to the east on the grass prairies and deserts of Darfur these little larks were found to die out once the prairie grass had diminished, but that it can thrive on absolutely barren soil was shown by its discovery in an isolated stretch of desert in the Damergu country north of Nigeria.

Its nest and eggs do not appear to have been found.

Distribution. The southern Sahara, extending from the French Sudan north of Timbuktu and Burem eastwards through southern Aïr and the country north of Kano across the dry belt to Darfur and Kordofan.

CHESTNUT-BACKED FINCH-LARK

Eremopterix leucotis melanocephala (Lichtenstein)

This tiny lark measures only 4·4 in. from bill to tail, and the male bird is easily recognised. The crown, neck, throat and breast are black, the ear-coverts are white and a narrow white band separates the hind neck from the mantle, which, with the back and scapulars,

is chestnut. There is a white patch on each side of the breast, and the greyish-white upper tail-coverts are noticeable when the bird first rises from the ground. The tail-feathers are blackish brown, margined with cinnamon; the outer feathers are whitish with a cinnamon wash. The wing measures 71–80 mm., the tail 38–46 mm. The bill is greyish white and the legs are flesh-coloured.

The female is duller and has the mantle browner, the under parts buffish, irregularly mottled with black; in the centre of the breast and belly is a blackish patch.

The finch-lark has a much wider range in West Africa than Dunn's Lark, with which it occasionally consorts on the borders of the desert. It is not restricted to, though found along, the edge of the Sahara, but may be encountered in orchard bush and on freshly burnt grasslands, ranging as far south in Nigeria as lat. 10° 50′ N., where flocks have been seen in the early part of the year. It subsists exclusively upon tiny seeds and, being dependent upon

them, is subject to a good deal of local movement. At the time of the rains a northward migration takes place.

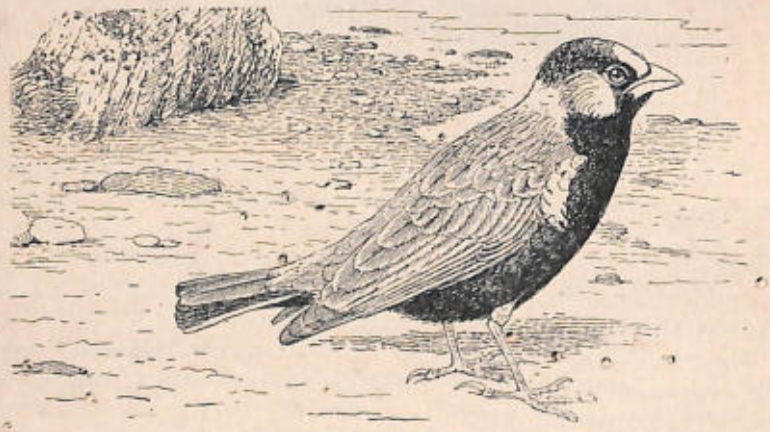
Sexual organs are fully developed before Christmas and early laying takes place in December, breeding continuing until March. In January males may be seen performing their love-flight, when they ascend to 80 yards or more and then descend to the ground in zigzag flight. The nest is very difficult to detect. One typical example was composed of a little pad of bits of rag, cotton waste, string and goats' hair placed in the open in a depression between a brick and a piece of dried dung. The egg is greyish white, thickly speckled with olive-brown and grey, forming a zone at the large end.

Distribution. The whole of the semi-arid belt from Senegal to the Nile Valley, ranging chiefly between lat. 10° and 18° N. and occurring locally in all British Colonies except Sierra Leone, from which it has not yet been recorded.

WHITE-FRONTED FINCH-LARK

Eremopterix nigriceps albifrons (Sundevall)

This most conspicuous little bird resembles the last in size and in having all black under parts and white cheek-patches, the feathers of which, being long, stand out like whiskers in life. The males may



be recognised at once from the males of the Chestnut-backed Finch-Lark by having (1) the forepart of the crown white and (2) the mantle and back pale sandy brown instead of bright chestnut. The white collar at the base of the neck is broader, and there are no black feathers below it. The female is sandy buff above, including the crown and cheeks, the breast sandy buff, the belly whitish

the centre of which are some black feathers, usually concealed. The wing of this finch-lark measures 72–78 mm. and the tail 39–43 mm.

Throughout much of their range this and the Chestnut-backed Finch-Lark may be seen together, frequenting the bare places in the scrub and grasslands. Both species are abundant on the plains where they occur, but very seldom are they seen out of them. That applies to their distribution in the Sudan and no doubt to other places where they are to be found.

It has been remarked that of the two species this one is far shyer and generally more of a desert species. The males may be seen soaring 90 ft. or so into the air, uttering a twittering call-note, then parachuting down with wings raised above the back. Large flocks may be seen at times, and there is certainly a marked seasonal movement. It is absent apparently from May to November from the area south of lat. 16° N., but in midwinter and spring it ranges much further south.

Breeding begins at the end of September, and nests are little more than a cup of dried grass placed in a depression in firm sand, occasionally under the shelter of a grass tuft. Eggs are greyish white sparsely speckled with olive-brown and grey.

Distribution and Races. *E. nigriceps albifrons* ranges from the edge of the desert near Timbuktu along the Upper Niger (Burem and Gao) to the wells of Tawa and Tillia in French Niger, thence across the arid belt to the Nile valley, where it occurs from about lat. 15° N. to Shendi and Ambukol. In West Africa it does not occur nearly so far south on the plains as does the Chestnut-backed species.

The typical subspecies, *E. nigriceps nigriceps* (Gould), takes the place of the mainland race in the islands of the Cape Verde archipelago. It resembles *E. n. albifrons* in plumage but is slightly smaller in size. The wing measures 72–78 mm., tail 39–43 mm.

GREY-BACKED FINCH-LARK

Eremopterix verticalis (Smith)

The adult male has the head and neck brownish black, cheeks, hind collar and a patch on the back of the crown are white. The rest of the upper parts are nearly uniform brown but varying in shade with pale edges to the feathers. Wings are entirely brown, the lesser coverts whitish marked with brown, the remaining coverts brown edged with whitish in fresh plumage. Upper tail-coverts are grey-brown. The tail is dark brown, the outer feather with pale outer web. The entire under parts are sooty brown save for a white patch on either side of the breast and some whitish feathers on the sides. Axillaries, under wing and tail-coverts are sooty brown.

Short feathers on the tibia are white. The eye is brown, bill greyish horn; legs and feet are dirty flesh-colour. The bill measures 10–11 mm., wing (male) 77–84 mm., (female) 75–82 mm.; tail (male) 40–43 mm., (female) 40–45 mm.; tarsus 17–18 mm.

The adult female has the whole upper surface brown inclining to sandy, the tips to the feathers being buff, which gives a streaky appearance. Sides of head and cheeks are buff streaked with blackish. The whole under side is buffish white, the breast obscurely streaked with brown, with a patch of sooty brown on the middle of the belly, under tail-coverts sooty tipped with buff, thighs whitish with dark streaks.

Distribution. This species only just comes within our limits on the Loango Coast, Portuguese Congo. It ranges over the greater part of South Africa. Its habits have been discussed in my larger work.

SHORT-TOED LARK

Calandrella brachydactila (Leisler)

THREE races of this lark have been recorded from West Africa.

The typical race is a small brownish bird, with the upper parts greyish earth-brown, a white patch on the lores and stripe over the eye, the crown with blackish shaft-streaks and dark middles to the feathers of back and mantle. The two outer tail-feathers are cream washed with sandy buff on outer web, the remaining rectrices almost black tipped with creamy buff, the central pair with both webs broadly margined rufous buff. The under parts are white, with the breast buffish, with blackish patch on each side. Axillaries, under wing-coverts and under tail-coverts are white. Legs and feet are pale raw sienna. The wing measures 95–96 mm., the tail 52–62 mm.

This and the other races of Short-toed Lark which have been found in West Africa are all winter visitors from distant lands and do not breed within our limits. They have all been found to occur on the grassy plains and sandy ridges covered with tussocks of *Panicum turgidum* along the borders of the Sahara. The typical race occurs more on the cultivated ground, fallow and stubble.

Distribution and Races

C. b. brachydactila (Leisler), described in detail above, is a breeding bird in southern Europe and northern Africa, migrating through the oases of the Sahara south to about lat. 12° N. It has been taken at Taberréshet Well, French Sudan, and at Maidugari, northern Nigeria, but is likely to be found at other places.

C. brachydactila hermonensis Tristram differs from the last in having the plumage paler and more sand-colour, the crown tending to

rufous. The wing measures 88–98 mm. It breeds in northern Africa and Palestine, ranging south in winter to French Sudan, Air and the Anglo-Egyptian Sudan.

C. brachydactila longipennis (Eversmann) is an eastern representative which has the plumage greyer than either of the others and lacks the sandy-rufous tinge of *hermonensis*. The wing measures 86–97 mm. It breeds in Transcaspia, Turkestan and Afghanistan and ranges in winter to the Algerian Sahara. It has been taken once at Zinder and once on the Athi River, Kenya Colony.

RAZA SHORT-TOED LARK

Razocorys razae Alexander

This grey-coloured lark with short tail has the mealy-grey upper parts of the body streaked with black. The outer tail-feathers are white save for the basal fringe of the inner web, the next pair white on the outer web, black on the inner; the remaining rectrices are blackish. The under parts are white with sharply defined blackish streaks on the breast, the axillaries and under wing and tail-coverts white; legs and feet are brownish-flesh. The wing measures 76–87 mm., the tail 44–55 mm.

This is an insular form restricted to the Cape Verde archipelago. It has a pretty song and a persistent call-note, which it utters especially at dusk.

The nest is a frail structure of grass and the eggs are greyish white closely freckled with reddish brown and olive-brown with stone-coloured shell markings.

Distribution. The island of Raza.

FAMILY MOTACILLIDAE

Generic key to the Wagtails, Pipits and Long-Claws

1. Outstretched legs and feet reaching beyond tail *Macronyx*, p. 836
   Outstretched legs and feet not reaching beyond tail .. 2
2. Tail long, under tail-coverts yellow or white, breast never streaked:
   (*a*) Tail longer than wing .. .. .. *Motacilla*, p. 822
   (*b*) Tail shorter than wing .. .. .. *Budytes*, p. 826
   Tail short, under tail-coverts never yellow or white, breast either strongly or faintly streaked *Anthus*, p. 829

Specific key to the Wagtails

1. Under tail-coverts yellow 2
   Under tail-coverts white 3
2. Back and mantle grey .. *Motacilla cinerea cinerea*, p. 825
   Back and mantle olive-yellow
   Budytes flavus flavus and races, p. 826
3. Mantle and back black .. *Motacilla aguimp vidua*, p. 823
   Mantle and back grey 4
4. Forehead and cheeks white, hind crown black
   Motacilla alba alba, p. 822
   Forehead and cheeks lead-grey, hind crown dark grey
   Motacilla clara, p. 824

WHITE WAGTAIL

Motacilla alba alba Linnæus

In winter dress, when the White Wagtail occurs in our area, the broad white forehead and cheeks should enable it to be recognised. It is also the only wagtail in which the black crown contrasts with the grey mantle and back. In *M. aguimp vidua* the whole crown and back are black, and in *M. clara* both crown and back are grey. In other respects the plumage is grey above, white below, with a black band on the breast. In flight the white outer tail-feathers are in strong contrast to the rest of the black tail. The White Wagtail in summer plumage has a black chin and throat in both sexes; in winter the throat is white. The bill is black, as are also the legs and feet. The wing measures 83–93 mm., the tail 85–91 mm.

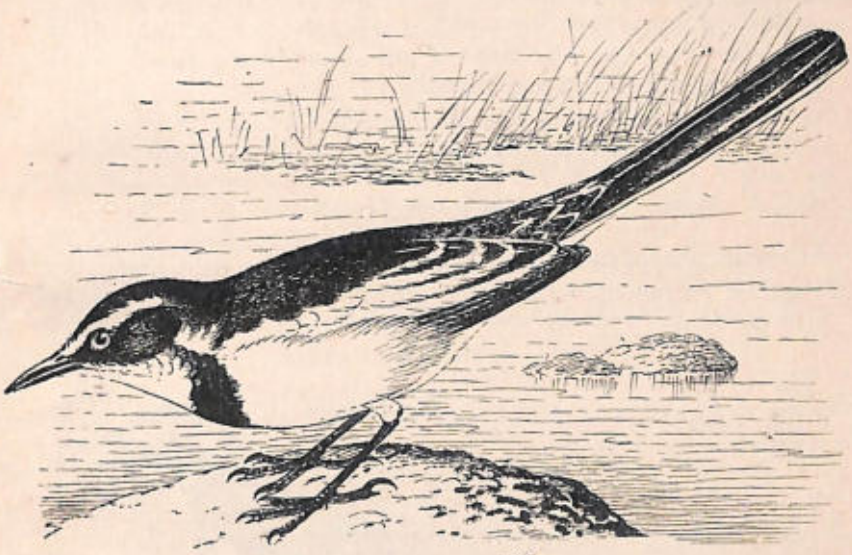
This well-known European bird is a winter visitor only to West Africa. It arrives in Gambia about the middle of October, and the latest to depart remain until April. These wagtails spread themselves all down the coast, reaching the northern borders of the Congo forest, and are to be found in all our Colonies south to Nigeria. In the desert country a few may be encountered near the wells feeding on the flies which attend the cattle and quenching their thirst when the water is spilled by the herdsmen.

Distribution. The whole of Europe, wintering in Africa south to Kenya, Uganda and the Uelle and Shari Rivers; in West Africa mainly recorded from the dry belt and Northern Territories.

AFRICAN PIED WAGTAIL

Motacilla aguimp vidua

THIS is a very striking wagtail—entirely black and white; the under parts are white with a black breast-patch, the upper parts black save for a white eyebrow and neck-patch. The wing when closed shows a band of white extending from the shoulder to the tip, and when spread a pretty pattern of black and white. Similarly the tail is partly black, partly white, the two outer feathers being white. It is rather larger than the White Wagtail or the Mountain Wagtail,



from both of which its black (instead of grey) upper parts will distinguish it when adult, but immature birds often have dark grey backs. The bill and legs are black. The wing measures 88–101 mm. and the tail 85–99 mm.

The adult female resembles the male, but the black of the upper parts is less intense and less glossy.

This wagtail is equally at home by the rushing torrents as it is among the pools and rivulets occasioned by the dry weather, when it may be seen running along the wet sand by the water's edge. When the large rivers are in flood the birds will leave the streams and may then be found on the fields and may even invade the clearings or village "posts," appearing quite unconcerned and unmolested in the village street. Fast-flowing clear and rock-strewn

Specific key to the Wagtails

1. Under tail-coverts yellow 2
   Under tail-coverts white 3
2. Back and mantle grey .. *Motacilla cinerea cinerea*, p. 825
   Back and mantle olive-yellow
   Budytes flavus flavus and races, p. 826
3. Mantle and back black .. *Motacilla aguimp vidua*, p. 823
   Mantle and back grey 4
4. Forehead and cheeks white, hind crown black
   Motacilla alba alba, p. 822
   Forehead and cheeks lead-grey, hind crown dark grey
   Motacilla clara, p. 824

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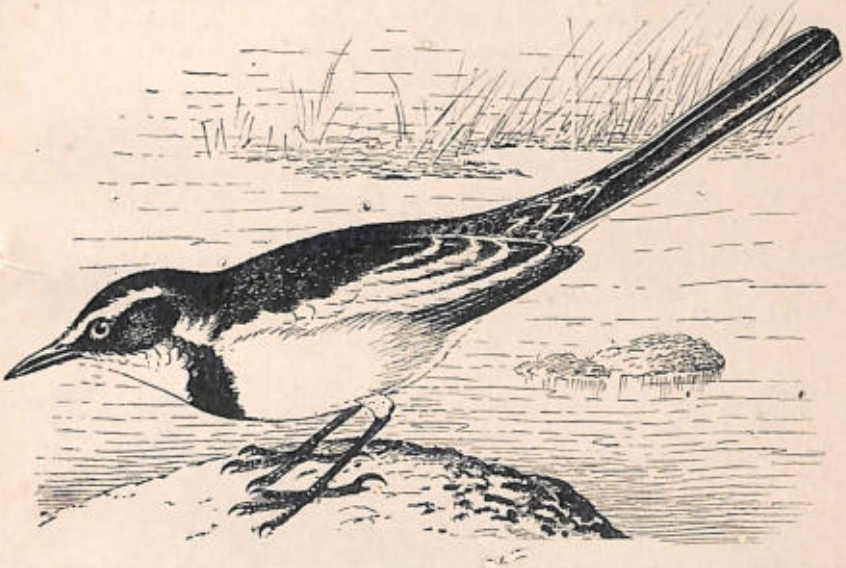

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streams are no doubt their first choice but they will be found also on stagnant or sluggish backwaters, endlessly hunting for the flies, beetles, ants and other insects upon which they feed.

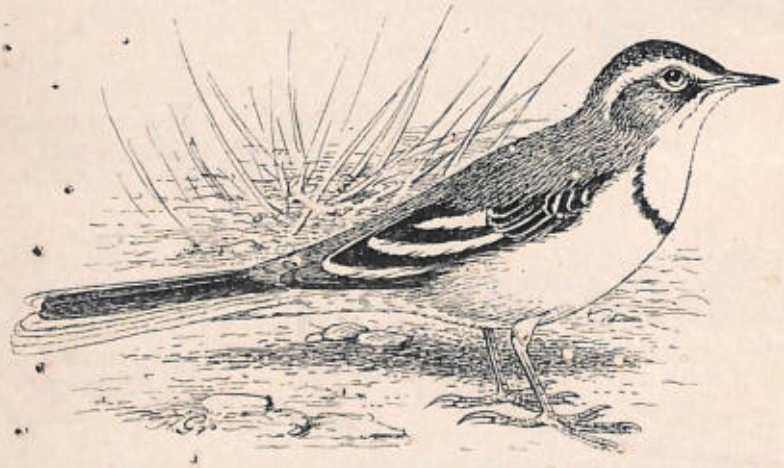
The nest is built in various situations, sometimes on the roof of a house or between ledges of rock near a stream. Three or four eggs are laid (in Nigeria in March and April) and are yellowish grey, the ground colour being almost hidden by the yellowish-brown streaks and spots. Measurements are 19·9–21·7 × 14·5–14·8 mm.

Distribution. From Liberia and the Nile to Angola and Cape Province. Widely but locally distributed in West Africa but not yet recorded from Gambia. It occurs from the coastal districts to the Northern Territories but is absent from forested areas, rarely visiting clearings. In eastern Africa, curiously enough, this wagtail is absent from the Abyssinian Plateau and Somaliland, but is resident in both Kenya and Uganda.

MOUNTAIN WAGTAIL

Motacilla clara Sharpe

About the size of the White Wagtail, lead-grey on the upper parts, white on the under parts, with a narrow black bar across the chest in the form of a crescent. Above the eye is a white superciliary and



below it a small black patch. The wings are crossed by two narrow white bars caused by the white tips to the black coverts. The three outer tail-feathers are white, the third with black on the outer web, the remaining feathers black with white tips. Axillaries, under wing-coverts and under tail-coverts are all white. The bill is black to

the legs are brownish grey. The wing measures 77–88 mm. and the tail 85–108 mm.

We must search for this wagtail on the rocks of rushing torrents in mountainous districts, and in such an environment it passes a pleasant existence. It has been found as high as 7,000 ft. above the sea. A most graceful little bird, it runs nimbly over the rocks and may be seen dashing into the spray of waterfalls without a moment's hesitation. Its twittering note is of such a timbre that it may be heard above the rush of waters. Flies, small dragonflies and insects constitute its food.

A nest discovered in a ledge was close by a waterfall, a bulky structure of dead leaves, moss and dried grass. Two eggs only had been laid, uniformly clouded with light yellowish brown. They measured 20·5 × 15·5 mm.

Distribution. From Sierra Leone and Abyssinia south to Natal and Benguella. Found locally where suitable streams occur in mountainous districts. In our area recorded from Sierra Leone, Liberia, and the British Cameroon highlands. In British East Africa it is rare and local, recorded from, among other localities, Mounts Elgon and Kilimanjaro (6,000 ft.).

GREY WAGTAIL

Motacilla cinerea cinerea Tunstall

The Grey Wagtail may be distinguished from the Blue-headed Wagtail (*B. flavus flavus*, the only other species in West Africa in winter with which it may be confused) by the exceptionally long tail and by the grey upper parts, which contrast strikingly with the yellowish rump and upper tail-coverts. In the Blue-headed Wagtail the whole upper parts are olive-brown or olive in winter, and there is no contrast in colour between the rump and the rest of the back. In summer plumage the Blue-headed Wagtail assumes a grey crown, but at that season the rest of the upper parts are bright olive-yellow, while in the Grey Wagtail they are clear lead-grey at that season. The Blue-headed Wagtail never has any black on the throat at any season in either sex. The bill is black, and the legs and feet are dusky flesh-colour. The wing measures 80–88 mm., the tail 95–105 mm. In my *The Birds of Tropical West Africa* this Wagtail is described in greater detail than space will allow here, for it undergoes considerable changes in the year. The points mentioned here should enable it to be recognised without the full description.

The Grey Wagtail has not yet been reported from West Africa south of Gambia, but is said to reach the latitude of our oldest British Colony during the winter months. The bird is a visitor from

Europe, and though it has a representative which breeds in the Canary Islands, it is not known to nest south of Morocco. It ranges much further south in eastern Africa than it is known to do in the west. In East Africa it frequents exactly the same reaches of water as the Mountain Wagtail and may even be seen on the same boulder. It may be looked for in such an environment between October and March inclusive.

Distribution. Europe from southern Scandinavia and the Ural Mountains to the Mediterranean, ranging in winter to Tanganyika and the Belgian Congo and in the west to Gambia, probably to Sierra Leone, but not recorded south of the Gambia River. On the eastern side of the continent it visits Kenya and Uganda between September and April.

BLUE-HEADED WAGTAIL

Budytes flavus flavus Linnæus

In addition to the above, four distinct European races of *B. flavus* have been reported from West Africa in winter, but none are so common or so widely spread as the Blue-headed Wagtail, great numbers of which arrive towards the end of September and during October.

The bird has a grey head, a conspicuous white eye-stripe, greenish-olive mantle and back and bright yellow under parts from chin to under tail-coverts. The legs and feet are black, and the wing measures (male) 80–84 mm., (female) 76–82 mm.

Unfortunately it is impossible to distinguish the races apart when in winter dress, so that not until the spring moult has taken place can we hope to assess the numbers of each which may be present. Although fairly generally distributed, these "yellow" wagtails are especially numerous where the herds of cattle are gathered, and so are found mainly in the Northern Territories. Another favoured habitat is where piles of groundnuts are collected awaiting shipment, but they may be seen on all cleared land and are fond of frequenting dry river beds, the borders of small pools and the short grass of swamps and fadammas. The birds are much in evidence in March, when numbers begin their long journey to the European breeding grounds. By the middle of April the majority have taken to

departure. It cannot be too strongly emphasised that it is useless to attempt to distinguish the five races until they have assumed their summer plumage.

Distribution and Races

The Blue-headed Wagtail (*B. flavus flavus* (Linn.)) is the commonest of all and is to be found from the seashore to the borders of the desert as well as in clearings in forest country and the bare highlands of northern Cameroon. For full description and seasonal change of dress see my larger work, vol. iv, pp. 65–6. Breeds in Europe and winters in Arabia and Africa from Senegal and the Sudan to Natal and Damaraland.

The Yellow Wagtail (*B. flavus flavissimus* (Blyth)) male in spring and winter has a greenish-yellow crown, yellowish forehead and bright yellow superciliary; brown and yellow ear-coverts, yellow throat and chin. The female is not always distinguishable from *B. flavus flavus*. The wing measures (male) 80–84 mm., (female) 76–82 mm. Breeds in Europe and is recorded from Gambia, the Gold Coast and Nigeria, ranging south to the Congo.

The Ashy-headed Wagtail (*B. flavus cinereocapilla* (Savi)) male has dark slate head and ear-coverts, no marked superciliary, a white chin and upper throat. The wing measures (male) 76–83 mm., (female) 77–79 mm. Breeds in Italy and Bosnia, ranging in winter to Uganda, and in West Africa is recorded from Senegal, French Sudan and Ivory Coast, but chiefly in western Saharan oases.

The Spanish Ashy-headed Wagtail (*B. flavus iberiae* (Hart.)) male resembles *cinerocapilla* but has a white superciliary stripe; the female has a darker crown and ear-coverts than *B. flavus flavus*. The wing measures (male) 78–81 mm., (female) 74 mm. Breeds in south-western Europe and winters in West Africa apparently, being recorded from Senegal.

The Grey-headed Wagtail (*B. flavus thunbergi* (Billberg)) male has a dark slate head and ear-coverts, no superciliary stripe, yellow chin and throat, often with moustachial streaks. The wing measures (male) 80–86 mm., (female) 79–86 mm. Breeds from Scandinavia to Siberia, ranging in Africa in winter to Transvaal and southern Nigeria. Recorded from French Cameroon, Sierra Leone, and Nigeria.

SUB-FAMILY ANTHINAE

*Key to the Pipits**

1. Upper parts uniform, not heavily marked with black .. 2
   Upper parts heavily marked with black 4
2. Outer tail-feathers with outer web and part of inner web white, or white with a sandy tinge; breast almost uniform .. .. .. *Anthus campestris campestris*, p. 829
   Outer tail-feathers without any white on either web; breast obscurely marked with dark brown 3
3. Under parts strongly washed with rufous buff; tarsus under 30 mm.
   Anthus leucophrys gouldii and *A. l. zenkeri*, p. 832
   Under parts dirty white, not washed with rufous buff; tarsus over 30 mm. .. .. *Anthus pallidiventris*, p. 834
4. Pale area of outer tail-feathers white, not washed with rufous or buff 5
   Pale area of outer tail-feathers washed with rufous or buff 6
5. Rump and upper tail-coverts plain, without black streaks; hind claw short, shorter than hind toe
   Anthus trivialis trivialis, p. 834
   Rump and upper tail-coverts streaked with black; hind claw long, as long as or longer than hind toe
   Anthus cervinus, p. 835
6. Second outer tail-feather almost entirely black or quite black 7
   Second outer tail-feather with long wedge-shaped area of pale buff on inner web 8
7. Upper parts almost black; breast heavily spotted with black .. .. *Anthus bannermani*, p. 831
   Upper parts earth-brown with broad sandy-buff margins to feathers; breast with obscure dark streaks
   Anthus similis asbenaicus, p. 829
8. Under parts dirty buffish white, upper parts blackish
   Anthus richardi cameroonensis, p. 830
   Under parts rich rufous buff, upper parts blackish brown with conspicuous sandy-rufous margins
   Anthus richardi lynesi, p. 830

* The Long-claw *Macronyx croceus* is not included in this key. This bird is much larger than any pipit and measures 8 in. in length. It differs from all pipits in that the outstretched legs and feet reach beyond the tip of the tail. The bright yellow throat and under parts and the black U-shaped gorget distinguish it from all pipits in our area. It is dealt with on p. 836.

TAWNY PIPIT

Anthus campestris campestris (Linnæus)

THE palest of the pipits in our area, where it occurs only in winter. Its general colouring is very uniform, the upper parts being pale sandy brown indistinctly streaked on crown; the dark centres of the wing-coverts, when visible, contrast with the pale sandy-buff fringes; above the eye is a well-marked pale cream-coloured eye-stripe. This is the only pipit with practically unstreaked breast, the breast being buff and the rest of the under parts creamy white. It stands high on its yellowish flesh-coloured legs, haunts barren plains, hillsides and sand dunes and runs with great speed. The wing measures 81–98 mm.

This is an abundant winter visitor from Europe which may be encountered from September until April and may then be seen on the more barren lands of the Northern Territories, frequenting the plains on the borders of the Sahara, beyond which few appear to proceed. Owing to its long legs it can run with great speed and invariably chooses terrain upon which its movements are unhampered, such as bare hillsides, sand dunes or stony plains. In the heat of the day these pipits seek the shade of some bush but are active when searching for the small grasshoppers and insects disturbed by the herds of cattle and goats. Many have been seen so engaged in the vicinity of Timbuktu, but further up the Niger this pipit is scarce. The spring passage lasts from February until April.

Distribution. Breeds in Europe generally from Scandinavia to the Mediterranean, wintering in north-west India and in Africa to the Equator, mainly found in West Africa in French Sudan and French Niger and at such places in the dry belt as Kano, Zinder and Timbuktu. Recorded also from Gambia and the Northern Territories of the Gold Coast and Bornu.

ASBEN LONG-BILLED PIPIT

Anthus similis asbenaicus Rothschild

THIS pipit may perhaps be recognised by its bill, which is rather longer than in most pipits and measures about 16 mm. in length. Mottled earth-brown above, with rufous-buff margins to the wing-coverts and under parts of the same colour; some indistinct dark streaks on the breast and a distinct buff eyebrow are the main features to observe. The legs are yellowish-flesh colour, and when the tail is spread it is mostly black with pale markings on the outermost feathers. The wing measures 87–100 mm.

In the mountainous district where this pipit is found the birds frequent the valleys where sandy flats adjoin stony ground. In the non-breeding season it is said to be a typical rock-pipit in its habits, frequenting rocky, grassy places among the hills. It breeds in June, at which season the sweet song of the male bird is to be heard uttered from a rock or bush, the bird occasionally rising with quivering wings.

Distribution. *A. s. asbenaicus* is only known from the mountain region of Asben in the southern Sahara, where it has been obtained at 5,200 ft.

Many races of *A. similis* occur throughout a great part of the wild mountainous country in Africa (to mention but two, *A. s. longirostris* in Kenya, *A. s. latistriatus* in Uganda), but only one other race has been named within our limits. This is *Anthus similis chapini* Grote, described from Fongu, near Bamenda, British Cameroon, but this bird has been proved to be the same as *Anthus bannermani*, to be described hereafter.

CAMEROON MOUNTAIN PIPIT

Anthus richardi cameroonensis Shelley

Two races of Richard's Pipit occur in our area; that named above is a very blackish-looking pipit, the ground colour of the upper parts being sooty brown, the feathers with blackish middles. A broad buffish-white eyebrow is conspicuous, as are the black stripes on either side of the whitish throat. The rest of the under side is dirty white or buff; the flanks and under tail-coverts are unstreaked. The tail is dark brown except for the two outer rectrices, the outermost whitish buff with only the basal half of the outer web dark brown, the penultimate feather with a wedge-shaped buff area along the shaft of the outer web. The legs and feet are yellowish-flesh colour. The wing measures 90–99 mm.

Distribution and Races. All we know about this pipit is that it is confined to the arid peak of Cameroon Mountain, where it was discovered at an altitude of 10,000 ft., and to the steep grass slopes of the mountain.

In the neighbouring range of the Banso Mountains in British Cameroon there lives a closely allied race, *Anthus richardi lynesi* Bannerman and Bates, resembling the Cameroon Mountain bird in its dark appearance but having the general colour of the plumage more rufous. It is very rufous on the under parts, and the black breast-spots stand out conspicuously. The wing of this race measures 90–98 mm. Specimens of this pipit were secured again at Oku, which lies higher than Bamenda. After breeding in these high

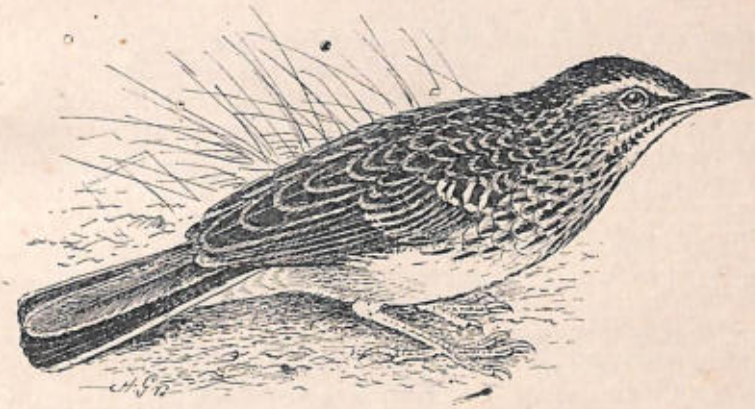
altitudes the pipits migrate in a north-easterly direction to spend the non-breeding season on the plains of Darfur, where they undergo a moult. It has recently been recorded from a rocky hill (1,000 ft.) near Yaundé, in French Cameroon.

The representative race in Kenya and Uganda is *Anthus richardi lacuum*, which is common and widely distributed except in the forests and swamps.

BANNERMAN'S PIPIT

Anthus bannermani Bates

Closely resembles *Anthus richardi cameroonensis* in its very dark appearance, having a well-marked whitish-buff eye-stripe, white throat and heavily marked breast, closely covered with blackish streaks. The wing is markedly rounded, and in its wing formula it



differs from the races of *Anthus richardi*, which show a considerable fall in length between primaries 4 and 5. In *A. bannermani* that is not the case. In the latter species primaries 2, 3, 4 and 5 are emarginate. In *A. richardi* and races only primaries 2, 3 and 4 show emargination. The legs and feet of Bannerman's Pipit are brownish-flesh colour; the wing measures 82–85·5 mm.

Recently it has been discovered that *A. bannermani* in Sierra Leone and the bird named *A. s. chapini* Grote, from the mountains of British Cameroon, are the same species. The latter was described from Fongu, near Bamenda, and a series has recently been collected at Bamenda and on Manenguba Mountain. In that area it was found nesting on 31st March, 1948.

The nest was placed under the shelter of a large boulder on a

steep, bare hillside at 6,000 ft., a slight cup-shaped structure of sheep's wool, horsehair and grasses. It contained two eggs, greyish white, thickly spotted with dark reddish brown with grey shell marks. They measured 22·5 × 16·5 mm. and 23·3 × 16·9 mm.

Distribution. First discovered on the Birwa plateau in Sierra Leone, where parties of three and four birds were observed flying over the rocks and running about on the heights surrounding the plateau. It has been found again on the bare summit of Bintimane, Loma Mountains, at 6,390 ft. It is a true mountain pipit in its habitat and habits. It probably breeds in Sierra Leone in May. Recently it has been found to inhabit British Cameroon (5,000–7,000 ft.) on the open grassy slopes of Bamenda and on Mount Manenguba.

PLAIN-BACKED PIPIT

Anthus leucophrys gouldii Fraser

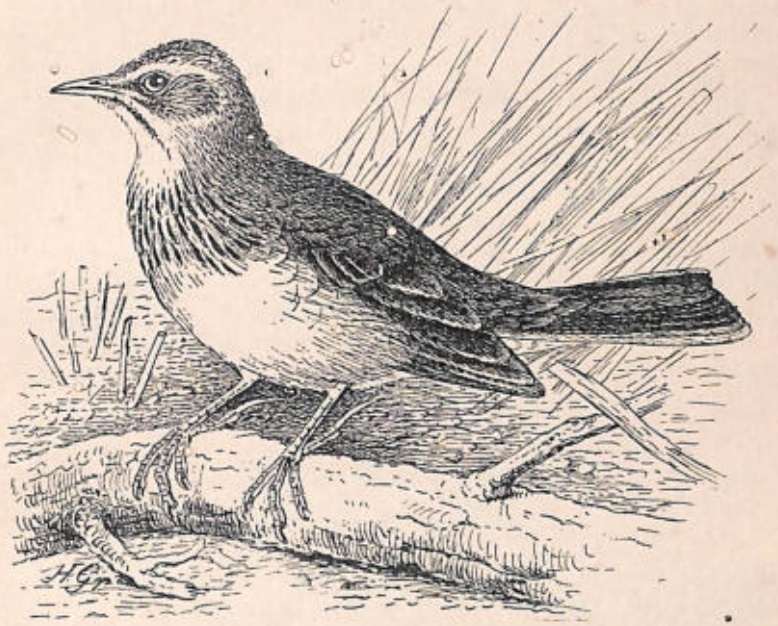
THERE are two races of this common pipit in our area; that named above is the darker form we find mainly in the coastal regions, while the other, *A. l. zenkeri*, inhabits the savanna belt of the interior. Despite what has been written about the correct name for these Plain-backed Pipits—always a confusing subject—I retain the names and distribution which I employed for them in my larger work.

This is one of the streaky-breasted pipits, with a white throat bordered by a dark moustachial streak and pale buff under parts. The whole upper surface is uniform earth-brown without any markings, and the wings are the same colour. Only when the tail is spread in flight do the outer tail-feathers look pale in contrast to the dark brown of the rest. Its bare flesh-coloured legs are noticeable, but are not, unfortunately, a distinctive specific character. The wing of *A. l. gouldii* measures 86–95 mm. and that of *A. l. zenkeri* 86–101 mm., but I had a larger series of the latter to measure.

Like all pipits, this species likes to frequent bare ground or short grass, where its movements are not impeded. It is partial to cassava fields and other cultivated patches, where the vegetation is not too dense. To some extent it seems to be migratory and is, in any case, subject to local movements, dependent perhaps on the food supply. It appears sometimes in forest clearings, but is equally happy on barren soil. It is not attracted by swampy land but prefers groundnut patches, fields prepared with mounds for yams, stony patches on hillsides and newly burnt ground.

A. leucophrys gouldii makes a nest of dry grass and odds and ends of vegetable fibre and gossamer which it conceals at the base of a

guinea-corn stump or among cassava or in other sheltered situations. The three or four eggs have a greyish-white ground, thickly mottled and spotted with brown and purplish grey. They measure 20·4–20·9 × 15·3 mm.



Distribution and Races. The range accepted for *A. l. gouldii* in my large work embraced the coastal regions of Sierra Leone, Liberia and the Ivory Coast, and parts of southern Nigeria.

A. l. zenkeri is found in the savanna belt, both grass woodland and thorn scrub, from Senegal to Nigeria, including the dry Accra plains, ranging east to Ubangi-Shari, the Upper Uelle and the Darfur plains of the Sudan.

As observed in the fourth volume of my large work, the difficulty of distinguishing between these two races is such that one feels sorely tempted to unite them under one name, but it cannot be overlooked that specimens from the coast between Sierra Leone and the Ivory Coast are on the whole, especially in series, darker than the Plain-backed Pipits inhabiting the area north of the forest. No hard and fast lines can be drawn, and the difficulty of assigning many specimens to the correct race will always offer material for disagreement, even among experts. Two other subspecies have been described from Kenya Colony.

LONG-LEGGED PIPIT

Anthus pallidiventris Sharpe

ADULT male and female have entire upper parts uniform brown; above the eye a very distinct white stripe passes behind the eye. Primaries and secondaries are dark brown, as are the wing-coverts, all with paler margins. The tail is dark brown, the outermost feather pale ash-brown, the penultimate feather having the tip only pale. Ear-coverts are dark brown. The throat is white, the rest of the under parts creamy buff, the crop darker with obscure dusky-brown markings. Under wing-coverts are brown; soft parts not recorded.

The bird described above is a huge pipit, skins of which measure nearly 7 in. in length. Its legs (probably yellowish-flesh colour in life) are exceptionally long (tarsus 31–34 mm.) and must enable it to stand high. The wing measures 90–96 mm., the tail 64–69 mm.

Distribution. Portuguese Congo, the Gaboon and the Lower and Middle Congo. Little is known of its life-history, but in any case it barely comes within our limits.

TREE PIPIT

Anthus trivialis trivialis

THE very heavily spotted breast is the surest guide to this bird's identification. It is olive-brown above, with dark streaking on the mantle and an unspotted rump. The breast is deep yellowish buff covered with heavy black streaks, and the belly is white. In flight the outer tail-feathers show a good deal of white. A character to observe at close quarters is the short hind toe; the legs are flesh-coloured, as in many other pipits, unfortunately. In build it is graceful and slender, rather larger than the well-known European Meadow Pipit. The wing measures 80–92 mm.

The Tree Pipit is a regular winter visitor to Africa, large numbers taking up their abode within our area. It is a savanna-frequenting species, trees being esential to its needs, and thus it passes through the more treeless districts without tarrying for long. Its characteristic song is not uttered in its winter quarters, nor is it to be seen planing down with rigid wings from a height, as so frequently observed in its northern breeding area. Some naturalists have found it to be very shy, others tame in its winter quarters, but it may often escape notice, as it then utters only a plaintive *peep* and has a habit of creeping about in the grass searching for small grasshoppers, beetles and other insects with which it varies its diet of small grain. It is greatly attracted to the acha fields, and little parties numbering

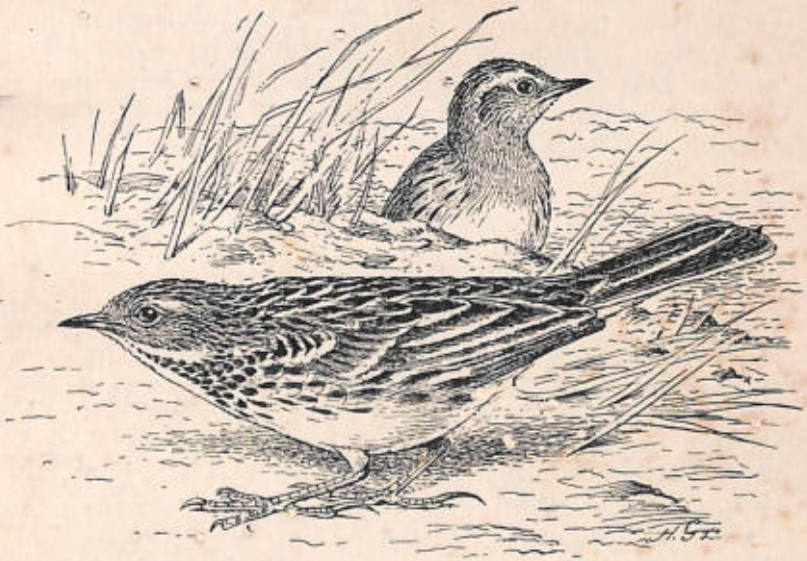
as many as twenty birds may gather on a small patch. It is also partial to burnt grasslands. Specimens examined from West Africa bear dates from mid-October to mid-March.

Distribution. The whole of Europe and western Asia, migrating in winter to North-West India and Africa, where it ranges south as far as the Limpopo and occurs throughout the whole of West Africa, crossing the Sahara on migration, where it is recorded from numerous oases and mountain ranges.

RED-THROATED PIPIT

Anthus cervinus Pallas

In summer plumage, which is assumed in spring, the vinous-red throat is the best guide to identification of the Red-throated Pipit, which in other respects closely resembles the Tree Pipit (*Anthus trivialis*). Both have the same amount of white in the tail and both



perch on trees, *A. cervinus* to a less extent than *A. trivialis*. It is only by very small points that the Red-throated Pipit in winter dress can be recognised from the Tree Pipit—the latter has a plain unstriped rump and a very short hind claw, while the Red-throated Pipit has dark middles to the rump feathers, giving it a streaky appearance, and has a conspicuously long hind claw. The wing measures 81–89 mm., the tail 54–62 mm. Legs and feet are yellowish-flesh colour.

This is another European-Asiatic species which migrates to Africa in winter but is less often recorded in West Africa than on the eastern side of the continent. Large numbers pass south through the Sudan towards the end of October, and lesser numbers must cross the Sahara. Like the Tree Pipit, this species perches in trees, but it is not such a woodland bird as *Anthus trivialis* and may be encountered away from wooded country, as on the grassy islands of Lake Chad and on newly burnt grass plains. The call-note of the Red-throated Pipit is very distinctive—a high-pitched metallic squeak, not at all like the notes of other pipits. It goes about in pairs or small flocks in its winter habitat and migrates in little parties which look for all the world like Meadow Pipits when on their southward passage, though by the time the return journey begins some have their "red" throats, the birds of the year acquiring them during their winter sojourn in Africa, while the old birds usually have some red feathers appearing, by which they may be distinguished from *Anthus trivialis*. The spring "rush" north occurs in late March, and the southward journey in autumn takes place in October.

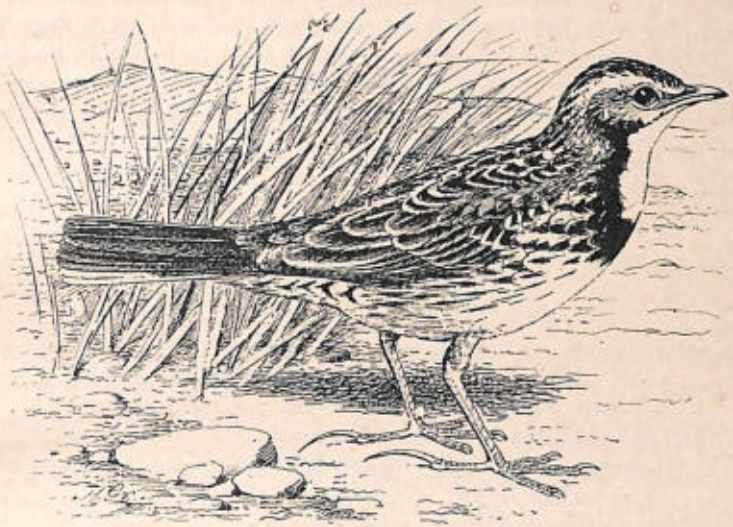
Distribution. Breeds in the Palaearctic region, wintering in India and Africa. It is a very common winter visitor in East Africa, reaching Lake Albert; it is much more rare in West Africa, but has been recorded from Lake Chad and the coast of Nigeria. Probably often mistaken for the Tree Pipit.

YELLOW-THROATED LONG-CLAW

Macronyx croceus croceus

This is a much larger bird than the pipits we have been dealing with, and although placed in the same family is not very pipit-like in appearance. Its total length in the flesh is 8 in. and wing expanse 12 in. It is a bird which is easily recognisable by reason of its striking colouring, for although the plumage of the whole of the upper parts is rather sparrow-like, a mixture of blackish, brown and fawn, the bright golden-yellow throat and under parts and the broad U-shaped gorget on the breast make it extremely conspicuous. It stands very high on its legs, which are yellowish or brownish with yellow-feathered thighs. The toes are extremely long and the hind claw is exceptionally so (reaching as much as 23 mm. in length and longer than the hind toe). The bird can run with great speed, and when flushed much of the terminal part of the tail is seen to be white. The wing measures 92–101 mm., the tail (male) 72–84, (female) 68–75 mm. and the tarsus 34–37 mm., which measurements are greatly in excess of any reached by other members of the pipit family in our area.

It is a resident species, found always in open country and orchard bush, frequenting parkland, cultivated fields, grasslands and thin woodland. In forested countries it may occur spasmodically in the larger clearings, but where there is much dense forest it is extremely rare. Grassy plains interspersed with bushes near coastal districts are a favourite locality in which to meet with it.



The Long-Claw does most of its feeding on the ground, but it may often be seen perched on some bush or rock and frequently selects the upper twig of a tree some 40 ft. from the ground. Pairs are very devoted to one another, and when misfortune falls on one bird its mate shows evident distress. As the breeding season approaches, the male may be seen to rise in the air and hover above his mate, sometimes making short flights before returning to drop down beside her.

Various notes have been attributed to the long-claw; a loud *kee-way*, a more gentle *twee-ee* and a longer *to-oo-we*.

The nest is placed on the ground, sometimes in a hoof-mark or under a tussock, and is made of grass stems with a well-screened tunnel-like entrance. Other nests are more solidly built of roots, dead grass and other fine materials. The eggs are pointed-ovate in shape, with glossy surface, greyish white to bluish grey freckled with small brown spots or more sparingly and boldly spotted with sienna and ash-colour. Fourteen eggs measured (max.) 24 × 16 mm. and 23·2 × 17·4 mm., (min.) 21·1 × 15·9 mm. and 20 × 16 mm. The normal clutch is apparently three. Eggs may be looked for in June and b July.

Distribution. The greater part of Africa, from Senegal and the Egyptian Sudan to Angola and Mozambique. It occurs in all our Colonies, but in West Africa it occurs somewhat locally, though in areas such as the Plateau, Benue and Niger Provinces of Nigeria it can be described as abundant on grassy meadows bordering streams and on marshlands. In both the Gold Coast and Nigeria it seems to be rare north of lat. 10° 30′ N. It is not uncommon in Gambia but is very local in Sierra Leone, where it seems to be restricted to the grassy plains. In East Africa it occurs from the coastal districts of the Indian Ocean to the Congo border; it is a well-known species both in Kenya and Uganda. In South Africa its place is taken by *M. croceus vulturnus*.

FAMILY TIMALIIDAE

Key to the Babblers (Timaliidae)

1. Under parts bright yellow, breast black
   Hypergerus atriceps, p. 845
   Under parts not bright yellow, breast not black .. 2
2. Whole plumage isabelline sand-colour, tail strongly graduated, outer tail-feather falling short of middle pair by about 2½ in. .. *Argya fulva buchanani*, p. 842
   Plumage not isabelline sand-colour, tail not strongly graduated.. 3
3. Size larger (wing over 91 mm.) 4
   Size smaller (wing under 91 mm.) 7
4. Tail almost as long as, or longer than, wing 5
   Tail considerably shorter than wing. 6
5. Head blackish *Turdoides reinwardii reinwardii* and subsp., p. 841
   Head not blackish, breast-feathers flecked with white points .. *Turdoides plebeja plebeja* and subsp., p. 839
6. Belly and throat white .. *Ptyrticus turdinus harterti*, p. 847
   Belly chestnut or maroon-brown, throat grey
   Phyllanthus atripennis atripennis and subsp., p. 843
   Belly brown washed with fulvous; chin and throat pure white, cheeks white with chestnut wash
   Kupeornis gilberti, p. 845
7. Ear-coverts bright rufous brown (breast and sides slate-grey) .. .. *Illadopsis poliothorax*, p. 853
   Ear-coverts not bright rufous brown 8
8. Throat and much of under parts white 9
   Very little white, if any, on under parts, but if present restricted to upper throat or middle of belly 13

9. Back and rump olive-brown or rust-brown 10
Back and rump greenish grey .. *Horizorhinus dohrni*, p. 854
10. Crown black *Illadopsis cleaveri cleaveri* and subsp., p. 852
Crown not black 11
11. Cheeks and area below and in front of eye ash-grey
Illadopsis rufipennis rufipennis and subsp., p. 848
Cheeks and area below and in front of eye brown .. 12
12. Flanks light brown; legs and feet very stout and heavy, tarsus over 29 mm. in length
Illadopsis puveli puveli and subsp., p. 850
Flanks grey; legs and feet not exceptionally stout and heavy, tarsus under 29 mm. in length
Illadopsis rufescens, p. 849
13. Breast and most of under parts grey 14
Breast and under parts not grey 15
14. Crown of head black .. .. *Pseudoalcippe atriceps*, p. 855
Crown of head grey
Pseudoalcippe abyssinicus monachus and subsp., p. 856
15. Upper parts mostly green 16
Upper parts not green 17
16. Throat grey, belly green
Macrosphenus flavicans flavicans and subsp., p. 857
Throat olive-buff, belly dull olive *Macrosphenus concolor*, p. 859
17. First (outermost) primary almost as long as second
Amaurocichla bocagei, p. 854
First (outermost) primary considerably shorter than second 18
18. Size larger (wing over 63 mm.), bill shorter than head .. 19
Size smaller (wing under 63 mm.), bill very long and straight, longer than head .. *Macrosphenus kempi*, p. 858
19. Chin and upper throat grey, upper parts olive-brown
Illadopsis fulvescens fulvescens and subsp., p. 847
Chin and upper throat tawny-brown like rest of under parts; upper parts strongly washed with rufous
Illadopsis moloneyanus moloneyanus and subsp., p. 851

SUDAN BROWN BABBLER

Turdoides plebeja Cretzschmar

(see Plate 39, facing page 840)

THREE races of *T. plebeja* come within our limits in West Africa.

This is a light brown bird about the size of a starling, with a white chin and the scale-like feathers of the breast with small white points. It has darkish brown wings and tail without any markings and black bill and legs. The eye of the Brown Babbler is orange and

yellow. It may be recognised from the Black-cap Babbler by its light-coloured head and pale cheeks (appearing almost whitish). The Sudan Babbler has a wing measurement of 100–112 mm. and tail 96–112 mm. The legs and feet are black.

This is a typically noisy bird, whose raucous chattering is a well known sound in the bush. All types of parkland and farmland, including gardens as well as the borders of closed forest and thin belts of fringing forest, are frequented by this bird, which lives in little parties of four to twelve individuals and has a special preference for thicket-clad banks of streams, rivers and nullahs. Although feeding largely in the open, the birds repair to thick cover for shade and at roosting time. The ordinary note is a twangy *caa*, but they will emit on occasions a clashing noise which is impossible to describe on paper. When away from cover the birds are alert and when disturbed follow one another in little groups of two or three, the alarm having been given by one of their number on sentinel duty in some nearby tree. Much of their feeding is done on the ground.

The nest is a rather shallow cup of small rootlets or grass stems loosely woven together and lined with fine grass. Usually it is placed in a low shrub or in a creeper-clad acacia. The birds show great excitement if the nest is approached. The eggs are ovate and glossy; the majority are of a beautiful uniform pink; some are pale mauve, and one clutch of grey-blue eggs has been taken. The clutch is usually of three eggs, which may be laid any time between May and August, in the latter month perhaps the result of a second laying.

Distribution and Races. *T. plebeja plebeja* Cretzschmar was described from Kordofan and is the race which extends westwards to northern Cameroon and northern Nigeria, where it is found to about lat. 9° N. It is particularly common in Sokoto, Kano, Bauchi, Bornu, northern Benue and Plateau Provinces of Nigeria. I have seen no specimens from southern Nigeria, from where, however, it has been reported.

Further west its place is taken by *T. plebeja platycircus* Swainson, which ranges from Senegal and Sierra Leone to the Gold Coast and Dahomey. Its northern range reaches almost to the desert edge. It differs from the typical race in having the head and face greyer, the crown much darker, and the general plumage darker and browner throughout. The wing measures 100–114 mm., tail 96–106 mm.

One other race, *T. plebeja uamensis* Reichenow, has the whole plumage much darker brown than either of the others. It occurs in eastern and middle Cameroon from the Upper Sanga and Uam west to Yaunde and the Tibati plateau. In East Africa its place is taken in Uganda and western Kenya by *T. plebeja cinerea*.

SNOWY-CROWNED ROBIN-CHAT

BROWN-CHESTED ALETHE

GOLD COAST SCRUB-ROBIN
BLUE-SHOULDERED ROBIN-CHAT
WHISKERED-REDBREAST
FIRE-CRESTED ALETHE

ORIOLE BABBLER OR MOHO

BLACK-WINGED BABBLER

BLACKCAP AKALAT
WHITE-BELLIED THRUSH-BABBLER

SUDAN BROWN BABBLER

BLACKCAP BABBLER

Turdoides reinwardii (Swainson)

Two races of this West African babbler occur in our area.

This bird is about 10 in. in length, ash-brown in colour with darker brown wings and a broad tail of the same colour. The head and face are black except for the whitish chin and throat; the under parts are paler than the back but of the same general colour. The eye is straw-yellow, the legs and feet are sepia and the bill is greenish black. The wing measures 115–120 mm. and the tail 103–115 mm. From the Sudan Brown Babbler this species may be recognised by the black crown and face.

Thickets by fringing streams are the favourite haunts of this babbler, which frequents closed forest and most types of parkland. It keeps close to cover and does not roam over country where ground cover is not present. It lives in small bands of half a dozen individuals or so, gaining its food on the ground among the fallen leaves and other debris of the thickets. It drinks from some thicket-surrounded pool. During the rains these birds are seldom seen but their chattering may be heard constantly, and if alarmed one of the band may seek some point of vantage on a tree from which it can assess the danger.

A nest found at the beginning of December in the Plateau Province of Nigeria was situated in a narrow belt of fringing forest in the bush. Built in a small oil-palm, it was a cup-shaped structure of leaves with a few rootlets for lining, situated among the stumps of dead fronds. The eggs, two in number, were pointed and 22 mm. in length; in colour "hedge-sparrow" blue. Another nest found in Nigeria at Abeokuta on 26th June contained two rather dark blue eggs with highly polished surface measuring 26 × 19·6 mm. and

24·8 × 18·8 mm. The open cup nest was 5 ft. up in a heavily foliaged tree.

Distribution and Races. The typical race, *T. reinwardii* (Swainson), ranges from Senegal and Gambia to Portuguese Guinea and Casamance.

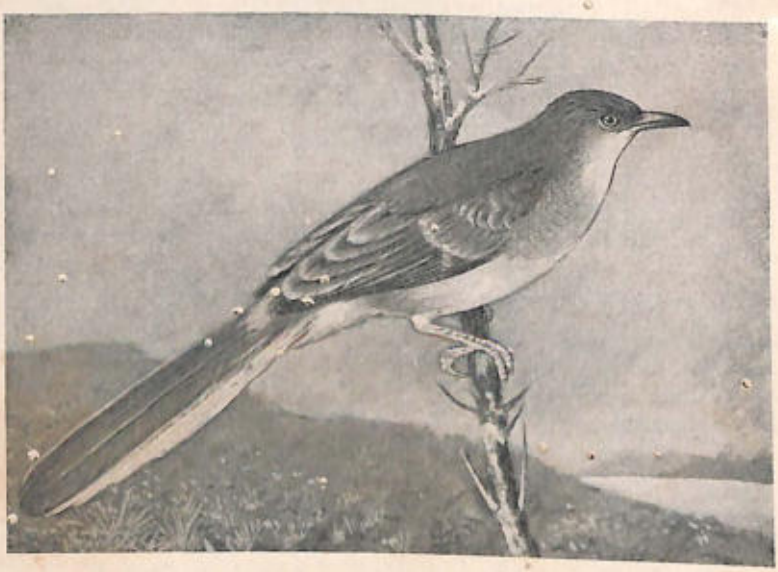
The Nigerian Blackcap Babbler (*T. reinwardii stictilaema* (Alexander)) has the head and cheeks less black and not so sharply defined from the mantle, the under parts darker and greyer than in the typical race. The wing measures 112–127 mm. It ranges from the Gold Coast to the Shari and Logone Rivers and is the form which occurs in Nigeria and the Cameroon highlands.

BUCHANAN'S BUSH-SKULKER

Argya fulva buchanani (Hartert)

Two races of *A. fulva* come within our West African boundaries.

A sandy-brown coloured bird, the body about the size of a lark, but with a very long graduated tail about 5 in. in length. In total



length the outstretched skin measures 10 in. The under side is isabelline, the bill dark and, like the legs and feet, rather powerful for the size of the bird. The legs and feet are pale grey-green or brownish yellow. The wing measures 90–97 mm., the tail 117–129 mm.

In flight this bird might be mistaken for a mousebird (*Colius*), for like that bird it has a long tail, though much broader. It is very secretive and lives in small parties in desert bushes, occasionally uttering little mewing cries.

It is to be found in the arid belt, inhabiting open desert with scrub and grass tussocks, and is particularly common wherever the *Acacia tortilis* is found in any numbers. At times they frequent the bushes which line the dry gullies in this inhospitable country. Insects are mainly devoured, but when beetles and grasshoppers are scarce, as in the month of May, the birds will devour berries of the *Salvadora*.

A nest with nestlings was found in a low *Balomitis* on 14th September. Eggs of this race of the bush-skulker have not been found, but those of the typical subspecies of northern Africa are glossy bluish green in colour.

Distribution and Races. A. fulva buchanani (Hartert) was first described from Mount Baguezan in the Central Sahara, Aïr Massif. The race extends in the Sahara as far north as the Ahaggar Mountains and west to the borders of the desert, between lat. 16° and 18° N., having been found in the French Sudan and French Niger, Timbuktu, Taberréshat Well and Tillia Grove. It is a true desert species which does not stray beyond the limits of the Sahara.

Another subspecies, *A. fulva acaciae* (Licht.), has recently been found in the Chad territory, hitherto only known from the Nile valley and differing from *A. f. buchanani* in having a grey wash on the upper parts, especially marked on the crown, nape and mantle. The wing measures 95–100 mm.

BLACK-WINGED OR CAPUCHIN BABBLER

Phyllanthus atripennis

(see Plate 39, facing page 840)

Two races of this species occur in Upper Guinea.

This is a small thrush-like bird about 9½ in. in length with short rounded wings, sooty brown in colour and a dark tail. It is distinctively coloured, the head and throat being grey and the whole of the rest of the body deep chestnut-maroon, the wings and tail shade into a reddish hue of dark brown, but in flight they appear almost black. The yellow thrush-like bill is a conspicuous feature. The legs, which are powerful, are olive-green. The wing of the typical race measures 114–126 mm., the tail 88–93 mm.

Like others of its genus, the Capuchin Babbler is an inhabitant of dense cover, and it may be encountered equally well in the high forest as in the second-growth thickets. Retiring in habits, it is also

a sociable bird, always being seen in companies of half a dozen or more, all keeping close together as they hop and flit through the undergrowth, uttering quiet croaks as they move along. Often it may be seen in company with the bird armies which scour the forest. It may be observed at a great height in the trees as well as on the ground or fairly low down, searching for insect life. Very wary, the Capuchin Babbler is not often encountered unless observed crossing a forest path, then seldom flying higher than the tops of the ginger plants.

No one seems to have found its nest or eggs.

Distribution and Races. *P. atripennis atripennis* (Swainson) ranges from Senegal to Liberia and is the race which occurs both in Gambia and in Sierra Leone.

Its place is taken further east by *P. atripennis haynesi* (Sharpe), a very distinct race which differs in having the body plumage both above and below much brighter reddish chestnut, the mantle never overspread with sooty black, as in the typical subspecies, and the grey of the upper throat never extending on to the crop or breast. The wing of this race measures 115–124 mm. and the tail 82–92 mm. The range *P. a. haynesi* includes the Gold Coast, Dahomey, southern Nigeria and northern Cameroon. In the Gold Coast it is evidently widely spread, but in Nigeria it is only recorded from near Lagos. No examples have been examined from the Ivory Coast.

WHITE-THROATED MOUNTAIN BABBLER

Kupeornis gilberti Serle

The striking white throat and bib extending towards, but sharply defined from, the breast together with the white cheeks washed with chestnut, white lores and white eyebrow should enable this newly discovered bird to be recognised easily.

In general colour the body plumage is olive-brown with a strong fulvous wash on the breast; the crown is dark chestnut, and the wings and tail are blackish with fulvous fringes. It is a plump, squat-looking bird, with rounded wings and short broad tail. The bill is pale brown above, dirty white on the lower mandible, the legs and feet are greenish grey and the iris is greyish white. The measurements are: Bill 16–17 mm., wing 106–117 mm., tail 70–79 mm., tarsus 31–34 mm.

In its actions it resembles *Phyllanthus atripennis* as well as by its loud calls. A mainly arboreal species, moving actively about the branches with long hops and occasional flights, it was found in company with others of its species on a hitherto unexplored mountain in British Cameroon.

Distribution. Restricted so far as we know to the primary forests of Mount Kupé (5,000–6,000 ft.), British Cameroons. This striking new bird is the gem of a fine collection made in the highlands of British Cameroons in 1948 by Dr. William Serle.

ORIOLE BABBLER OR MOHO

Hypergerus atriceps (Lesson)

(see Plate 39, facing page 840)

This is the brightest coloured of all the babblers and is about 8 in. in total length. Its black head, the feathers edged with white, giving a scaly appearance, contrasts with the bright yellowish-olive

plumage relieved along the edge of the wing and on the under parts with bright canary yellow; the olive fan-shaped tail is fairly long (about 3¾ in.), and so is the black bill. If facing the observer, the jet-black throat and upper part of the breast are set off by the bright yellow of the rest of the breast, and the sides of the face sometimes appear almost silvery white. The eye of the Moho is mahogany-red, the bill is greenish black and the legs are light brown. The bill measures 20–22 mm.; the wing (male) 83–88 mm., (female) 76–82 mm., tail (male) 91–99 mm., (female) 81–92 mm.; tarsus 27–30 mm.

A well-known but local bird in all our Colonies, the Oriole Babbler frequents kurimis, fringing and gallery forests, thickets on the banks of streams and (in Gambia) bush and palm groves. It sometimes attracts attention to itself by its loud, unpleasing song—a repetition of the same notes over and over again, which may be written *whee-oo, whee-oo, whee-oo*. It is shy and secretive in its movements and, not being gregarious and at times remaining silent, it is not easily observed. It may be seen sometimes hunting round the base of the branches of palms for insects, upon which it appears to feed exclusively. As it has been caught in traps set on the ground, it must feed to some extent on the floor, but it is more usually seen peeping from the twigs and branches, showing itself only for a second as it threads its way through a thicket.

Of its nesting habits we know practically nothing. At Badagry in southern Nigeria a pair were seen on 22nd October entering and leaving an empty nest suspended below a palm leaf. Three eggs were found in a nest in Portuguese Guinea on 16th July, but the finder left no account of the eggs, which still remain to be described.

Distribution. The whole of West Africa from Senegal to Nigeria and the highlands of Cameroon, extending east to Ubangi-Shari.

It may occur from the coastal districts to far into the interior, ranging throughout the savanna belt. In Nigeria it is not recorded from north of lat. 9° 30′ N. and is everywnere local and never really common.

WHITE-BELLIED THRUSH-BABBLER

Ptyrticus turdinus harterti Grote

(see Plate 39, facing page 840)

This is a small reddish-brown bird with white under parts, with a brown patch on each side of the breast and a number of reddish-brown spots on the lower throat and middle of the breast. Under wing-coverts and under tail-coverts are white. Stiff black hairs spring from the nostrils and gape. The wings and tail match the body colour. The eye is red, and the legs and feet are greyish white. The bill is rather long (21–22 mm.) and is straight with a small hook at the tip; legs and feet are exceptionally powerful for so small a bird. The measurements are as follows: Wing 93–110 mm., tail 75–82 mm., tarsus 32–35 mm.

Originally discovered in the Upper Kadai region of eastern Cameroon, this bird extends on to the Tibati plateau (about 2,800 ft. in altitude). It is a bird which has never been seen until trapped, and we know nothing about its habits.

Distribution. Cameroon (Tibati) and Upper Kadai. The typical race, *P. t. turdinus*, takes its place in the Upper Uelle region.

BROWN AKALAT

Illadopsis fulvescens

Three races of this akalat come within our limits.

It is a dull-plumaged bird about 6½ in. in length, tawny or olive-brown with the rump inclining to rust-colour, dark brown wings and rufous-brown tail. The cheeks are grey, and the top of the throat and chin are greyish white. The legs and feet are bluish grey, the bill is dark horn above, slate-blue to greyish below. The wing measures in the typical subspecies 65–78 mm., the tail 58–69 mm.

The chief point to observe is that there is no white on the under parts below the upper throat. In the White-breasted Akalat (*I. rufipennis*) the throat and middle line of the belly are white; in the Blackcap Akalat the under parts are even whiter.

The race of the Brown Akalat with which we are concerned in Upper Guinea is *I. fulvescens gularis*.

In their habits all these akalats are very retiring, and as they live

in the densest undergrowth of the forests they are seldom recognised. They have a passion for termites and may be captured in traps baited with these delicacies. A long-drawn, soft and plaintive whistle is uttered, followed by a second whistle in a lower tone.

Nests are shallow cups of dead and decaying leaves with a few tendrils for lining, placed in low bushes on the forest edges. Two eggs have a ground varying from white to pinkish, either densely mottled or else spotted and blotched with bright maroon and purplish grey. Measurements are 20–23·5 × 15–16·5 mm.

Distribution and Races. *I. f. fulvescens* (Cassin) ranges from Angola northwards to the southern Cameroon forests.

I. f. gularis Sharpe is more olive-brown than tawny-brown on the under parts and has a paler belly. The wing measures 74–80 mm., tail 59–67 mm. It ranges from the Gold Coast to Sierra Leone.

A third race, *I. f. ugandae* (van Someren), has the under parts paler than in the preceding race and the throat purer white. The wing measures 69–80 mm. It ranges from the Ubangi and Uelle Rivers east to the Uganda forests.

WHITE-BREASTED AKALAT

Illadopsis rufipennis

LIKE the last species dealt with, three races occur within our limits.

About 6 in. in length and inconspicuously coloured; the amount of white on the under parts distinguishes it from the Brown Akalat. The upper parts are olive-brown, the under parts greyish white, the breast and flanks washed with olive-brown. A rufous tinge overspreads the back and mantle, and the rump is brighter rufous, almost rust-colour. The tail is dark brown with a claret tinge; the wing-coverts, like the back and the quills, are dark brown. The eye is pale brown, the bill is blackish above, pale horn below, and the legs are pale blue. The measurements of the typical race are: Bill 12–15 mm., wing 66–77 mm., tail 50–60 mm., tarsus 24–25 mm.

The White-breasted Akalat lives in the dark forest undergrowth close to the ground, finding its food on the forest floor—insects, woodlice, snails, beetles, bugs and spiders. It has several notes, one described as a noisy *tizz* and a grating *ka-a-a-a* followed by a throaty *kwo kwo*. Another note resembles a human whistle, and others are faint little squeaks. In Ashanti this akalat spends much time in the thick undergrowth of wild ginger and cocoa yams and never appears to reach the level of even the lower branches of trees. Little parties may often be observed together. A female obtained in December in the Gold Coast was incubating.

The nest and eggs have never been discovered.

Distribution and Races. *I. rufipennis rufipennis* (Sharpe) ranges widely in the forests of British and French Cameroon, Gaboon and the western Belgian Congo, its range extending almost to the Nigerian border.

I. rufipennis extrema (Bates) takes its place in Sierra Leone, French Guinea and the Gold Coast. It is more tinged with rufous than the typical race, especially on the head. Among other small points of difference enumerated in my larger work is the slightly smaller size of this race—wing 67–72 mm., tail 51–54 mm.

A third, doubtfully distinct, race, *I. rufipennis bocagei* (Salvadori), is restricted to Fernando Po. It is said to be distinguishable by its larger bill—14–15·5 mm., wing 68–76 mm. and tail 48–54 mm. Its plumage resembles that of the typical subspecies.

In eastern Africa we have *I. rufipennis barakae* Jackson in the eastern Belgian Congo, Uganda and the Elgon district of Kenya, linking up with the typical subspecies.

RUFOUS-WINGED AKALAT

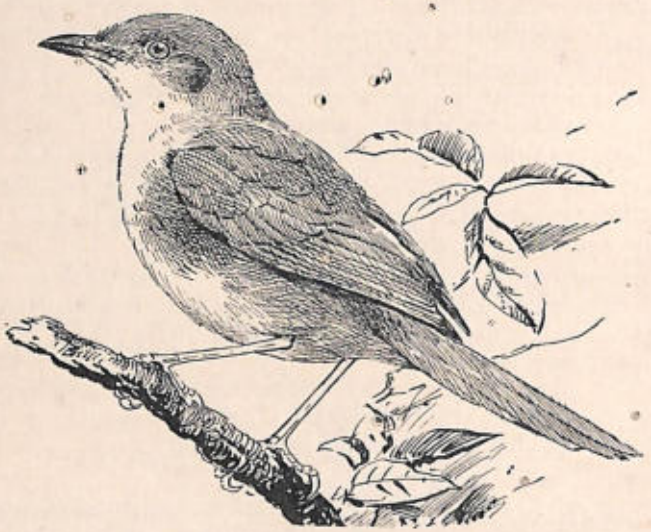
Illadopsis rufescens (Reichenow)

As this akalat is more likely to be recognised than the more secretive forest dwellers we have been discussing, a fuller description of it is given. The entire upper parts, including the crown, are rufous brown; ear-coverts brown; the upper tail-coverts, edges of the primaries and secondaries rufous. The tail is claret-brown. The throat is white; the rest of the under parts are greyish white except for dark olive-brown patches on each side of the breast which almost meet the olive-brown, becoming less pronounced in the middle of the breast. The sides of the body and flanks are grey tinged with brown, the under wing-coverts brown. The eye is dark brown; bill black, edges and base whitish; feet are bluish white. The bill measures 14–16 mm., wing 73–85 mm., tail 59–67 mm., tarsus 27 mm.

This species may very easily be confused with *I. rufipennis*. The only marked difference between them is that *I. rufescens* has much more white below; the whole belly is white in *rufescens*, whereas in *rufipennis* the white area is restricted to a patch in the middle of the breast. *I. rufipennis* has grey cheeks, *I. rufescens* brown. *I. rufescens* is also a longer-billed bird and is more rufous in tone of plumage. Both are represented by races in Sierra Leone and the Gold Coast.

In its mode of life this bird is more thrush-like than the last species discussed. It has stouter legs and shorter, blunter claws, which is more in keeping with a bird which gets its living scratching among the dead leaves of the forest floor. It is both commoner and

bolder than *I. rufipennis*, but, like that bird, it is never seen at any elevation, keeping always on or very near the ground. There it may frequently be seen in pairs or family parties, hunting for small snails, beetles, termites and such-like, uttering the while faint little cries.



The male birds utter rather melodious calls—*chit-chit-tu-hoo-hoo*, repeated with but little pause over and over again. Every bird army has some of these akalats attached to it. When alarmed, they flit and hop rapidly over the ground. Just before a thunderstorm, when the forest grows dark, all the little birds will start calling, doubtless thinking that night is approaching.

Its eggs have not been found.

Distribution. Probably occurs throughout the forest country of Upper Guinea but is only actually recorded from Sierra Leone, Liberia and the Gold Coast. There are no described races and no representative has been found as yet in Lower Guinea.

PUVEL'S AKALAT

Illadopsis puveli (Salvadori)

Two races of this bird are found, both in Upper Guinea.

It is a dull-coloured bird about the size of an English robin, some 7 in. from bill to tail. The whole of the upper parts are rufous brown including the wing-coverts and the tail, browner on the crown, more rufous on the upper tail-coverts. The chin and upper part of the throat are white, the breast and sides of the body brown,

with a dark patch on each side of the breast. The middle of the breast, belly and thighs are white, the flanks washed with pale rufous brown. The legs and feet vary from purplish skin-colour to bluish white; the bill is olive-green above, greyer below. The wing measures 80–90 mm., the tail 59–74 mm. and the tarsus 30–33 mm. The feet are distinctively powerful for so small a bird and the legs are thick.

Nothing is yet known about the particular habits of this species, which in its demeanour is said to be somewhat thrush-like. It probably resembles the Rufous-winged Akalat more than the other species in the group and is less given to climbing about the stems of the undergrowth. It inhabits dense bush, so far as we can tell from the few examples which have ever come to hand, and probably second-growth forest.

Distribution and Races. *I. puveli puveli* (Salvadori) has not been found yet beyond the boundaries of Portuguese Guinea and Sierra Leone.

Another race, *I. puveli strenuipes* (Bannerman), was discovered at Iju, near Lagos, which has the upper parts darker brown, less rufous and with a tinge of olive; the under parts are darker on the breast and sides, and the thighs are brown. The wing measures 86 mm., tail 67 mm., tarsus 33 mm.

MOLONEY'S AKALAT

Illadopsis moloneyanus (Sharpe)

Two races have been found in Upper Guinea.

This is a slightly larger bird than either the Brown or White-breasted Akalat, measuring about 6½ in. in length. The whole upper parts are rufous brown, becoming brighter on the rump, and pure rufous on the upper tail-coverts. The under parts are tawny-brown without a trace of white, even on the chin. The tail is rufous brown with a distinct claret shade, and the under tail-coverts are tawny-rufous. The upper mandible is blackish, the lower pale blue; legs and feet are black. The bill measures 18 mm., wing 75 mm., tail 62 mm., tarsus 25·5 mm.

Nothing is known about this bird except that it inhabits dense bush.

Distribution and Races. *I. m. moloneyanus* (Sharpe) is found in the Gold Coast and in former German Togoland.

Another race, *I. m. iboensis* (Hartert), is found in Nigeria and has been obtained at Oguta, Aguleri and near Lagos. It differs in having the upper parts more olive and less rufous, the upper tail-coverts fulvous rather than rufous, and the edges of the wing-feathers more olive. The wing measures 70 mm., tail 57 mm., tarsus 26 mm.

BLACKCAP AKALAT

Illadopsis cleaveri (Shelley)

(see Plate 39, facing page 840)

HERE again we have no fewer than four described races in our area, details of which are given in the final paragraph.

From the other members of its genus this akalat, which measures 6 in. in length, may be distinguished easily by its black cap and broad white eye-stripe. The rest of the plumage is olive-brown like so many of the akalats, and the white throat, breast, and middle of the under parts are not different from *Illadopsis rufescens* or *I. rufipennis*, the species or races of which inhabit the same country. Concentrate, therefore, on the black crown and white stripe over the eye as the best means of identification. It is, in fact, the only difference between it and the White-breasted Akalat. The measurements, taken from *I. c. batesi*, are as follows: Bill 14–15·5 mm., wing 69–81 mm., tail 55–63 mm., tarsus 25–27 mm.

This is one of the most secretive of birds, keeping to the dark thickets of the forest and only rarely allowing itself to be seen. Specimens have always been trapped in snares baited with termites, or sometimes in snares set over streams in the forest where the birds come to bathe. A sweet, plaintive song uttered in a whistling tone has been traced to this bird, the notes varying much in pitch. The bird accompanies its singing by spreading its wings. Sometimes small parties of six or eight may be heard chattering in the undergrowth, but observers have never seen them leave the cover of the forest.

Nests are loose, shallow cups of dead leaves and are placed on low forest undergrowth. The eggs are white, densely and darkly spotted, and measure 24 × 17 mm.

Distribution and Races

I. cleaveri cleaveri (Shelley) has been found only in the forest country of the Gold Coast.

I. cleaveri johnsoni (Büttikofer) is darker and not so rufous on the wings; it has been found only in Liberia on the Dukwia River.

I. cleaveri batesi (Sharpe) may be distinguished from the typical race by having the stripe in front of the eye grey instead of white, the flanks and under tail-coverts brown instead of rufous buff. It is resident in the forests of Cameroon and Gaboon.

I. cleaveri poensis Bannerman differs from the last race (*batesi*) in its darker coloration, particularly on the mantle and back. The tail-coverts are more rufous chestnut and the breast is browner. The wing measures 76 mm. It is restricted to Fernando Po.

GREY-CHESTED AKALAT

Illadopsis poliothorax (Reichenow)

This akalat, with dark brown crown, has the rest of the upper parts bright rufous chestnut, becoming more rufous on the upper tail-coverts. The wings and coverts are dark brown with chestnut margins, and the tail is dark reddish brown. Chin and throat are white, merging into leaden grey on the breast; the belly is white. The bill is black above, slate-grey below; the legs and feet are slate-blue. Bill 15–16 mm., wing 80–87 mm., tail 63–73 mm., tarsus 29–31 mm. The eye is reddish brown. Length about 5 in.

This akalat is one of those interesting species which constitute a link between the highlands of Cameroon (and especially Cameroon Mountain) and Mount Ruwenzori, lying hundreds of miles to the east. It is found again on the Peak of Fernando Po, but nowhere does it occur in the low altitudes of the intervening country. It is a shy species which keeps to the thick undergrowth, where it creeps about like a mouse, uttering at intervals a series of loud notes. On Fernando Po it was found to keep much to the ground in the forest.

Distribution. Cameroon Mountain (3,100 ft. upwards), Bamenda and Kupé Mountain (5,000–6,500 ft.), the highlands of Fernando Po (6,000 ft.), and also on Mount Ruwenzori (7,000–8,000 ft.).

DOHRN'S THRUSH-BABBLER

Horizorhinus dohrni (Hartlaub)

THE adult male and female have at the base of the bill a few white feathers. The crown, nape, lores and ear-coverts are dark grey-brown, which is the general colour of the back, wings and tail, the mantle, wing-coverts and back strongly tinged with olive. The primaries have narrow whitish margins. Cheeks, throat and under parts are white, with a faint yellowish tinge on the breast, across which is a band of grey-brown. Sides of the body and flanks are streaked with olive-brown; the thighs are olive-brown and white. Under wing and tail-coverts are white; soft parts are not recorded by collectors. The bill measures 13–14 mm.; wing (male) 66–70 mm., (female) 68–73 mm.; tail (male) 57–59 mm., (female) 56–60 mm.; tarsus 24–25 mm.

In size and movements this little bird may be likened to a wood-warbler, its general manner of flying about being that of a large *Phylloscopus*. It occurs in gardens, plantations, bushy country and forest of all types, and, apart from the ground, which it avoids, it may be seen at all heights and in all kinds of vegetation.

Its song is one of the most characteristic bird sounds on the island and is to be heard much more frequently than the songster can be seen, for if not actually secretive, Dohrn's Thrush-Babbler is certainly not conspicuous. It seems to live entirely upon an insect diet —beetles, ants, caterpillars, etc.

The song is long and melodious, some notes being of the nightingale quality, and in pattern has some resemblance to that of a European wren.

Dohrn's Thrush-Babbler makes a small cup-shaped nest of dead grass, with a thin bottom and no lining, which it places in a bush or on the fork of a bough of a cocoa or similar tree. The two eggs are described as dirty white, spotted with brown. Eggs have been taken in June and young found at end of September.

Distribution. Restricted to Principe island, Gulf of Guinea.

SHORT-TAILED THRUSH-BABBLER

Amaurocichla bocagei Sharpe

THIS little bird, which has the entire upper parts, wings and tail dark chocolate-brown, has the appearance in the skin of a very large wren, but whether it is wren-like in life has never been ascertained. It has short, rounded wings and a very short tail. The

throat is white, the neck and rest of the under parts are rufous brown except the middle of the belly, which is white tinged with rufous buff. We have no record of the colour of the soft parts before death, but the bill appears to be dark. The measurements of the type are: Bill 16 mm., wing 65 mm., tail (very worn) 36 mm., tarsus 25 mm. The bill is conspicuously long and straight for so small a bird and has no hook at the tip of the upper mandible.

Nothing is known of this exceedingly rare bird, of which I have seen the type specimen only.

Distribution. Restricted to the island of São Thomé in the Gulf of Guinea.

RUWENZORI HILL-BABBLER

Pseudoalcippe atriceps (Sharpe)

It should not be difficult to recognise this bird, with its entirely black head, as depicted in the accompanying drawing, the black reaching on to the nape. The rest of the upper parts are bright

rufous brown, becoming paler on the rump. The chin is blackish, merging into sooty grey on the throat; the remainder of the under parts are dark grey, paler on the belly. The flank-feathers are tipped with rufous olive, and the under tail-coverts are grey. The bill is black above, blue-grey beneath; the legs and feet are bluish

grey. Measurements are: Bill 11–11·5 mm., wing 67–74 mm., tail 53–64 mm., tarsus 23–24 mm.

A bird of mountainous country which is known to occur in the highlands of East and West Africa but not in between, the Hili-Babbler frequents the woods and bamboo thickets at high elevations. It goes about in pairs or small parties and may be observed hopping along through the ferns and tangled vegetation, uttering a low twittering note which doubtless keeps the members of the party in touch with one another. At times it will ascend into a little tree, from which it will give forth its loud, pleasant-sounding song, which has been likened to that of a garden warbler. A nest found on 24th May at 8,000 ft. in a mountain wood above Lake Bambulue was slung between two upright shoots in forest undergrowth built of plant stems with roots and gossamer and lined with fine grass tops.

The eggs are cream-colour thickly speckled and spotted with pale reddish brown, with lilac shell marks, the markings forming a zone near the larger end. They measure 20·8 × 15·7 mm. and 20·4 × 15·5 mm.

Distribution. The Banso and Genderu Mountains in British Cameroon (4,000–6,000 ft.), ascending to 8,000 ft. in the Bamenda Division, also in the Ruwenzori, Kivu and Ruanda Mountain ranges, ascending on the first named to 9,000 ft.

CAMEROON MOUNTAIN BABBLER

Pseudoalcippe abyssinicus monachus Reichenow

Exactly like the last species described in size and general appearance, but the whole head and under parts are smoke-grey, the back is olive-brown, the wing-coverts are rufous brown and the rump is olive. The tail is rufous brown. The bill is black above, pale grey beneath; feet and legs are pale grey. The bill measures 11–12 mm., the wing 63–69 mm., the tail 47–55 mm. and the tarsus 24 mm.

This is another abundant mountain bird which, like the last species described, has a sweet and quite loud song, but of which we know very little else. It is to be found in second-growth bush from 4,500 to 7,000 ft., where it may be seen in little parties chasing one another and giving forth a two-syllabled call. It is a very active little bird and frequents the flowering shrubs on the mountain side.

No one has yet described its nest or eggs.

Distribution and Races. Cameroon Mountain (above 6,000 ft.).

Another subspecies, *P. abyssinicus claudei* Alexander, which has the grey of the head and mantle extending further down the back, the flanks and thighs of a duller olive-brown and a greater extent of

white on the belly, occurs on the island of Fernando Po, at high elevations such as on the Pico St. Isabel.

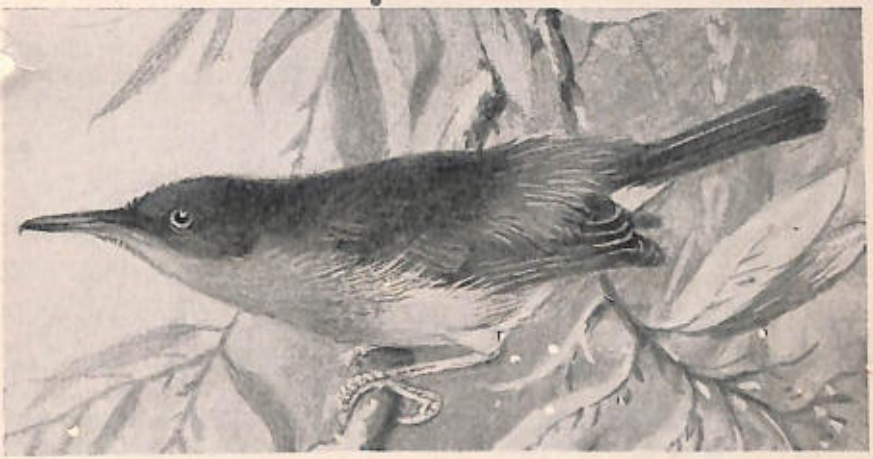
In East Africa the typical subspecies, *P. abyssinicus abyssinicus* (Rüppell), inhabits the mountains of Abyssinia and Kenya, other doubtfully distinct races having been described from Tanganyika Territory.

LONG-BILLED BUSH-CREEPER

Macrosphenus flavicans

Two mainland races occur in our area.

This is a very curious-looking bird, olive and brown above with grey throat and bright olive-yellow under parts. The feathers on the back and flanks are very long and silky and can perhaps be puffed out in the manner described under *Macrosphenus kempi*. The most striking feature is the long straight bill (about $\frac{3}{4}$ in.), the tip



of which ends in a tiny hook which overlaps the lower mandible, the upper mandible being blackish, the lower paler. This bird has a yellow eye and the bill seems too long for the size of the head and body, which, including the bill, measures a little over 5 in. in all. Legs and feet are grey. The detailed measurements are: Bill 15–18 mm., wing 54–65 mm., tail 34–46 mm., tarsus 19–21 mm.

This is another secretive forest bird concerning which we have much to learn. It has been seen in company with other small birds, hopping about in the branches of low trees and catching insects, and it frequently joins the mixed bird parties of the primary forest. It is

equally at home at any height from the forest floor to the forest roof, but when it sings it chooses a high perch in the forest foliage. The song is very distinctive, plaintive and melodious—four notes, slowly descending the scale. In the Kumba Division of British Cameroon it occurs in both the lowland and highland forest, ascending on Mount Kupé to 4,000 ft. It has a preference for primary forest or mature second growth.

Distribution and Races. Two distinct races of this bush-creeper have been described; the typical race, *M. flavicans flavicans* Cassin, ranges from British Cameroon to Portuguese Congo and is the race which is found on Fernando Po.

Another race, *M. flavicans leoninus* Neumann, resembles the typical race on the upper parts but differs in having the throat and chin yellow, the breast brownish olive becoming paler yellow below. The wing measures 54 mm., tail 35 mm. This race has only been found in Sierra Leone, where it occurs in the heavy forest.

KEMP'S BUSH-WARBLER

Macrosphenus kempi Sharpe

Two races of this bush-warbler have now been discovered.

Kemp's Bush-Warbler is about the same size as the last species described, and is dark brown above tinged with olive, the crown darker than the back, the rump covered with long, silky feathers with grey bases and cinereous tips. The chin is white, becoming grey on the throat, the middle of the breast and belly greyish; the sides and flanks are covered with long, silky feathers of orange-chestnut. The under wing-coverts are white; legs and feet are plumbeous and the bill blackish. The bill measures 18–20 mm., the wing 54–60 mm. and the tail 30–39 mm.

The bright yellow eye may attract attention to this secretive little bird with its long straight bill (about 1½ in.) with a minute hook at the tip. It has the power to stretch out its neck and puff out its silky plumage, as depicted in the text figure in my larger work, vol. iv, p. 128. It hops about, warbler-like, in the dense bushes and tangled vines and is not easy to observe. Consequently we know nothing of its life-history. It has been heard to utter a squeaky note.

Distribution and Races. M. kempi kempi Sharpe inhabits Upper Guinea and has been recorded from localities between Sierra Leone and southern Nigeria (Lagos). Its place is taken in Nigeria east of the Niger by *M. kempi flammeus* Marchant, from Owerri Province, which is darker grey on the throat and has brighter, more flame-coloured flanks.

OLIVE BUSH-CREEPER

Macrosphenus concolor (Hartlaub)

Not unlike the last bird described, about 4½ in. in length, in colour almost entirely olive-green, darker above, paler below, having a fairly long bill 13–15 mm. in length. The wing measures 55–61 mm., the tail 36–44 mm. This bush-creeper has a brown eye which distinguishes it from the last two discussed, apart from the pale olive under parts, which are distinctive.

It is an inhabitant of very thick cover and must be sought in dense bushy growth along the forest paths or at low elevations in second-growth forest. In its mode of life it has much the same habits as the glass-eye *Camaroptera*, which may be seen threading its way singly through the undergrowth in a similar manner, but the call-notes of the two birds are quite distinctive and should enable them to be recognised. Probably all these bush-creepers have the power to raise the fluffy feathers which cover the rump in the manner illustrated in my larger work, vol. iv, p. 128. The bird then appears like a ball of puffed-out feathers, which is evidently some kind of threat attitude. From time to time it utters a double-syllabled whining cry and has a distinctive "jingle" of rapid high and low notes. It seems to be a very common bird in forest country. It lives on insects and caterpillars. The nest has never been found.

Distribution. Rather local but of wide distribution from Sierra Leone to southern Cameroon and across the northern Belgian Congo to Uganda. It is recorded from Fernando Po and occurs in all our Colonies except Gambia.

FAMILY PYCNONOTIDAE

Key to the Bulbuls

1. Entire head *and* throat dark blackish brown 2
   Entire head *and* throat not dark blackish brown .. 3
2. Under tail-coverts white or white tinged with sulphur
   Pycnonotus barbatus inornatus and subsp., p. 863
   Under tail-coverts bright yellow
   Pycnonotus tricolor tricolor, p. 863
3. A few long fine black hairs springing from hind neck and falling over mantle, not visible until feathers are lifted up (see figure in illustrated key, p. 54) 4
   No fine black hairs springing from hind neck 7
4. Throat white (no yellow tinge) 5
   Throat yellow or sulphur-coloured 6
5. Tail chestnut, breast grey
   Trichophorus chloronotus chloronotus, p. 866
   Tail brown, outer webs margined with olive green, breast olive or yellowish olive
   Trichophorus calurus calurus and subsp., p. 867
6. Throat yellow (not sulphur), whole body plumage olive-green .. .. *Trichophorus olivaceus*, p. 868
   Throat whitish tinged strongly with sulphur-yellow, middles of breast-feathers grey
   Trichophorus barbatus barbatus and subsp., p. 865
7. Toes iii and iv (middle and outer) have basal phalanges of outer toe completely fused to those of middle toe, leaving terminal or distal one free; under parts are yellow (see figure in illustrated key, p. 54) 8
   Toes iii and iv not fused as described above but more or less free 10
8. Tail reddish chestnut
   Bleda syndactyla syndactyla and subsp., p. 868
   Tail green 9
9. Crown dark grey .. .. .. *Bleda canicapilla*, p. 871
   Crown green .. *Bleda eximia eximia* and subsp., p. 870
10. Rump and wing-coverts spotted with white or yellowish white .. .. *Ixonotus guttatus*, p. 879
    No yellowish white or white spots on rump and wing-coverts 11
11. Four outer tail-feathers with considerable amount of white, either terminally or otherwise 12
    No white on four outer tail-feathers 14

12. Upper parts and tail grey-brown slightly tinged with olive, four outer rectrices broadly tipped with white
Thescelocichla leucopleura, p. 872
Upper parts green 13
13. Under parts greyish washed with olive; white outer tail-feathers with black tips *in adults only*; immature have no black tips *Baeopogon indicator indicator* and subsp., p. 877
Under parts fawn-buff; three outer tail-feathers apparently always pure white .. .. *Baeopogon clamans*, p. 878
14. Bill with *several* notches or indentations on cutting edge of upper mandible *in addition* to single notch just behind tip. Plumage entirely dull olive above, and grey, olive or olive-brown below 15
Bill with only one notch (if any) on upper mandible just behind tip 19
15. Conspicuous yellow streak on each side of throat; legs and feet yellow *Andropadus latirostris latirostris* and subsp., p. 892
No yellow streak on each side of throat; legs and feet dark in colour 16
16. Under parts grey
Andropadus gracilirostris gracilirostris and subsp., p. 890
Under parts dull uniform olive-brown or dull olive .. 17
17. Distinct ring of small whitish feathers round eye in strong contrast to surrounding plumage
Andropadus gracilis gracilis and subsp., p. 891
No ring of whitish feathers round eye, feathers of which if slightly paler are hardly in contrast to surrounding plumage 18
18. Bill broad at base, short and stumpy, and often with yellow tip, 10–12 mm. in length
Andropadus virens virens and subsp., p. 893
Bill longer and finer, not broad at base, no yellow tip, 12–14 mm. in length
Andropadus curvirostris curvirostris and subsp., p. 889
19. Whole plumage uniform bright olive-green, brighter than in species of *Andropadus*, no bright yellow on under parts .. .. *Arizelocichla montana*, p. 887
Whole plumage not as described above 20
20. Entire crown slate-grey; tail not rufous 21
Crown not slate-grey 22
21. Throat white, rest of under parts bright canary yellow
Phyllastrephus poliocephalus, p. 883
Throat grey, rest of under parts olive and dull yellow
Arizelocichla tephrolaema tephrolaema and subsp., p. 886

FAMILY PYCNONOTIDAE

Key to the Bulbuls

1. Entire head *and* throat dark blackish brown 2
   Entire head *and* throat not dark blackish brown .. 3
2. Under tail-coverts white or white tinged with sulphur
   Pycnonotus barbatus inornatus and subsp., p. 863
   Under tail-coverts bright yellow
   Pycnonotus tricolor tricolor, p. 863
3. A few long fine black hairs springing from hind neck and falling over mantle, not visible until feathers are lifted up (see figure in illustrated key, p. 54) 4
   No fine black hairs springing from hind neck 7
4. Throat white (no yellow tinge) 5
   Throat yellow or sulphur-coloured 6
5. Tail chestnut, breast grey
   Trichophorus chloronotus chloronotus, p. 866
   Tail brown, outer webs margined with olive green, breast olive or yellowish olive
   Trichophorus calurus calurus and subsp., p. 867
6. Throat yellow (not sulphur), whole body plumage olive-green .. .. *Trichophorus olivaceus*, p. 868
   Throat whitish tinged strongly with sulphur-yellow, middles of breast-feathers grey
   Trichophorus barbatus barbatus and subsp., p. 865
7. Toes iii and iv (middle and outer) have basal phalanges of outer toe completely fused to those of middle toe, leaving terminal or distal one free; under parts are yellow (see figure in illustrated key, p. 54) 8
   Toes iii and iv not fused as described above but more or less free 10
8. Tail reddish chestnut
   Bleda syndactyla syndactyla and subsp., p. 868
   Tail green 9
9. Crown dark grey .. .. .. *Bleda canicapilla*, p. 871
   Crown green .. *Bleda eximia eximia* and subsp., p. 870
10. Rump and wing-coverts spotted with white or yellowish white .. .. *Ixonotus guttatus*, p. 879
    No yellowish white or white spots on rump and wing-coverts 11
11. Four outer tail-feathers with considerable amount of white, either terminally or otherwise 12
    No white on four outer tail-feathers 14

12. Upper parts and tail grey-brown slightly tinged with olive, four outer rectrices broadly tipped with white *Thescelocichla leucopleura*, p. 872

Upper parts green 13

13. Under parts greyish washed with olive; white outer tail-feathers with black tips *in adults only*; immature have no black tips *Baeopogon indicator indicator* and subsp., p. 877

Under parts fawn-buff; three outer tail-feathers apparently always pure white .. .. *Baeopogon clamans*, p. 878

14. Bill with *several* notches or indentations on cutting edge of upper mandible *in addition* to single notch just behind tip. Plumage entirely dull olive above, and grey, olive or olive-brown below 15

Bill with only one notch (if any) on upper mandible just behind tip 19

15. Conspicuous yellow streak on each side of throat; legs and feet yellow *Andropadus latirostris latirostris* and subsp., p. 892

No yellow streak on each side of throat; legs and feet dark in colour 16

16. Under parts grey *Andropadus gracilirostris gracilirostris* and subsp., p. 890

Under parts dull uniform olive-brown or dull olive .. 17

17. Distinct ring of small whitish feathers round eye in strong contrast to surrounding plumage *Andropadus gracilis gracilis* and subsp., p. 891

No ring of whitish feathers round eye, feathers of which if slightly paler are hardly in contrast to surrounding plumage 18

18. Bill broad at base, short and stumpy, and often with yellow tip, 10–12 mm. in length *Andropadus virens virens* and subsp., p. 893

Bill longer and finer, not broad at base, no yellow tip, 12–14 mm. in length *Andropadus curvirostris curvirostris* and subsp., p. 889

19. Whole plumage uniform bright olive-green, brighter than in species of *Andropadus*, no bright yellow on under parts .. .. *Arizelocichla montana*, p. 887

Whole plumage not as described above 20

20. Entire crown slate-grey; tail not rufous 21

Crown not slate-grey 22

21. Throat white, rest of under parts bright canary yellow *Phyllastrephus poliocephalus*, p. 883

Throat grey, rest of under parts olive and dull yellow *Arizelocichla tephrolaema tephrolaema* and subsp., p. 886

22. Tail bright olive-green, resembling rest of upper parts .. 23
Tail not bright olive-green, either rufous, brown or olive-brown 24

23. Belly bright yellow, bill light-coloured
Calyptocichla serina, p. 886
Belly white, flanked with grey; bill dark-coloured
Arizelocichla falkensteini falkensteini and subsp., p. 888

24. Head light grey, upper tail-coverts and tail bright rufous
Pyrrhurus scandens scandens and subsp., p. 873
Head not light grey 25

25. Tail chestnut or reddish brown, contrasting with rest of upper parts, which are either green or olive-brown .. 26
Tail not chestnut or reddish brown and not contrasting with rest of upper parts, which tail closely resembles in tone 31

26. Under parts mostly pale yellow and olive 27
Under parts not mostly pale yellow and olive 29

27. Throat white
Phyllastrephus albigularis albigularis and subsp., p. 882
Throat yellow 28

28. Size large (wing 86–89 mm.) .. *Phyllastrephus xavieri*, p. 885
Size smaller (wing 67–82 mm.)
Phyllastrephus icterinus icterinus, p. 884

29. Legs and feet pale (yellowish or pinkish flesh-colour); under parts distinctly pale *Phyllastrephus fulviventris*, p. 881
Legs and feet dark (bluish slate or plumbeous); under parts dusky (olive or olive-brown) 30

30. Under side of lower mandible very pale (bluish white in life, horn-white in skin); under parts uniform
Phyllastrephus baumanni, p. 882
Under side of lower mandible dark (not bluish white or horn-white); breast brownish, darker than belly
Phyllastrephus poensis, p. 880

31. Throat bright yellow
Pyrrhurus flavicollis flavicollis, *P. f. adamauae*, p. 875
Throat white or whitish 32

32. Throat purest white; under wing-coverts and quill lining deep fawn-colour .. .. *Pyrrhurus simplex*, p. 876
Throat not purest white, sometimes faintly tinged with yellowish or buff; under wing-coverts and quill lining not deep fawn colour
Pyrrhurus flavicollis soror, *P. f. simplicicolor*, p. 876

YELLOW-VENTED BULBUL

Pycnonotus tricolor tricolor (Hartlaub)

About 7½ in. in length this bird is earth-brown above, including the wings and tail, the latter being rather long, measuring 3½ in. The crown, cheeks and throat are much darker brown than the mantle. The breast is earth-brown, paler than the throat; the rest of the under parts are white, but the under tail-coverts are lemon-yellow. Bill and feet are black. The wing measures 89–101 mm., the tail 74–90 mm.

In its general habits this bulbul resembles the next species to be discussed more fully. It is a bird of fairly low altitudes, requiring rather a richer environment than the White-vented Bulbul, but is widely spread over the tree-savanna country beyond the limits of our area, into which it penetrates only in northern Cameroon. The song is varied but wearisome, on account of oft-repeated phrases.

The nest is ridiculously small, barely able to hold the nestlings, and is usually built on the branch of a small tree or on the fronds of the oil-palm. A nest with two eggs has been discovered on 20th September in Darfur.

Distribution and Races. The Anglo-Egyptian Sudan south to the Bahr el Ghazal and westwards to northern Cameroon, ranging south of the Equator to northern Rhodesia and Damaraland, occurring in the Belgian Congo and Uganda. Its place is taken in the Kenya highlands by *P. t. fayi*, and in the Sudan by *P. t. minor*. Other races occur in the coastal area of East Africa. In Upper Guinea its place is taken by the next species described.

COMMON GARDEN BULBUL

Pycnonotus barbatus Desfontaines

Four races of this bulbul were included in my larger work, two of which, *P. b. inornatus* and *P. b. nigeriae*, occur in Upper Guinea. It is the race first named which is universally spread in West Africa and is found in all our four British colonial possessions in that area. The typical subspecies is found only in countries north of the Sahara.

The Garden Bulbul is about the size of a sparrow, with the head and throat dark brown, the rest of the upper parts, wings and tail, dull earth-brown. The breast is pale brown, below which the under parts are white, including the under tail-coverts in the races so far mentioned. The measurements of *P. b. inornatus* are: Bill 14–16 mm., wing 88–101 mm., tail 80–90 mm., tarsus 22–23 mm.

This is one of the commonest birds in West Africa, equally at home in many surroundings but especially familiar around homesteads and gardens, from which it takes its trivial name. It is found, too, on cultivated ground and in low bush away from habitations. In forested countries it keeps to the clearings and villages rather than entering the closed canopy.

Its food consists of fruit and insects of a wide variety. Young are fed largely on grasshoppers. Its notes are pleasing and are one of the earliest sounds to be heard on waking. *Quick-doctor-quick* is an interpretation of what it says. Owing to its being encountered almost wherever one goes, from the coastal districts and maritime islands to the semi-arid belt, the Garden Bulbul is a general favourite which almost takes the place of the ubiquitous sparrow in European lands.

The nesting season is a long one and continues throughout the entire dry season. Its nest may be found in many situations from the low fork of a cassava to 40 ft. from the ground in a teak-tree. It is a neat cup thinly woven with root fibre, grasses and a few dead leaves, the full clutch being two or three eggs. Eggs vary considerably, and those of *P. b. nigeriae* are described fully in my larger work. The ground is either pink or white, the shell either regularly covered

with speckles and blots of reddish brown or with some heavier blotches and lilac markings, variations between the extremes being found. Fourteen eggs of *P. b. nigeriae* average 22·86 × 15·94 mm.

Distribution and Races

P. barbatus inornatus (Fraser), already described, is widely spread in forest, savanna and Sudanese arid belts of Upper Guinea from Senegal and the French Sudan to northern Nigeria except along the course of the Niger in French Niger Territory.

P. barbatus nigeriae Hartert is a darker bird than *inornatus*, the head and throat being more blackish brown and the brown breast more sharply defined from the white area below. Under tail-coverts are pure white. The wing measures 90–105 mm., tail 76–88 mm. This race is found in southern Nigeria and along the course of the Lower Niger as far as Tillabéry in French Niger Territory about lat. 15° N. In the coastal area it extends from Lagos south to the vicinity of Duala and Port Gentil in Cameroon and perhaps beyond.

P. barbatus gabonensis Sharpe resembles *inornatus*, but the under tail-coverts are tinged with yellow and the tone of the upper parts is dark in comparison with *nigeriae*. The wing measures 91–100 mm., tail 80–87 mm. It ranges from Pointe Noire, the southernmost tip of French Equatorial Africa, through Gaboon and the forests of Cameroon to the western Belgian Congo.

P. barbatus arsinoë (Lichtenstein) has a black crown, cheeks and throat and white under tail-coverts. The wing measures 86–95 mm. It occurs in Aïr, southern Sahara, and ranges to the White Nile.

There is no race of *P. barbatus* in Kenya or Uganda, where *P. tricolor* holds sway.

BEARDED BULBUL

Trichophorus barbatus Temminck

Two races come within our limits, both occurring in Upper Guinea.

The general colour of this bird, which is about 8½ in. in length, is olive-green, the head rather greyer and the breast with grey middles to the feathers. The only conspicuous feature is the bright sulphur-yellow throat, and even there the yellow is restricted to the upper throat and chin, but the feathers are long and droop down in the form of a beard. The wings are brown, edged with olive, and the tail is olive with a strong rufous tinge when spread. Apart from the throat, the whole under side is dull—a mixture of grey and olive. The measurements of the typical subspecies are: Bill 18–19 mm., wing 100–110 mm., tail 90–100 mm., tarsus 24–26 mm. The bill is black above, blue-grey below; the legs and feet are blue-grey.

This is strictly a forest species and one which does not stray into open country. Where it occurs it is usually common, especially the typical race in Sierra Leone in the high forest reserves. It may be seen regularly with the bird armies, each of which is sure to contain half a dozen Bearded Bulbuls. There they draw attention to themselves by their rather loud cries, *seep, seep* or *pée-u, pée-u*, uttered as they search the undergrowth and lower branches for the insect life upon which they live.

The song of the male is a loud shrill *feera-fée*, the last syllable accented and with a rising inflection. As the bird sings it erects the feathers of the crown and puffs out its yellow beard. This is a well-known sound in the ravines of the Tingi Mountains.

No one appears to have obtained the eggs of this bulbul.

Distribution and Races. Trichophorus barbatus barbatus Temminck ranges from Sierra Leone to Togoland wherever heavy forest occurs. It is no doubt as numerous in the Gold Coast as it is reported to be in Sierra Leone and Liberia.

Another race, *T. barbatus ansorgeanus* (Hartert), is found in the forests of southern Nigeria, where it was discovered in the Niger delta. It differs in having the throat paler yellow, the under parts more brownish olive and the under tail-coverts rufous buff. The tail and upper tail-coverts are more rufescent. The wing measures 99–103 mm., tail 88–92 mm. It is uncertain how far east this race extends; it has not been reported from British Cameroon.

GREEN-BACKED BEARDED BULBUL

Trichophorus chloronotus chloronotus Cassin

This bulbul is about 9 in. in length, with a slate-grey head, green back and wings, rufous tail and a white throat, the feathers of which are rather long and often stand out in the form of a drooping beard, from which the bird gains its name. The sides of the belly are olive-green, becoming yellow in the middle; the under tail-coverts buffish fawn. The bill is dark horn above, pale blue beneath; legs and feet are bluish grey. The measurements are: Bill 18–20 mm., wing 95–109 mm., tail 85–95 mm., tarsus 24–25 mm.

In this bird (as with others of the genus *Trichophorus*) a few long hair-like bristles spring from the back of the neck and extend over the mantle. They would pass unnoticed unless lifted up with a pin or knife-blade, but are a remarkable feature of the group.

In the dense woods around Cameroon Mountain the soft wavering mournful notes of this bulbul may be heard as they call to one another from some hidden retreat. They are said to be more

solitary in their ways than other bulbuls and do not congregate together as a rule. Usually they prefer the lower growth of the wood, searching continually for the caterpillars, spiders and seeds upon which they live. In the Congo it is exclusively found in heavy uncut forest, and there it has been noticed high up in the trees. That it will descend to the ground is proved by the specimens that have been caught in snares.

I have no information of its nesting.

Distribution. From British Cameroon to the mouth of the Congo and in the the northern Belgian Congo. It is not rare in the forests of southern Cameroon.

Another race has been described from the Ituri and Semliki Valley.

WHITE-BEARDED BULBUL

Tricophorus calurus Cassin

Again there are two distinct races of this bird in our area, one in Lower, the other in Upper Guinea.

This is a smaller bird than those already described, measuring little more than 7 in. from bill to tail. The crown is chocolate-brown, and above the eye is a narrow grey line. Mantle, back and wing-coverts are olive-green, as are most of the flight feathers. The tail (in the typical race only) is rufous fawn, the rectrices with narrow olive fringes. Chin and throat are white, the sides of the breast and body bright yellowish olive, brighter yellow in the centre of the breast and on the belly. The under tail-coverts are yellow tinged with fawn; the culmen is black, and the feet are dark grey. Measurements of *T. calurus calurus* are: Bill 16–19 mm., wing 80–92 mm., tail 74–82 mm., tarsus 20–22 mm. The white throat when spread out is a very conspicuous field character, and there is a small area of pale blue skin around the rather large dark eye.

Like the Bearded Bulbul, the present species is sure to be seen in a forest *ejak* but is seldom seen away from the company of other forest birds. It is a common bird in Upper Guinea and is strictly forest-frequenting. These Bulbuls are rather noisy and keep up a continuous mellow *chit chuh* on slightly varying keys, replaced occasionally by a low *tch-tch-tch.*

It builds its nest in forest shrubs among close-growing leaf petioles. The nest is composed of small dry twigs and a quantity of moss and is lined with fibres. The eggs have a pinkish ground almost obscured by dense chocolate-brown markings and measure 22·5–23 × 16 mm.

Distribution and Races

Trichophorus calurus calurus Cassin extends into southern Nigeria, where it has been obtained in the Provinces of Owerri and Benin. In Lower Guinea it ranges from Cameroon Mountain to Gaboon and through the Belgian Congo, other races occurring in the eastern Congo forest. It is also found on Fernando Po.

Trichophorus calurus verreauxi (Sharpe) takes its place in western Nigeria (Lagos area), extending north and west to Sierra Leone and French Guinea. It is widely spread in the Gold Coast. This race differs in having the upper tail-coverts and tail olive-green, like the back, the rectrices being only slightly washed with rufous. Wing 85–98 mm., tail 75–87 mm.

YELLOW-THROATED OLIVE BULBUL

Trichophorus olivaceus Swainson

THE entire upper parts of this bird are olive-green, the head rather browner olive. A few long hair-like bristles spring from the back of the neck; the wing-coverts and outer webs of the flight feathers are green, like the back, and the quills are brown. The tail is rufous brown margined and washed with olive. Chin and throat are bright yellow, the rest of the under parts olive-green, yellower along the middle of the breast and belly. Bill and feet are dark leaden blue. In total length this bird measures 7 in.; the bill is 15–17 mm., wing 81–82 mm., tail 70–74 mm., tarsus 21 mm.

Nothing is recorded about the habits of this small bulbul, which is rare in collections, though it was described as long ago as 1837. It is probably a forest bird, and it is doubtful if it has ever been obtained in Gambia, in which country the type was supposed to have been obtained. An example recently turned up in a patch of forest near a village in French Guinea, and this specimen had small eggs in the ovaries. It may have a wider distribution than specimens indicate.

Distribution. Specimens have been secured in Casamance, French Guinea (Nzèrekôrè) and the Gold Coast (Fanti). It may occur in forest country anywhere in that area.

COMMON BRISTLE-BILL

Bleda syndactyla (Swainson)

Two races occur, one in Upper, the other in Lower Guinea.

This is one of the larger bulbuls in West Africa, measuring in the flesh just under 10 in. The crown, cheeks and ear-coverts are dark olive, a black streak separating the cheeks from the yellow

throat. Mantle, back and wing-coverts are paler olive, the rump feathers tipped with rufous. The upper tail-coverts and tail are bright rufous. The wings are brown. The whole of the under surface is sulphur-yellow, the sides dull olive and the under tail-coverts pale yellow. Under wing-coverts and axillaries are dull yellow. The eye is red-brown, bill horn above, bluish below; legs and feet are pale slate. The measurements of *B. s. syndactyla* are: Bill 21–23 mm., wing 93–115 mm., tail 83–101 mm., tarsus 24–27 mm. The bill in this bird is heavy and long, furnished with a small hook at the tip and with black bristles springing from the gape. The male is believed to be generally larger than the female, a distinction more apparent in life than in skins.

The Bristle-bill is a shy, secretive inhabitant of the undergrowth of the West African forests and is not at all uncommon in the forest reserves of Sierra Leone, the Gold Coast and Nigeria, with an allied race ranging from Cameroon Mountain southwards. Often the birds may be seen in company with other species around driver ants, the first warning of their presence being a low *chirrit-chirrit* as they dodge about the undergrowth, exhibiting an occasional glimpse of a rufous tail.

The song is a series of descending notes, while a monotonous *tur-tur-tur-tur* is reiterated from time to time, but the song is quite pleasant. Termites, mantises, ants of various kinds and insects of all varieties are its prey, and it may be able to tackle larger game with such a formidable bill.

The breeding habits have only been studied in the Lower Guinea race. It seems to nest all the year round in the Cameroons, building a shallow structure of decaying leaves and sticks and lined with tendrils and rootlets. Eggs have a pale buff ground almost obscured by dense blotches of rich vandyke brown and pale brown. One egg measures 26·5 × 18 mm.

Distribution and Races. B. s. syndactyla (Swainson) ranges from Casamance to the Gold Coast and possibly beyond, and is the race which occurs in Sierra Leone.

Its place is taken east of the Niger (Owerri and Port Harcourt), also on Cameroon Mountain and in the Kumba Division, by *B. s. ogowensis* Neumann, which ranges from British Cameroon to the Loango coast and extends to the Middle Congo. This race differs from the Upper Guinea typical subspecies in having the upper parts considerably darker olive, the back greener, in which it harmonises more nearly with the crown. Around the eye is a pale bluish area. The bill measures (male) 25–27 mm., (female) 20–23 mm., wing (male) 103–117 mm., (female) 96–110 mm., tail 88–101 mm.

In Uganda and parts of Kenya the closely allied *B. s. woosnami* ranges westwards to the Ituri and Uelle districts of the Belgian Congo.

GREEN-TAILED BRISTLE-BILL

Bleda eximia (Hartlaub)

Two races of this bird also occur in Upper and Lower Guinea respectively, though, as with so many other species, the Lower Guinea subspecies is found to range into southern Nigeria.

In this bird the crown of the head, the neck and entire upper parts are rather bright olive-green, the quills dark brown with olive margins. Below the cheeks is a blackish line. The upper tail-coverts and the six middle tail-feathers are green like the back, the three outer ones similar but tipped with pale yellow. The under parts from the chin to the under tail-coverts are bright yellow. The bill is black above, light blue below; the legs and feet are greyish white. In the typical race the wing varies from 102 to 108 mm., the tail from 88 to 94 mm. Fuller measurements will be given under the sub-species, of which we have a larger series.

This bird is easily confused with *B. canicapilla*, which latter has a grey instead of a green head. The only other bristle-bill which resembles it in size is *B. syndactyla*, whose red tail should betray its species, as both the others have green tails with yellow tips to some of the feathers.

In its habits the Green-tailed Bristle-bill closely resembles the Common Bristle-bill. It is often met with singly as well as being a member of a bird army, and spends most of its time close to the ground in the dense undergrowth. Ants form an appreciable part of its diet, varied with beetles and other insects. When perched on a branch watching for a procession of migrating ants a bird will from time to time give forth a mournful whistle, varied by a flute-like note.

Strictly forest dwellers, these bristle-bills appear to have no fixed nesting time. The eggs have not been described.

Distribution and Races. *B. eximia eximia* (Hartlaub) ranges from Sierra Leone to the Gold Coast.

Its place is taken further east in southern Nigeria by *B. eximia notata* (Cassin), a race which is distinguished by having darker green upper parts and darker and broader yellow tips to the three outer tail-feathers, but especially by a large yellow spot in front of the eye, which area is green in the typical race. *B. e. notata* measures: Bill 16–18 mm.; wing (male) 92–100 mm., (female) 88–92 mm.; tail 75–90 mm.; tarsus 23–26 mm. This race extends from southern Nigeria to the mouth of the Congo and in French Congo and occurs in Fernando Po.

Another race, *B. e. ugandae*, ranges from the Ubangi to Uganda.

GREY-HEADED BRISTLE-BILL

Bleda canicapilla (Hartlaub)

THIS bird and the White-tailed Greenbul are about the same size, i.e. about 8 in. in length. These two birds cannot be confused, as the greenbul has not yellow under parts. The head of *B. canicapilla* is grey, the upper parts and tail olive, wings dark brown and whole under parts yellow. It may easily be confused with another species with olive upper parts and yellow under parts and the same yellow

tips to the outer tail-feathers, i.e. the Green-tailed Bristle-bill (*B. eximia*), but that species has an olive head like the back, not grey as in *B. canicapilla*. Both occur side by side in the same forests. Still another species, *B. syndactyla syndactyla* (the Common Bristle-bill), is liable to be confused with it—the yellow under parts are alike in both, but *B. syndactyla* has a red tail, whereas *B. canicapilla* has a green one with yellow tips to the outer feathers. The eye is red, and the legs and feet are blue. The measurements are: Bill 17–18 mm.; wing (male) 101–106 mm., (female) 90–98 mm.; tail 85–96 mm.; tarsus 24–27 mm.

Although this bird is recorded from various localities between Portuguese Guinea and Nigeria, it seems that it is more commonly seen in Sierra Leone than in any other part of its range. It lives in the undergrowth of the high forest and also in the dense second-growth thickets in secondary forest. Usually it is seen in pairs or in small parties of four or five, which keep to dense cover and pick up their food of termites and other insects on the ground.

Every bird army is sure to contain one or more of these birds, and they may often be seen round driver ants. If alarmed, they break out into a shrill racket. The male has a fine song, which is rather slowly uttered. Like some other bristle-bills, this species will often sit with its mandibles apart as if panting, which gives it an odd appearance.

As with so many forest-dwelling birds, its nest and eggs have never been discovered.

Distribution. Recorded from Gambia to southern Nigeria, but it is doubtful if it occurs north of Portuguese Guinea. It has not yet been recorded from east of the Owerri Province of Nigeria. It seems to be generally though locally distributed in forested areas of the Gold Coast and Togoland among other countries.

SWAMP BULBUL

Thescelocichla leucopleura (Cassin)

The Swamp Bulbul is about the size of a European starling; it is 10 in. long and has a wing expanse of 13 in. Only the terminal

third of the tail is white, the amount of white decreasing towards the four central feathers, which have no white tips at all. The

general colour of the upper parts is olive-brown; the breast appears mottled white and dusky olive and the belly whitish yellow. The white in the tail is the best feature to observe. Another olive-brown bird of the same family with the whole of the four outer tail-feathers white is the Spotted Bulbul (*Ixonotus guttatus*), but that bird has the wings and back covered with large white spots, is smaller in size and has different habits, so that confusion is unlikely. The eye of the Swamp Bulbul is reddish brown, the bill is black and the legs and feet are bluish grey. The bill measures 18–20 mm., wing 104–115 mm., tail 94–112 mm., tarsus 25–26 mm.

This is a very voluble species, and its throaty babbling may be constantly heard. It is a bird which is especially fond of swamp ground, where it frequents the swamp palm (*Raphia vinifera*). Towards evening the pleasant song of the male birds may be heard in the swamps, some of its notes having a peculiar ringing tone.

The Swamp Bulbul is a shy, restless bird, always on the move, going about in parties of two to six, difficult to approach and keeping to the moister places in the forest. At times it may be found in the trees, especially *Raphia* palms which line the banks of streams, and when certain berries are ripe these Bulbuls will even visit private gardens to feed on the fruit of the royal palms. At times it will visit forest trees and forest clearings in places remote from water or *Raphia* palms.

A nest was found in a *Raphia* palm in Cameroon, but it contained nestlings and its eggs are still unknown.

Distribution. The whole of the forest or swamp country in forested areas which extends from French Guinea to Portuguese Congo. It is found in all British Colonies except apparently Gambia, and is widely and generally distributed, especially wherever the *Raphia* palm flourishes.

LEAF-LOVE

Pyrrhurus scandens (Swainson)

THREE races of this bird have been found within our limits.

The Leaf-love is about 9 in. in length with a pale grey crown, pale olive back and lesser wing-coverts, the feathers of the lower back very long and fluffy with pale fawn tips. The upper tail-coverts are bright fawn and the tail is of the same colour but slightly inclining to rufous. Chin and throat are white becoming pale yellowish buff on the chest and palest yellow on the belly. The axillaries are pale yellow, the under wing-coverts buff tinged with fawn. The eye is grey-brown, the bill dark horn above, whitish beneath; legs and feet are blue-grey. Measurements are: Bill 17–18 mm., wing 99–116 mm. (one 118 mm.), tail 92–109 mm., tarsus 26–27 mm.

The Leaf-love is a bird of wooded river banks and is not found in the dense undergrowth of forests. When the woods of a valley in which these birds occur continue up the mountain slopes, the Leaf-loves may be found up to high elevations, following the tongues of forest which ascend to the high plateaux. Its peculiar and characteristic notes, when learned, betray its presence, but these are impossible to describe on paper. In some ways they resemble the notes of the White-tailed Greenbul. It is a very active bird, which can cling with its head upside down and climb about at any angle, searching for its insect prey.

A nest was a cup-shaped structure slung between the twigs of a bush overhanging a stream. The eggs, two or three in number, are buff-coloured with fine brownish speckles evanescing at the larger end into a purplish-brown mottling.

Distribution and Races

P. s. scandens (Swainson) ranges from Senegal to the British Cameroon highlands, and Tibati on the plateaux of French Cameroons; it occurs in all British Colonies.

P. s. acedis (Oberholser) has the whole plumage darker, the head more slate-grey and the upper tail-coverts inclining to chestnut. The wing measures 95–104 mm. It is found in the forests of southern Cameroon and in Gaboon.

P. s. orientalis (Hartlaub) is intermediate between the two aforementioned, with wing 95–107 mm. It inhabits the country through which flow the Ubangi and Uelle Rivers of the Belgian Congo, ranging east to the Bahr el Ghazal.

YELLOW-THROATED LEAF-LOVE

Pyrrhurus flavicollis (Swainson)

Four races of this species occur in West Africa, to be enumerated hereafter. It is the typical race which is found in all British Colonies in Upper Guinea.

Easily recognised by reason of its bright yellow throat, this leaf-love is about 10 in. in length and has the whole of the upper surface, including the wings and tail, olive-brown; the crown is rather darker than the mantle. Chin and throat are sulphur-yellow, the rest of the under parts greyish olive-brown. The eye is light brown, the bill is black, and the legs and feet are grey. Measurements of the typical race are: Bill 17–18 mm., wing (male) 114–120 mm., (female) 105–107 mm., tail 100–110 mm., tarsus 25–26 mm.

In southern Nigeria another bird, *Trichoporus barbatus ansorgeanus*, may be confused with it, as it has a yellow throat also, but it is greener above and has a reddish (not olive-brown) tail.

Wherever the vegetation is thick and leafy, especially along streams, we may expect to find this bird, but it frequents thick shrubberies in open country, orchard bush, kurimis and fringing forest. Usually it is encountered in couples or small parties. It is noisy and restless, continually scolding and flicking its wings. Its chatter may be heard from a dense thicket, and a minute or two later the bird appears high up in an exposed position.

From accounts which have reached me it does not seem that it is common anywhere, but its yellow throat makes it conspicuous wherever it occurs.

A nest of this leaf-love was found in a lime-tree of evergreen hedge surrounding a rest house in northern Nigeria situated well away from the village and near a stream. The nest was 8 ft. from the ground, a cup-shaped structure of rootlets and small twigs slung between two limbs of a fork. It contained two nestlings in mid-August. The eggs have not been described.

Distribution and Races

P. flavicollis flavicollis (Swainson) extends from Senegal to northern and southern Nigeria and has been recorded from all political divisions.

Its place is taken in British Cameroon by *P. fl. soror* (Neumann), which differs in having the throat faintly washed with sulphur and in being paler on the under parts. It ranges from the Cameroon highlands eastwards via the Ubangi and Uelle Rivers to the Bahr el Ghazal.

P. flavicollis adamauae (Reichenow), from the Genderu Mountains, has greyer under parts and a yellow throat.

P. flavicollis simplicicolor (Grote) is known only from Bosum in eastern French Cameroon. It has a whitish throat like *soror* but is more brown than olive on the upper parts.

SIMPLE LEAF-LOVE

Pyrrhurus simplex (Hartlaub)

A VERY dull coloured bird entirely darkish brown above, with brown cheeks, wings and tail, the head and lores rather darker brown than the back. The throat is pure white and the rest of the under parts are dirty white or pale buff, with drab-coloured flanks and sides. The bill is black, and the feet are bluish slate. At close quarters the white eyelids are a guide to identification, the white being noticeable above the eye but not below. In size it measures in the flesh 9 in. from bill to tail and has a wing expanse of 13 in. Should the bird lift its wings, it will be seen to be fawn-coloured below. It is about the same size and coloration as the Common Bulbul (*Pycnonotus barbatus*), but that bird has a blackish throat whereas the Simple Leaf-love has a white throat and is much more of a skulker and more restricted in its habitat. The measurements are: Bill 15–19 mm., wing 92–109 mm., tail 84–94 mm., tarsus 24–26 mm.

This is a common bird whose white throat and white eyelids are in strong contrast to the drab brown plumage. It is an inhabitant of dense low bush, of second-growth forest and occasionally of more open bush among tall grass. It spends much time skulking in the bushes, from which it utters a curious conversational chatter in rather guttural tones. It does not shun cultivated areas where it can find suitable cover, but is nowhere so plentiful or so obvious as the Common Bulbul (*P. barbatus*). Despite its reputation for being a shy bird it is seldom that a collection of birds from West Africa does not contain several examples.

Its principal food consists of insects, but it frequently visits berry-bearing palms and fruit-trees in gardens, as observed in British Cameroon.

The nest is a shallow construction of weed-stems and dry tendrils without lining. It is always placed in low bushes near the ground, another favourite site being in the fork of a cassava plant. Two eggs complete the clutch. In colour the eggs are white or pale stone-colour plentifully marked with scrolls, blotches and spots of vandyke brown and lilac. They measure 22–26 × 16–19 mm., showing considerable variation in size.

Distribution. Widely but somewhat intermittently distributed in

every political division from Portuguese Guinea to northern Angola, mainly in forested areas or second growth. Numerous in Sierra Leone and the Gold Coast, it is not recorded from northern Nigeria, but is found only in the Southern Provinces. It is absent from Gambia where the country is unsuitable.

WHITE-TAILED GREENBUL

Baeopogon indicator (Verreaux)

THREE races of the White-tailed Greenbul occur in West Africa.

This is rather a heavy-looking bird with a short black bill and comparatively short black and white tail. It measures about 8–8½ in. in length and is olive-green above, greyish washed with olive below, with a light buff ventral area and flanks. The most

conspicuous feature of this bird (which is shared by all in the genus) is the striking colour pattern of the tail, the four middle feathers being black and all the rest white with black tips. The eye is creamy white in the male, browner in the female; the bill is black, and the legs and feet are slate-grey. Measurements of the typical race are: Bill 14–17 mm., wing 94–108 mm., tail 70–81 mm., tarsus 20–22 mm.

The colouring of the plumage, especially the tail-pattern, closely resembles that of the honey-guides, but in habits the birds are poles apart.

This greenbul is not uncommon in the large trees of second-growth forest, in which it finds the small fruits on which it mainly feeds. It keeps much to the tree-tops. Its song is loud and melodious —*sweet-sweet-sweety*, repeated twice—and is uttered especially during the rains. In the dry season a long-drawn *see-weeer*, like the final syllable of its song, is the only sound uttered apart from an oft-heard mewing cry. It may be observed chasing the hornbills over the tree-tops or more often hunting through the undergrowth of high forest as a member of a bird army.

It is not surprising that its eggs are unknown.

Distribution and Races

B. i. indicator is an inhabitant of the Guinea forests which ranges from southern Nigeria (Oyo and Owerri Provinces) through British and French Cameroon to northern Angola and extends into the western Belgian Congo.

B. i. leucurus (Cassin) differs from the above in having the under parts paler and greyer, the throat purer grey and the under tail-coverts cream rather than buff. The wing measures 91–105 mm. This race is restricted to Sierra Leone and Liberia.

B. i. togoensis (Reichenow) differs from *leucurus* in having the upper parts and under parts more buffish grey and washed with yellow. It is even more distinct from the typical race, whose breast and sides are so much darker. It has been found in Togoland and in the forests of the Gold Coast.

SJÖSTEDT'S WHITE-TAILED GREENBUL

Baeopogon clamans (Sjöstedt)

SJOSTEDT'S Greenbul at first sight resembles *Baeopogon indicator*. It has the same stumpy appearance and short tail and bill. The plumage of the upper parts is golden green, including wings and tail, the quills being blackish. The tail has the three outer feathers pure white, without black tips, as in *B. indicator*, the fourth white on outer web and the middle pair blackish. The chin is grey; throat, breast and belly are buff, washed with yellowish olive on the breast and with fawn on the belly. The under surface of the tail appears entirely white when closed. The bill is black, and the legs and feet are grey. Measurements are: Bill 14–16 mm., wing 93–104 mm., tail 67–77 mm., tarsus 20–22 mm.

This species was discovered at the foot of Cameroon Mountain to haunt the densest undergrowth, where its far-reaching call betrays

its presence—a loud *pee-ew* uttered with energy and accompanied by the spreading of its tail, when the white feathers appear to advantage. Its song is quite impossible to describe on paper. Usually the birds live singly, but two or three occasionally forgather and sing to one another in the tree-tops.

The nest has never been discovered.

In southern Cameroon the birds were not uncommon in the primeval forest but still more numerous in the second growth on former cleared land.

Distribution. British and French Cameroon, south to the Como River in Gaboon and the northern Belgian Congo–Uelle River district, is the range of this greenbul as known as present.

SPOTTED GREENBUL

Ixonotus guttatus Verreaux

This is one of the few members of this difficult family which may easily be recognised, but the very distinct white spots on the wings and lower back, on the olive-brown ground, though very conspicuous at close quarters, are not easily seen, as the bird keeps much to the tree-tops. The whole of the under parts are white. Like the other two species of greenbuls we have just dealt with, this bird has the outer half of the tail white, the middle feathers dark

brown. The species is remarkable for the density of feathers on the lower back, but the bird must be handled to appreciate it. When seen, as is usually the case, from below, the under side of the tail appears wholly white, and a distinct feature which attracts the eye is the white on the under side of the wing, i.e. the quill lining. The bird's total length is about 7 in. in the flesh. The bill measures 13–15 mm., wing 84–95 mm., tail 71–78 mm. and tarsus 19 mm. The bill is black, and the legs and feet are bluish grey.

Immature birds are very like the adults, and even from the nestling stage the white spots on the plumage are apparent.

The yellow under tail-coverts, as well as the yellow axillaries, may often be seen, as the bird has a habit of flirting the tail and raising the wings.

This greenbul is never still for a second during daylight hours, continually hopping about the branches and even hanging to the under side in search of fruit. It is commonly seen in the woods, usually in small parties, which move through the tree-tops in search of insects and berries, occasionally uttering a loud chirping call. Other notes which they utter are deeper in tone—*tok-tok-tok*, with the syllables run together—but the usual cry is a cheerful twittering not unlike a party of Long-tailed Tits in a wood at home as they pass on their way. Its characteristic manner of feeding in company, the flock remaining only if fruit is present and moving on quickly if the tree is barren, has been remarked by several naturalists.

The nest is a rude, slight, shallow cup of dry leaf-petioles, bits of leaves and bark, and lined with rootlets, etc. The egg has a yellowish ground almost obscured by dark brown speckles and spots. Egg measurements are not available.

Distribution. The whole forest area of West Africa from Liberia to the Congo, then eastward across the Congo forest to the Ituri district, extending north and south of the equatorial forest into the gallery forests. Curiously enough, it has not yet been reported from Sierra Leone. It seems to be commonly found in Ashanti and is reported from the forests of southern Nigeria and British Cameroon, both from jungle and second-growth bush, as well as from intermediate areas.

CAMEROON OLIVE GREENBUL

Phyllastrephus poensis Alexander

This is a dull-looking bird just over 7 in. in length, with the mantle and back brownish olive, the head and neck darker and browner, the upper tail-coverts rusty fulvous brown and the tail brown tinged with rufous. A greyish-white throat fades into olive-brown on breast

and sides, the middle of the belly being yellowish white. The under tail-coverts are buffish brown and the axillaries dull olive. The bill is blackish above, pale horn below, and measures 15–17 mm. The wing measures 71–88 mm., tail 72–80 mm., and tarsus 22–24 mm., the legs being bluish slate in colour.

Not unnaturally, this dull-coloured bird has received little attention from naturalists, and its status is not well known. It was discovered first in the higher altitudes of Fernando Po and later on Cameroon Mountain around 3,160 ft., which is lower than the ground where it was discovered on the island.

It has recently been found over a larger area of the Cameroon montane area: Kupé Mountain, Bamenda, where it was found in the primary forests, 4,500–7,000 ft. It occurs in pairs and small parties, associating with other species only when insect hunting at driver ant columns. Thick foliage attracts it, whether in the undershrubs, the tree-tops or the creepers at intermediate levels. It is a very unobtrusive species which is seldom observed.

In my larger work I included another closely allied bird, the Pale Olive Greenbul (*Phyllastrephus fulviventris* Cabanis). It is 8 in. in length, brownish olive above, pale yellow washed with pale brown below, and a white throat. The bill is heavy (16–19 mm. in

length), with a prominent hook. It has a rather long tail (80–90 mm.) and rather short wings (81–90 mm.). It comes into our area in Portuguese Congo and ranges south to Mossamedes. It seems to be confined to the savanna and forest patches of the Congo basin.

BAUMANN'S GREENBUL

Phyllastrephus baumanni Reichenow

This is another dull-coloured bird which closely resembles *Phyllastrephus poensis* in the colouring of the upper parts, which are olive-brown rather than olive, washed with rufous, and becoming quite rust-coloured on the rump; upper tail-coverts and tail are exactly the same as in *P. poensis*. The head is darker than the back, but is not so dark as in *P. poensis*. On the under surface the new species cannot be compared with *P. poensis*. It lacks the dark breast of that species, and is almost uniform greyish olive, not unlike *Andropadus gracilirostris*, but much greener. The throat is very pale greenish white, and the feathers of the throat and breast have very distinct white shaft-streaks; the flanks are brownish olive and the under tail-coverts pale brown as in *P. poensis*, which species it also resembles in the colour of the under wing-coverts and quill lining. The bill is rather heavier than in *P. poensis*, less slender and broader at the base. The sexes are alike. The iris is hazel, upper mandible black, lower bluish white; the feet are plumbeous. The measurements are as follows: Bill 15–16 mm., wing 74–84 mm., tail 73–81 mm., tarsus 24 mm.

This is said to be a very retiring bird which, though widely distributed, is seldom noticed; consequently we know nothing of its habits. A bird shot near Lagos was feeding on ants and berries.

Distribution. The whole Upper Guinea forest country. Specimens have been collected as far west as Sierra Leone and as far south and east as the Owerri Province of southern Nigeria. It has been reported from all our Colonies except Gambia.

WHITE-THROATED GREENBUL

Phyllastrephus albigularis (Sharpe)

Two races of this bird come within our limits.

This is a smaller, more slenderly built bird than those we have been discussing. From bill to tail it measures in the flesh 7 in. The bill is straight, powerful and rather long, nearly 1 in. from the gape, from which four or five prominent black bristles stand out. The

general colour is olive, the head browner, the tail appearing rufous brown in contrast to the olive back; the under parts are mostly pale yellow, and the throat is white. There is a great difference in size between the sexes, so much so that for some time the male and female were believed to belong to two different species. The eye is dark hazel, the bill is black and the feet are grey. Measurements are: Bill (male) 16–17 mm., (female) 15–16 mm.; wing (male) 77–86 mm., (female) 65–76 mm.; tail (male) 72–80 mm., (female) 64–68 mm.; tarsus (male) 20–22 mm., (female) 20–21 mm. (8 males, 5 females measured).

The White-throated Greenbul is another shy bird which keeps to the cover of dense bush, where it has been observed creeping about in search of insects and ants. At such times the chestnut or rufous tinge of the tail and upper tail-coverts gives some clue to its identity. Of its life-history we know nothing.

Distribution. The typical species, *P. a. albigularis*, is that which occurs in Sierra Leone, the Gold Coast, Nigeria and the foot of Cameroon Mountain.

Another race, *Phyllastrephus albigularis adametzi* Reichenow, was discovered at Bamenda in the Cameroon highlands (5,500–6,000 ft.). It has no trace of yellow on the under side, which is dirty olive-brown. The throat is dull brownish white and the breast browner. The tail measures 79 mm.; the wing was broken.

YELLOW-BELLIED GREENBUL

Phyllastrephus poliocephalus (Reichenow)

This is the most distinctively coloured of all the bulbuls, and its brilliant yellow breast, white throat, grey head and olive-green back and tail should enable it to be easily identified. It is, moreover, a large bird, the male being over 9½ in. in length and the female about 8 in.—a very considerable difference in size between the sexes, be it noted. In general appearance and the yellow under parts it closely resembles those species which I have here included in the genus *Bleda*, but its pure white throat and grey head distinguish it at a glance. The eye is dark brown; bill, legs and feet are grey. The bill measures 17–21 mm., wing (male) 100–106·5 mm., (female) 90–100 mm.; tail (male) 102–103 mm., (female) 88–91 mm.; tarsus 25–27 mm.

In the cloud forest of Cameroon Mountain this greenbul has been observed singly, busily searching the moss or lichen-laden branches, presumably for insects. It may also be seen in company with babblers and other insect-eaters moving through the trees. The

song is an unemotional and regular *tu-tu-quicker-quicker*, the latter part of which is more frequently uttered than the whole refrain.

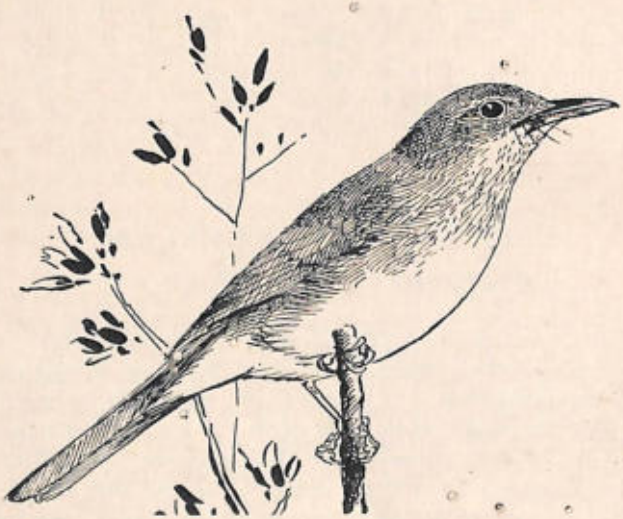
Its nest and eggs are unknown.

Distribution. The open forest of Cameroon Mountain above Buea between the altitudes of 3,000 and 6,000 ft. approximately. It has not been found elsewhere except on Kupé Mountain, where in the primary forest between 4,000 and 6,000 ft. it is not uncommon. It is said to be absent from Manenguba Mountain in the same area of British Cameroons.

LESSER ICTERINE GREENBUL

Phyllastrephus icterinus (Bonaparte)

A SMALL bird, little over 6 in. in length, having a superficial resemblance to an Icterine Warbler. The upper parts are dark olive, the under parts pale yellow. The tail is rufous brown and the wings are brown edged with yellowish olive. It has a prominent bill,



blackish above, greyish beneath, and bluish-grey feet. The under wing-coverts, axillaries and under tail-coverts are all pale yellow. In my larger work the measurements given are not reliable and the following must be substituted: Bill (male) 18–20 mm., (female) 17–18 mm.; wing (male) 71–80 mm., (female) 65–70 mm.; tail (male) 64–73 mm., (female) 56–63 mm. It will be seen how greatly the sexes differ in size.

Owing to the exact similarity in plumage between this species and *P. xavieri* (formerly known as *P. cabanisi*), which live side by side and

differ only in size, their distinctions were not realised at the time vol. iv of *The Birds of Tropical West Africa* was being prepared. Explanation of the mistake will be found in vol. viii, p. 389.

The Lesser Icterine Greenbul, as we must now term this bird, is a common little bird of the high forest reserves in Sierra Leone and in other forested areas of West Africa, where it may be seen wandering about in small parties of a dozen or so, but usually as part of a bird army. They utter quiet little chattering cries as they thread their way through the forest undergrowth and search the lower branches of the smaller trees for insect food. At times it will ascend to the tree-tops, where it diligently searches the leaves.

A nest of this greenbul found in Cameroon was slung on the horizontal branch of a shrub hammock-fashion, attached by black fine fibres. Eggs are mauvish green, very finely speckled with dark grey and dark brown, and measure 20–21 × 14·5 mm.

Distribution. From Sierra Leone to the Congo River and through the North and South Belgian Congo gallery forests. Probably not in the closed forest of the equatorial belt. It is also found in Fernando Po. I have examined specimens from forested localities in all our colonies except, of course, Gambia, to which the high forest does not extend. In Cameroon and the Congo it lives side by side with the next species, with which it has for long been confused.

If it is considered advisable to distinguish between the Upper Guinea and Lower Guinea population of these birds, on account of the brighter yellow under parts and brighter green upper parts of those ranging from British Cameroons southwards, they can be named *Phyllastrephus icterinus tricolor* (Cassin), the Upper Guinea birds being *P. icterinus icterinus* (Bonaparte).

GREATER ICTERINE GREENBUL

Phyllastrephus xavieri (Oustalet)

EXACTLY the same in plumage as the last species described, differing only in size. It is considerably larger throughout, but there is also a difference in the size of the sexes, as the following measurements show: Bill (male) 21–23 mm., (female) 19–20; wing (male) 83–91 mm., (female) 72–77 mm.; tail (male) 75–84 mm., (female) 65–70 mm.; tarsus 20–21 mm.

Distribution. P. xavieri xavieri inhabits the South Cameroon forest and those of the French Congo south to Angola. This bird also ranges into the Belgian Congo and was described from the Ubangi River. In southern Cameroon and Gaboon it lives side by side with *P. icterinus tricolor.* In the highlands of British Cameroon a race named *P. xavieri serlei* Chapin has been separated. It has the under

parts paler yellowish, the upper tail-coverts more rufous brown. The upper parts are alike in both races.

Phyllastrephus xavieri was formerly known as *Phyllastrephus cabanisi* and is discussed under the latter name in my larger work.

GOLDEN BULBUL

Calyptocichla serina (Verreaux)

This bird has crown, entire upper parts, wing-coverts, inner secondaries and outer webs of the quills yellowish olive, the rest of the primaries and secondaries dark brown. The tail is olive, the shafts are light brown. Ear-coverts are olive with whitish shaft-lines; the chin is whitish, throat feathers are also whitish at the base but tipped and washed with yellow. Sides of the breast and body are yellowish olive, the centre of the breast and belly bright yellow, gradually merging into olive on the sides. The under tail-coverts are bright yellow, tinged with fulvous; under wing-coverts are yellow tinged with ochre; the axillaries are yellow. The eye is hazel; the bill is reddish-horn colour, brownish at tip; the legs and feet vary from dirty claret-colour to dark blue. Measurements are: Bill (male and female) 15–16 mm.; wing (male) 87–94 mm., (female) 85–91 mm.; tail (male) 73–82 mm., (female) 72–82 mm.; tarsus 20–21 mm. (12 males, 7 females measured.)

This is one of the brightest-coloured bulbuls in our area, but even so, naturalists have learned little concerning it. A forest species which lives on small fruits and insects as well as grubs, it has been observed in Fernando Po to keep to the tops of the tall trees. It is a widely spread species found in all our Colonies where forest still remains, and sooner or later we may hope that someone will discover its nest and eggs.

Distribution. Ranges from Sierra Leone to Portuguese Congo. In the Gold Coast mainly in Ashanti, but its presence in Kumasi points to its frequenting clearings as well as forest. It has now been reported from Nigeria (Owerri Province) and has been found in British Cameroons at Kumba. It is found on Fernando Po.

GREY-THROATED BULBUL

Arizelocichla tephrolaema (Gray)

Two races of this bird occur.

The forehead, crown and cheeks are grey, the ear-coverts slightly paler with white shafts. The whole of the rest of the upper parts, wing-coverts, inner secondaries, outer webs of primaries and

remaining secondaries, upper tail-coverts and tail are bright olive-green. The chin, throat and forepart of the breast are light grey, the rest of the breast and sides of body olive-green, becoming pale yellow on the middle line of the body; the belly is pale yellow. Under tail-coverts are olive washed with yellow; under wing-coverts and axillaries are pale yellow. The eye is hazel, the bill is black and the legs and feet are greenish. Measurements are: Bill (male) 14–16 mm., (female) 13–14 mm.; wing (male) 88–88 mm., (female) 77–87 mm.; tail (male) 70–73 mm., (female) 68–70 mm.; tarsus (male and female) 22–23 mm. (15 males, 10 females measured.)

These bulbuls are so numerous and so difficult to identify that it has been thought wiser to include the full description in all instances where difficulty of identification may arise.

In total length this species measures 7½ in. This mountain-loving bird does not occur anywhere except in highland country and has not been seen west of Cameroon Mountain and Fernando Po. In the island it frequents the wooded hills and is evidently numerous, judging by the series which have been collected. On Cameroon Mountain it ascends to 7,000 ft. in the forests. In British Cameroons it is one of the commonest birds of the mountain forests from 3,000 to 8,000 ft. and is to be found in almost any type of leaf environment from the tree-tops to the undergrowth. The call is a distinctive, far-reaching, plaintive *weep-weepweep*, repeated in a high-pitched monotone for several seconds. It builds in undershrubs. Nests with two fresh eggs have been found in May; open cups of moss, tendrils and plant stems and gossamer lined with fine grasses.

The eggs have a cream-coloured ground, blotched, spotted and streaked with tawny, blackish brown and olive brown, with grey shell markings. They measure 23·2–25·4 × 16·2–17·1 mm.

CAMEROON MOUNTAIN BULBUL

Arizelocichla montana (Reichenow)

This is a very rare bird restricted to a high mountainous area of British Cameroons, the whole plumage of which is bright olive-green, including the tail. The under parts are similar but in a lighter tone, with the breast and sides rather darker olive than the middle of the belly. The under wing-coverts are dull yellow. The eye is reddish brown, the bill is black, the legs and feet are grey. Only two specimens are available for measurement, the larger a male, the other *probably* a female. The dimensions are: Bill 13–14 mm., wing 77–86 mm., tail 78–82 mm., tarsus 22–23 mm.

In the field it would be quite impossible to distinguish this bird from *Arizelocichla tephrolaema bamendae*, even though the latter has a

grey head and throat, as they resemble each other so closely. *A. montana* has a finer bill which is more pointed.

Distribution. Cameroon Mountain (*circa* 3,000 ft.) and the Bamenda district (6,000 ft.) in British territory. The vicinity of Buea on the mountain is well known where the bird was discovered. Later it was found around the crater lake of Bambulue, where old gnarled trees and some second-growth wood afford it cover. Nothing else is known about it.

YELLOW-THROATED BULBUL

Arizelocichla falkensteini Reichenow

Two races of this bird come within our boundaries, both confined to Lower Guinea.

It is a small bulbul about 7 in. in length, with the whole plumage of the upper parts bright olive-green, including the tail and the outer webs of the flight feathers. A patch of yellow shows at the bend of the wing. The upper part of the throat is bright yellow, the lower and breast are dark grey washed with olive at the sides; the belly is white, tinged with yellow in the middle. The under wing-coverts, axillaries and quill lining are bright pale yellow, the under tail-coverts yellowish white. The eye is blood-red; the bill is greenish black and the legs and feet are slate-blue. The typical subspecies measures: Bill 14–16 mm., wing 85–94 mm., tail 74–86 mm. and tarsus 21–22 mm.

The Yellow-throated Bulbul is an unobtrusive, quiet bird which lives in forest country. Its notes when uttered sound like human chatter, in tone not unlike the well-known notes of *Pyrrhurus simplex*, the Leaf-love.

This bird builds a shallow cup-like nest made of shreds of the bark of weeds and leaf-petioles, lining it with fine grass. It is often set in the fork of a cassava or bush within reach of a village. The eggs are elongated pointed ovals, with ground of greenish white or pale stone-colour, covered with clouded markings of olive and grey concentrated mainly round the obtuse end. Superimposed are irregular lines and scrolls of umber-brown. Two form the clutch, and measurements vary, e.g. 22–25·5 × 16–17 mm. Those described were taken in southern Cameroon.

Distribution and Races. A. falkensteini falkensteini Reichenow ranges from Landana, Portuguese Congo, southwards to Benguella. Further north in the forests of French Cameroon its place is taken by *A. f. viridescentior* (Sharpe), which differs in having the under parts, especially the sides and flanks, deeper grey and the yellow of the throat less bright. The upper parts are slightly darker than in the typical subspecies. The wing measures 84–92 mm., tail 75–82 mm.

SOMBRE BULBUL

Andropadus curvirostris Cassin

Two races occur in West Africa and both are found in Upper Guinea.

This bird (about 7 in. in length) is a great skulker and not by any means easy to observe. Its obscure colouring—almost entirely olive-brown above, olive below—does not help to distinguish it from several closely allied members of the same family. Even when handled it requires an expert to distinguish it from *Anaropadus virens* by the shape of the bill, which in *curvirostris* is longer and more slender, and from the small *Andropadus gracilis* by its larger size and absence of a white ring of tiny feathers round the eye—neither of which characters will appeal to the field observer. Its voice may possibly be the surest key to its identity, but it has only been heard to utter some rapid twittering cries. The tail of the Sombre Bulbul is rufous brown and the middle of the light brown abdomen is washed with yellow. Axillaries and under wing-coverts are pale sulphur. The bill is black; legs and feet are brown. Measurements of the typical race are: Bill 12–14 mm., wing 75–83 mm., tail 66–73 mm., tarsus 17–18 mm.

In habits these bulbuls of West Africa resemble one another closely. Field notes will be included under *A. latirostris* and *A. virens*, the two commonest species.

The nest of the Sombre Bulbul has not been found as yet.

Distribution and Races

A. curvirostris curvirostris Cassin extends from northern Angola to the Gold Coast (not Ashanti) and through the Belgian Congo forests to Uganda and southern Kenya. It also inhabits Fernando Po. This is the race which is found in southern Nigeria (Lagos) and which ranges as far west as Prahsu on the road from Saltpond to Kumasi.

Its place is taken in Ashanti Province by the more westerly race, *A. curvirostris leoninus* Bates, which has been found at Mampong and Goaso. It ranges westwards to Liberia, eastern Sierra Leone and French Guinea. It differs from the typical race in having a darker brown head, darker olive-brown upper parts and a much darker tail. The under parts are more greyish olive and the throat is grey. The wing measures 71–77 mm., tail 67–71 mm.

SLENDER-BILLED BULBUL

Andropadus gracilirostris gracilirostris Strickland

THIS dull little bird is not easily recognised from other near relatives of the same family, so many of which are various shades of olive-green above, without any very distinctive markings anywhere on their plumage. This species is one of the smaller members, rather under 8 in. in length with an expanse of 10 in. It has paler greyish under parts instead of the olive-green under parts of its congeners and an almost white throat, and this perhaps is the best guide to

its identity. Thus it may be distinguished from *A. curvirostris*, *A. virens*, *A. gracilis* and their several subspecies. The eye is reddish brown; bill black and legs are dark brown. The bill measures 14–16 mm., wing 79–90 mm., tail 73–84 mm., tarsus 19–21 mm.

This is another secondary forest and thicket bird whose life-history is little known. It is to be seen in the forest clearings and on the borders of reserves but mainly perhaps in secondary growth. It lives mainly on insects, varying its diet with small berries. Sometimes it will ascend to the topmost spray of some shrub and will utter a rather sweet high-pitched note, hoping to be answered, as is sometimes the case, by another bird. The flight is said to resemble that of the Common Bulbul (*Pycnonotus*).

Its nest does not appear to have been found.

Distribution and Races

A. g. gracilirostris was first discovered on Fernando Po, but was

later found to have a wide distribution on the mainland, ranging from Casamance throughout the whole of West Africa to the Congo. Eastwards its range extends to Uganda.

In Kenya its place is taken by *A. g. percivali* (Neum.) and in the vicinity of Leopoldville by *A. g. congensis* Reichenow, with distinctly darker grey under parts and browner crown. The wing measures 84–87 mm.

The typical race of this bird is found in all our West African Colonies except Gambia, from which it has not been recorded.

LITTLE GREY BULBUL

Andropadus gracilis Cabanis

THERE are three races of this bulbul in West Africa and others beyond our limits. That which we find in our three forested Colonies in Upper Guinea is *A. gracilis extremus*.

In size it is the smallest of the family (under 6½ in. in total length, with an expanse of 9 in.) and in appearance is exactly like the Sombre Bulbul (*Andropadus curvirostris*), but generally speaking is more brown and yellow, less olive-green below—a character which is, of course, quite useless in the field. The two birds are really indistinguishable until handled. There is very little difference in size, but in *A. gracilis* there is a distinct white circle of tiny feathers around the eye and the bill is decidedly smaller. It is also very like the Little Green Bulbul (*A. virens*), but it is of a distinctly more slender build and, unlike *virens*, is a rather silent bird. The eye is brownish grey, bill black, yellow at the gape; legs and feet are brownish horn. The bill measures (in *extremus*) 11–12 mm., wing 63–74 mm., tail 60–65 mm., tarsus 16–17 mm.

The Little Grey Bulbul is a quiet bird whose only note so far heard is a simple *twit*. It resembles in habits *A. virens*, to which reference should be made (p. 893). The Gold Coast race (*extremus*) was found breeding in Liberia at the end of September. In its feeding habits it is believed to be largely dependent on caterpillars and their larvae. It is found in the main body of the forest and is probably quite common.

Distribution and Races

Andropadus gracilis gracilis Cabanis ranges from southern Cameroon to northern Angola, extending east through the Belgian Congo. The wing measures 65–76 mm., tail 60–64 mm.

Andropadus gracilis extremus Hartert extends from Sierra Leone to southern Nigeria (except the Niger delta). It differs from the typical race in having the under parts greener, the middle of the

abdomen brighter, inclining to yellow, and the grey throat paler, extending further on to the breast. For measurements, see description above.

Andropadus gracilis ansorgei Hartert is known from the Niger delta (Degama and Gregani). I have not seen specimens of this race, which were compared by its describer with the typical subspecies instead of with *A. virens*. The throat is said to be grey instead of green, the under parts paler, less olive and more rufescent. The wing measures 72–74 mm., tail 62–64 mm. It is more fully described in the fourth volume of my *The Birds of Tropical West Africa*, p. 191.

In Kenya *A. g. kavirondensis* Van Someren is the local race, and in Uganda the subspecies *A. g. ugandae* has been named by the same author.

YELLOW-WHISKERED BULBUL

Andropadus latirostris Strickland

Two races come within our area.

The whole upper parts of this bulbul are dull olive-brown, becoming more rust-coloured on the upper tail-coverts. The tail is

reddish brown, the throat and breast are olive-brown, and the middle of the chest and belly are much paler, inclining to yellow. The best mark of identification in this olive-brown-coloured bulbul is the bright yellow stripe on either side of the throat, while the

yellowish-coloured feet and legs form another distinguishing mark, for in its nearest allies they are dark. About 7 in. in length, the Yellow-whiskered Bulbul closely resembles the Sombre Bulbul (*A. curvirostris*), the yellow moustachial stripe on the former being the only sure guide, and, as in the case of many characters, this mark of distinction is more conspicuous in life than might be imagined from examination of the skin. This species spreads out the feathers of the chin and throat, thus giving the fullest effect to the yellow feathers. In the typical race the bill measures 13–15 mm., wing 77–88 mm., tail 70–78 mm. and tarsus 19–21 mm.

The Yellow-whiskered Bulbul is one of the most characteristic birds of the dense forests of Upper and Lower Guinea, where it inhabits the lower story of tree growth and appears to be rather solitary in its habits. It is a noisy bird which may be constantly heard, many of its notes having a clear ringing tone which is pleasing to the ear, though apt to become monotonous. It calls repeatedly when hidden in a thicket but is not so often visible, as it is extremely clever at hiding itself from an observer. Its food consists chiefly of small fruits, and it has a partiality for figs.

The nest is built in the tangled undergrowth on the edge of the forest, a loosely built cup of dried leaves and weed stems lined with vegetable fibre. Two eggs are laid, having a white ground sparingly spotted with purplish brown and grey and some larger grey blotches on the broad end. They measure 20–25 × 14–16·5 mm. Eggs of the Upper Guinea race have not yet been found.

Distribution and Races

A. latirostris latirostris Strickland ranges from the Niger (Owerri) and Cameroon Mountain district (Bipindi) through the forests of Cameroon and Gaboon to Portuguese Congo and is also found on Fernando Po.

A. latirostris congener Reichenow ranges from Lagos to Sierra Leone and has been recorded also from Casamance and Senegal. It resembles the typical race in every particular except that it has a dark brown tail instead of paler reddish brown. The bill measures 12–13 mm., wing 75–86 mm., tail 72–80 mm.

LITTLE GREEN BULBUL

Andropadus virens Cassin

Upper and Lower Guinea each has its representative race of this bulbul, which is probably the commonest member of its genus in West Africa. Its whole plumage is olive-green, dark on the upper parts, inclining to rust-brown on the rump and upper tail-coverts

and paler olive on the under parts, the middle of the belly inclining to yellow. The under tail-coverts are pale brown with palest yellow tips, the under wing-coverts and axillaries pale yellow and light olive. The bill (in the typical race) measures 10–12 mm., wing 67–85 mm., tail 60–73 mm., tarsus 18–20 mm. It is a small bird (about 6½ in. in length) and is remarkable for the notches in the upper mandible. The bill is brown or blackish; the legs and feet vary from dark olive to dark grey.

In the field it must be impossible to distinguish this bulbul from *A. gracilis* or *A. curvirostris* unless the voice is known to the observer. The call begins with two or three rather harsh notes, then a sharp staccato note and ends in a confused warbling or gurgling. On the whole its notes are soft, sweet and varied.

The habitat of the Little Green Bulbul embraces a wide variety of country. It is common in all second-growth vegetation and thickets, in the forest and in the tongues of forest which extend up the ravines towards the higher ground. It has been found at higher altitudes than most bulbuls so long as suitable woods occur.

This bird is very fond of bathing in shallow pools, and dense bush in the vicinity of a stream forms a likely environment in which to find it. It keeps fairly close to the ground and moves dexterously among the twigs and leaves. Fruit seeds and berries of many kinds constitute its food supply, and dipterous flies have also been found in its stomach.

The nest, made of a few dead leaves and twigs, is neatly lined with fibres and usually placed only a foot or two above ground. Two eggs are laid, dull whitish or grey, closely speckled with brown, the markings sometimes coalescing around the broad end. Eggs measure 20 × 14·5 mm.

Distribution and Races

A. virens virens Cassin ranges from Cameroon to northern Angola, across the whole equatorial forest region to Uganda, Tanganyika, Nyasaland and Northern Rhodesia.

A. virens grisescens Reichenow takes its place in Upper Guinea, extending from Gambia to southern Nigeria. Specimens from east of the Niger delta and from Cameroon Mountain have not been examined to determine the race. It is distinguished by its rather darker upper parts and more brownish-olive under parts without the yellow middle to the belly. The wing measures 71–80 mm., tail 65–73 mm.

Several other races have been described on rather doubtful characters from other parts of Africa.

FAMILY MUSCICAPIDAE

Key to the Flycatchers (Muscicapidae)

1. Fleshy wattle, usually very brightly coloured over eye .. 2
   No fleshy wattle over eye 3
2. Tail very short (shorter than outstretched legs and feet), lower half of under parts entirely white
   Dyaphorophyia (see separate key to the species, p. 937)
   Tail fairly long (considerably longer than outstretched legs and feet), lower half of under parts also entirely white *Platysteira* (see separate key to the species, p. 933)
3. Blue-black, sooty or chestnut band across breast, throat and belly white, no eye-wattle present, small birds (little over 4 in. from tip of bill to tip of tail), wing not exceeding 65 mm.
   Batis (see separate key to the species, p. 929)
   Under parts not crossed by blue-black or chestnut crop-band 4
4. Birds whose central tail-feathers are considerably longer than the next longest, and when fully developed end in streamers of chestnut, white or black or a combination of these colours
   Tchitrea, fully developed ♂ (see separate key to the species, p. 949)
   Birds whose central tail-feathers are not lengthened into long streamers 5
5. Birds which are either chestnut or orange-rufous on either breast or back, or both, with graduated tails, middle tail-feathers usually longer than the next pair. Blue or grey heads, usually glossy and sometimes crested
   Tchitrea, other than full plumaged ♂ (see separate key to the species, p. 949)
   Birds which are not chestnut or orange-rufous on breast or back or both (except two which have dull olive-brown, not blue or grey heads) 6
6. Entire plumage sooty black
   Melaenornis edolioides edolioides, p. 911
   Entire plumage not sooty black 7
7. Under parts bright canary-yellow
   Chloropeta natalensis batesi, p. 921
   Under parts not bright canary-yellow 8
8. Plumage almost entirely light blue, tail long and strongly graduated *Erannornis longicauda longicauda* and subsp., p. 945
   Plumage not entirely light blue 9

9. Under parts from chin to under tail-coverts entirely white 10
Under parts not entirely white 12

10. Prominent white patch on wing 11
No white patch on wing, upper parts glossed blue or bottle-green .. *Megabyas flammulatus flammulatus* ♂, p. **924**

11. Broad white collar surrounding neck
Ficedula albicollis albicollis (summer dress), p. **901**
No white collar surrounding neck
Ficedula hypoleuca hypoleuca (summer dress), p. **900**

12. Head with prominent crest of elongated feathers .. 13
Head with black or chestnut cap contrasting in colour with back 14
Head not capped black or chestnut and not prominently crested; feathers of crown uniform in colour with back 16

13. Crest glossy blue like back
Trochocercus nitens nitens and subsp., p. **946**
Crest glossy bottle-green like back
Bias musicus musicus ♂, p. **925**
Crest brown contrasting with chestnut back
Bias musicus musicus ♀, p. **925**

14. Cap rufous chestnut
Erythrocercus mccallii mccallii and subsp. p. **944**
Cap black 15

15. Plumage grey-blue, including belly
Trochocercus nigromitratus nigromitratus, p. **947**
Plumage sooty slate-grey, belly white
Trochocercus albiventris albiventris, p. **948**

16. Under parts whitish and heavily streaked longitudinally with dark brown *Megabyas flammulatus flammulatus* ♀, p. **924**
Under parts not heavily streaked 17

17. Under parts entirely chestnut 18
Under parts not chestnut 19

18. Outer tail-feathers rufous .. *Stizorhina fraseri fraseri*, p. **921**
Outer tail-feathers brown and white *Stizorhina finschi*, p. **923**

19. Breast-feathers white or greyish edged with black or slate, giving scale-like appearance 20
Breast-feathers not having scale-like or scalloped appearance 21

20. Distinct small white patch over eye, breast-feathers edged with slate-grey
Fraseria cinerascens cinerascens and subsp., p. **914**
No white patch or spot over eye, breast-feathers edged with black .. *Fraseria ocreata ocreata* and subsp., p. **913**

21. Under parts either rust-colour or whitish uniformly washed with yellow-ochre, usually with metallic glossy blue or violet upper parts *Hyliota* (see separate key, p. 926)
Under parts not rust-colour or washed with yellow-ochre. Feathers of upper parts without any metallic gloss .. 22

22. Distinct white bar on wing. Plumage olive-brown above, whitish below 23
No white wing-bar present 24

23. 2nd primary (i.e. the first long one) usually longer, or as long as, 5th primary
*Ficedula albicollis** adult ♀ or adult ♂ in winter plumage, p. 901
2nd primary (i.e. the first long one) shorter than 5th primary
*Ficedula hypoleuca hypoleuca** adult ♀ or adult ♂ in winter plumage, p. 900

24. Upper parts very dark sooty brown; tip of closed wing reaching two-thirds down length of tail; bill minute for size of bird, exposed culmen under 10 mm. in length 25
Upper parts not very dark brown; tip of wing not reaching two-thirds down length of tail. Bill not abnormally small for size of bird 26

25. Under parts uniform ash-brown, no mottling or streaking on breast or belly .. .. *Artomyias ussheri*, p. 919
Under parts dark brown streaked and mottled with fulvous or pale rufous *Artomyias fuliginosa fuliginosa*, p. 918

26. Upper parts grey, bluish grey or slate-colour 27
Upper parts brown, olive-brown or greyish brown .. 34

27. Outer tail-feathers white *Parisoma plumbeum plumbeum*, p. 908
Outer tail-feathers not white but same colour as rest of tail 28

28. Size very small (wing under 60 mm. in length), under mandible yellow 29
Size larger (wing over 60 mm. in length), under mandible black or grey at base only 30

29. Feet and legs black .. .. .. *Alseonax epulatus*, p. 905
Feets and legs yellow .. .. *Alseonax seth-smithi*, p. 906

30. Bill short, stumpy and very broad at the base. Plumage smoky-slate colour 31
Bill fine, not stumpy and not noticeably broad at base. Plumage grey 32

* As an added distinction between *F. albicollis* and *F. hypoleuca* it may be remarked that usually *F. hypoleuca* is the smaller, though the measurements slightly overlap. They are as follows: Wing (♂) *hypoleuca* 76–82 mm., (♀) *hypoleuca* 75–80 mm.; (♂) *albicollis* 80–87 mm., (♀) *albicollis* 79–84·5 mm.

31. Size larger (wing 73–76 mm.) *Pedilorhynchus tessmanni*, p. 917
Size smaller (wing 60–68 mm.)
Pedilorhynchus comitatus comitatus and subsp., p. 916

32. Middle of throat white; plumage grey but not bluish-slate colour 33
Middle of throat not white but uniform with rest of under parts; plumage bluish-slate colour
Parisoma griseigularis holospodium, p. 908

33. Small feathers above and below eye white, the former continued in white stripe to bill
Alseonax cinereus cinereus and subsp., p. 907
No white feathers above and below eye and no white stripe passing to bill .. .. *Alseonax cassini*, p. 906

34. Size larger (wing over 78 mm.) 35
Size smaller (wing under 78 mm.) 36

35. Throat and crop distinctly streaked with brown or dark grey on whitish ground and crown streaked with dark brown .. *Muscicapa striata striata* and subsp., p. 898
Throat, crop and crown without any indication of streaking .. *Bradornis pallidus modestus* and subsp., p. 910

36. Chin and throat mostly white 37
Chin and throat not white 38

37. Throat and breast indistinctly streaked, bill short, with under mandible yellow *Muscicapa gambagae gambagae*, p. 899
Throat and breast without any ill-defined streaking, bill rather fine, under mandible dark like the upper
Alseonax aquaticus aquaticus, p. 903

38. Axillaries and under wing-coverts white. Size larger (wing 66–76 mm., tail 57 mm.) .. *Alseonax olivascens*, p. 904
Axillaries and under wing-coverts orange-buff. Size smaller (wing 59–65 mm., tail 39–47 mm.)
Alseonax minimus and subsp., p. 902

SPOTTED FLYCATCHER

Muscicapa striata striata (Pallas)

A LITTLE grey-brown bird about 6 in. in length, this migrant from Europe, including Britain, is sombrely coloured—grey-brown on the upper parts with the crown narrowly streaked with dark brown, the feathers of the back with dark brown middles and pale edges, giving a streaky appearance. Wings and tail are dark brown, with

no white on the rectrices. Chin and throat are white; the breast is white streaked with dark brown, and the sides of the body are pale cinnamon-brown obscurely streaked. Middle of belly and under tail-coverts are white, axillaries and under wing-coverts cinnamon-brown. Bill, legs and feet are black. The bill measures 11·5–12 mm., wing 80–89 mm., tail 58–63 mm., tarsus 13·5–16 mm.

The Spotted Flycatcher will be well known to Europeans from their acquaintance with it in England. Its actions and poise are unmistakable, as it sits on some point of vantage, making short flights to capture insects on the wing.

Great numbers arrive in Africa to pass the winter months, the earliest being seen in the tropics in mid-September. The birds migrate on a wide front, and during their passage, which lasts for a month or more, the Saharan oases are used as stepping stones to the open savanna country, where trees and plantations, as well as forest clearings, attract it. It does not frequent the closed forest. It remains in the tropics until the middle of April, being one of the last of the European migrants to leave.

Distribution. The whole of Central and southern Africa during winter, when it is widely spread in our area and may be seen in all British Possessions from Gambia to British Cameroon. It returns north to North Africa and Europe to breed.

A subspecies, *M. striata balearica* Jordans, with less spotting on the breast and some white streaks on the crown, also winters in West Africa and has been obtained in southern Cameroon. It breeds in the Balearic Islands.

GAMBAGA DUSKY FLYCATCHER

Muscicapa gambagae gambagae (Alexander)

The plumage of this bird is as described for the Spotted Flycatcher (*Muscicapa striata striata*) except that the head is practically uniform in colour with the back and lacks the pronounced dark centres to the feathers, which are but faintly indicated. The breast is more uniformly washed with grey-brown and lacks the decided dark brown streaks of *M. s. striata*. In its smaller size and shape of wing (which is shorter) *M. gambagae gambagae* is very different, however. The eye is dark brown; the upper mandible of the bill is black, the lower pale yellow; legs and feet are black. The bill (male) measures 9–11 mm., (female) 9–10 mm.; wing (male) 71–76 mm., (female) 73–74 mm.; tail (male) 55–58 mm., (female) 54–56 mm.; tarsus 15–16 mm.

In appearance this is simply a miniature example of the Spotted

Flycatcher, some 5 in. in length. It has a very short bill which is remarkable for its breadth at the base, unlike the migratory bird which it so closely resembles.

This is a resident flycatcher which is not very common. It is found in the semi-arid belt and in the little trees which are dotted over the plains.

A nest was found in a little hollow in a dead tree. It was made of fine grass lined with seed-down, the whole being kept together by cobwebs. Two eggs were greenish white freckled all over with pale grey and yellowish brown and measured 17·5 × 13 mm. and 15·5 × 13 mm.

Distribution. The Northern Territories of the Gold Coast, Nigeria and northern Cameroon, extending east through the Shari country to Darfur and the Sennar Province of the Sudan, another race taking its place in Somaliland.

PIED FLYCATCHER

Ficedula hypoleuca hypoleuca (Pallas)

In winter dress the Pied Flycatcher is mostly dull brown with dirty-white under parts, but the white patch on the wing continued in a streak down the outer secondaries is noticeable. When the males begin to acquire their summer plumage they are much more conspicuous; the blackish mixed with brown upper parts contrast with the larger white area in the wing, and the under side is then glistening white all over. At all seasons the white in the wing and on the edge of the outer tail-feathers distinguishes the Pied Flycatcher from the Spotted or Dusky Flycatcher. It is much the same in size. It is quite impossible to distinguish the Pied from the Collared Flycatcher in winter plumage in the field and not by any means easy in the hand. Some minor distinctions between them will be given under the latter species, including the measurements of both birds—an important factor in their determination.

This is not a very common migrant to West Africa, but some turn up every year and are fond of frequenting trees in the vicinity of streams in savanna country. More rarely they will be noted in dense bush. Dates when they have been obtained in our area range from the third week of October until the end of April. The birds pass through the Saharan oases on both journeys and evidently brave the crossing of the desert.

Distribution. Sparsely distributed in West Africa in the winter months from Gambia to the Ubangi-Shari and found here and there in all our Colonies. It has not been found as yet in East Africa.

WHITE-COLLARED FLYCATCHER

Ficedula albicollis albicollis (Temminck)

THE White-collared Flycatcher with its glossy black upper parts, white forehead and collar, white under parts and wing-speculum, so easily distinguished in its breeding dress by the broad white collar but otherwise resembling the Pied Flycatcher remarkably closely, is a very different bird in winter, sombre greyish brown above, whitish below, with reduced white wing-speculum. The white on the outer web of the three outer tail-feathers is variable in amount, sometimes being absent, so that this is not a character to rely upon, especially as it is shared by the Pied Flycatcher. In winter dress the relative length of the wing is probably the best indication as to which species a bird belongs. The wing of *F. albicollis* (male) is 80–87 mm. against 76–82 mm. in the wing of *F. hypoleuca* (male). *F. albicollis* in both sexes is greyer on the upper parts, less brown, and the bases of the feathers of the hind neck in the male *F. albicollis* are white, giving some indication of where the white collar will appear when the summer dress is assumed. Size of wing is also an important factor in the females. The wing of *F. albicollis* (female) measures 79–84·5 mm. and that of *F. hypoleuca* (female) 75–80 mm. Although there is a slight overlap, the measurements accurately taken will, in nine cases out of ten, enable a specimen to be identified.

The White-collared Flycatcher migrates from Europe at the same time as the Spotted Flycatcher and sometimes in its company, but it is not yet possible to state where the off-season is spent. It stops short of the Equator, but, unlike the Pied Flycatcher, seems to visit East as well as West Africa, as it has been recorded from Uganda.

In its habits there is not much to choose between this and the Pied Flycatcher, though it has been remarked that the White-collared Flycatcher feeds more in the air and less on the ground. It is an exceedingly tame little bird from all accounts.

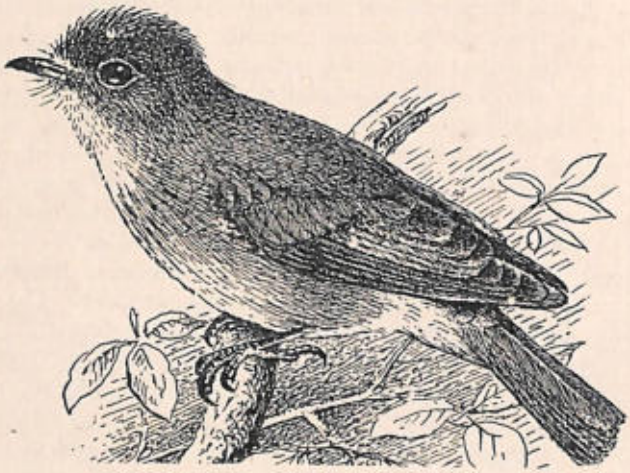
Distribution. Breeds in Central and southern Europe generally, migrating to tropical Africa in winter. It has been obtained in the Gold Coast and Asben in the Central Sahara, in Darfur and in Uganda, but records are very scarce, which is not surprising, considering it cannot be identified in winter dress unless most carefully examined in the hand.

PYGMY FLYCATCHER

Alseonax minimus (Heuglin)

Four races of this bird have been described from the highlands of Cameroon and neighbouring country.

The best known is the race which occurs on Cameroon Mountain, *A. m. obscurus* Sjöstedt. It is a very small dusky-brown flycatcher about 4½ in. in total length, having a broad short bill with black bristles at the base. The under parts are paler and washed with



ochraceous-buff, the throat being almost white. The bill is black, paler at the base; the legs and feet are also black. *A. m. obscurus* measures: Bill 9–10 mm., wing 59–65 mm., tail 39–47 mm. and tarsus 15–17 mm.

All these Pygmy Flycatchers are inhabitants of mountainous districts in Africa, and no fewer than a dozen races have been described from the wooded slopes at high elevations. It ascends to the tops of tall trees and is equally, or even more, at home in wooded ravines and along tree-lined streams.

It has much in common with the European Spotted Flycatcher, being equally tame and tolerant of man. Usually it prefers to sit on some branch from which to sally forth after its winged prey, but it has been seen to perch on a boulder of a mountain torrent and is not averse to a veranda rail when such is available. Its note is a sibilant *z-z-z-zt*. It builds a tiny cup nest of moss, usually not more than 20 ft. from the ground, in some bush or tree, but the eggs have not been found.

Distribution and Races. All the mountain ranges of Africa have one

or more races of this flycatcher resident thereon. Of the dozen subspecies which have been described, four come within our limits and all are fairly close together.

A. minimus obscurus Sjöstedt occurs on Cameroon Mountain, also in the Kumbo district (5,000–6,000 ft.) and the highlands of Fernando Po.

A. minimus okuensis Bates was discovered in the Oku district of the Cameroon highlands (6,000–6,500 ft.) within twenty miles of the first-mentioned race. It is darker and more sooty-brown and the whole under side is more dusky.

A. minimus albiventris Reichenow is restricted to the Genderu Mountains of the Cameroon-Nigerian highlands. It has paler under parts, more white on throat and belly, and more grey-brown above. The wing measures 62–63 mm., tail 44–47 mm.

A. minimus grotei Reichenow is said to resemble closely the East African race, *A. m. pumilus*, but to be paler. It is found in the Bosum district in eastern Cameroon.

Eight other subspecies have been described from other mountain ranges in Africa beyond our limits. The typical subspecies, *A. minimus minimus* (Heuglin), is restricted to Abyssinia; the Kenya race is *A. m. murinus* and that from Uganda *A. m. pumilus*.

SWAMP FLYCATCHER

Alseonax aquaticus aquaticus (Heuglin)

This is a little grey-brown bird with white throat and grey breast, measuring in total length barely 5 in. Its detailed description is as

follows. Entire upper parts ashy brown; the wings and tail darker brown, the greater coverts and secondaries with narrow paler margins. Lores like the crown; immediately in front of the eye a

pale spot or streak, difficult to see in skins. Chin and throat are whitish, becoming pale ash-brown on the breast, which is faintly washed with buff. Belly and flanks are paler, inclining to white, as are the under tail-coverts. Under wing-coverts are palest brown with pale outer edge of cream. The eye is dark brown; bill black, base of lower mandible brown; legs and feet are brownish black. Bill (male) 11–12 mm., (female) 10–12 mm.; wing (male) 67–71 mm., (female) 67–70 mm.; tail (male) 52–56 mm., (female) 49–54 mm.; tarsus 15–16 mm.

Such an insignificant-looking bird easily escapes notice. It is strictly confined to the borders of pools, lakes and rivers and delights in sitting on a partly submerged bush from which it can keep a sharp look-out for passing insects. Lake Chad, with its islands and shallow water, is an ideal spot for it.

It is believed to breed about April, but its nest has not been found. Owing to its habitat, it must be considered a local species everywhere. It is resident, however, wherever it occurs, so long as its favourite pool does not dry up. It has all the habits of the Common Spotted Flycatcher as we know it in Africa.

Distribution. Extends from Gambia to northern Cameroon, the Ubangi-Shari and Chad. Further east it has been found in the Bahr el Ghazal. Though recorded from the northern parts of the Gold Coast and from Nigeria as far south as Ibi, it is far from being universally distributed.

OLIVACEOUS FLYCATCHER

Alseonax olivascens (Cassin)

A SMALL olive-brown flycatcher not more than 5½ in. in length, with little distinctive in its appearance. The technical description in my larger work reads as follows. Entire upper parts ashy olive-brown, the crown and cheeks rather browner, less ashy. Wing-coverts like the back, but with paler edges. Primaries and secondaries dark brown, the inner secondaries washed with olive. Tail dark brown, the fringe of the webs with an olive tinge. Throat greyish white, becoming ashy on the breast and sides of the body, the middle of the belly inclining to whitish. Under tail-coverts white. Axillaries and under wing-coverts also white. Eye dark brown; bill black above, whitish horn beneath; legs and feet brown. Bill (male) 11·5 mm., (female) 11–11·5 mm.; wing (male) 76 mm., (female) 66–68 mm.; tail (male) 57 mm., (female) 47–51 mm.; tarsus (male) 18 mm., (female) 14–15 mm.

Distribution. This resident species is probably found in all the forest country from the Gold Coast to Gaboon, but few examples

exist in collections. There is a specimen in the British Museum from Fanti, and another has been reported from the Owerri Province of Nigeria. It is believed to extend through the forests of Cameroon and Gaboon eastwards through the equatorial forest to the Ituri, from which latter locality this, or a closely allied, race has been obtained.

LITTLE GREY FLYCATCHER

Alseonax epulatus (Cassin)

A VERY small bluish-slate coloured flycatcher only 4½ in. in total length, with the upper parts uniformly coloured, the crown with darker middles to each feather. Throat and belly are white; the breast is slate-grey. The wings and tail are dark brown, but the tail-coverts resemble the back, the under tail-coverts being white. The bill has the upper mandible black, the lower yellow; legs and feet are brown, and the soles yellow. The measurements are: Bill 8–9 mm., wing 53–59 mm., tail 35–40 mm., tarsus 11–12 mm.

Although this little bird is known to range as far west as the Gold Coast, it is only in the forests of Cameroon and the Congo that its habits have been studied. There it has been seen perched on bare twigs of trees bordering some native farm, from which it makes circular flights after insects in the true flycatcher manner. It lives in the main forest, frequenting the lower part of the tall trees.

Its nest consists of a mass of dried moss, leaves, tiny sticks and lichens, held together by cobwebs, much resembling the small cup-like nests of Paradise Flycatchers. Eggs have never been taken.

Distribution. The forest country from the Gold Coast to Congo River eastwards through the great forest to the Semliki valley. The next species to be described is very like it, but may be recognised by the colour of its feet.

YELLOW-FOOTED FLYCATCHER

Alseonax seth-smithi Van Someren

Reasons for change of name of this bird are given in my larger work, volume viii, p. 394. In volume iv, p. 218, it was named *A. flavipes*.

The entire plumage of this bird is bluish-slate colour above; the wings are dark brown, washed with slate on the inner primaries. Wing-coverts are like the back. The tail is blackish brown. A few tiny white feathers border the eyelid and a small whitish patch lies in front of the eye. Chin and upper throat are whitish; sides of neck, breast, sides of body and thighs are bluish-slate colour, the middle of the lower breast with some white feathers, the white increasing on the belly and under tail-coverts. Under wing-coverts and axillaries are slate-colour. The eye is dark brown; bill, upper mandible black becoming yellow at base, lower mandible yellow; legs and feet are yellow. Bill (male and female) 9–10 mm.; wing (male) 56–59 mm., (female) 54–58 mm.; tail (male) 35–38 mm. (female) 34–36 mm.; tarsus (male) 11–12 mm., (female) 10–11 mm.

We know little about this bird, but it seems to have much the same range as the last species, except that it has never been foume in Upper Guinea. Its habitat is the same—in the depths of tlhe forest—but though so similar in plumage, it may be distinguished by its bright yellow legs and feet and darker slate-blue back. The legs of *A. epulatus* are brown.

The nest is a small cup-shaped cavity of fresh moss lined with *usnea*. Two eggs are laid—dull greenish white indistinctly clouded with faint rufous and greyish mottlings, the markings being occasionally more numerous and concentrated round the large end. They measure 17 × 13·5 mm.

Distribution. British and southern Cameroon, Gaboon and the northern Belgian Congo, extending east to the Semliki valley and Uganda. In British Cameroon specimens have been obtained on Kupé Mountain (5,000 ft.), Nyassoso and Massaka, all in primary forest.

CASSIN'S GREY FLYCATCHER

Alseonax cassini (Heine)

The whole upper side of this flycatcher is bluish ash-grey, the crown with darker shaft-streaks. Wings and tail are dark brown, the latter with narrow pale buff tips. The throat is white, becoming pale ash-grey on the breast; belly and under tail-coverts are white; the axillaries and under wing-coverts smoke-colour. The bill is

entirely black; the legs and feet are blackish brown. Measurements are: Bill 11–13 mm., wing 69–75 mm., tail 51–57 mm., tarsus 13–16 mm.

This flycatcher is about 5½ in. in length and is described by those familiar with it as a rather sad little bird which spends its time sitting disconsolately on branches overhanging streams, from which it makes periodical flights over the water, much as we can see our Spotted Flycatchers behave on our rivers at home, but Cassin's Flycatcher is typically aquatic and is never seen away from water. It has exactly the same requirements as regards a habitat as *Alseonax epulatus*, both seeking an open space in which to hunt their prey and both avoiding thick foliage.

Various nests have been discovered—shallow cups of moss and weed-stems lined with grass-tops or oil-palm fibre. Eggs are two in number, pale olive-brown flecked chiefly at the broad end with reddish brown. Sixteen eggs averaged 18·7 × 13·6 mm. The breeding season lasts from November to April.

Distribution. The whole forest country of West Africa, recorded from Liberia to the Congo and northern Angola and across the equatorial forest to Uganda and northern Rhodesia. It is not only widely distributed, but is a common bird in suitable localities. I have little doubt that its range extends in Upper Guinea as far west as forest patches exist.

WHITE-EYED FLYCATCHER

Alseonax cinereus Cassin

Two races occur in our area, the typical race in Lower Guinea and a representative in Upper Guinea.

It is exactly the same in size and in its bluish-grey colour as Cassin's Grey Flycatcher, but its white eyelid may perhaps be noted and its bill is stumpy. Their habitat differs, however, for *A. cinereus* lives in the forest glades away from water. Close comparison between these two birds is made in my larger volume. The bill is black above with greyer lower mandible; legs and feet are grey. The under wing-coverts and axillaries are nearly white in this bird, smoke-colour in *A. cassini*, among other minor differences. Measurements of *A. c. cinereus* are: Bill 10–11 mm., wing 67–78 mm., tail 45–58 mm., tarsus 15–17 mm.

Distribution and Races

A. cinereus cinereus Cassin inhabits the forests of southern Nigeria east of the Niger, Cameroon, Gaboon and the Belgian Congo, ranging to Uganda, other subspecies occurring in eastern Africa.

A. cinereus cinerascens (Sharpe) is the representative race in Upper

Guinea west of the Niger, but has only been recorded from the Gold Coast and Togoland. It differs in the rather paler grey upper parts and the under parts with a brownish tinge. It is not known which race lives in the area between the Togoland boundary and Owerri, where the typical bird occurs.

GREY-THROATED TIT-BABBLER

Parisoma griseigularis holospodium Bates

THE entire upper parts of this bird are bluish-slate colour. Longer feathers of the crown have whitish spots at the base which are concealed from view. Primaries and secondaries are dark brown, the former very narrowly edged with grey; wing-coverts and scapulars like the back. The tail is blackish brown; sides of the face are like the crown, but a shade paler. Throat, breast and sides of the body are light smoke-grey, becoming whitish on the belly. Under tail-coverts, under wing-coverts and axillaries are whitish. The eye is dark brown; bill black above, pale grey beneath; legs and feet are grey. Bill measures (male) 11–12 mm., (female) 10–11 mm.; wing (male) 62·5–66 mm., (female) 59–62 mm.; tail (male) 50–53 mm., (female) 47–51 mm.; tarsus (male) 16 mm., (female) 15 mm.

This bluish-slate coloured little bird may be recognised from the *Alseonax* members of its family just described by its darker plumage and the fact that the lower mandible is light coloured. Moreover, there is no white on the throat, the whole under side except the belly being smoke-grey. In total length it measures 5 in., being the same size as both Cassin's and the White-eyed Flycatchers.

This is another flycatcher restricted to the heavy forest through which run innumerable streams, but of which we know next to nothing.

Distribution. The forests of southern Nigeria (Owerri), Cameroon and Gaboon. In the eastern Congo and Uganda its place is taken by the typical subspecies.

GREY TIT-BABBLER

Parisoma plumbeum plumbeum (Hartlaub)

THE Grey Tit-Babbler has the whole upper side bluish grey, the crown slightly streaky. A white streak above the eye extends to the base of the bill. Primaries and secondaries are dark brown, and the wing is more noticeably pointed than in the *Alseonax* group of flycatchers we have already discussed. The tail has the outer rectrices white, the next pair white on the outer web and on the

terminal third of the inner, the others with narrowing white tips except the middle pair, which are entirely black. The entire under parts are pale grey, becoming whiter on the belly; under wing-coverts and axillaries are mostly white. The bill is black, with the lower mandible bluish at the base; legs and feet are plumbeous. This is a larger bird than the last, measuring 5½ in. in length. The bill is 10–12 mm., wing 63–74 mm., tail 57–65 mm. and tarsus 17–20 mm. In flight the white in the tail catches the eye.

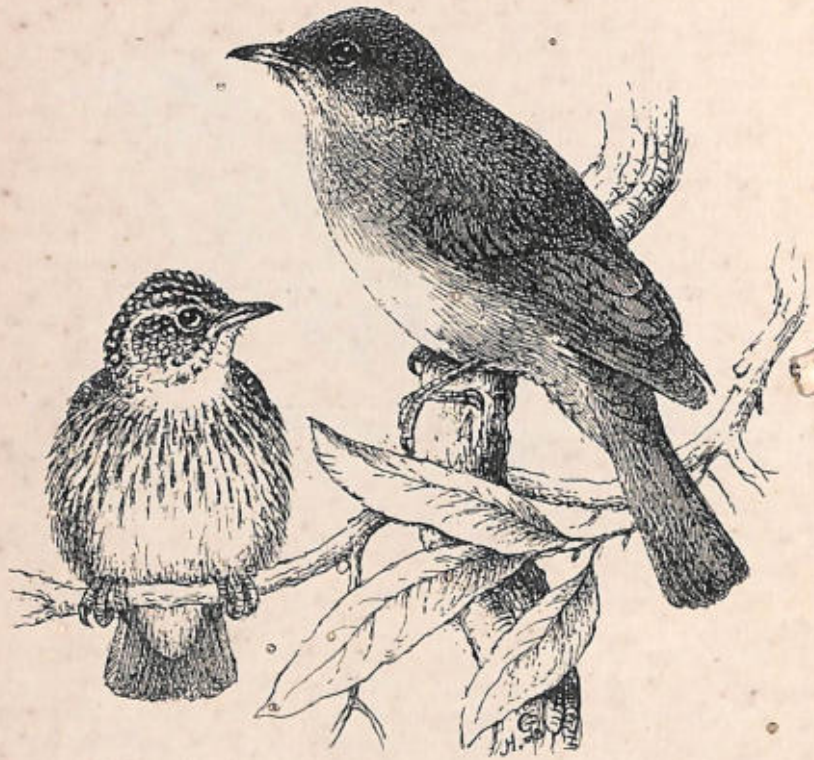
The name Tit-Babbler is not a happy one, for the bird is usually quiet and of a retiring nature, living in the wooded savanna and in the open glades of the forest. Few seem to have noticed it. It is the possessor of some plaintive notes which may be heard coming from the thickish bush or from its stance high up in some tree. There is little reason to ally it with the flycatchers so far as its habits are concerned. It is believed to nest in the holes of trees, like a tit, where it appropriates the nest hole of a barbet or woodpecker, adding rootlets and feathers upon which to deposit its two eggs. These are dull white, heavily spotted and blotched with brown and some lavender. Measurements are not available. In Cameroon it breeds from March to August.

Distribution. The whole of Upper Guinea in thick bush or savanna, ranging from Gambia to Cameroon and through the savanna country of the northern Belgian Congo to Uganda. The eastern representative is *P. plumbeum orientale*, which ranges from Kenya to the Transvaal.

PALE FLYCATCHER

Bradornis pallidus (Müller)

Two races of this flycatcher occur commonly in West Africa and another just touches the fringe of the country with which we are concerned. The typical race, *B. p. pallidus*, is found in the Nile Valley and does not come within our limits.



The Pale Flycatcher is not really a pale-coloured bird, though very drab in appearance, the whole upper parts being earth-brown, the forehead slightly washed with fawn. A ring of isabelline-buff surrounds the eye, and the lores incline to cream. Wings and tail are dark brown, the basal half of the inner remiges margined with rufous. The chin and upper throat are whitish, merging on the breast and neck into pale grey-brown, the belly inclining to whitish. Flanks, thighs and under tail-coverts are fawn-coloured, the under wing-coverts and axillaries more rufous. Bill, legs and feet are blackish brown. The bill measures 11–12 mm., wing 80–91 mm.,

tail 64–74 mm. and tarsus 20–21 mm. The above are the measurements of *B. p. modestus*, which I have described.

This common bird has a very wide distribution, the darker race in the southern tree savanna and forest clearings, the paler one in the more arid thorn scrub north of the forest. It is to be met with singly or in couples and is fond of perching in trees which overhang streams and pools. Cultivated clearings, roads and paths running through the bush, shady kurimis and gallery forests are the places where the Pale Flycatcher may be encountered most often.

It is a sedentary species except when the country is all burnt up and the rain pools are dry; then some local movement southwards has been observed.

Nesting takes place (in Nigeria) mainly in April, May and June. Nests are slight shallow cups made of intertwined rootlets, occasionally, but not always, lined with fibre. The eggs have a greeny-grey ground almost obscured by spots, streaks and speckles of various shades of brown with pale lilac secondary markings. Clutches consist of two or three eggs, which measure 17·9–20·4 × 13·3–14·6 mm.

Distribution and Races

Bradornis pallidus modestus Shelley occurs in the forest country and that which lies south of it, in Portuguese Guinea, Sierra Leone, Liberia, French Guinea, the Ivory and Gold Coasts, southern Nigeria and Middle and South Cameroon.

Bradornis pallidus nigeriae Reichenow takes the place of the above form in the drier country north of the forest and is the race which ranges from Gambia through the whole semi-arid belt of the French Sudan, French Niger to northern Adamawa, including the Northern Territories of the Gold Coast and Nigeria. This race differs from *B. p. modestus* in having the upper parts paler, more grey-brown, and the under tail-coverts cream or light buff instead of deep fawn. The wing measures 79–90 mm., tail 65–71 mm. The ranges of these two subspecies are more closely defined in my larger work.

A third race, *B. pallidus murinus* Finsch and Hartlaub, extends from the French Congo through the southern Belgian Congo to Rhodesia, etc. It is greyer in plumage and rather larger in the wing than those we have discussed. The wing measures 85–101 mm., tail 65–74 mm.

BLACK FLYCATCHER

Melaenornis edolioides edolioides (Swainson)

This bird has the entire plumage slate-black, slightly glossy, with a blue sheen on the upper surface. The lores are jet-black, primaries and secondaries black, slightly glossed with blue-black on the fringes.

Wing-coverts are similar. The tail is slate-black with a faint gloss; under wing- and tail-coverts are dull slate-black. The eye is dark brown; bill, legs and feet are greenish black. The bill (male) is 13–14 mm., (female) 12–13 mm.; wing (male) 95–102 mm., (female) 90–100 mm.; tail (male) 100–109 mm., (female) 92–102 mm.; tarsus (male) 24–25 mm., (female) 23–24 mm. Immature birds are dull slate-black spotted all over with chestnut, the spots on the crown are small, those on the back and under parts much larger.

This flycatcher is a bird of the thickets in open bush country and care must be taken not to mistake it for a Drongo, though in its habits the Drongo is more forthcoming. The lack of any fork in the tail also distinguishes it from these flycatchers. In size the Black Flycatcher is about 8 in. in total length.

It is usually seen by itself, preferring the better wooded and watered parts of the country, and is locally distributed both north and south of the forest belt. Thus we find it in all our Colonies. Shy and retiring, it has the habits of the true flycatchers, seeking its prey on the wing from an established perch. It will also capture insects on the ground. Its voice is seldom heard, but a few scattering notes in a clear tone are uttered from time to time. As it hawks its prey from perches well hidden in the thickets, it is less often seen than many of the tamer members of its family.

A nest from which this flycatcher was obtained was that of a Kurrichane Thrush in a shea butter tree in open bush country in the Plateau Province of Nigeria. It contained two eggs of the flycatcher, but whether this bird normally appropriates the nests of

other birds is not known and seems unlikely. The two eggs are pale green, spotted, speckled, streaked and blotched with various shades of brown and underlying purple. They measured 21·9–22·4 × 15·7–16 mm.

Distribution. From Senegal to British and French Cameroon and widely, if locally, spread over the country from the coastal districts to the northern plains, but it does not occur in the closed forest except on the borders. Kurimis and fringing forests are, however, favourite haunts, but especially does it favour dense bush.

FOREST FLYCATCHER

Fraseria ocreata (Strickland)

THREE races of the Forest Flycatcher come into our area, all three in Upper Guinea and one also ranging into Lower Guinea.

In total length about 7 in., the bird should not be difficult to recognise. The crown and nape are blackish, merging into slate-grey on the mantle and back. The wings are dark brown with ash-grey

fringes; the tail is blackish with a faint slate wash. The under parts from chin to under tail-coverts are white, the throat and breast with narrow crescentic slate-black bars, the belly being white. The eye is brown; bill, legs and feet are blackish, and the gape is furnished with strong black bristles. Measurements are: Bill 14–15 mm., wing 89–98 mm., tail 66–74 mm., tarsus 21–24 mm. The black bill is rather heavy and shrike-like with a prominent hook at the tip, and not only in that way does it remind one of *Lanius*, but also in its poise and manner of capturing its prey.

Surprisingly, this bird has a most attractive song, in many of its notes imitating the calls of other birds, but the whole medley is extremely sweet. In addition to the song, it has been heard to utter a remarkable buzzing sound like the repetition of the letter *z*. From the tree-tops it will make circular flights after insects. It is fond of frequenting old cleared land and may be seen both on the small and tall trees.

It makes a fair-sized nest of fine fibres or leaf skeletons lined with rootlets. No soft lining is used. Eggs are light olive-green, longitudinally smeared with blotches and spots of umber-brown and grey. One egg measured 21 × 17 mm., but two are believed to form the clutch.

Distribution and Races

Fraseria ocreata ocreata (Strickland), which has already been described, ranges from the Lagos district of southern Nigeria to northern Angola and eastwards through the northern Belgian Congo savanna to Uganda. It was discovered first in Fernando Po.

Fraseria ocreata prosphora Oberholser differs in having the crown and nape uniform dark grey like the back, and the under parts less squamated. The wing measures 86–96 mm. This race ranges from the Gold Coast to Liberia.

Fraseria ocreata kelsalli Bannerman has the upper parts uniform grey, paler and clearer than in *F. o. prosphora*, the under parts white and the sides broadly margined with grey. The wing is as above. It is known only from Sierra Leone.

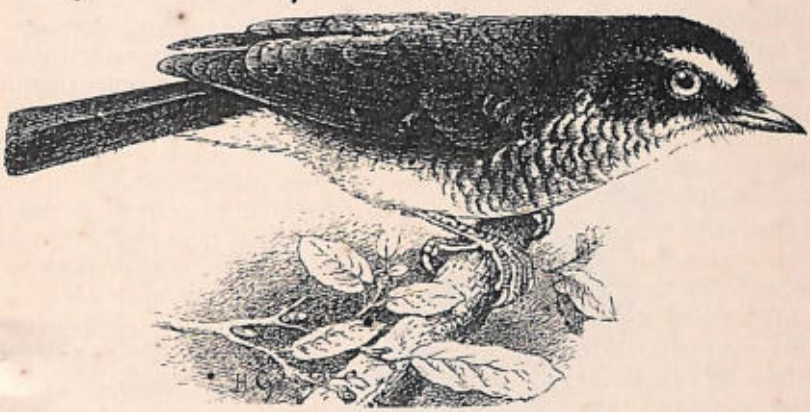
WHITE-BROWED FOREST FLYCATCHER

Fraseria cinerascens Hartlaub

Two races occur in West Africa, the typical race everywhere from Liberia eastwards.

The description given for *F. ocreata* applies to this bird also, except that in *F. cinerascens* a conspicuous white patch extends over the eye and the fringes of the breast-feathers are dark grey instead

of black, giving a more dappled appearance to the breast. The bill is black; legs and feet are slaty black. Measurements are: Bill 13–14 mm., wing 72–84 mm., tail 58–68 mm., tarsus 18–20 mm. A text figure of the young is given, showing the spotted appearance of the juvenile plumage. As both species occur together, the utmost care must be taken to see whether the white area is present over the eye before correct identification can be assured.



Although found in the same countries, it may be that these two flycatchers live in a slightly different environment. The subject of this note has been found in Liberia in pairs in the shaded under story of small trees and bushes at the edge of river banks. The pairs keep closely associated and seem to prefer quiet inlets from the main stream bordered with trees and thick bushes bordering watercourses. It seems, therefore, to be more of an aquatic species than *F. ocreata*. Insects of various kinds supply it with food.

Its nest has never been discovered.

Distribution and Races

F. c. cinerascens Hartlaub ranges from the forests of Liberia to Nigeria and then through Cameroon and Gaboon and east via the Ubangi and Uelle Rivers. It has been found in British territory in the Gold Coast and in the Benin Division of southern Nigeria.

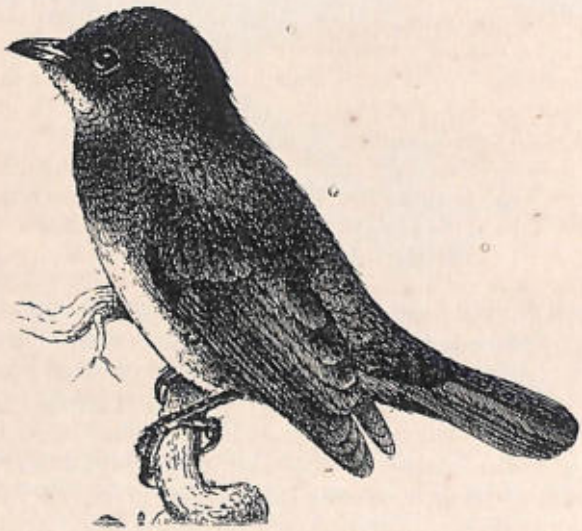
F. c. guineae Bannerman is distinguished from the above by the paler upper parts, which are bluish grey rather than slate-grey and the crown is the same colour as the back, not darker as in the typical race. The wing measures 73–82 mm., tail 59–67 mm. This race was described from Gunnal, Portuguese Guinea, and is the form which is found in Sierra Leone.

DUSKY-BLUE FLYCATCHER

Pedilorhynchus comitatus (Cassin)

THREE races come into our area.

This tiny flycatcher measures but 4¾ in. from bill to tail and has a wing expanse of 8½ in. It is slate-coloured above, dark grey on the breast and sides; a conspicuous white throat and white on the belly are the main colour distinctions. The short rounded wings and longer tail are dark brown, but the contrast with the rest of the dark upper parts is probably not noticeable in life. For its small



size this flycatcher has a remarkably broad bill, almost triangular in shape and black in colour. A few long stiff black bristles spring from the gape. The measurements of the typical subspecies are: Bill 11–12 mm., wing 60–68 mm., tail 52–54 mm., tarsus 15–16 mm. The bill is black; the legs and feet are bluish slate.

This little bird is a forest species which may often be seen sitting motionless on a dead twig from which it occasionally flies out after a passing insect, returning again to the same perch. It is usually to be observed in the secondary forest, its activities reminding one of the European Spotted Flycatcher. Usually it is silent, but has been heard to utter a sweet little song. Care must be taken not to confuse it with Tessmann's Flycatcher, which lives in the same area.

The nesting habits of the Dusky-Blue Flycatcher are interesting, for the bird does not build its own nest but appropriates the old nests

of weavers, often selecting those of the Village Weaver or the Black-necked Weaver. Both the Gold Coast race and the Cameroon race have been proved to do this. A slight additional lining is added to the old nest such as fine plant fibres or shreds of palm leaf. Four eggs are laid. They are light brown in colour, either uniform without markings or more often densely marked all over with yellowish brown or reddish brown. They measure 19–21 × 13–13·5 mm.

Distribution and Races

P. comitatus comitatus (Cassin) ranges from Gaboon to northern Angola.

P. comitatus camerunensis Reichenow is found in southern Cameroon and ranges to Cameroon Mountain and Kupé Mountain in British Cameroons. It is common from Victoria to the Bamenda escarpment from the coastal plantations to 2,400 ft. It differs from the last race in having a less clearly defined white throat, the under parts more bluish slate and the whole under parts greyer. The wing measures 60–67 mm., tail 47–55 mm.

P. comitatus aximensis W. Sclater ranges from the Abeokuta division of southern Nigeria through the Gold Coast to Sierra Leone. It is not an uncommon bird in suitable country. In colour it approaches *P. c. comitatus* but has a paler breast band and a wide area of white tinged with fulvous on the under parts. The wing measures 61–67 mm., tail 51–58 mm.

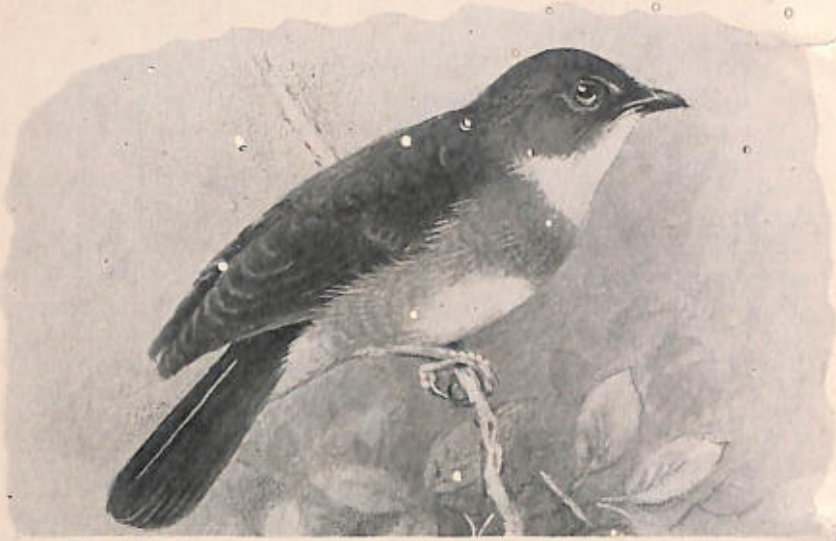
TESSMANN'S FLYCATCHER

Pedilorhynchus tessmanni Reichenow

This bird almost exactly resembles *P. comitatus comitatus* in plumage but has considerably more white on the under side, the middle of the lower breast and the whole of the belly being pure white as well as the throat. The rest of the under parts are greyer and less sooty-coloured, the breast being decidedly paler. The upper parts resemble *P. c. comitatus*. The eye is dark brown, the bill black; legs and feet are slaty blue. In size *P. tessmanni* is a larger bird in every way than *P. comitatus*. Measurements are: Bill (male) 11–12 mm., (female) 11 mm.; wing (male) 75–76 mm., (female) 73–74 mm.; (? sex) 75·5 mm.; tail (male) 56–57 mm., (female) 55 mm.; tarsus (male) 17–18 mm., (female) 16–17 mm.

The artist who drew the text figure in my larger work inadvertently made it appear as if the central tail-feather had a white shaft. That is incorrect—the shaft is black, as in *P. comitatus*. Compared with that bird, it is definitely larger in all its proportions. Although it inhabits the same type of country, it seems to be much more uncommon, judging by the specimens which have been obtained.

In its mode of capturing prey it resembles the Dusky-Blue Flycatcher, but it is not known whether it copies that bird's breeding habits.



Distribution. From the Gold Coast to Spanish Guinea. I have seen specimens from Alén in Guinea; Assobam and the Bumba River in Cameroon; Shonga on the Niger; and from Prahsu, Fumsu and Goaso in the Gold Coast.

DUSKY FLYCATCHER

Artomyias fuliginosa fuliginosa Verreaux

The Dusky Flycatcher is about 5 in. in length with the crown dark sooty-brown; the rest of the upper parts are dark chocolate-brown, most of the feathers with narrow rufous margins. Wings and tail are dark brown. The chin is grey or white; the throat and breast are dark brown, the breast-feathers fringed with fulvous. The rest of the under parts are fulvous-brown with dark middles to the feathers, giving a rather mottled effect. The belly and under tail-coverts incline to rufous. The bill is black; the legs and feet are dark brown. Measurements are: Bill 8–9·5 mm., wing 80–88 mm., tail 46–53 mm., tarsus 12–14 mm. The wing is rather long and the tail square.

This flycatcher is found in the main body of the forest, where it may be observed sitting motionless, often choosing the broken tip of a dead limb from which it has a clear field to circle out and catch insects. It has a preference for those which are brightly coloured, especially small beetles.

Its nest must be difficult to find, but one was located in the Benin Division of Nigeria, situated at the end of a slender branch of a tree, some 20 ft. from the ground. It was a shallow cup of moss, with the upper portion of grass and small roots. It contained two eggs,

which were not saved. This nest was on the banks of the Osse River among high forest.

Distribution. Ranges from British Cameroon through the forest country of Cameroon and Gaboon, the Congo mouth and northern Angola. Its place is taken in Upper Guinea by a closely allied species described next.

USSHER'S FLYCATCHER

Artomyias ussheri Sharpe

THE entire upper parts of this bird from the forehead to the upper tail-coverts are uniform dark sooty-brown, the crown not darker than the back. Wings and tail are blackish brown. The under parts are dark ash-coloured, the throat rather paler than the breast and inclining to whitish on the chin, but the whole under side is very uniform without any mottling or streaking. Under tail-coverts

are conspicuously tipped with white. Under wing-coverts are sooty-brown. The eye is brownish black; the bill is black, and the legs and feet are brownish black. Measurements are: Bill (male, female) 8–9 mm.; wing (male) 81–89 mm., (female) 84–90 mm., (without sex determined) 80–85 mm.; tail (male) 44–47 mm., (female) 47–51 mm.; tarsus (male) 13–15 mm., (female) 13 mm.

Sharing with the last species the longish pointed wings, Ussher's Flycatcher has the suspicion of a fork to its tail, which is not apparent in *A. fuliginosa*.

It may be seen waiting patiently for passing insects, when its large dark eyes may be observed through binoculars. It usually perches high, choosing a dead limb from which to make its sallies, returning again and again to the same position. Occasionally it seeks its prey nearer the ground. From accounts of its habits it seems less a bird of the high forest than the Dusky Flycatcher of Lower Guinea, preferring more open areas in forest country with dead standing timber. Those specimens which have been obtained have generally been in the vicinity of some stream bordered with tall trees.

The nest and eggs have not been found.

Distribution. Widely spread in Upper Guinea from Sierra Leone and French Guinea to the Gold Coast but restricted to the forest country of those colonies and to the intermediate forested areas.

To the date of writing neither *A. fuliginosa* nor *A. ussheri* has been recorded from southern Nigeria, where one or other, if not both, species must occur.

YELLOW FLYCATCHER

Chloropeta natalensis batesi Sharpe

A SMALL but conspicuous bird about 5½ in. in length, with a broad heavy bill guarded by black bristles at the gape. The whole under parts are yellow, the upper parts olive-brown, the crown darker brown than the back. It can raise its head-feathers to form a crest, when it has some resemblance to the Common Bulbul in outline. The wings are dark brown margined with olive-yellow, and the tail is similarly coloured, but the edge of the outer feather is paler yellow. The under tail-coverts are bright canary-yellow. The bill is dark horn above, the lower mandible pale yellow with bluish veins. The legs and feet are grey. The bill measures 12–13 mm., wing 56–61 mm., tail 49–57 mm. and tarsus 20–22 mm. in length.

The Yellow Flycatcher has many representatives in Africa and is a bird of savanna country bordering the forest. It also frequents clearings in the forest itself, but is most often to be seen in high grass and on overgrown waste land, when it may attract notice by its loud song, brief and clear—a trill preceded by three notes: *twee twee twee.*

Nests are built on cultivated ground in forks of such weeds as *Triumfetta* or sometimes on tangled thorn-bushes. They are bulky objects with a small cup built of grass blades and lined with finest grass tops. Two eggs form the clutch—pinkish white finely dotted and spotted with maroon-red and lilac-grey, sometimes with an indistinct cap. They measure 16·5–18 × 12–13·5 mm.

Distribution. The savannas of British and French Cameroon eastwards through the northern Belgian Congo savanna country to Lake Albert. In the Cameroon highlands it ascends on the Bamenda Banso and Manenguba Mountains to 7,000 ft.

Many other races have been described. That from the Uganda-Kenya forests is *C. n. massaica.* Another race occurring in the East African highlands above 5,000 ft. is *C. n. similis.* In Angola *C. n. major* is found, while the typical *C. n. natalensis* is confined to South Africa. It is very curious that no representative has been found to occur in Upper Guinea.

FRASER'S RUSTY FLYCATCHER

Stizorhina fraseri fraseri (Strickland)

FRASER'S Flycatcher is larger than the birds we have dealt with already, measuring nearly 8 in. in total length. Its measurements in detail are: Bill 12–13 mm., wing 90–100 mm., tail 72–85 mm.,

tarsus 20–21 mm. The eye is chestnut-brown, the bill is black, and the legs and feet are pale brown. Its plumage is rufous olive-brown on the upper parts, the crown darker olive-brown than the mantle, which is washed with rufous. The under parts are rust-colour or orange-rufous except the throat, which is ash-grey washed with orange-buff. The primaries, which are blackish brown, are rufous on the outer web and have a patch of rufous buff on the inner web. Special attention must be given to the tail. The middle pair of feathers are olive-brown washed with rufous; the next pair are blackish brown; the next pair have the outer web and tip of the inner web rufous buff, the remainder of the inner web being dark brown. The two outer tail-feathers are rufous buff, shading into dark brown at the base. The axillaries and under tail-coverts are rich orange-rufous, the under tail-coverts paler but of the same colour.

Very great care must be taken in identifying the Rusty Flycatcher for the following reason. In Upper Guinea (which includes all British Colonies) its place is taken by a very closely allied and similarly coloured species, *Stizorhina finschi*. The points of difference between *S. fraseri* and *S. finschi*, particularly of the tail, are discussed in detail under the description of *S. finschi*.

Unfortunately another bird which belongs to another family altogether (the *Turdidae*) is remarkably like the Rusty Flycatcher in size and colour—this is the Red-tailed Ant-Thrush (*Neocossyphus rufus gabunensis*), described later in this volume. The latter species is much more rufous, particularly on the wings and tail, the whole of the tail-feathers being bright rufous in the Ant-Thrush, whereas only the outer feathers are rufous in the Rusty Flycatcher, the middle tail-feathers being dark brown in strong contrast. Particularly note that there is no white in the tail of either of these species. Should a bird resembling either of those mentioned above be seen with white in the tail, it is either *Stizorhina finschi* or *Neocossyphus poensis*. Though both *Stizorhina* and *Neocossyphus* are forest birds their habits are different, the former feeding on insects captured in the air or on trees, the latter capturing its food (ants, etc.) on the ground.

In its behaviour the Rusty Flycatcher somewhat resembles a bulbul. It does not make circular flights after its prey, but chases insects among the branches in the shelter of the trees. From time to time it will give forth a low pleasing whistle, *sweet sweet, sweet*, which has an occasional break or hoarseness in it. In the Cameroons it has been observed in dark, little-frequented places in the forest and is said to be not particularly shy. At the base of Cameroon Mountain it has been seen on plantations and was first discovered in Fernando Po among undergrowth on the hillsides.

Although a common bird, the nest and eggs have not been found.

Distribution. British and French Cameroons, ranging south to northern Angola, also in the western Congo and in Fernando Po.

FINSCH'S RUSTY FLYCATCHER

Stizorhina finschi (Sharpe)

This Rusty Flycatcher, which takes the place of the last bird described, from Nigeria westwards, has the crown and upper parts dark olive-brown, with no distinction in shade between the crown and the mantle. The under parts are rufous chestnut. The wings are like *S. fraseri*, but the coverts in *S. finschi* are darker, matching the back. The main distinction between these two species is in the tail. That of *S. finschi* has the four central feathers dark brown, the remaining rectrices blackish brown at the base, with gradually lengthening white terminal portion until in the outer feather half the feather is white. A patch of bare skin below the eye is pale blue. The bill is black and the legs and feet are flesh-colour. Measurements are: Bill 13–14 mm., wing 91–107 mm., tail 80–107 mm., tarsus 21–22 mm.

This forest bird is about 8½ in. in length and has a wing-span of 12 in. Like Fraser's Flycatcher in Cameroon, it has a wing which exhibits rufous-buff mirrors when expanded. Living in the same forests as Finsch's Flycatcher is an Ant-Thrush (*Neocossyphus poensis poensis*) which is so extraordinarily similar in colour as to be very easily confused. In fact, apart from the darker slate-brown upper parts of the Ant-Thrush, black middle pairs of tail-feathers (instead of olive-brown as in the flycatcher) and rather larger size, there is no other point of distinction to observe, save the important fact that the Ant-Thrush is chiefly a ground dweller, feeding on the ground, whereas the flycatcher, after the manner of its kind, feeds in the air or on branches of trees. The notes, of course, are quite different, but these are not easy to describe on paper. Points to remember are: If any white in the tail and otherwise rufous-rust colour on the under parts, the bird is either *Stizorhina finschi* or *Neocossyphus poensis*; if it closely resembles the above but has no white on tail, the bird is either *Stizorhina fraseri* or *Neocossyphus rufus gabunensis*. Another field distinction has been noted: *S. finschi* has never been seen to raise and depress its tail, which is so characteristic of *Neocossyphus poensis* when perched. These two species, which are so amazingly similar in appearance, are not infrequently seen together, especially when in pursuit of driver ants on the ground. Of the two birds *Neocossyphus* is the more restless and shy.

Finsch's Flycatcher may frequently be heard singing from the top of rubber or other trees. The song consists of a long-drawn whistle of medium to low pitch, a pause, and then the whistle repeated, followed by two shorter notes of higher pitch. In volume viii of *The Birds of Tropical West Africa* I have discussed the song and call of this bird at much greater length. It also utters harsh croaking cries.

Much of its time is spent in the tree-tops unless foraging for ants, which seem to constitute a large part of its food supply. It is by no means conspicuous, but will proclaim its presence by its song. Judging by the number of times its song is heard, it must be one of the commonest flycatchers of the high forest. This is certainly the case in Sierra Leone. Besides the high forest, it also frequents second growth.

In Owerri Province of Nigeria a bird was observed collecting nesting material from the base of epiphytes on the forest trees and flying towards a mass of *Raphia* palms. The nest and eggs have never been found.

Distribution. From Sierra Leone to the Owerri Province of Nigeria in all forest country is the known range of this flycatcher, which has no subspecies in Lower Guinea or elsewhere in Africa.

SHRIKE FLYCATCHER

Megabyas flammulatus flammulatus Verreaux

A COLOURED figure is given of both sexes of this flycatcher in volume iv of my larger work. The whole of the upper parts of the male are glossy blue-black, the rump and entire under parts white, with a black wing and tail. The powerful black bill is strongly hooked at the tip. Legs and feet are slate-grey, and the eye is red. It may very easily be mistaken for a Puff-backed Shrike. The female is entirely different and much more easily recognised—chestnut on the mantle and back, earth-brown on the crown and nape; a chestnut tail, scapulars and wing-coverts and white under parts heavily streaked from the throat to the belly with dusky brown. The combined measurements of male and female are: Bill 19–22 mm., wing 84–91 mm., tail 57–65 mm., tarsus 16–17 mm.

As our knowledge of West African birds is increasing, we must now consider the Shrike Flycatcher to be more numerous than was formerly believed. In Sierra Leone it is confined to the high forest, living much in the tree-tops, where little parties have been observed progressing from branch to branch by short flights, frequently pausing to look around and continually jerking their tails up and

down. The flight is strong and powerful, during which the bird will utter a rather melodious *tuwick* as well as a double whistling call.

The nest has not been discovered.

Distribution. From Sierra Leone to Gaboon in forest country but not yet from Nigeria, where it must occur, as it is not uncommon in the Gold Coast.

Another race, *M. f. aequatorialis* Jackson, takes its place in Uganda and the Belgian Congo.

BLACK-AND-WHITE FLYCATCHER

Bias musicus musicus (Vieillot)

THE sexes of this bird are dissimilar. The male about 6½ in. in length; the head, throat, breast and entire upper surface are glossy blackish green; the wing is black terminally, white basally, forming a broad white band across the quills. The tail is black, margined with bottle-green. The belly and under tail-coverts are white and the thighs black. The eye is yellow, the bill is black, and the legs and feet are yellow. In the female the crown and crest are blackish brown gradually shading into bright chestnut on the mantle and rump. Primaries are black terminally, chestnut basally, which is the colour of the wing-coverts. The tail, too, is chestnut. The chin is white, the throat and rest of the under parts are buffish fawn, more inclining to chestnut on the sides and under tail-coverts. Combined measurements of the sexes are: Bill 19–21 mm., wing 84–92 mm., tail 45–52 mm., tarsus 13–14 mm. When at rest the long crest of the male is most noticeable, and the heavy bill, guarded with black bristles at the gape, gives the bird a fierce appearance.

The flight is described as sometimes quivering or undulating, but the bird is capable of swift direct flight also. The call of the male is likened to *tit-tiu, tit-tiu,* becoming faster and faster until the notes are jumbled. It also has a harsh alarm cry.

This is a bird of cleared forest land and may be seen in forest strips in the savanna but does not occur in the heavy forest. It is a familiar species near village clearings. It is usually in pairs, keeping to the tree-tops, seldom frequenting the lower branches. Its musical notes will attract attention to it wherever it is found. Pairs may be seen indulging in love flights, with much fluttering of wings and little progress, when a shrill note like *pee-tzub* has been heard.

Although spending much of its time in the tree-tops, it will build its nest at much lower elevations, such as on the branch of a rubber tree 25 ft. from the ground. The nest is small and composed of dry leaf petioles and stems without any soft lining, the whole being kept

together with a network of cobwebs. Eggs are pale bluish green or greenish grey spotted and blotched with umber-brown and lilac-grey chiefly around the broad end. One egg measured 21 × 16 mm. Three form the clutch.

Distribution. The whole of the secondary forest growth from Portuguese Guinea and Sierra Leone to the Congo River, extending east through the Uelle district of the northern Belgian Congo. It is fairly generally spread in all our Colonies except Gambia, from the coastal regions to the strips of forest north of the main belt but not in closed forest.

In Uganda another race, *B. musicus feminina*, takes the place of the typical race.

Key to the species of the genus Hyliota

1. Without any white on wing, not even the narrowest white edging to a wing-covert .. *Hyliota nehrkorni*, p. **928**
   With white on wing or edge of one or more secondary wing-coverts 2
2. White patch on wing large, whole of median and greater wing-coverts white .. *Hyliota flavigaster flavigaster*, p. **926**
   White on wing restricted to greater secondary coverts or narrow edge to those feathers 3
3. Under parts almost white, washed with yellow ochre. Secondary coverts white on both webs *Hyliota violacea* ♂, p. **928**
   Under parts rust-colour, secondary coverts narrowly edged with white on outer web.. *Hyliota affinis* ♀, p. **928**
   (possibly the hen of *H. violacea*, which is unknown)

YELLOW-BELLIED FLYCATCHER

Hyliota flavigaster flavigaster Swainson

The male of the Yellow-bellied Flycatcher is a very conspicuously marked bird, with the head and upper parts shining deep blue with the large white patch on the wing, and the throat and under parts ochraceous yellow, which appears almost more buff in tone than yellow. The tail is black, glossed with steel-blue or steel-green. The wings are dusky black, the outer webs glossed with greenish blue. The female differs from the male in having the forehead, crown and entire upper parts sooty-grey and the whole under parts of a duller ochraceous yellow than the male. The eye of this flycatcher is dark

brown, the bill is black and the legs and feet are slate-grey to bluish black. Combined measurements of male and female are: Bill 11–13 mm., wing 65–76 mm., tail 38–46 mm., tarsus 17–18 mm.

As this is a savanna bird rather than a forest species, its range includes Gambia, and there it may be observed in the scrub,

usually in pairs. It is never numerous but is evenly spread throughout the drier savanna belt and more open bush. It searches the little trees for insects and is sometimes almost tit-like in its antics, clinging to the under surface of boughs. It seems to prefer country where trees are prevalent, though it shuns the forest. When searching for insects it keeps up a continuous call—*kep-kep-kep, kep-pink*—but has not been heard to give any song.

Its nest and eggs are unknown.

Distribution. The whole savanna belt of West Africa from Senegal to the high grasslands of Cameroon, then ranging eastwards to appear in Abyssinia, Kenya and Uganda. It is commonly found in British territory north of the forest, but is also known from the Southern Provinces in certain localities.

VIOLET-BACKED FLYCATCHER

Hyliota violacea Verreaux

THE male has the crown and entire upper parts deep glossy violet-blue, including the lesser wing-coverts, the greater secondary coverts white, but none of the median coverts, as in *H. flavigaster*. Feathers of the rump are long and grey at the base, which is often exposed. Upper tail-coverts are glossed with steel-blue, quills and tail-feathers as in *H. flavigaster*. Under parts from chin to under tail-coverts are whitish, faintly washed with pale yellowish ochre. Under wing-coverts and thighs are black, the former being slightly glossy. Measurements (male) are: Bill 12 mm., wing 77–78 mm., tail 43–49 mm., tarsus 19 mm. (two males measured).

The female has never been discovered, unless, as seems probable, it is the flycatcher upon which the name *Hyliota affinis* was bestowed by Reichenow, a bird which is only known from the female. This bird compared with *H. violacea* has the whole upper parts duller, glossed with blue rather than violet; the white in the wing is restricted to a narrow outer margin to the inner greater secondary coverts. The whole under parts are yellowish brown, the under tail-coverts creamy white. The wing measures 74–77 mm.

Nothing is known about this flycatcher, which is likely to resemble *H. flavigaster* in its main habits.

Distribution. The male was originally found in Gaboon and has been collected in southern Cameroon (Efulen and Bitye). The female also has been found at Bitye and was discovered at Yaunde, both in French Cameroon. Everything points to their being male and female of the same bird, though in my larger work I kept them distinct under the two names bestowed upon them.

NEHRKORN'S YELLOW-BELLIED FLYCATCHER

Hyliota nehrkorni Hartlaub

THIS bird, which is closely allied to the last species and may be its Upper Guinea representative, has only been found in the Gold Coast and is known from the male only. It differs from the male of *H. f. flavigaster* in having the upper parts glossed with violet rather than blue. There is not a trace of white on any of the wing-coverts, which are glossy violet-blue, and the under parts are creamy white, faintly washed with yellow ochre. The only specimen examined measures: Bill 12 mm., wing 76 mm., tail 40 mm., tarsus 18 mm.

Distribution. Known only from the Gold Coast, where examples have been obtained at Prahsu and Accra.

Key to the species of Puffback Flycatchers (Batis)

1. Inner under wing-coverts and axillaries white 2
   Inner under wing-coverts and axillaries black 6
2. Breast-band black or dark smoke-brown 3
   Breast-band chestnut 5
3. Crown of head grey .. .. .. *B. minulla* ♂, p. **931**
   Crown of head not grey 3
4. Crown glossy black; breast-band similar .. *B. poensis* ♂, p. **929**
   Crown dull blackish brown, breast-band smoke-brown
   *B. minima** ♂, p. **931**
5. Breast-band dark chestnut and narrow (about 5–6 mm. deep in centre) .. .. *B. poensis* ♀, p. **929**
   Breast-band light chestnut and broad (about 9–10 mm. deep in centre) .. .. *B. minulla* ♀, p. **931**
6. Breast-band black 7
   Breast-band chestnut 8
7. Mantle dark bluish slate, slightly glossy
   B. senegalensis ♂, p. **932**
   Mantle grey dappled with white, not glossy
   B. minor (3 races) ♂, p. **931**
8. Hind-collar and streak behind eye pale chestnut. Breast-band light chestnut and very broad (about 13 mm. in depth in centre) .. .. .. *B. senegalensis* ♀, p. **932**
   Hind-collar and streak behind eye white. Breast-band very narrow, about 7 mm. in depth in centre
   B. minor (3 races) ♀, p. **931**

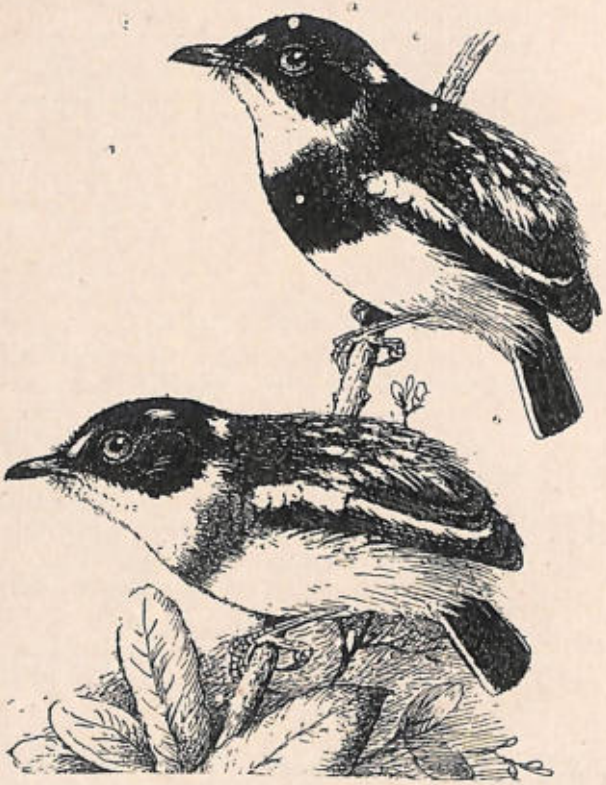
FERNANDO PO PUFFBACK FLYCATCHER

Batis poensis Alexander

Although named after the island in which it was discovered, this bird is widely distributed on the opposite mainland as far west as Sekondi, but is nowhere common apparently. It is a very small flycatcher, about 4¾ in. in total length, with a wing expanse under 6½ in. The males are black above, mottled with white; the crown is black, with a white patch at the base of the nape and a conspicuous white band down the whole length of the wing. The under parts are white, the males with a broad band of black across the chest, while in the females this band is dark chestnut and narrower. The eye is lemon yellow; the bill, legs and feet are black. Measurements are: Bill 11–12 mm., wing 48–56 mm., tail 27–32 mm., tarsus 13–14 mm.

* The female of *B. minima* is unknown.

The males are very liable to confusion with *Batis senegalensis senegalensis*, but fortunately the two species inhabit different country; the Senegal Flycatcher lives in the semi-arid belt, while the present species is found in the forest. The former has a white line over the eye which *B. poensis* lacks. The females are much more easily distinguished, *B. poensis* having a narrow dark chestnut band across



the breast, while in *B. senegalensis* it is much paler chestnut and three times as broad. The lack of a long white stripe over the eye also distinguishes *B. poensis* from the grey-crowned *Batis minor chadensis*.

This forest flycatcher is said to frequent the tops of the highest trees, and as it never appears to come down to lower elevations its habits can only be imagined, and its eggs and nest are unknown. Fortunately we know much more about the life-history of *Batis senegalensis*, which is much more accessible.

Distribution and Allied Species

Batis poensis extends from the Gold Coast (Sekondi and Aburi) through southern Nigeria to the southern Cameroon forest, where it has been taken at Bitye. It was discovered first on Fernando Po.

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BLUE FAIRY FLYCATCHER.
Erannornis longicauda longicauda

NIGERIAN CHESTNUT-CAP FLYCATCHER.
Erythrocercus mccallii nigeriae

SENEGAL PUFF-BACK FLYCATCHER.
Batis senegalensis ♂ & ♀.

CHAD PUFF-BACK FLYCATCHER.
Batis minor chadensis ♀.

CASSIN'S CRESTED FLYCATCHER.
Trochocercus nitens nitens

Another species which is even smaller in size, known as *Batis minima* Verreaux, differs from *B. poensis* only in the tone of the upper parts, being uniform dull blackish brown with a brownish-grey (instead of black) band across the chest of the male. It has been found in Gaboon and probably extends across the Congo to the Ituri. Its wing is 47 mm. and tail 31 mm. The female is unknown.

Still another species, *Batis minulla* Bocage, extends from the mouth of the Congo south to northern Angola. It is described in my larger work, vol. iv, on page 262. A black band across the white chest in the male and similar chestnut band in the female, together with a white bar down the whole length of the black wing, should enable this tiny bird, totalling 4 in. in length with wing 51–56 mm., to be distinguished.

CHAD PUFFBACK FLYCATCHER

Batis minor chadensis Alexander

(see Plate 40, facing page 931)

THREE races of this bird are found in West Africa and others inhabit other parts of the continent. The race named above is the better known.

The *Batis minor* group are small flycatchers, 4½ in. in length, having a very broad flattened bill. The crown and mantle are grey, the former bordered by a white line reaching from the bill to the nape. Lores, ear-coverts and cheeks are glossy black. Back and rump are mottled greyish black and white, the rump feathers broadly tipped with white. The tail is glossy black, the two outer feathers being margined and tipped with white. Wings are blackish with a white band extending along the border of the coverts and secondaries. The under parts are white. In the male the breast is crossed by a black band; in the female this band is dark chestnut and in neither sex does the band cover the breast, though it extends right across it. The female is depicted in the coloured plate facing this page. The eye is yellow; bill and feet are black. The measurements are: Bill 11–12 mm., wing 54–61 mm., tail 37–42 mm., tarsus 15–17 mm. For the characters which distinguish *Batis minor* from *Batis senegalensis*, see under the latter species.

This Puffback Flycatcher is a characteristic bird of the thicker bush which occurs in the semi-arid belt from Lake Chad to the Nile, without a break. Its bell-like notes attract the notice of the traveller through the arid wastes which are its home, and though nowhere very common, a pair or two may be observed on most daily treks through the bush. In the south of its range it must come into the less arid savanna country of the Upper Congo border.

Its breeding habits have not been described.

Distribution and Races

B. minor chadensis Alexander extends from Lake Chad eastwards to the Red Sea Province of the Sudan; its southern range is bordered by the Shari and Bamingui Rivers. In the Anglo-Egyptian Sudan this race ranges to about lat. 15° N. and in the south it meets the range of *B. minor nyansae* about lat. 9° N. How far west of Lake Chad it ranges is uncertain.

In the British Cameroon highlands we have *B. minor batesi* Bannerman, which is larger in size, with wing 62–65 mm., tail 43–48 mm., and heavier bill, blackish back and mantle and broader crop-band. In the female the chestnut crop-band is also brighter in colour. It is known only from Genderu and Bamenda (4,500–5,000 ft.) and from the Fumban-Banyo area.

In the grasslands of eastern Cameroon and Lower valley of the Congo *B. minor congoensis* Neumann occurs, extending south to northern Angola. This race barely comes within our limits; it is described in my larger work, vol. iv, page 265.

SENEGAL PUFFBACK FLYCATCHER

Batis senegalensis Linnæus

(see Plate 40, facing page 931)

THIS is the best-known and most widely spread of all the little Puffback Flycatchers in our area. Both male and female are depicted in the coloured plate facing page 931, so they need but little description. This is a plump little black and white bird with a white collar and eye-stripe, white wing-bar and white under parts; the breast is crossed by a broad band of black in the male, chestnut in the female. When the wings are closed the bird appears to have a white V on the back (caused by the white edge of the coverts and the subterminal white patches on the rump-feathers). The female, apart from the chestnut breast-band, is more brown on the back and has the collar, nuchal patch and stripe bordering the crown rust-colour instead of white. The eye is yellow; bill and feet are black. Measurements are as follows: Bill 11–13 mm., wing 53–61 mm., tail 40–42 mm., tarsus 15–17 mm. The absence of red eye-wattles will save the male bird from confusion with *Platysteira cyanea* (the Wattle-eye). The flight of the Senegal Puffback is dipping, and then the white bar on the wings and white on the outer tail-feathers is conspicuous.

Throughout the whole of the semi-arid belt of West Africa and the open woodland and thorn country this little bird is a familiar object. It is more often encountered where the vegetation is not too thick, and there, of course, it is more easily seen. It is a lively

bird, found generally in pairs, flitting about after insects and occasionally making circular flights, but usually it prefers to find its prey on leaves and branches. If alarmed it will utter a scolding *tsit, tsit, tsit*; its other notes are more musical.

It breeds in the latitude of northern Nigeria from March to May, laying two eggs in nests composed of dried grass and lichen bound together with cobwebs. The nests are placed in the forks of shrubs a few feet from the ground and are extremely small, the outer diameter being only about 2 in. The eggs have a pale greenish ground and are distinctly spotted with red-brown and violet. Measurements are: 15·2–15·5 × 11·8–12·1 mm.

Distribution. The whole semi-arid and much of the grass woodland belts extending from Senegal and Gambia and the Karina district of Sierra Leone to northern Nigeria, northern French Cameroon and the Ubangi-Shari. It breeds in Nigeria as far south as Lokoja and is common around Ibadan. In the Gold Coast it is fairly generally distributed north of the forest. In Sierra Leone it is uncommon, found only in the extreme north. In Gambia it is more widely spread. On the borders of the Sahara it has been met with to lat. 16° N. in French territory.

Key to the Wattle-eyed Flycatchers in the genus Platysteira

1. With white wing-bar 2
   Without white wing-bar; eye-wattles light red
   P. laticincta, p. **935**
2. With narrow white frontal band at base of upper mandible; eye-wattles scarlet-vermilion .. *P. albifrons*, p. **935**
   No white frontal band; eye-wattles scarlet-vermilion
   P. cyanea cyanea, p. **933**

SCARLET-SPECTACLED FLYCATCHER OR WATTLE-EYE

Platysteira cyanea cyanea (Müller)

(see Plate 41, facing page 940)

This flycatcher, which is about 5½ in. from bill to tail, is conspicuously marked in black and white, the male being white below with a glossy blue-black band across the breast, the female with a dark chestnut-maroon throat and breast and white belly. Both have dark upper parts, the male glossy blue-black, the female greyer, while both have a conspicuous white band running down the wing, which gives the bird the appearance of having a white V on the upper parts when the wings are closed. The most noticeable feature of both sexes is the prominent scarlet eye-wattles, which

character distinguishes the genus *Platysteira* from the flycatchers of the *Batis* group, the males of which are so easily confused with it. The note of the male is distinctive, four clear notes, each in a different pitch. Its red eye-wattle is the feature to look for, otherwise its resemblance to the Senegal Flycatcher is very close. The eye of this bird is light blue—a very unusual colour in birds. The bill is black and the feet are purplish black. The bill measures 13–15 mm., wing 61–68 mm., tail 42–51 mm., and tarsus 18–20 mm.

In the female a narrow white line which passes from the base of the bill to border the maroon bib has accidentally been omitted in the coloured plate of this bird; it is barely perceptible in the skin.

A bird of the savanna and of clearings in the forest, which in the wet season is found ranging into normally dry country such as Gambia and Senegal, i.e. from May to December, the majority moving south when the rains are over. Its range extends from the coastal districts to the Northern Territories, lat. 10° N., appearing to be, in the Gold Coast and Nigeria at any rate, the northern limit of its extension towards the desert.

It is not a shy bird and may often be noticed in the vicinity of rest houses and bungalows, spending its time in searching the foliage of the garden trees for the insects upon which it feeds. It takes a fly or two, then renders its tinkling song of thanksgiving—*do, di, dum, di-di-do,* in distinct separate notes. The bird also makes a rattling noise, and as the breeding season approaches both sexes make a snapping noise with the bill and another flipping sound with the wings. Caterpillars are devoured when opportunity offers, and it has been seen to snap up a small butterfly on the wing, which it promptly gave to its mate. The species has been observed bathing in quite deep water. Those who have the opportunity should pay some attention to the seasonal movements of this Wattle-eye, for they are as yet little understood. Its local migrations are definitely seasonal.

The breeding season is a long one—in Sierra Leone fully grown young have been found in April and in July still in the nest, while young have been found in southern Nigeria at the end of August. The nest is constructed of coarse and fine grass with lichen externally and may be placed in the branches of small trees such as coffee, within 6 ft. of the ground. Two eggs form the clutch, having a sandy-coloured ground with a band of chocolate and dull lilac markings at the broad end. One egg measured 18 × 14 mm.

Distribution and Races

The whole of West Africa from Senegal to the Congo, both in savanna and in forest clearings but not in closed forest. In the dry season it occurs in coastal districts and in the wet season may be found in the thorn scrub. Thus it is widely spread and common.

South of lat. 10° N. it is generally distributed. It ascends to a fair altitude and has been found in British Cameroon at Bamenda in the oil-palm forest.

In the Ubangi-Shari and Uelle district it meets the Uganda race, *P. cyanea nyansae*, another subspecies (*P. c. aethiopica*) taking its place in southern Abyssinia.

WHITE-FRONTED WATTLE-EYE

Platysteira albifrons Sharpe

The adult male is very similar to the male of *Platysteira cyanea* but with a distinct narrow white frontal band, rather greyer on the mantle and back, and the glossy blue-black breast-band narrower, about 7 mm. in breadth (in *P. cyanea* it is about 10 mm. broad). The size is smaller. The eye is azure-blue with shining white inner rim and fleshy eye-wattles of scarlet-vermilion; the rim of the lower eyelid is dark olive-green; the bill is black and the feet are dark purple.

The adult female does not resemble the female of *P. cyanea*. Like the male, it has a narrow white frontal band. The entire upper parts are blue-grey; the wing-coverts and quills are darker grey, tinged with olive-brown, the median coverts broadly tipped with white, forming an alar bar, the inner secondaries bordered with white, continuous with the alar bar. The upper tail-coverts and tail are glossy blue-black, the rectrices narrowly tipped with white. The whole under parts from chin to under tail-coverts are white; sides of body are greyish, under wing-coverts, axillaries and quill lining white.

The measurements are as follows: Bill 13–14 mm., wing 59–63 mm., tail 45–50 mm., tarsus 19–20 mm.

Distribution. The Loanda and Benguela Provinces of Angola, ranging north to the Congo. As it barely comes within our limits, it will not be discussed further. Very little is known about it, in any case.

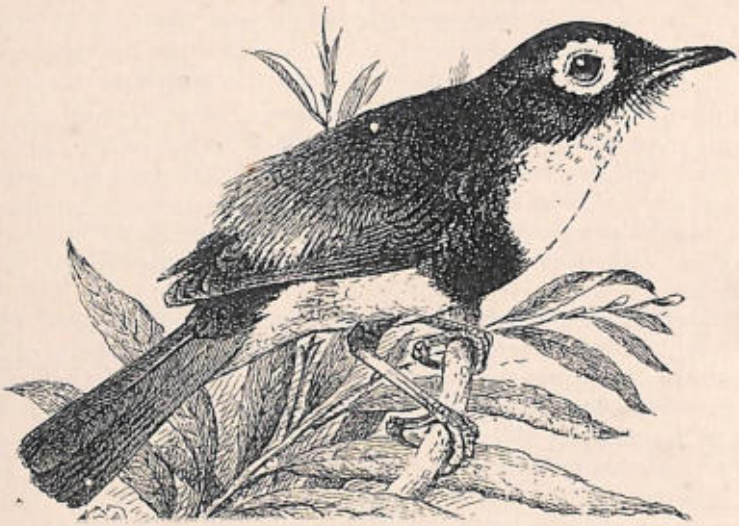
BANDED WATTLE-EYE

Platysteira laticincta Bates

This bird was discovered by its describer in the highest part of the Kumbo range, British Cameroon highlands.

The description of the male is as follows: The forehead, crown, ear-coverts and entire upper parts, including the wing-coverts, are glossy blue-black, reflecting bottle-green in certain lights, the

feathers of the rump greyer and lacking the gloss of the back. No white bar on the wings; primaries and secondaries are dull blackish, the secondaries with narrow glossy blue-black fringes. The upper tail-coverts and tail are like the back, the rectrices with minute white tips. Chin and throat are white; a broad pectoral band (13 mm. broad in the middle) is glossy blue-black. The rest of the under parts and under tail-coverts are white. Axillaries and under wing-coverts are white except the small feathers along the edge of



the wing, which are black. The eye is "apparently blue," the eye-wattle light red, bill black, gape with strong black bristles; legs and feet are purplish black. The measurements are: Bill 14 mm., wing 67 mm., tail 51 mm., tarsus 19 mm.

The female resembles the male on the upper parts, but differs below as follows: The chin is white, throat and breast are glossy blue-black, the rest of the under parts as in the male.

This species appears to be confined to the high mountain forests of the Bamenda Division. It occurs singly and in pairs and its actions recall *P. cyanea*, but it is a silent bird and lacks the latter's cheerful call. It searches all strata of the forest foliage from the under-shrubs to the tree tops.

A female shot on 18th September was in breeding condition, and a juvenile male was collected on 16th October.

The District Officer of the Kumbo district in 1935 observed a male bird at the edge of a patch of forest at 7,000 ft. and a small cup-shaped nest was discovered of felted moss and lichen, lined with material like thistledown. Three young were in the nest.

Distribution. The Kumbo district of the Cameroon highlands and high mountain forests of the Bamenda Division.

Key to the Wattle-eyed Flycatchers in the genus Dyaphorophyia

1. Belly deep reddish chestnut or golden chestnut
Dyaphorophyia concreta, p. **942**
D. concreta lomaensis, p. **943**
Belly not deep reddish chestnut 2
2. Under parts golden, the females washed on the breast with chestnut. Eye-wattles emerald-green in life
D. ansorgei harterti, p. **943**
Under parts not golden; eye-wattles not emerald-green in life 3
3. Throat white 4
Throat not white 6
4. Conspicuous white stripe above eye; fleshy wattle over eye deep purplish brown .. .. *D. tonsa* ♂, p. **939**
No visible white stripe above eye 5
5. White collar completely surrounds neck; eye-wattles black .. .. .. *D. castanea hormophora* ♂, p. **937**
White collar only partly encircling neck and not continued on to nape; eye-wattle blackish flesh-colour
D. castanea castanea ♂, p. **937**
6. Throat, back and entire breast chestnut, breast sometimes mixed with white 7
Throat, back and breast not chestnut 8
7. Crown of head black; eye-wattles dull purple in life
D. tonsa ♀, p. **939**
Crown of head slate-grey; eye-wattles purplish black or wine-colour in life
D. castanea castanea ♀ and *D. castanea hormophora* ♀, p. **937**
8. Bright chestnut patch on sides of neck; eye-wattles turquoise blue in life .. .. *D. blissetti* ♂ ♀, p. **941**
No chestnut patch on sides of neck; eye-wattles light green in life .. .. *D. chalybea* ♂ ♀, p. **940**

CHESTNUT WATTLE-EYE

Dyaphorophyia castanea (Fraser)

(see Plate 41, facing page 940)

Two races occur, the typical subspecies in Nigeria and Lower Guinea and its representative *D. c. hormophora* in Upper Guinea.

The following description applies to both females, but only to the male of *D. c. castanea*.

The adult male has the forehead, lores, ear-coverts and crown of head black glossed with blue, extending on to the mantle and wing-coverts. Above the eye are fleshy wattles. Feathers of the back and rump are long, silky and white. Primaries and secondaries are blackish brown, the latter with white inner margins. Upper tail-coverts and tail are blue-black, slightly glossy. The chin and throat are white, extending on to the side of the neck. The breast is glossy blue-black; the whole of the rest of the under parts, including the under tail-coverts, under wing-coverts and axillaries, are white. The eye is very dark blood-red brown, the eye-wattle blackish-flesh colour; the bill is black and the feet are plumbeous tinged with pink.

The bill measures (male, female) 12–13 mm.; wing (male) 53–63 mm., (female) 55–62 mm.; tail (male) 23–26 mm., (female) 23–25 mm.; tarsus 14–15 mm.

The adult female is very different from the male. The forehead, lores, ear-coverts and crown are bluish-slate colour. The base of the bill is furnished with strong black bristles. Mantle, wing-coverts and upper back are bright chestnut. The rump is greyish, with the bases of the feathers white. Upper tail-coverts and tail are glossy blue-black. Primaries are black, narrowly edged on the outer web with light chestnut; secondaries are black, broadly fringed on the outer web with bright chestnut. The chin is white; throat and breast are dark chestnut, the rest of the under parts being white, including the under tail-coverts, under wing-coverts and axillaries. The eye is dark brown, eye-wattles are Indian purple; the bill is dark purplish and the feet are slate-colour.

The immature male has the upper parts and breast chestnut and the crown browner, sometimes with a chestnut wash, but the sex may usually be distinguished by the presence of black feathers appearing on the crown, back or breast among the chestnut and an indication of a crop-band.

This is a very common bird in the high forest and in kurimis in tree savanna, from which normal environment it strays to thick swamp, or to dense bush surrounding villages. It is one of those species which may be encountered in the very depths of the forest, and there it is commonly found in an éjak or bird army. Family parties are also to be met with, and as the males chase the little females through the trees they frequently make cracking noises with their wings—*whup-crack-crack-whup-crack*—as they fly. They also snap their bills and make odd ventriloquial croaks like those emitted by a bull-frog. Another note is a metallic *tink*, which is repeated endlessly. The flight is fast with quick wing-beats, but generally short.

In southern Nigeria and the Lower Guinea forests another very similar species, *D. tonsa*, inhabits the same country, the females of

which are easily recognised apart, though not so the males. The grey crown of the female *D. castanea* is the character to observe. West of Nigeria *D. tonsa* does not occur.

The nest of the Chestnut Wattle-eye has been found placed on a branch of a big-leaved shrub that grows in wet and shady places in the forest. The two eggs in this nest had a bluish-white ground spotted and speckled with grey and brown. One measured 18 × 13·5 mm.

Distribution and Races

D. castanea castanea (Fraser) extends from southern Nigeria from Lagos eastwards to northern Angola and across the Congo forest to Uganda and Kenya. It also inhabits Fernando Po.

D. castanea hormophora Reichenow takes its place to the west of Nigeria, ranging from the Gold Coast forests to Sierra Leone. The females of these two races are indistinguishable, but the male of *hormophora* may at once be recognised, as it has a broad white collar completely surrounding the neck; otherwise there is no difference. The wing measures 54–58 mm., tail 21–23 mm.

WHITE-SPOTTED WATTLE-EYE

Dyaphorophyia tonsa Bates

As this bird resembles *D. castanea castanea* (already described in detail) so closely, it will be sufficient to point out the differences between them. From the male of *D. c. castanea* the male of the present species may be distinguished by the visible white streak above the dull purple eye-wattle, which even in life must be quite obvious. The white collar also extends further round the neck. The main distinction in the chestnut female is to be seen in the colour of the crown—black in *D. tonsa*, grey in *D. castanea*. The feathers of the crown in both sexes of *D. tonsa* are exceptionally short and shiny black. The eye is black, eye-wattle purplish brown in male, dull purple in female. Legs are purplish black, and the bill is black. Measurements are: Bill 7–8 mm., wing 55 mm., tail 21 mm., tarsus 15 mm. (one of each sex measured).

As observed in my larger work, it is remarkable to find two species so alike in appearance as this bird and *D. castanea* living side by side.

In the Owerri Province of Nigeria small parties of these tiny flycatchers have been observed flying through the low ground shrubs, rarely above 10 ft. from the ground. In flight they made a buzzing noise as they flitted from bush to bush in their constant search for food. Various extraordinary sounds are connected with this wattle-eye, one a loud explosive *tong*, the other a short mellow whistle *kwee*

mounting the scale. The white spot above the eye in the male and the black shiny crown of both sexes distinguish this species in the field which often consorts with *D. castanea*, the male of which has no white spot over the eye and the female a grey crown.

Distribution. Recently discovered to occur in the Owerri Province of Nigeria, the range certainly extends to southern Cameroon. It is probably the same as that of *D. c. castanea*, but though known from the Semliki valley, it has not been recorded from the main equatorial forest of the Congo.

BLACK-THROATED WATTLE-EYE

Dyaphorophyia chalybea Reichenow

This minute flycatcher, with characteristically broad bill, measures only 3½ in. from bill to the end of its tail. The upper parts are entirely glossy bottle-green from crown to back; the rump is grey and white; the tail is bright blue-green with a strong metallic gloss. The wings are black without any white markings. The chin, throat and upper half of the breast are dark bottle-green like the head, the

BLISSETT'S WATTLE-EYE
Dyaphorophyia blissetti ♂

SCARLET-SPECTACLED FLYCATCHER
Platysteira cyanea cyanea ♂ & ♀

CHESTNUT WATTLE-EYE
Dyaphorophyia castanea hormophora ♂ & ♀.

GOLDEN-BELLIED WATTLE-EYE
Dyaphorophyia ansorgei harterti ♀ & ♂

rest of the under parts pure white. In this bird the fleshy eye-wattle is light green and the legs and feet are purplish black. The female has the upper side more grey-black and the breast duller; otherwise it resembles the male. Measurements of this wattle-eye are: Bill 12–13 mm., wing 50–54 mm., tail 23–25 mm., tarsus 17–20 mm.

A curious point about the plumage is that in the immature the young birds, having at first a pure white throat and breast, appear to assume a chestnut throat and breast before the adult green feathers.

The Black-throated Wattle-eye comes within British territory at the foot of Cameroon Mountain but does not, so far as we know, occur in the adjoining Nigerian territory. It is an inhabitant of second-growth forest and dense bush, while in Fernando Po it was found not only in the south of the island in thick undergrowth but also in the vicinity of the peak, which presumably is forested. It is certainly not a bird of primeval forest as is *D. castanea*.

Its nest is a circular cup of fibres in which two eggs are laid. These are greenish white with a heavily blotched and spotted zone round the larger end of umber-brown. Eggs measure 17·5–18 × 12 mm.

Distribution. Cameroon Mountain south to the Ja River in southern Cameroon and in the island of Fernando Po.

BLISSETT'S WATTLE-EYE

Diaphorophyia blissetti Sharpe

(see Plate 41, facing page 940)

Like the other members of this genus, this is a very small bird, some 4 in. in total length, but with rather a longer tail than most of the others. In colour it is glossy dark green on the upper parts,

wings and throat, the sides of the neck being bright reddish chestnut and the under parts white. The tail-feathers are metallic blue-green and the eye-wattles remarkable for their turquoise-blue colour. The bill is black; the legs and feet are dull blue. The measurements are: Bill 12–14 mm., wing 50–55 mm., tail 20–25 mm., tarsus 16–18 mm.

The above description applies to the male only, the female differing from it in having the upper parts entirely grey with a greenish gloss. Young birds also have grey backs. It is the chestnut on the sides of the neck, separated by the rifle-green throat, which will always distinguish both sexes of Blissett's Wattle-eye from the other members of the genus.

Although we know very little about its life-history, it is probable that this is also an inhabitant of second-growth rather than of primeval forest, but it has been noticed in Sierra Leone in a strip of gallery forest in the Konno Division with a large army of high forest birds, so that its absence from the closed rain forest cannot be assumed. Its discovery recently in the undershrubs in primary forest in British Cameroon is of great interest. It certainly occurs in the Ivory and Gold Coasts in dense bush and from localities where it has been obtained cannot be very rare, though doubtless local. They draw attention to themselves by the peculiar noises which these minute balls of feathers are capable of making—sharp whip-cracking sounds and frequent snapping of bills. Their wing-beats, too, are described as extraordinarily loud and harsh. As they chase each other among the bushes they occasionally emit a loud chirp.

The nest and eggs have not been discovered.

Distribution. From Sierra Leone to Togoland and British Cameroon is the range so far recognised of this wattle-eye. In the first-named colony it seems to be rather rare but has been found at Bo, near Kailahun, near Bintumane Peak and on the Sulima River. Gold Coast examples have been secured at Wassa, Aburi, Ejura and elsewhere in "Fanti" and Ashanti, while in Cameroon it has been found at Kumba to specify only localities in British Colonies where it is known to live.

CHESTNUT-BELLIED WATTLE-EYE

Diaphorophyia concreta Hartlaub

The recent discovery of a race of this bird (first described from the Gold Coast) in Sierra Leone is fully discussed in the eighth volume of my larger work. The typical subspecies *D. c. concreta* is known only from the male, but that is a bird which is recognised by the distinctive colour of the under parts, which are reddish chestnut without any trace of yellow on the belly. The only other wattle-eye

with golden-chestnut under parts is not found west of southern Cameroon.

D. c. concreta is just over 3¾ in. in length, the whole upper parts being dark grey with a greenish-blue gloss; the under parts are reddish chestnut; the throat is paler, dirty white washed with chestnut. The tail is glossy steel-green. The bill measures 12 mm., the wing 57 mm., tail 23 mm. (worn) and tarsus 15 mm.

Judging from the habitat of the subspecies living in Sierra Leone, this must be a bird of the undergrowth of primitive forest, where it has been observed with a bird army, flitting rapidly along through the undergrowth.

As already noted, the female of the typical race has never been obtained, but presumably it will exhibit the same differences from the male as the race discovered in Sierra Leone, *D. concreta lomaensis*. That bird is described in detail in my eighth volume of *The Birds of Tropical West Africa*. The male has the head and upper parts to the rump glossy olive-green, the tail glossy steel-green or blue, the forepart of the throat yellow and from the breast to the flanks golden chestnut. The female resembles the male on the upper parts; the chin is yellow and the whole throat and crop dark chestnut, below which the breast and belly are bright yellow and also the under tail-coverts. The eye-wattles are apple green. The measurements of this race are: Bill 15 mm., wing 59–61 mm., tail 26–27 mm. and tarsus 16 mm. The ovaries of the female were enlarged on 15th April, when it was obtained.

Distribution and Races

D. concreta concreta Hartlaub is known from one bird only, a male shot in Ashanti, Gold Coast.

D. concreta lomaensis Serle is restricted to Sierra Leone, where it has been recorded from York Pass in 1937 and from the Loma mountains, where the type was shot in 1943, a male and a female being secured. The former was a sight record only.

GOLDEN-BELLIED WATTLE-EYE

Dyaphorophyia ansorgei harterti Bates

(see Plate 41, facing page 940)

Two races come within our limits, one in northern, the other in southern Cameroon.

The plumage of this wattle-eye, with its emerald-green eye-wattles, golden under parts, which are washed in the female with chestnut on the breast, and olive-green upper parts, should enable it to be recognised without difficulty, for no other wattle-eye in Lower Guinea approaches it in coloration. It is figured in colour in

this volume so that no further description is necessary. The bill is black; the legs and feet are blue-grey. The measurements are: Bill 13–14 mm., wing 58–62 mm., tail 26–29 mm., tarsus 17–18 mm. In total length it is about 4 in.

It appears, from what little we know of this bird, that it inhabits the closed forest, and from the few specimens that have ever been secured it would seem to be rare. It has been shot in the high forest of Cameroon by natives using bow and arrow, but absolutely nothing is known of its habits.

Distribution and Races

D. ansorgei harterti Bates is restricted to the forests of southern Cameroon. *D. ansorgei kumbaensis* has only recently been described from the Kumba Division of British Cameroon. It is greener than *D. a. harterti* above and the chestnut of the under parts darker in shade and sharply defined from the yellow breast. *D. a. ansorgei* Hart. inhabits Angola; *D. a. graueri* Hart. the Ituri district of the Belgian Congo, and *D. a. silvae* Hart. and van Someren the Kaimosi district of Uganda. All are very rare birds in collections, known from a few examples only.

CHESTNUT-CAPPED FLYCATCHER

Erythrocercus mccallii (Cassin)

(see Plate 40, facing page 931)

Two races come within our limits, the typical form in Lower Guinea, *E. m. nigeriae* in Upper Guinea. The latter is figured in colour in this volume.

This tiny bird, measuring little more than 4 in. in total length, ash-grey above, with bright rufous crown and tail, buff breast and whitish belly, is from all accounts never seen sitting quietly alone on the watch for a passing insect, but will be encountered in a lively little party hunting the undergrowth in the manner of tits. Its rufous crown and tail are the most conspicuous features, and when engaged in an insect hunt the birds keep up a continuous twittering. The light yellow eye will perhaps be noticeable at close quarters. The bill is horn-colour, the legs and feet are brownish-flesh colour. It is a very small bird, with bill 8–9 mm., wing 45–49 mm., tail 40–48 mm. and tarsus 14–17 mm., and the sexes are alike in plumage.

In its movements and habits it resembles the titmice, hunting its prey in little parties of six or eight, chasing the insects among the foliage or darting about in the undergrowth with much fuss and twittering. It is seldom seen to fly out in the open after a passing insect, and is more likely to be observed trooping through the dense

bush, at times joining an éjak, driving through the secondary forest. This little creature is never still for a second, continually turning about and spreading its tail or wing and erecting its small crest.

A nest was found suspended from two small twigs, made of dry leaves with a little down inside and a deep cup. The attachment was assisted by cobwebs. Eggs have not been described. Two nestlings had the mouths bright orange and the margin of the gape yellowish white.

Distribution and Races

E. mccallii mccallii Cassin ranges from the environs of Cameroon Mountain and the Kumba Division of British Cameroon to the Lower Congo. How far east it extends is uncertain.

Another race, *E. m. congicus*, occurs in the eastern Belgian Congo.

In Upper Guinea its place is taken by *E. mccallii nigeriae* Bannerman, which has the rufous of the crown slightly darker, the under parts whitish tinged with yellowish buff and lacking the fawn-coloured throat of the Lower Guinea race. The wing is 47–50 mm. and the tail 43–48 mm. This race probably extends through the whole forest country of Upper Guinea, having now been found in Sierra Leone at York Pass and in the Kambui and Nimmini forest reserves. Examples are also known from western Liberia, the Gold Coast (Kumasi, Goaso and Mampong) and southern Nigeria (near Lagos). It is likely to range throughout southern Nigerian forest country to the border, but which race occurs east of the Niger has not been ascertained.

BLUE FAIRY FLYCATCHER

Erannornis longicauda (Swainson)

(see Plate 40, facing page 931)

Two races come within our limits and a third very close.

This beautiful flycatcher, which has surely earned the right to be called a fairy among birds, is an inhabitant of all our Colonies. It is small in size (7 in. in total length, with wing expanse of 8½ in.) and its colour is light silvery blue (almost grey-blue at certain seasons), becoming whitish on the belly. This bird has a rather long, very broad, graduated tail, the two middle feathers protruding much beyond the next pair; the outermost feathers are on the contrary very short, and the others become longer and longer until the central pair are reached. Once seen, it can hardly be mistaken for any other bird. The male bird constantly spreads wide his fan-shaped tail and when displaying it to the female claps his wings in an agitated manner. The eye is dark brown, the legs and feet are black. Measurements are: Bill 9–10 mm., wing 64–73 mm., tail 77–102 mm., tarsus 17–18 mm.

Shady places in the vicinity of water are beloved by this little bird, which is usually seen in pairs and is seldom still for a moment. It is difficult to conceive anything daintier or more fairy-like than this tiny bird taking up its perch, usually on a branch that overhangs water. The pair seek their food in the vicinity, but usually secure their insect food by searching the foliage of tree-tops. They are great bathers, and from their perch overhanging a pool they will frequently plunge into the water, flying up to some tree-top to dry their feathers. Luckily they are not at all shy and admit of close approach.

These birds may be seen in kurimis and fringing forest in the savanna belt and are widely spread in a great variety of country from the coastal area to about lat. 10° N. The usual notes uttered appear to be in the nature of a gentle twitter, but it has a little song described as fine and sweet like a sunbird's but more varied. Its food consists entirely of small flies.

The nest is made of fine grass fibres, tufts of vegetable down, green moss and lichen attached to the exterior with gossamer and is lined with finest grass heads. The eggs are cream or white, thickly mottled and clouded with lilac and grey, some with yellow-brown spots. Eggs of the typical race measure 15·3–17 × 12·3 mm., and of the Sudan race 16–17 × 12 mm. Two form a clutch.

Distribution and Races

E. longicauda longicauda Swainson is found in the savanna belt from Gambia to Nigeria.

E. longicauda teresita Antinori ranges from Cameroon Mountain to southern Cameroon and then along the northern Congo savanna to Uganda, Kenya and the Bahr el Ghazal, where it was discovered. It is paler blue above and purer white below. The wing measures 62–70 mm., tail 75–102 mm. This race is more frequently found in cleared forest land.

E. longicauda loandae Scl. and Praed, described from northern Angola, may reach the Congo basin. It has the blue of the upper and under parts brighter than in any other race.

CRESTED FLYCATCHER

Trochocercus nitens Cassin

(see Plate 40, facing page 931)

AGAIN there are two representative subspecies in our area, the typical race in Lower Guinea and the other further west, but, as so often obtains, the Lower Guinea form extends into southern Nigeria.

This flycatcher is about 6¼ in. in total length; the whole head and breast of the male are glossy steel-blue, the upper parts of the

same colour and the under parts below the breast light grey. The head is adorned with a short crest and the gape furnished with prominent black bristles. A peculiar feature is the light blue legs. The chief distinction of the female is that it has entirely grey under parts, but, like the male, it has a shiny steel-blue crest. Measurements of the typical race are as follows: Bill 10–13 mm., wing 62–68 mm., tail 65–73 mm., tarsus 14–16 mm.

The Crested Flycatchers in this group are birds of the high closed forest and in consequence are difficult to observe, though a number have been collected. Beyond the forest edge it ventures only into very close dense bush, where it is even more hidden from prying eyes. It is very shy, which makes matters worse.

It has a habit of spreading and slightly raising its broad tail, especially when sexually excited. A bird has been seen to dart round and round in the bush with tail wide spread, making the while a curious rattling sound. It has also been heard to utter four or five high-pitched notes.

No one has ever found its nest, which is likely to be placed high in the forest trees.

Distribution and Races

T. nitens nitens Cassin extends from southern Nigeria (Lagos district) to northern Angola and through the Cameroon and northern Belgian Congo forest to Uganda. Probably also in the main equatorial forest to the Ituri.

T. nitens reichenowi Sharpe ranges from Sierra Leone to Togoland (Misahöhe), where it is found in the primitive forest or dense bush in all political divisions, and appears to have a fairly wide distribution, including Sierra Leone and the Gold Coast.

BLACK-CROWNED FLYCATCHER

Trochocercus nigromitratus nigromitratus Reichenow

Both male and female of this species have the crown of the head dull black without any gloss, the gape furnished with wide-spreading black bristles. The mantle, back and upper tail-coverts are blue-grey; the wing-coverts, primaries and secondaries brown, the coverts with very narrow bluish edges. The tail is brown, the fringe of the outer webs tinged with bluish grey on the basal part of the rectrices. The entire under parts are bluish smoke-grey, including the under tail-coverts, under wing-coverts and axillaries. The eye is brownish black; bill black; legs and feet are purplish-slate colour. The sexes are alike. Measurements are as follows: Bill (male) 11–13 mm., (female) 11–12 mm.; wing (male) 60–64 mm., (female) 57–61 mm.; tail (male) 54–61 mm., (female) 51–55 mm.; tarsus (male) 18–19 mm.,

(female) 16–17 mm. Unlike the last species, it is devoid of gloss, even the black crown lacking any sheen.

From the little we know of this flycatcher it appears in Cameroon to be an inhabitant of the dark forest, the only record from Nigeria having come from a forest reserve.

It builds a nest of moss and cobwebs which it places in the fork of an undershrub in the forest. It lays two eggs 18 × 12 mm., which are said to resemble those laid by *Tchitrea*.

Distribution. The forest country of Cameroon, probably ranging into southern Nigeria, where a bird identified as this species was shot in the Ohosu Reserve, Benin Division of the Benin Province. The skin was lost in transit before I could confirm the identification. It has been found in the Kumba Division of British Cameroon.

WHITE-BELLIED FLYCATCHER

Trochocercus albiventris albiventris Sjöstedt

About 4½ in. in total length, this small sombrely coloured bird may be recognised by its white belly from the other species living at very high altitudes within its range. The description which I gave of it in my larger work is as follows: Crown dull black, gradually shading into slate-grey on the mantle, back and rump. Numerous strong black bristles spring from the gape. Wing-coverts dark brown, narrowly edged with slate-colour. Primaries, secondaries, upper tail-coverts and tail very dark brown. Chin, throat and ear-coverts sooty grey, becoming more slate-colour on the sides of the body and breast. Belly white shaded with grey, the white extending on to the middle of the breast. Under tail-coverts white tinged with grey. Axillaries and under wing-coverts white. Eye brownish black; bill black, base of under mandible whitish; feet black. The sexes are alike in plumage. Measurements are: Bill (male, female) 8–9 mm.; wing (male) 59–67 mm., (female) 58–62 mm.; tail (male) 58–63 mm., (female) 56–61 mm.; tarsus 17 mm.

First discovered at Mann's Spring on Cameroon Mountain, where it lives at an altitude of 7,000 ft. in the cloud forest, *T. albiventris* is strictly confined to the highest forest on the mountains of British Cameroon and to that on Fernando Po. It has not been taken much below 6,000 ft., where, near Kumbo, it was found in a wood partly clothing a ravine, the trees different from those of the forest region and all very gnarled and twisted with age. It is described as being an inquisitive, restless little bird and has been heard to utter a hesitant song. Its call-note is a sharp *pink*. A nest discovered in the Cameroon Mountain forest at 6,000 ft. on 29th November was a beautiful compact cup built in the upright fork

of a sapling 3 ft. from the ground. Made externally of moss, internally of plant-down, it was lined with fine grass-stems and decorated on the outside with lichens. The whole was bound to the supporting fork by gossamer. Two eggs, creamy white in ground colour, have markings of various shades of brown forming a solid wreath at the broadest diameter, the rest of the shell being sparsely spotted and speckled with yellowish brown. Two eggs in this nest measured 16·8 × 12 mm. and 16·9 × 12·2 mm.

Distribution. Cameroon Mountain and Cameroon highlands (Bamenda, Kumbo, Lake Oku), Mount Kupé, Mount Manenguba, also on Fernando Po (Santa Isabel and neighbouring peaks).

Key to the Paradise Flycatchers in the genus Tchitrea

1. Under parts white .. .. *Tchitrea atrochalybeia* ♀, p. **957**
   Under parts not white 2
2. Entire plumage black glossed with dark blue or steel-green 3
   Plumage not entirely black glossed with blue or green .. 4
3. Margins of wing-feathers white *Tchitrea viridis viridis* (black phase) ♂, p. **950**
   No white on wing-feathers or anywhere else in the plumage .. .. .. *Tchitrea atrochalybeia* ♂, p. **957**
4. Upper parts of body white or with considerable mixture of white in body plumage *Tchitrea viridis viridis* (white phase) ♂, p. **950**
   Upper parts without white in plumage except perhaps on margin of wings and coverts 5
5. Upper parts (except head) grey *Tchitrea tricolor tricolor*, p. **956**
   Upper parts (except head) chestnut, orange-rufous, rufous or brown 6
6. Under parts (except throat) chestnut, orange-rufous or rufous 7
   Under parts not chestnut or rufous 11
7. White margin to secondary quills and usually to some of wing-coverts; crown with rather long crest *Tchitrea rufiventer* ♂, p. **954**
   No white margin to any wing-feathers 8
8. Mantle olive-brown tinged with rufous contrasting with rufous rump and upper tail-coverts *Tchitrea smithii fagani*, p. **955**
   Mantle chestnut or orange-rufous not contrasting with rump and upper tail-coverts, which are the same colour as back 9
9. Tail greyish black .. .. *Tchitrea smithii smithii*, p. **956**
   Tail chestnut, rufous or orange-rufous 10

10. Plumage (except head) bright orange-rufous; feathers of crown short, not noticeably crested
Tchitrea nigriceps nigriceps, p. 954
Plumage (except head) dull chestnut; crown feathers rather long, forming short crest *Tchitrea rufiventer* ♀, p. 954
11. Secondary quills, and usually some wing-coverts, edged with white. Tail-feathers also sometimes with some white, otherwise all chestnut
Tchitrea viridis viridis (chestnut phase) ♂, p. 950
No white in wings or tail 12
12. Under tail-coverts white or white tinged with buff
Tchitrea plumbeiceps, p. 952
Under tail-coverts not white or pale buff 13
13. Under tail-coverts deep chestnut or orange-rufous .. 14
Under tail-coverts grey or pale chestnut
Tchitrea viridis viridis ♀, p. 950
14. Upper parts chestnut
Tchitrea melampyra and *Tchitrea batesi*, pp. 952, 953
Upper parts bright orange-rufous .. *Tchitrea batesi*, p. 953

A review of the plumage variations in the Paradise Flycatchers will be found on pages 294–96 of my fourth volume of *The Birds of Tropical West Africa*. There is not space here to enter into a discussion on this vexed subject in this handbook, in which I wish to depart as little as possible from the work quoted.

It has been suggested that mutation is the most probable explanation of some of the named forms of Paradise Flycatchers, and the writings of Professor Erwin Stresemann and of Doctors James P. Chapin and Finn Salomonsen should be consulted in this connection.

PARADISE FLYCATCHER

Tchitrea viridis

In the coloured plate 11 in vol. iv of *The Birds of Tropical West Africa* the two right-hand figures represent two colour phases exhibited by *T. viridis*, and many others are known and are described in some detail in the larger work, to which I must refer the reader. It is impossible here to define them more precisely for want of space. Birds in the same area in full adult plumage will be found, some with chestnut backs and chestnut tails, others with chestnut backs and white tails. Some, again, have black and white backs and white tails, or black backs and black tails. Also there are birds with black, white and chestnut in the same tail. Then again there are many with a varying amount of white in the wing, others without any trace of white. In fact, there seems no end to the combination of chestnut, black, and white exhibited in the plumage. The various

attempts to correlate these variations with locality have, for the most part, broken down.

The Paradise Flycatcher has a body about the size of a Spotted Flycatcher (about 3 in. from the bill to the root of the tail); the central tail-feathers of the full-plumaged male may then extend a further 10–12 in. The crest is highly glossy deep blue or bluish green. In most birds a varying amount of white is present in the wing which is very noticeable in flight. In some birds the upper parts are mainly bright chestnut, in others white; in others it may be mottled chestnut and black or black and white, while the elongated tail-feathers may be any one of these colours or a combination of them; the under parts are mainly slate. The females and young males lack the long tail-feathers and are chestnut above and slate below, with dark blue head. The measurements are as follows: Bill 12–15 mm., wing 73–88 mm., middle tail-feathers (male) in breeding dress 205–316 mm., in non-breeding dress 80–115 mm.

This very widely distributed, and consequently well-known, bird has a varied habitat, occurring not only in the high forest trees, kurimis and fringing forest, but ranging far into the open woodland wherever creepers and dense undergrowth are found. It may be observed in rubber plantations in Cameroon, in thick bush near water in Gambia and in all manner of country in between, penetrating in Nigeria to within thirty miles of Sokoto town, well within the semi-arid belt. During the rains there is probably a northward movement of these birds, which are certainly more in evidence in Gambia at that season than in the summer. In the early rains the birds set about nesting operations.

The long streamer tails draw attention to the males, whose flight is more bouncing than that of their shorter-tailed mates. The cry is a low buzzing chirrup, but there are many other calls as well, and some are mentioned in my larger work.

The exquisite nests are usually built in the fork of some twig in the forest, not many feet above the ground. They are tiny, cup-shaped structures but made without any moss. Both sexes take part in incubation. Two eggs are laid, creamy white, spotted with shades of red, chiefly at the broad end. They vary in measurements, e.g. 17–20 × 12·5–15 mm.

Distribution and Races. The greater part of Upper Guinea is inhabited by a chestnut-backed bird, ranging from Senegal to northern Nigeria (Niger and Plateau Provinces) and probably northern Cameroon, across the dry belt of Central Africa to the Nile Valley. This is typical *T. viridis viridis* Müller, described first from Senegal.

In the moister coastal area from the Ivory Coast to Gaboon and the Belgian Congo a race named *T. viridis speciosa* (Cassin) occurs. It is mainly black, white and chestnut, black and white, or blue-black

and chestnut. In my larger work I united it with the typical subspecies, but modern opinion favours the retention of both races.

In eastern Africa other forms are found, of which *Tchitrea ferreti* Guerin, described from Abyssinia and ranging to Uganda, is the most widely spread. Where these races meet, intergradations are found.

ANGOLAN RED PARADISE FLYCATCHER

Tchitrea plumbeiceps Reichenow

CHESTNUT above except for the steel-blue crest and grey neck, with an entirely chestnut tail and long central streamers, and grey below, this Paradise Flycatcher will not be confused with any other ranging between the Congo and southern Cameroon, unless it be for a bird in the all-chestnut phase of *T. viridis*, which in Cameroon is very rarely met with. From that species the long-tailed male would at once be recognised by the chestnut wings without any white in them, for in *T. viridis* they are edged broadly with white. *T. plumbeiceps* also has a greyer head. The two birds are alike in size. The females of the two species are, of course, so alike as to be indistinguishable from one another in the field. *T. plumbeiceps* has a wing of 73–86 mm., middle tail-feathers of male 267–334 mm., of female 79–90 mm.

Distribution. This is an Angolan species which has occasionally been taken in southern Cameroon, and is perhaps a migrant so far north. It has not, so far as I am aware, been recorded from the country between Landana and Bitye in southern Cameroon, but has twice occurred at the latter locality. In the south it ranges from Angola and Damaraland across Africa to Nyasaland, Northern and Southern Rhodesia, the Transvaal and the Zambesi valley.

RUFOUS-VENTED PARADISE FLYCATCHER

Tchitrea melampyra Verreaux

I NOW favour the view that *Tchitrea batesi* can no longer be considered a race of *T. melampyra*, as I have listed it in my larger work.

The adult male of the latter species has the entire head deep glossy blue, sharply defined from the rest of the upper parts, which are entirely bright rich chestnut, including the whole of the tail and central rectrices, as well as the wing-coverts, inner secondaries and outer web of the outer secondaries; the rest of the quills and alula are black. The throat is like the crown; breast and sides of body are slate-blue. Under tail-coverts and ventral region are chestnut; under wing-coverts and axillaries bluish grey tinged with pale chestnut. Soft parts are not recorded. The adult female resembles

the male except that the plumage is duller and the gloss on the crown is considerably less and more inclined to steel-green. The measurements are as follows: Bill (male) 12–14 mm.; wing (male) 73–82 mm.; tail (male) middle rectrices reach 172 mm., next longest 86–90 mm., (female) 75–80 mm.; tarsus 15–16 mm.

Distribution. First described from Gaboon, this bird has now been found to range south to the Lower Congo and northern Angola and west to Nigeria (Fadan Karshi, Plateau Province) and the Gold Coast (Krachi). Examples answering to the description of this bird, with glossy steel-blue heads, have been noted in British Cameroon, distinguishing them from what I now believe to be a distinct species, *T. batesi*.

BATES' PARADISE FLYCATCHER

Tchitrea batesi Chapin

The very bright orange-rufous of the back, wings and rather long tail (up to 4½ in.), contrasting with the unglossy blue-grey head and under parts, and the lack of any white on the wing or tail, should enable this Paradise Flycatcher to be identified, as *T. viridis* often has white in the wing. Compared with *T. melampyra*, Bates' Flycatcher has the blue of the head duller, more of a grey-blue and without gloss. The rest of the upper parts, which in *T. melampyra* are chestnut, are in *T. batesi* bright orange-rufous, including the under tail-coverts. The under wing-coverts are a paler shade of the same colour; the rest of the under parts from chin to abdomen are bluish slate. The eye is dark brown; bill and feet are blue. The female differs from the male in having the upper parts less orange and more rufous; this is easily apparent when comparison in series is made. The blue of the head is likewise slightly less bright in the female bird. The measurements are as follows: Bill 12–14 mm., wing 70–80 mm.; tail (male) central rectrices 84–97 mm., next longest 74–87 mm., (female) 69–76 mm.; tarsus 14–15 mm.

This is a retiring bird which keeps to the forest but otherwise seems to resemble *T. viridis* in habits. It has the same call and song, but in a rather subdued voice. In the Congo it has been seen associating with other insect-eating birds which in mixed flocks wander through the forest, but it avoids the village clearings, keeping to the shady solitudes.

Bates' Paradise Flycatcher builds a cup-shaped nest with fine plant fibres with some moss in the bowl. Two eggs are laid. One type resembles those of *T. viridis speciosa*, but in the other type the markings of chocolate-brown and lilac-grey are smaller. The eggs measure about 19 × 14 mm.

Distribution. Cameroon from Cameroon Mountain to the Ja River district and across the Belgian Congo forest to the Ituri.

RED-BELLIED PARADISE FLYCATCHER

Tchitrea rufiventer (Swainson)

THE status of this flycatcher is uncertain. There is a suggestion of its being a hybrid between *T. viridis* and *T. nigriceps*, but only close observation in the area which it inhabits can settle the question. It is remarkable for the length which the tail attains, the central feathers being sometimes as much as 240 mm. The colour of the body, wings and tail is bright rufous chestnut, the quills being black, some with white outer edges, and a white patch is present on the wing-coverts. The elongated crest and the throat are deep glossy steel-blue. There is considerable variation in the amount of blue on the head; in some examples it is mixed with chestnut, in others it extends on to the neck or crop. The wing measures 78–86 mm. The chestnut chest and belly distinguish *T. rufiventer* from *T. viridis*, with its slate-grey chest and belly.

In the same area we find *T. nigriceps*, another long-tailed bird, rufous orange in colour, with the head almost black glossed with purplish blue and no elongated crest. The males exhibit no white in the wing.

Distribution. Senegal, Gambia, Casamance and Portuguese Guinea, extending as far east perhaps as Kete Krachi, from which a bird resembling it has been seen but not obtained.

BLACK-HEADED PARADISE FLYCATCHER

Tchitrea nigriceps nigriceps (Hartlaub)

THE entire head and throat of this bird are black, the tips of the feathers glossed with deep blue. Feathers of the crown are short, not crested. The rest of the entire body plumage and tail are bright blood-orange-rufous, as are most of the wing-coverts, the outer edge of the secondaries and both webs of the inner secondaries, which have black shafts. The remainder of the quills are black. Axillaries, under wing-coverts and under tail-coverts are like the rest of the body plumage. The eye is brownish black; the bill is blue tipped with black; legs and feet are blue. Measurements are: Bill 13–16 mm.; wing 73–80 mm.; tail (male) central rectrices 148–200 mm., next longest 84–89 mm., (female) 80–88 mm.; tarsus 13–16 mm.

The adult female is not so bright as the male, in particular being less red and more orange-rufous, and the head is blacker without quite such a blue gloss. In addition, the female lacks the elongated central rectrices of the full-plumaged male. A great many males

examined which otherwise appear fully adult have not yet attained the long tails.

Immature males resemble the adult females in being less bright in plumage.

The absence of white anywhere on the wings should enable the male of this species to be recognised from *T. rufiventer*. In addition, the Black-headed Paradise Flycatcher has very little crest. The plumage is much brighter and more orange-chestnut in *T. nigriceps*.

Observations made on this species in Sierra Leone and the Gold Coast point to its wide distribution in those colonies. In the former it was found to be a common bird of the high forest and to a lesser extent of the second growth. It keeps less to the tree-tops than *T. viridis*, being often seen in the undergrowth of the high forest. Usually it is in pairs, and these get their living by driving in a bird army to which they attach themselves.

This flycatcher is very fond of bathing in the secluded forest pools and has been seen to plunge in repeatedly until thoroughly soaked. On occasions they exhibit astonishing bravery and have been observed attacking hawks with great fury, driving them from tree to tree.

Distribution. Ranges from the Casamance River through Guinea and Sierra Leone to the Gold Coast and Togoland, though not yet reported from Nigeria. Numerous localities where it has been taken in British territory are given in my larger work.

FAGAN'S PARADISE FLYCATCHER

Tchitrea smithii fagani Bannerman

THE head, throat and neck of this bird are velvety dark blue, inclining almost to black. The whole of the upper parts, including the wing-coverts, are olive-brown washed with rufous chestnut, becoming bright rufous on the rump and upper tail-coverts. Primaries are blackish, secondaries and major coverts black washed externally with rust-rufous, the outermost washed with rufous on the inner web. The tail is rufous brown, the outer webs browner. The breast and the rest of the under parts, including the under tail-coverts, are orange-sienna, as are also the axillaries and under wing-coverts. The eye is very dark brown; eyelids are dull blue. The bill is blue, with the tip black; legs and feet are blue. The adult female resembles the male, but the head is blacker and has less of a blue gloss. Measurements are: Bill 13–15 mm.; wing 76–81 mm.; tail (male) central rectrices 84–86 mm., next longest 76–80 mm., (female) 82 mm.; tarsus 17–18 mm. The crown of this

flycatcher is blue-black, short and velvety, without any sign of an elongated crest.

Fagan's Paradise Flycatcher has been observed above the dense-foliaged trees near the Iju waterworks, Lagos, but little is known about it.

Distribution and Races

T. smithii fagani Bannerman was discovered near Lagos and has been taken in the Abeokuta Division and also in the Ondo and Oyo Provinces of southern Nigeria.

T. smithii smithii (Fraser) is restricted to the island of Annobon in the Gulf of Guinea. The plumage of the upper parts is brighter, more orange-sienna than brownish-rust colour as in *T. s. fagani*. The wing measures 73–76 mm., tail 74–75 mm. The all-black head in contrast to the body plumage will enable this bird to be recognised in its island home.

Two other races occur close by on the mainland of Lower Guinea—*T. s. schubotzi* on the Ubangi, *T. s. mayombe* on the Lower Congo.

In addition, *T. s. ignea* ranges across the Congo to the Semliki valley.

GREY-BACKED PARADISE FLYCATCHER

Tchitrea tricolor (Fraser)

Two races come within our limits, the typical subspecies being an insular form

It is a very handsome bird, having a glossy dark blue head, without crest, sharply defined from the bright orange-chestnut breast but gradually merging on the nape into the bluish grey of the rest of the upper parts. The tail and upper tail-coverts are slate-grey like the back; the entire under parts are orange-chestnut. The female differs from the male in having all these colours duller and head less glossy. The wing measures 73–86 mm., the central tail-feathers up to 123 mm., but varying considerably.

The bird which inhabits Fernando Po is apt to catch the eye as it flits from one branch to another in the forest glades. It was breeding in October and November. On the mainland occurs a subspecies whose range is given hereafter. It is mainly a forest species but has been noted also in rubber plantations. It may often be seen in company with other insectivorous birds engaged in a communal insect drive through the forest. The song is pleasanter than that of *T. viridis* and extends to more notes.

Nests have been found in shrubs as well as in forest trees, built of fibres and fine rootlets. Eggs have not been described. Breeding seems to take place over most of the year.

Distribution and Races

T. tricolor tricolor (Fraser) is restricted to Fernando Po.

T. tricolor neumanni (Stresemann) differs from the island race in having the under parts more reddish orange and of a deeper tone. The wing measures 69–82 mm. and central tail-feathers 90–122 mm. Its range extends from Nigeria (Ankpa, Abuchi, Owerri) through the Cameroons to Portuguese Congo. It has been found in the interior of the primary forest in British Cameroon.

BLACK PARADISE FLYCATCHER

Tchitrea atrochalybeia (Thomson)

The male is impossible to mistake for any other species. In size it is the same as the other Paradise Flycatchers, but is entirely glossy dark blue with green reflections, probably in life appearing all black unless the light strikes the plumage, which will then be seen to be highly glossy. The crest is short and the tail long (over 6 in.).

The female is so different that it is unlikely to be recognised as such unless the birds are seen in pairs. Only in the glossy steel-blue crown does it resemble the male. The rest of the upper parts, wings and tail are light chestnut, the under parts dull white, and a greyish collar surrounds the neck. The tail is but half the length of that of the male.

The wing measures 75–83 mm., the central tail-feathers 148–171 mm. For a detailed description my larger work must be consulted. It is dismissed here briefly, as it does not occur on the mainland.

Distribution. Almost certainly confined to the island of São Thomé in the Gulf of Guinea. Although the type was said to have been obtained on Fernando Po, that was probably an error.

FAMILY TURDIDAE

Key to the Thrush family (Turdidae), which includes the Wheatears, Chats and Robin-Chats

1. Upper tail-coverts white (or white tinged with isabelline) and sometimes rump white also 2
   Upper tail-coverts and rump not white 3
2. Basal part of tail-feathers white. Wing over 81 mm. in length when folded, tips extending far beyond upper tail-coverts .. .. *Oenanthe* (see separate key, p. 971)

Basal part of tail-feathers black. Wing under 81 mm. in length when folded, tips seldom extending beyond upper tail-coverts *Saxicola torquata salax* and subsp., p. 985

3. Wing-coverts with large white spots caused by white tips to some of the coverts (but not including birds with all-white shoulder-patches) 4
Wing-coverts without white spots 9
4. Tail fan-shaped and tipped with white 5
Tail not fan-shaped and not tipped with white 7
5. Basal half of tail rufous like upper tail-coverts 6
Basal half of tail blackish brown contrasting with rufous upper tail-coverts .. *Erythropygia leucosticta*, p. 1005
6. Crown brown. Breast streaked conspicuously with sepia *Erythropygia leucophrys ruficauda*, p. 1004
Crown sooty. Breast inconspicuously streaked or mottled with grey .. .. *Erythropygia hartlaubi hartlaubi*, p. 1004
7. Breast orange-rufous 8
Breast brown .. .. *Geokichla princei* and subsp., p. 965
8. Cheeks with two black patches separated by pale area; wing under 99 mm. *Geokichla camaronensis camaronensis*, p. 964
Cheeks suffused with black below eye but no black patches; wing over 99 mm. *Geokichla gurneyi crossleyi*, p. 963
9. Both throat and breast either yellow, orange, orange-rufous, or chestnut-orange
Genus *Cossypha*, etc. (see separate key, p. 988)
Both throat and breast neither yellow, orange, orange-rufous, nor chestnut-orange 10
10. Throat white, unspotted 11
Throat not white unless spotted 14
11. Feathers of middle of crown orange-rufous 12
Feathers of crown uniform black or brown 13
12. Mantle and back chestnut; no white on outer tail-feathers .. .. .. *Alethe castanea castanea*, p. 1001
Mantle and back olive-brown, outer tail-feathers with broad white tips .. .. *Alethe castanea diademata*, p. 1002
13. Crown brown uniform with rest of upper parts; tail chestnut .. .. *Luscinia megarhynchos megarhynchos*, p. 1008
Crown blackish or greyish black contrasting with rest of upper parts; tail dark brown *Alethe poliocephala* and subsp., p. 1002
14. Rump* chestnut or rufous 15
Rump* not chestnut or rufous 23

*Care must be taken that the upper tail-coverts are not confused with the rump. The rump in the sense here used does not include them.

15. Large white patch on shoulders 16
No white shoulder-patch present 17
16. Crown black without any white
Thamnolaea cinnamomeiventris bambarae ♂ or *T. c. cavernicola* ♂, p. 981
Crown white or black and white
Thamnolaea coronata coronata ♂, p. 982
17. Middle pair of tail-feathers contrasting in colour with outer ones; size smaller (wing usually under 85 mm.) 18
Middle pair of tail-feathers not contrasting in colour with outer ones; size larger (wing usually over 85 mm.) .. 20
18. Throat and cheeks black
Phoenicurus phoenicurus phoenicurus ♂, p. 1008
Throat and cheeks not black 19
19. Under wing-coverts orange-buff and sides of body washed with same colour
Phoenicurus phoenicurus phoenicurus ♀, p. 1008
Under wing-coverts greyish white; sides of body greyish brown .. .. *Cercomela familiaris falkensteini*, p. 978
20. Tail chestnut 21
Tail black 22
21. Under parts mostly orange-chestnut
Neocossyphus rufus gabunensis, p. 966
Under parts mostly greyish buff *Cichladusa ruficauda*, p. 1003
22. Breast grey .. *Thamnolaea cinnamomeiventris cavernicola* ♀ or *T. c. bambarae* ♀, p. 981
Breast brownish buff *Thamnolaea coronata coronata* ♀, p. 982
23. Throat and cheeks bluish grey 24
Throat and cheeks not bluish grey 25
24. Breast and belly orange-rufous .. *Monticola saxatilis* ♂, p. 969
Breast and belly bluish-slate colour, sometimes with narrow pale tips to feathers
Monticola solitaria solitaria ♂, p. 970
25. Plumage mostly black or uniform slate-colour; no spots or bars on under parts 26
Plumage not black or uniform slate-colour; occasionally with spots or bars on under parts 30
26. Tail exceptionally long and tipped with white; primaries mostly chestnut .. .. *Cercotrichas podobe podobe*, p. 1006
Tail not exceptionally long and not tipped with white; no chestnut in primaries 27
27. White shoulder-patch present 28
No white shoulder-patch present 29
28. Forehead white .. *Pentholaea albifrons limbata* ♂, p. 979
Forehead black .. .. *Myrmecocichla nigra* ♂, p. 984

29. Forehead white .. *Pentholaea albifrons frontalis* ♂, p. 979
Forehead slate .. *Pentholaea albifrons frontalis* ♀
P. a. limbata ♀, p. 979

30. Entire body plumage very dark brown both above and below 31
Entire plumage not dark brown 32

31. Inner web of primaries mostly white
Myrmecocichla aethiops aethiops, p. 983
Inner web of primaries dark brown like rest of plumage
Myrmecocichla nigra ♀, p. 984

32. Under parts uniformly rufous; outer tail-feathers with broad white tips .. .. *Neocossyphus poensis poensis*, p. 968
Under parts not uniformly rufous; no broad white tips to outer tail-feathers 33

33. Size larger (Thrush size) (wing over 100 mm.) 34
Size smaller (Whinchat size) (wing under 90 mm.) .. 37

34. Upper parts uniform brown or olive-brown, some white on belly 35
Upper parts not uniform brown or olive-brown, no white on belly 36

35. Breast and belly barred *Turdus olivaceofuscus* and subsp., p. 963
Breast and belly without bars
Turdus libonyanus and subsp., p. 960

36. Upper tail-coverts orange-rufous; under parts light orange-chestnut with blackish crescentic bands
Monticola saxatilis ♀, p. 969
Upper tail-coverts slate-colour; under parts bluish slate barred with black .. *Monticola solitaria solitaria* ♀, p. 970

37. Upper parts uniform mouse-coloured unstreaked; no white stripe over eye
Cercomela melanura and subsp., p. 977
Upper parts heavily streaked with blackish brown; broad white stripe over eye .. *Saxicola rubetra rubetra*, p. 987

KURRICHANE THRUSH

Turdus libonyanus Smith

No fewer than five races of this thrush (but not the typical subspecies) come within our limits, for which see the final paragraph.

The Kurrichane Thrush is not unlike a female European Blackbird, which it resembles in size, i.e. about 9 in. in total length, with a wing expanse of 13 in. It is olive-brown above, with a heavily streaked throat on a whitish ground, the rest of the under side being whitish except for the dull pale brown breast. The next conspicuous

feature is the bright yellow bill. In flight or when stretching its wing the orange-chestnut of the under wing-coverts and axillaries may occasionally be noted. Unlike our European Thrush, the under parts are uniform when adult, only the young being spotted below. The measurements of the most widely spread of the races, *T. l. saturatus*, are: Bill 18–21 mm., wing 109–122 mm., tail 78–91 mm., tarsus 29–32 mm. The legs and feet are vandyke brown, the bill yellow ochre, becoming brighter yellow in the breeding season. The distinguishing characters of the several subspecies will be mentioned hereafter.

Although less common in the extreme west of its range in Gambia, the Kurrichane Thrush can only be termed an abundant species in Nigeria and the Gold Coast. It is to be met with in many types of country, its habitat not being restricted to forest, bush or mountain. It is most commonly seen in farmland and gardens, lawns and thickets during the breeding season, but when the young are reared the family parties roam further afield and may be encountered almost anywhere in orchard bush, kurimis, in grass woodland and clearings in the forest, and among rocky outcrops.

It seeks its food in typical thrush-like manner—a run forward, then a pause to listen, and so on. Insects and worms form a large part of the menu and berries and fruits in season, especially that of the nim-tree. On the whole it is a timid bird and is usually seen alone or in pairs. Its scolding notes are rather harsh, but it has a decidedly pleasing song which often resounds from all sides from February onwards.

The breeding season in Nigeria and the Gold Coast lasts from April to September, when fresh eggs may be found, that is, mainly during the rains. The cup-shaped nest, composed of dry grass and fine roots lined with fibre, may be placed 10–40 ft. from the ground in all manner of trees, orange and mango being often chosen. The eggs (two or three in the clutch) have a greenish-blue ground largely obscured by spots, freckles and blotches of brown and reddish brown with underlying markings of lavender. Measurements vary, e.g. 22·5–30·7 × 18·7–21·6 mm. A fair average is 25·9 × 20·2 mm. Two clutches are normally laid.

Distribution and Races

T. libonyanus libonyanus Smith is extra-limital, a South-east African species.

T. l. chiguancoides Seebohm ranges from Senegal and Gambia to Sierra Leone, gradually merging between the latter country and the Gold Coast into the next race. The wing measures 112–125 mm., tail 83–95 mm.

T. l. saturatus (Cabanis) ranges from the Gold Coast to the Congo except for a small area inhabited by the two following subspecies. It has a greater amount of orange-chestnut on the sides and the under parts are a little darker. For measurements see above.

Birds from the highest mountain forest of British Cameroon: Banso (6,500 ft.), Manenguba (6,500 ft.), Oku (7,000 ft.) resemble in coloration those from the lowlands.

T. l. adamauae Grote is much paler than the last, especially on the under side, having a very white belly. It is restricted to the lowland part of Adamawa. The type came from Badda.

T. l. nigrilorum Reichenow is a darker shade above than *T. l. saturatus*, the sides being brown without the rufous wash. The wing is 114–120 mm., the tail 77–81 mm. Restricted to Cameroon Mountain (above 2,500 ft.). Examples from Ekoma (1,400 ft.) are assigned to *T. l. saturatus*.

T. l. poensis Alexander is like the Cameroon Mountain bird but more greenish olive above, the breast being of a richer brown shade and less grey. The wing measures 106–114 mm., tail 74–80 mm. Restricted to the island of Fernando Po.

All these thrushes are discussed in much greater detail and their habits defined in my larger work.

In East Africa, the Sudan, Kenya and Uganda *Turdus pelios* Bonap. and its races take the place of *T. libonyanus* of West Africa.

OLIVACEOUS THRUSH

Turdus olivaceofuscus Hartlaub

Two insular races of this thrush are found in our area.

It is a typical thrush in appearance, about 9½ in. in total length. The upper parts, wings and tail are uniform olive-brown; the ground colour of the under parts is white, the throat symmetrically spotted with brown; the breast is more uniform light brown, and the rest of the under parts have narrow crescent-shaped bars of brown on the pale ground. The colour of the bill and legs has not been noted in the typical race, but in the subspecies these are reported to be yellowish. The bill measures 24–26 mm., wing 126–131 mm., tail 84–94 mm., tarsus 38–42 mm.

In its island home of São Thomé the typical race is fairly common and widely distributed.

It builds a flattened cup of roots of ferns, threads of palms and leaves of grasses in which it lays oval-shaped eggs, greenish in colour, irregularly spotted and dotted with reddish brown. The eggs average about 35 × 21 mm.

Distribution and Races. *T. o. olivaceofuscus* Hartlaub is restricted to the island of São Thomé. On the neighbouring island of Principe another form, *T. olivaceofuscus xanthorhynchus* Salvadori, takes its place. It is said to be distinguished from the typical bird by having the dark margins of the belly feathers broader and the pectoral band less uniform. The under wing-coverts are pale rufous. I have not examined an example of this bird, which is not represented in the British Museum.

CROSSLEY'S GROUND-THRUSH

Geokichla gurneyi crossleyi Sharpe

(see Plate 38, facing page 800)

This is a strikingly marked thrush some 8½ in. in total length, the colouring of which is distinctive. The lores and patch under the eye are black; it is russet-brown on the crown, merging into rufous chestnut on the nape and again into russet-brown on the mantle and back; the rump is more rufous and the scapulars tinged with olive. The lesser and median wing-coverts are dark brown with large white terminal spots; the greater coverts are also spotted with white on the outer web. The tail is maroon-brown, and the quill-feathers are brown. The throat and sides are bright orange-chestnut, the middle of the belly and under tail-coverts white. The axillaries are also white. The sexes are alike. The bill measures

20–21 mm., the wing 102–105 mm., the tail 67–70 mm. and the tarsus 33–34 mm.

This is a mountain thrush which bears the name of an early explorer of Cameroon Mountain and is a retiring inhabitant of the high forest. It is evidently a very scarce bird, and those naturalists who have seen it agree that it is exceptionally timid. Its nearest relatives are found in the high mountain ranges of East Africa, Mounts Kenya, Ruwenzori, Kilimanjaro and the Usambaras each having their own specialised form of *G. gurneyi*.

The eggs of the West African bird have never been taken.

Distribution. In West Africa this thrush has been found only on Cameroon Mountain and on Kupé Mountain (4,500–6,000 ft.) in British Cameroon.

BLACK-EARED GROUND-THRUSH

Geokichla camaronensis camaronensis Sharpe

This small ground-thrush is a rather stumpy-looking bird, owing to its short tail and rather heavy bill. It measures from bill to tail under 7 in. The wings, too, are short and rounded, as becomes a bird which spends most of its time on the ground. Its colouring is distinctive—russet-brown above, rich orange-chestnut below and also on the face, upon the sides of which are two striking black patches separated by a narrow band of orange-chestnut. Both the black patches on the face and the white spots on the wings are obvious from the nestling stage onwards. The bill is black; the legs and feet are whitish. Adult examples of this thrush measure: Bill 16–18 mm., wing 94–96 mm., tail 58–64 mm., tarsus 26–28 mm.

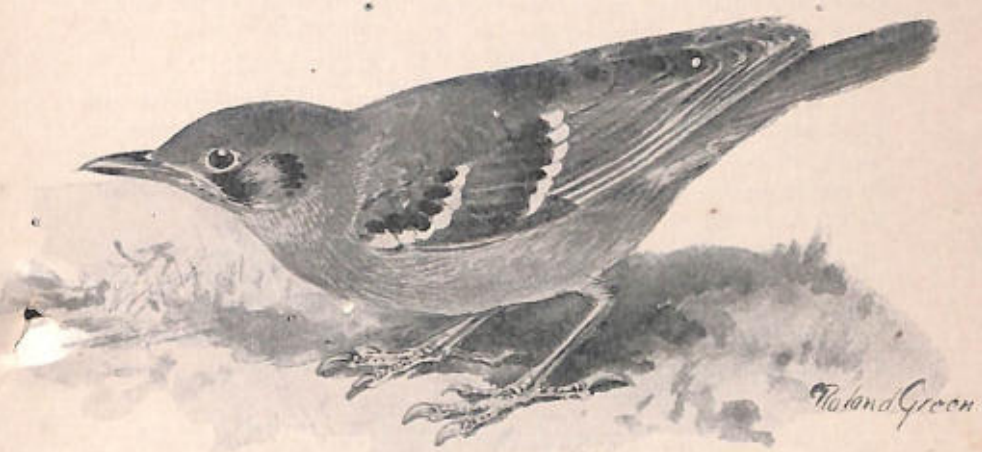
There appears to be nothing exceptional about the habits of this bird, which conform to those of its near relatives. It lives on small snails and insects which it finds in the wildest part of the southern Cameroon forest some twenty-five miles from the coast, where the plateau of the interior falls to the low coastal strip. The only record from further north rests on a head and wing of a bird obtained near Ndian, British Cameroon.

Distribution. British and southern Cameroon, as specified above. The only known relative, *G. c. graueri* Sassi, is an inhabitant of the forest west of Semliki in the Belgian Congo.

GREY GROUND-THRUSH

Geokichla princei (Sharpe)

A RUSSET-BROWN bird about 8¼ in. in total length, with heavy, slightly arched bill and rather short wings and tail. The two black patches on the sides of the dirty-white face and the large white spots on the wing-coverts, arranged in two rows, are the most conspicuous features to look for.



Two races of this thrush come within our limits; the typical race named above is that which is found in Upper Guinea. As ground-thrushes in British territory are so rare, this bird will be described in greater detail than usual. The illustration gives a good idea of its appearance. The following is taken from my larger work. Crown brown, lores and sides of the face dirty-white. Ear-coverts and cheek-patch black, above the anterior half of the eye a white streak. Mantle olive-brown shading into russet-brown on the back and scapulars and becoming more rufous on the rump and upper tail-coverts. Wing-coverts brown, the middle of the feathers darker, the tips of the median and greater coverts broadly tipped with white. Primaries and secondaries brown, a white patch at the base of the inner web of the quills, all the primaries with paler outer margins. Tail reddish-brown, the two outermost rectrices with narrow white tips. Chin dirty-white shading into pale russet-brown on the throat and breast, the former with a slight indication of a narrow moustachial stripe. Middle of lower breast and belly white, shading to russet-brown on the sides of the body. Under tail-coverts white, tinged with russet. Axillaries white at the base, the terminal half

black. Under wing-coverts black at the base and white terminally, the small feathers along the margin of the wing also white. The soft parts are not recorded. In the skin the bill is dark reddish-horn shading into yellowish at the base of the lower mandible. The feet and legs are pale yellowish-flesh colour. Bill 19 mm.; wing 104 mm.; tail 73 mm.; tarsus 33 mm.

Owing to the fact that it keeps to the densest part of the forest, this bird is very seldom seen. It is a ground feeder, living on tiny snails, beetles, grubs, millipedes, spiders and such-like. Even the bones of a small frog have been found in the stomach of the Cameroon race.

Distribution and Races

G. princei princei (Sharpe) lives in the forests of Upper Guinea and has been found in Liberia and the Gold Coast, in the last named at Setwi, and in the mountain forest of Aburi, Akwapim. Its presence in Sierra Leone is suspected but not confirmed. There is no record as yet from east of the Gold Coast of this race.

G. princei batesi Sharpe is barely distinguishable but was described on account of the slightly more olive mantle and less rufous rump. The wing measures 101–110 mm., tail 66–74 mm. It is known from the wild forests of southern Cameroon, the only specimens known having been snared on the forest floor.

CAMEROON RED-TAILED ANT-THRUSH

Neocossyphus rufus gabunensis Neumann

This ant-thrush is about 8 in. in length, its general colouring being rufous, darker above, paler and brighter below. The rump and tail are bright rufous and very striking, the latter in two shades, the three outer feathers on each side being much paler than the inner ones. The rather long tail is a conspicuous feature. Moreover, the tail is the main distinguishing character by which to identify this ant-thrush from a very similarly coloured bird which occurs in the same area, i.e. the Rusty Flycatcher (*Stizorhina fraseri fraseri*). The ant-thrush's tail, remember, is all rufous, though of two shades, whereas in the Rusty Flycatcher the two middle pairs of tail-feathers are dark brown in strong contrast to the outer feathers. In both species the outer tail-feathers are mainly light rufous. In flight the wings of the ant-thrush appear dark brown, almost black, with bright rufous edges to the quills. *Neocossyphus* is very shy, living in undergrowth; *Stizorhina* is a rather tame arboreal species.

There is another ant-thrush (*Neocossyphus poensis poensis*) living in the same country, exactly similarly coloured on the under side of the body, but this bird has the whole of the upper parts slate-brown

with a black and white tail and a rufous pattern on the wings, and is therefore easily distinguishable.

The measurements of *N. r. gabunensis* are: Bill 15–18 mm., wing 108–112 mm., tail 89–95 mm., tarsus 26–29 mm.

Top: Red-tailed Ant-thrush
Bottom: White-tailed Ant-thrush

The forests and coastal bush are the habitat of this ant-thrush, which lives entirely upon insects, among which ants form a large share of its diet. Owing to its extreme shyness, it is seldom seen but may be occasionally heard uttering a harsh grating call of alarm. It is also the originator of a very thin, high, quavering whistle inflected in a minor key, which may sometimes be heard issuing from the bush.

Nothing is known of its breeding habits, but in its mode of life it is likely to resemble the next species to be described, about which we know rather more.

Distribution. From the plains at the foot of Cameroon Mountain this bird ranges throughout the whole of Cameroon to the Ogowé River in Gaboon and probably throughout that country to French Congo. It is likely to occur in the western Congo, but from there I have no details.

WHITE-TAILED ANT-THRUSH

Neocossyphus poensis poensis (Strickland)

In size this bird is similar to the last species described, with dark slate-brown upper parts, a greyish throat, olive-brown breast and rufous belly. The main characteristics are to be found in the wings and tail. The former, when outspread, are seen to be rufous nearest the body and blackish towards the tip. The tail is more striking in pattern, almost black in colour, the three outer feathers on each side being broadly tipped with white. By some curious freak of nature both this and the last species discussed have their counterparts in the family of flycatchers. Finsch's Rufous-bellied Flycatcher (*Stizorhina finschi*), which inhabits the country between Sierra Leone and the Gold Coast, is so like the White-tailed Ant-Thrush (*Neocossyphus p. poensis*) as to be easily confused within that area. The points of difference in plumage have already been mentioned under *S. finschi* on page 924 and need not be recapitulated here. The best guide to identification, or, rather, to save confusion, must be sought in the call-notes and habitat of the two species concerned. The ant-thrush is the darker bird of the two, the tail being almost black, thus in greater contrast to the white tips. The measurements are: Bill 14–16 mm., wing 98–110 mm., tail 80–92 mm., tarsus 25–28 mm.

The primitive forest is the natural home of the White-tailed Ant-Thrush, and wherever the ancient forest has been preserved, there will we surely encounter this bird throughout the whole extent of Upper and Lower Guinea. It is possible to wander for miles in such places without seeing a bird, when suddenly one comes upon a gathering of insect-eating species, or an éjak, working through the undergrowth, among which this ant-thrush is a prominent member. Nearly the whole of its time is spent on the forest floor feeding on termites, and a sure way to discover an army of driver ants is to listen for the cries of the ant-thrushes.

The subject of this essay is a shy, restless bird, constantly flying about through the undergrowth in front of the ants and sometimes dashing up to the tree-tops, from which it may utter its thrice-repeated whistle, *whee-u, wheeu, whéeu.* It has a characteristic habit of raising and depressing its tail, and this is one of the traits which

help to distinguish it from the similarly coloured Rufous-bellied Flycatcher (*Stizorhina*). It will venture out on to the forest paths, and most of the specimens in museums have been secured in such places or snared in the forest in traps baited with termites.

Oddly enough, no one appears to have discovered its nest or eggs, despite its extensive range.

Distribution. From Sierra Leone and French Guinea to the Congo, throughout the whole of the forest area and also in Fernando Po. It is not uncommon, but is seen only by those who penetrate the forests and have sharp eyes. It is recorded in British territory from Sierra Leone, the Gold Coast, Nigeria and British Cameroon.

ROCK-THRUSH

Monticola saxatilis (Linnæus)

(see Plate 42, facing page 984)

The male Rock-Thrush in adult winter plumage is an unmistakable bird by reason of its colouring—blue-grey head, dark slate back with a partially concealed large white patch, blackish wings and orange-chestnut tail and breast. Its total length is about 8 in. and the tail is much shorter than that of a typical member of the Thrush family. Its bill, on the contrary, is slightly longer and finer. The female is not so easily distinguished, being mostly brown above, pale orange-chestnut below, the under parts with black crescent-shaped borders to the feathers, giving a barred effect. Like the male, the tail is orange-chestnut, and this is likely to be the best mark of distinction. The young, with the light spots on the brown upper parts and narrowly black-barred under parts tinged with pale chestnut, are less easily distinguished, but in all cases the orange-chestnut tail seen from above and below is a sure guide to identity. The measurements are: Bill 24–26 mm., wing 114–129 mm., tail 60–70 mm., tarsus 26–28 mm. There is considerable seasonal change of plumage in both sexes; after the end of March the pale tips to the feathers are lost, and the colours are then purer.

This thrush is a winter visitor to West Africa from its breeding area north of the Sahara, and it may be encountered in our area from about the third week of September until the end of March. The males are the first to leave, followed shortly afterwards by the females. The spring passage north is undertaken in more leisurely fashion than the return journey in autumn.

Although we rightly associate this thrush with rocky outcrops and (in West Africa) an environment such as can be offered by the Jos Plateau in Nigeria, the birds may be seen amidst surroundings far removed from what they affect in Europe. I have records of them

being seen in cultivation clearings, on recently burnt ground in the bush, in the desert perched on a stone and in the precipices of some mountain mass. Those birds which reach the west coast are probably those which have bred in Morocco and Algeria, as the main line of migration from Europe is in a south-easterly direction, many more Rock-Thrushes wintering in East Africa than West.

Distribution. South and Middle Europe, breeding as far south as northern Africa and ranging in winter to Tanganyika on the east and Nigeria on the west. It may turn up anywhere within that area and is recorded from all our colonial possessions.

BLUE ROCK-THRUSH

Monticola solitaria solitaria (Linnæus)

THE adult male of the Blue Rock-Thrush is easily recognised by its entirely slate-blue colouring, the body being about the size of a

Song-Thrush. The wings and tail are blackish and, apart from some obscure barring on the breast in winter plumage, this thrush has

nothing very striking about it. The bill and legs are black. The female is browner than the male, particularly on the head and neck, and the under parts are buff, each feather with a blackish sub-terminal bar. The measurements are: Bill 26–31 mm., wing 122–132 mm., tail 81–83 mm., tarsus 28–30 mm. When the summer plumage is assumed, the whole plumage is washed with cobalt blue. In winter the bird looks very dull-coloured in comparison.

This is another winter visitor in very small numbers to the area with which we are concerned, many more visiting the hills and plains of Darfur than ever venture to West Africa. The birds arrive at the end of October and leave again in March for their breeding places in the Mediterranean districts.

In appearance and habits it is very chat-like, usually seeking a rock or stone upon which to settle. It has a melodious song and makes itself conspicuous by its manners. In flight the wings are noticeably pointed, and when on the ground the bird has a very upright stance.

Distribution. Breeding in southern and Middle Europe, the Mediterranean islands and Atlas Mountains, it winters in north-eastern Africa, southern Arabia and the western Sahara and has been recorded from Fort Lamy near Lake Chad, Bamako in the French Sudan, and from Senegal.

Key to the Wheatears (Oenanthe)

1. General colour of plumage blue-black except for rump, vent and (in some individuals) crown, which is white
Oenanthe leucopyga leucopyga ♂ ♀, p. 975
General colour of plumage not black 2
2. With black on throat and/or sides of face 3
No black on throat or sides of face 6
3. Mantle and crown french grey (tinged with brown in autumn) .. .. *Oenanthe oenanthe* ♂ and subsp., p. 972
Mantle and crown not french grey 4
4. Black area of all tail-feathers reaches more than half-way from tip, greatest area being black
Oenanthe deserti ♂ and subsp. ♂, p. 973
Black area of all but central tail-feathers not reaching more than one-third length of feather from tip, greatest area being white 5
5. Crown and mantle washed with sooty grey (occasionally mantle wears white). (*a*) Throat black = Black-throated phase; (*b*) Throat whitish = White-throated phase .. .. *Oenanthe hispanica melanoleuca* ♂, p. 974

Crown and mantle pale sandy isabelline (occasionally mantle wears white). (*a*) Throat black = Black-throated phase; (*b*) Throat whitish = White-throated phase .. .. *Oenanthe hispanica hispanica* ♂, p. **974**

6. Upper parts very dark brown, breast tinged with rufous *Oenanthe heuglini campicolina* ♂ ♀, p. **976**

Upper parts light brown, greyish or sandy isabelline 7

7. Under wing-coverts and axillaries white 8

Under wing-coverts and axillaries mostly dark, sometimes with white fringes 9

8. Outer tail-feathers with more than terminal half black *Oenanthe deserti* ♀ and subsp. ♀, p. **973**

Outer tail-feathers with less than terminal half black *Oenanthe isabellina* ♂ ♀, p. **975**

9. Ear-coverts dark brown, axillaries black

(*a*) Upper parts sandy *Oenanthe hispanica hispanica* ♀, p. **974**

(*b*) Upper parts brown *Oenanthe hispanica melanoleuca* ♀, p. **975**

Ear-coverts light brown, axillaries dusky with broad white fringes .. *Oenanthe oenanthe* ♀ and subsp., p. **972**

WHEATEAR

Oenanthe oenanthe (Linnæus)

Both the Common and the Greenland Wheatear are winter visitors to West Africa, and as the only distinction between them is one of size, it is impossible to determine the origin of a bird in the field.

It is unnecessary to describe its plumage in detail. The white rump and outer feathers of the tail, with the black subterminal band, should, in conjunction with its french-grey crown and back, enable it to be distinguished, but most Europeans will recognise it from familiarity with it as one of our earliest spring visitors to Britain.

It comes to West Africa in September and then it is fairly abundant and generally distributed on the plains and fields, on ground which has been burnt and on any bare stony patches as well as closely pastured land. During the period when the wheatear is most common—from December to March—the crops are gathered from the fields and the bush is practically bare of grass. The fields are the wheatear's chief habitat.

Many birds acquire their summer dress before their departure north, and very lovely they look in their clean grey backs with all trace of the sandy-brown tips gone. The measurements of the two races will be given in the final paragraph.

Distribution and Races

Oenanthe oenanthe oenanthe (Linn.) breeds throughout northern and Central Europe, wintering in Africa south to the borders of the equatorial forest, reaching Kenya in the east and the Cameroons in the west. It is widely spread in West Africa, ascending in the Cameroon Mountain district to 6,500 ft. The wing measures (male) 94–99 mm., (female) 88–96 mm.; tarsus 25–27 mm.

The Greenland Wheatear (*Oe. oe. leucorhoa* (Gmelin)) differs in its larger dimensions, with wing (male) 100–111 mm., (female) 96–104 mm.; tarsus 27–33 mm. On the whole it is darker on the under side. It breeds in Greenland and winters mainly in West Africa, especially in Senegambia.

DESERT WHEATEAR

Oenanthe deserti (Temminck)

This is a desert species with upper parts harmonising closely with the desert soil, the female being most inconspicuous except for the black tail and whiter rump. The male is more easily recognised by reason of the black wings, jet-black terminal half of tail (the base being white) and the black cheeks and throat contrasting with the isabelline plumage of the rest of the body. The black throat stands out conspicuously from afar. A true chat in its habits, it is a species which flies some distance when alarmed, and may be seen perching on small bushes or rocks. In flight the male in particular shows up easily, and the black wings and tail with the white rump are then striking features. The measurements of the typical subspecies are: Bill 12–13 mm., wing 87–93 mm., tail 63–69 mm., tarsus 25–26 mm.

The female is rather greyer and less isabelline on the upper parts than her consort and the rump is less white and more washed with sand-colour. The tail of this wheatear (figured on page 344 of my larger work, vol. iv) is much blacker than the tail of the European wheatear.

It is a true inhabitant of the desert, especially the plains, which are covered with occasional dwarf scrub and a sprinkling of plant life.

It is an early breeder, eggs being laid in March and April. The nest of dry grass is lined with wool or hair and placed in a hole in the ground or at the foot of a desert shrub. Four or five eggs are laid, greenish blue spotted with violet and reddish brown. They average about 19·92 × 14·9 mm. in size.

Distribution and Races

Oenanthe deserti deserti (Temm.) is resident in Egypt east of the Nile, in Sinai and Palestine, and has been recorded from as far south in the Sahara as Aïr.

Oenanthe deserti atrogularis (Blyth) is somewhat darker on the upper parts. It breeds from the Caspian Sea to Turkestan and winters in India and Africa, chiefly the north-east, but has been recorded from Lake Chad.

SPANISH WHEATEAR

Oenanthe hispanica (Linnæus)

Not only are there two races of this wheatear—a western race (*Oe. hispanica hispanica*) and an eastern race (*Oe. hispanica melanoleuca*), but the species is dimorphic, each race having a black-throated form and a white-throated form which were at one time considered to represent two distinct species.

In colour the crown and back of the western form are warm cinnamon-buff, the rump being white. In strong contrast are the black wings, black cheeks and sometimes black throat, and black and white tail, with the two middle tail-feathers black, the remainder white with black tips. The entire under parts are white tinged with buff except in the black-throated form, when the throat alone is black. Bill, legs and feet are black. Measurements of the typical subspecies are: Bill 12–13 mm., wing 87–93·5 mm., tail 58–66 mm., tarsus 22–24·5 mm. The distinctions between the eastern and western races will be given in the final paragraph.

The complicated plumage changes and other facts of interest are discussed in detail in my larger work, to which reference is given above.

Neither of the races mentioned above breed within the limits embraced by this handbook, but both have been found in the desert area of West Africa in winter. The western race is no doubt far the commoner and may be looked for along the borders of the Sahara and in the French Sudan from late September onwards. In its habits it is like all the desert chats, which add such an interest and charm to the waste places of the earth. The birds pass north again through Morocco in March and April, quite a number remaining to nest in the country between the Great Atlas and the Mediterranean, others crossing the sea to breed in southern Europe.

Distribution and Races

Oe. hispanica hispanica (Linn.) is restricted as a breeding bird to southern France, Portugal, Spain and Italy, and in northern Africa from the Great Atlas to Tripoli. It winters in West Africa but has

not been taken south of Gambia or the country within the great bend of the Niger.

Oe. hispanica melanoleuca (Güldenstädt) is more greyish brown above, lacking the sandy colour of the western race. A narrow black frontal band is present and in the black-throated form the black extends further down, covering the whole throat. The wing measures 87–96 mm. This eastern race breeds in southern Russia, western Persia, Asia Minor and Palestine, wintering mainly in East Africa as far as Darfur and French Niger territory, the latter being the only country within our limits, where it has been found at Tillia and Tazza Wells.

WHITE-RUMPED BLACK CHAT

Oenanthe leucopyga leucopyga (Brehm)

This chat, about 6¼ in. from bill to tail, is entirely black in colour except for a white rump and often a white or piebald (black and white) crown. The wings are black, and the tail is mostly white save for the two middle feathers which are black and some black marks near the tips of the outer feathers. The ventral region is also white, as can be seen when the bird takes wing. Though the bird is usually absurdly tame, its habitat within our area is restricted to a desolate rock-strewn area in the southern Sahara. The bill, legs and feet of this chat are black and its measurements as follows: Bill 14–15 mm., wing 92–107·5 mm., tail 60–72 mm., tarsus 25–27 mm.

Distribution. Northern Sahara south to the Tuareg country, Air and Bilma, the Sudan and Darfur. How far west the bird ranges in the Sahara is not known, but there is nothing to prevent it being found within our limits in the true desert. It is a species which can accommodate itself to any environment but is associated chiefly with dry nullahs, desolate ravines and rock-strewn country such as abounds throughout the Sahara. Its nesting and other habits are described in my larger work.

ISABELLINE WHEATEAR

Oenanthe isabellina Temminck and Laugier

The Isabelline Wheatear, as its name implies, is entirely of that colour, harmonising so closely with the earth that it is exceedingly difficult to observe unless the eye lights on the white at the base of the tail, which as often as not is hidden by the wings. In flight this wheatear has not the contrasting black wings of so many of the

wheatears, and in the field it appears a fairly large example of its family. Size, in fact, is the only distinguishing feature between it and the female Desert Wheatear, which it so closely resembles in plumage. The white under wing-coverts are unfortunately present in both birds, so that even in flight there is little to choose between them, relative size being an impossible guide to identity in the field. The bill, legs and feet of this wheatear are black. The bill measures 14–15 mm., wing 94–106 mm., tail 56-62 mm. and tarsus 29–33 mm.

The Isabelline Wheatear is a winter visitor to a restricted desert area of West Africa, and not until recent years was the discovery made that it migrated so far west as to reach the vicinity of Timbuktu. It does not breed anywhere in Africa. It was found to be one of the commonest of the wheatears at Taberréshat in October, when they were seen to be perched on a stone or little bush in the barer parts of the sandy desert. It is a true desert species, more so than any of the species we have been discussing.

Distribution. Breeds in south-eastern Russia, Asia Minor and from Syria to Mongolia, wintering in India and Africa, mainly in the eastern half of Africa, but also in the western Sahara.

NIGERIAN RED-BREASTED CHAT

Oenanthe heuglini campicolina (Reichenow)

The dark brown upper parts and the strong rufous tinge of the breast are more or less distinctive; only a small area at the base of the tail is white, caused by the white upper tail-coverts, the rump being dark brown like the back. In flight the tail appears about two-thirds black from the tip, the basal portion being white, but with the white upper tail-coverts added, the black and white would doubtless appear evenly proportioned. At close quarters the white line above the eye may be seen. It is a small chat (about 5½ in. in total length) and has a predilection for burnt-up fire-blackened country. Bill, legs and feet are black. The bill measures 11–13 mm., wing 82–92 mm., tail 47–57 mm., tarsus 26–28 mm. In flight the entire wings appear dark brown, the coverts and secondaries broadly, the primaries narrowly, edged with sandy brown.

This chat is a resident bird in West Africa, inhabiting a wide stretch of country but showing a marked preference for plains and hillsides upon which the grass has been recently burnt. The same choice of habitat is evinced by the typical subspecies in the Sudan.

In January the birds may be seen hovering in the air and singing, now and then alighting on a termite's mound or stump, from which they mount again to continue their nuptial flight. It has been seen

to perch on trees, differing in that respect from the wheatears. These chats are subject to seasonal movement nearer the desert when the rains set in, and we know very little about their migrations.

Pairs of Red-breasted Chats were found nesting in the Plateau Province of Nigeria, not necessarily near burnt ground, and all ten nests located were placed underground in a hole of some burrowing animal. The nest is of coarse grass, lined with finer grass and fur, and is usually placed at a depth of 2–3 ft. from the entrance. Two broods are normal. Three or four eggs are laid and are palest blue in colour, measuring 21–21·5 × 15 mm.

Distribution and Races

The Red-breasted Chat is separated into two races on rather poor characters. The typical subspecies, *Oe. heuglini heuglini* (Finsch and Hartlaub) ranges from the Nile Valley to Darfur and has been recorded from Kavirondo.

In the west we have *Oe. heuglini campicolina* (Reichenow), which extends from northern Cameroon and Ubangi-Shari westwards through northern Nigeria, French Niger and French Sudan to the great bend of the Niger.

BLACK-TAILED ROCK-CHAT

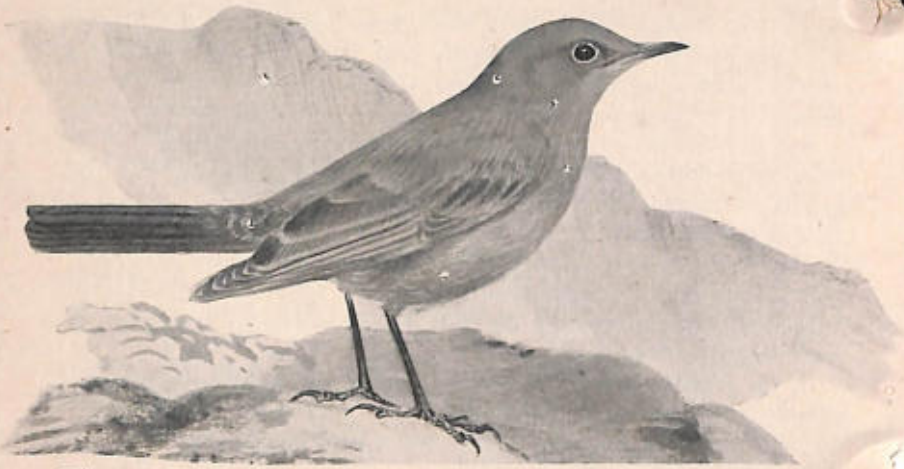
Cercomela melanura (Temminck)

ALTHOUGH the typical race of this rock-chat is a native of Arabia and Palestine, it has three representative races in Africa, two of which come within our limits, while the third ranges from the Red Sea Province to Somaliland. It is noteworthy that as they have progressed westwards they have become darker in plumage. In appearance it is more like a redstart than any chat we have so far dealt with. In total length it measures about 5½ in. and is greyish brown in colour with rather a long narrow bill and black tail. The chin and throat are greyish white merging on the breast into pale cinnamon-buff, the belly being whiter. Both under tail-coverts and axillaries are white, and there is a narrow white edge to the wing on a line with the shoulders. Bill and legs are black. Measurements of the Niger race are: Bill 12–13 mm., wing 71–85 mm., tail 52–55 mm., tarsus 23 mm.

The Black-tailed Rock-Chat is an inconspicuous little bird which inhabits the bluffs of the Niger and the bare rock and sides of ravines in the mountain districts of the southern Sahara, perching on bushes when these are present but often taking cover by running into the crevices of the rocks. In the breeding season (May to July) these rock-chats flit nervously about, frequently opening and shutting

the tail and occasionally giving vent to a sweet but unvaried little song.

Nest and eggs have not yet been found.



Distribution and Races

The Niger Rock-Chat (*Cercomela melanura ultima* Bates), which is characterised by the rusty tinge on the brown upper parts, inhabits the bluffs of the Niger in French Niger territory and French Sudan.

Its place is taken further east by the Asben Rock-Chat (*C. melanura aïrensis* Hartert), which inhabits the country from the Aïr Massif to Darfur and Kordofan, where it approaches the paler Eritrean race, *C. m. lypura*.

RED-TAILED CHAT

Cercomela familiaris falkensteini (Cabanis)

(see Plate 42, facing page 984)

In appearance and size this bird is very like the Black-tailed Rock-Chat recently described, brown above and greyish below, with whiter throat and belly. It has one very distinctive feature, however, in its bright rusty-rufous rump and tail, the latter when spread showing black tips to all but the two central feathers, which are black. It lacks the white at the bend of the wing of *Cercomela melanura* but has the same chocolate-brown ear-coverts. The primaries, secondaries and wing-coverts are dark brown, narrowly edged with rufous brown. The under tail-coverts vary from buff to cinnamon. Bill, legs and feet are black. The bill measures 12–13 mm., wing 74–85 mm., tail 50–60 mm. and tarsus 22–24 mm.

This is one of the characteristic birds of the rocky granite outcrops which are such familiar features in northern Nigeria, and there the Red-tailed Chat may be seen in the wooded ravines or among the trees in the boulder-strewn ground at the base of the hills. It is not found on the barren summits. It also frequents the surrounding cultivation, acha or millet patches or yam mounds, but wherever it is found there is sure to be a hill close by. Such is its habitat in the Plateau and Benue Provinces of Nigeria, but we hear of it again in the neighbouring Gold Coast and on the high plateaux of the Cameroons and again in the grasslands of French Cameroon. Everywhere suitable kopjes are essential to its habitat.

These chats may be seen in small parties of three to five individuals, which are not necessarily family parties. The birds call to one another at intervals of two or three seconds—a shrill, quickly uttered whistle of *sweep-sweep-sweep*, with intervening noises like the creaking of a bough.

The nest is usually tucked away under a stone or rock and is snugly built into any handy cup-shaped cavity, more rarely in the hole of a rest house or other building where a brick has become displaced. The nest is lined with hair and feathers and may be fairly large. Four eggs complete the clutch, and these are deep blue with red-brown markings. An average measurement is 19 × 15 mm.

Distribution and Races

C. familiaris falkensteini (Cab.) ranges from the Gold Coast and northern Nigeria to Portuguese Congo and the high plateaux of northern Cameroons east to Uganda, Nyasaland, Tanganyika, Northern Rhodesia and Portuguese East Africa.

A number of races of this chat have been described, the typical subspecies being the South African representative. *C. f. angolensis* Lynes was described from Angola, and three other subspecies are recognised in Africa and one in Yemen.

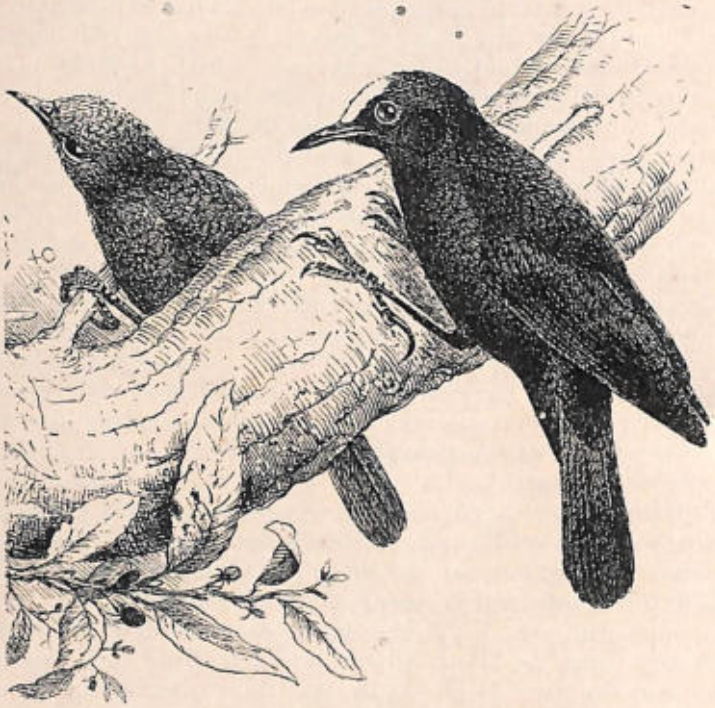
WHITE-FRONTED BLACK CHAT

Pentholaea albifrons frontalis (Swainson)

Two races of this chat come within our limits; the above-named is that which occurs in all political divisions in West Africa except in the grasslands of northern Cameroon, where a representative race with a white shoulder-patch takes its place (see Distribution).

Its plumage is black, including the head except the forepart of the crown, which is white. Wings and tail are also black. The bill measures 12–14 mm., wing 73–82 mm., tail 49–56 mm. and tarsus 23–25 mm.

It is locally distributed, frequenting the cultivated clearings during the rains and moving into the burnt, bare, stony savanna in the dry season. It is frequently encountered in Gambia on the burnt tree-trunks on cultivated land and is certainly more common in that colony during the winter. In the Niger, Benue and Plateau Provinces of Nigeria it may be seen in pairs in the orchard bush and



will sometimes indulge in a burst of song accompanied by a flicking of the tail. The usual note is a monosyllabic *tweet*, but if alarmed a string of chattering notes will be uttered. I have records of this chat from the Benin and Owerri Provinces of Nigeria, and in the north it is frequently met with as far as lat. 9° 30′ N.

It breeds in the Northern Territories of the Gold Coast and doubtless everywhere on that latitude in January and February, building a nest of dried grass which it places under the shelter of large boulders. The eggs have not been described.

Distribution and Races

P. albifrons frontalis (Swainson) occurs over the whole area from Gambia to northern Angola, no doubt to Senegal also in winter. It is locally distributed in all British Colonies, ranging eastwards to the French Sudan.

P. albifrons limbata (Reichenow) is a well-marked race with a white shoulder-patch, the lesser wing-coverts white, or black fringed with white, and the inner greater coverts tipped with white. The wing is 74–79 mm. and the tail 48–52 mm. This race inhabits the grasslands of northern and eastern Cameroon and the Ubangi-Shari, another subspecies, *P. a. clericalis*, being found in the Upper Uelle district.

BAMBARA CLIFF-CHAT

Thamnolaea cinnamomeiventris

THERE are two local races of this cliff-chat in our area separated by an area of 300 miles, both races living an entirely isolated existence, which accounts for their differentiation.

The bird which has been named *T. cinnamomeiventris bambarae* has the sexes unlike each other, the male being a handsome creature in

jet-black body plumage with pure white shoulders and a chestnut rump and belly. The female is less conspicuous, being slate-grey in place of black and without the white shoulder-patches. In total length this bird measures 8 in. Measurements are: Bill 15–19 mm., wing 102–111 mm., tail 93–98 mm. and tarsus 28–31 mm. It has a habit of slowly waving the tail up and down. The eye is dark brown; the bill, legs and feet are black.

The Bambara Cliff-Chat was discovered at the great Bird Rocks near Kulikoro on the Upper Niger, and at the far end of what may perhaps have once been the same range another race was discovered inhabiting much the same terrain, though divided by a wide stretch of dry flat country.

In my account of this bird in my larger volumes I borrowed from what we know of the typical subspecies in the mountains of Tanganyika, for naturalists in our particular area have had little opportunity to study either of the West African forms.

All agree that it is an extraordinarily attractive bird, living entirely in the broken rocks in which it builds its nest, sometimes utilising the nests of other birds, such as swallows' nests plastered on the cliff face, within which to make its own of roots, leaves and twigs. It seldom perches on a branch and is generally to be observed hopping over the rocks, disappearing quickly into a crevice when alarmed, as it is peculiarly shy. It has a beautiful whistle and has been heard to warble a little song as well as a harsh *krek* of alarm. Always active, they fly with undulating flight but seldom for any distance, preferring to seek cover in the burrows of hyraxes and in the cracks among the rocks.

Distribution and Races

T. c. bambarae Bates is only known from Kulikoro, near Bamako, on the Upper Niger.

T. c. cavernicola Bates inhabits the cliffs of Fiko, French Sudan, 300 miles north-east of Kulikoro. It differs in having the white shoulder-patch more extensive and the rufous on the rump and under parts of a brighter shade, extending further up the back. The wing measures 106–116 mm., tail 93–102 mm. The shade of the chestnut in the female is the same in both races.

WHITE-CROWNED CLIFF-CHAT

Thamnolaea coronata coronata Reichenow

(see Plate 42, facing page 984)

This fine cliff-chat, which has the appearance of a rock-thrush, is a conspicuous bird, particularly the adult male, which measures 8 in. from bill to tail. With glossy blue-black plumage above, chestnut

rump, white (or black and white) crown, black wings and large white shoulder-patches, which last are very noticeable among the rocks, it cannot easily be mistaken for any other species unless it be for the Bambara or Fiko Cliff-Chats, which, however, do not occur (so far as we know) in the same area. In any case the latter have no white on the crown. Below, the White-crowned Cliff-Chat has a glossy blue-black throat and breast, chestnut belly, tail half black and half chestnut, the terminal half being black. The female is browner above and chestnut below, the wings black, the lesser and median coverts edged with grey. There is no white shoulder-patch and no white on the crown, which is slate-grey tinged with brown. The wing measures 104–116 mm., tail 85–92 mm., tarsus 28–31 mm. The eye is brown; bill, legs and feet are black.

This is a very locally distributed species in our area and is never seen away from rocks; kopjes, boulder-strewn slopes and precipices are its home, and here it may be seen, when present, in some numbers. On the large rocky outcrops, so familiar in northern Nigeria, these cliff-chats are far from easy to approach; always on the alert, the birds perch for a second on some exposed boulder, only to fly to a fresh position at the first sign of an intruder. It reminds one of a rock-thrush when in flight and has, in addition to a mournful pipe, a loud clear whistle.

No one has yet succeeded in finding a nest of this cliff-chat, so that its eggs still remain to be described.

Distribution. Extends from the frontiers of former German Togoland, through northern Nigeria to northern Cameroon in the vicinity of the Bamenda-Kumbo highlands. We find it again in Darfur, ranging to Jebel Marra, but in Kordofan its place is taken by a subspecies, *T. coronata kordofanensis*. In Nigeria it is most commonly seen on the precipices and outcrops in the Bauchi, Niger and Plateau Provinces and is to be encountered frequently in similar environment in the Kukuruku Division of the Benin Province.

ANT-CHAT

Myrmecocichla aethiops aethiops Cabanis

(see Plate 42, facing page 984)

This is a stumpy-looking bird, altogether more squat and less elegant than the cliff-chats. Its entirely dark-brown plumage appears almost black in life, but when the bird flies the large white patch on the wings is conspicuous. Both bill and feet are black. In total length this species measures 7½–8 in. from bill to tail. The eye is dark brown. The wing measures 108–115 mm., tail 67–76 mm. and tarsus 33–36 mm.

Like the last bird described, the ant-thrush is local in its distribution, though its range is a very wide one. It is to be found in open country and is especially fond of pits and hollows, but there are wide areas, which are unsuitable to it, from which it is absent. Along the borders of the desert it is a familiar bird where old artificial wells have been sunk, in the holes of the sides of which the ant-chat makes its nest. Clay and sand pits are also much favoured, and the ant-chats are believed to excavate these for themselves. One tunnel ran for 6 ft. into the earth and, as with the holes in wells; was also used for roosting purposes. If telegraph wires are in the vicinity, the ant-chat will use them as a perch. Its voice is thoroughly pleasing and attracts immediate attention as it utters its piping whistle: *ee-ju*, *ee-ju* or *fee-chu*, *fee-chu*. Sometimes a number of birds will all call in unison.

The breeding season is in the early summer and courting takes place in May. Curiously enough, their eggs do not appear to have been described. They may be expected to lay from mid-June onwards.

Distribution. From Senegal and Gambia through the French Sudan and French Niger to Chad and Damergu and in the Northern Provinces of Nigeria and the Upper Volta country of the Gold Coast. Southward it ranges to northern Cameroon, but its range is restricted roughly to the country lying between the 10th and 18th parallels.

In the Anglo-Egyptian Sudan its place is taken by *M. aethiops sudanensis*.

SOOTY ANT-CHAT

Myrmecocichla nigra (Vieillot)

THE entire plumage of the male of this ant-chat is glossy black except for the large white shoulder-patch formed by the white lesser and median coverts. Wings and tail are also black and also the bill, legs and feet. The adult female has the whole plumage dark brown and lacks the white shoulder-patch of the male. In total length the Sooty Ant-Chat is 6½ in. The wing measures 91–100 mm., tail 55–61 mm. and tarsus 29–32 mm. The only species with which the female may be confused is *M. aethiops*, but the Sooty Ant-Chat is decidedly smaller. The male Sooty Ant-Chat is unmistakable.

It is a tame little bird, restricted to the savannas and grassy plains, where it is a familiar object perched on the summit of an ant-heap. It has a little thrush-like song which is quite pleas[ing] to the ear, though not very sweet. Often it may be encountered on roads and bush paths in the country which it inhabits, but from all

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RED-TAILED CHAT.
Cercomela familiaris falkensteini.

WHITE-CROWNED CLIFF-CHAT.
Thamnolaea coronata coronata ♀ & ♂.

ANT-EATER-CHAT.
Myrmecocichla aethiops aethiops.

ROCK-THRUSH.
Monticola saxatilis.

NIGERIAN WHITE-CROWNED ROBIN CHAT.
Cossypha albicapilla giffardi.

accounts it is much less numerous in West Africa than in Uganda, to which it ranges via the Upper Congo savanna. It has been observed in pairs and parties in the tree-dotted savanna country (4,000–5,000 ft.) in British Cameroons between Bamenda and

Banso. Its nest has not been found as yet in our area, but in Uganda it prefers to excavate a tunnel in a sand pit or road cutting, 2 ft. or more in length with an enlarged chamber at the end filled with dry coarse grass lined with grass roots. Two eggs are laid—bluish-white, unmarked and perfect ovals, measuring about 24 × 17 mm.

Distribution. From northern Nigeria, northern and British Cameroon and northern Angola across the continent by way of the Uelle River district to the Anglo-Egyptian Sudan, western Kenya, Uganda and Tanganyika.

MOUNTAIN STONECHAT

Saxicola torquata

No fewer than five races of this stonechat have been described from the area dealt with in this handbook. All but one are residents of high altitudes.

The description of it will be brief, as the accompanying half-tone gives an excellent idea of its appearance. In colour the male is black save for the white collar, white shoulder-patch, rump and belly and the chestnut breast. The female is duller, dark brown above, buff below, with rufous breast, relieved by the white rump and white patch on the shoulder, both white areas being of lesser extent than in the male. The tail is black in both sexes. The wing

is black in the male, dark brown in the female. Bill, legs and feet are black. The measurements of *S. t. salax* are: Wing 63–64 mm., tail 46–50 mm., tarsus 20–22 mm. Those of the other subspecies will be given hereafter.

Every mountain or considerable range of hills in Africa seems to hold a race of this stonechat, and thus it is represented over the whole continent in one form or another. Our British stonechat comes under the same specific name but is not so addicted to high ground as are its representatives in the tropics. The African races have the same familiar habits: they are perky little birds, perching on small trees, bushes, rocks, telegraph wires, or even tall grass stems, taking little notice of an intruder and living apparently quite happily among driving mists and rain in the most forbidding surroundings.

All appear to be resident where they occur, and such must have been the case for ages to enable so many local races to be recognised. As tame here as on our commons at home, the Mountain Stonechat is always a favourite, living in close proximity with man and his dwellings in the hill stations of Africa as contentedly as in uninhabited districts.

Its nest is placed on the ground or in a hole in a bank. It is neatly made of grass and unlined. Four eggs complete the clutch, and these are plain blue in colour. Three eggs of *S. t. adamanae* measured 17·8 × 14·6 mm., 18·3 × 14·4 mm. and 18·4 × 14·3 mm., one of which was faintly marked.

Distribution and Races. The typical race of this stonechat is a native of Cape Province, but numerous other races have been described. Within our limits alone the following occur:

Saxicola torquata salax (Verreaux). A lowland race, ranging from Gaboon to the Lower Congo and Fernan Vaz.

Saxicola torquata pallidigula (Reichenow). Found on Cameroon Mountain, common above the 9,000 ft. plateau, and seen up to 13,000 ft., seldom occurring as low as Buea. Larger in size (wing 71–80 mm.).

Saxicola torquata adamauae Grote. The highlands of northern and western Cameroon, not on Cameroon Mountain. Noted up to 9,000 ft. above Lake Oku. Characterised by narrow red-brown breast-band and smaller size (wing 67–72 mm.).

Saxicola torquata nebularum Bates. The highest mountains of Sierra Leone: Bintumane, Birwa Plateau and Tingi Mountains, and in French Guinea on Mount Nimba. The bright red-brown breast-band extends further towards the belly. It is small in size (wing 67–69 mm.).

Saxicola torquata moptana Bates. The Mopti area of the Upper Niger, French Sudan. This has a paler breast-band than any other known race, the red-brown area being smaller than in the other races. In size it is the smallest (wing 60–65 mm.).

WHINCHAT

Saxicola rubetra rubetra (Linnæus)

THE Whinchat is so well known to many in England that it will come as a surprise to meet with it in the unfamiliar environment of West Africa, where, however, it is a winter visitor. It is a neat little bird in appearance, some 5 in. in total length. The upper parts are streaked, black and rufous brown; the breast (in the male) is deep rich buff, in the female much paler and browner with some fine

streakings. Both sexes have a prominent white streak passing from the base of the bill to above and beyond the eye; the males, moreover, have much white in the wing and at the base of the tail, which is conspicuous during flight, but only a white bar on the wing is visible when the bird is perched or at rest. The Whinchat has fairly long slender black legs, upon which it stands or perches rather high. The measurements are: Wing 73–81 mm., tail 43–48 mm., tarsus 21–24 mm. The whinchat's appearance is so well known that no more description need be detailed.

This is the same bird which breeds so commonly in Europe and migrates in large numbers to winter in Africa. It is particularly numerous in the area embraced by this book, frequenting the plains and savanna, plantations, forest clearings, old cornfields and rubber plantations. It is equally common near the coast as near the desert and may be expected to arrive from the last week of September onwards, many remaining in the area until April is advanced. These birds cross the desert on their migrations north and south. None remain to winter north of the Sahara.

Distribution. The whole of tropical Africa in winter south to Tanganyika and the Cameroons, others reappearing in South-west Africa south of the forest. Especially common in West Africa where it is a familiar winter visitor to all our Colonies. None remain to breed in the tropics.

Key to the Robin-Chats in the genus Cossypha and Allied Genera Cossyphicula and Sheppardia

1. Feathers of crown white or tipped with white 2
   Feathers of crown neither white nor tipped with white 4
2. Size larger (wing over 110 mm., tail over 110 mm.) .. 3
   Size smaller (wing under 110 mm., tail under 110 mm.)
   Cossypha niveicapilla, p. 996
3. Crown mostly white, feathers with black middles
   Cossypha albicapilla albicapilla, p. 996
   Crown black with white edges to feathers
   Cossypha albicapilla giffardi, p. 995
4. Conspicuous white stripe present above eye 5
   No white stripe above eye 8
5. Wing-coverts conspicuously tipped with cobalt blue
   Cossypha cyanocampter cyanocampter, p. 993
   Wing-coverts not tipped with cobalt blue 6

6. Middle pair of tail-feathers chestnut like the rest of the tail; cheeks orange-rufous
Cossypha polioptera nigriceps and *C. p. tessmanni*, p. **992–3**
Middle pair of tail-feathers blackish, contrasting with remaining chestnut feathers; cheeks black 7

7. White eye-stripe broad and continued as far behind as in front of eye .. *Cossypha heuglini subrufescens*, p. **989**
White eye-stripe narrow, not continued towards nape beyond level of eye
(*a*) Belly white .. .. *Cossypha isabellae isabellae*, p. **991**
(*b*) Belly orange-rufous .. *Cossypha isabellae batesi*, p. **991**

8. Middle pair of rectrices black, contrasting with rest of tail.. .. .. .. *Cossyphicula roberti roberti*, p. **998**
Middle pair of rectrices not black and not contrasting with rest of tail 9

9. Abdomen bright orange-rufous, only middle of belly white; rictal bristles short .. *Cossypha insulana*, p. **991**
Abdomen entirely white 10

10. White spot in front of eye, bristles at gape rudimentary *Stiphrornis erythrothorax*, p. **1000**
No white spot in front of eye, bristles at gape very long and widespread .. .. *Sheppardia cyornithopsis*, p. **999**

ANGOLA WHITE-BROWED ROBIN-CHAT

Cossypha heuglini subrufescens Bocage

THIS is a very conspicuously coloured bird, olive above with rufous rump, black crown and sides of the face and a striking white stripe extending the whole length of the head from bill to nape and separating the crown from the black ear-coverts and lores. The whole of the under parts are orange-chestnut. The tail is rufous except for the black middle pair of feathers, and the wings are grey. Measurements are: Wing 89–96 mm., tail 74–86 mm., tarsus 30–32 mm. The measurements of one exceptionally giant specimen are omitted from the above.

The amazing variety of notes, all of rich and beautiful quality, to which this robin-chat gives vent has earned for it a reputation as a songster of quite unusual merit even for a robin-chat. It is an excessively shy bird which spends most of its time securely hidden in the undergrowth, though it will venture on to the paths to pick up insects or bathe in a puddle.

Distribution. The race *subrufescens* named above barely comes within our limits in Portuguese Congo and is the form which ranges from Angola across the continent to Katanga and Rhodesia.

The typical subspecies, *C. heuglini heuglini* Hartlaub, is more likely to be found within our boundaries, as it has been obtained on the Shari River and is the race which occurs widely in East Africa from Darfur and the White Nile to Kenya, Uganda and Tanganyika. It is quite likely to extend west of the Shari, although specimens have not yet been obtained.

MOUNTAIN ROBIN-CHAT

Cossypha isabellae Gray

Two races occur in the Cameroon Mountain district.

A small robin-chat, about 6 in. in total length, it is orange-chestnut below, blackish on crown and cheeks with a white stripe in front of each eye. Wings and back are dark, the rump rufous like the tail, which has the middle pair of feathers black and the rest tipped with black. The wing measures 71–79 mm., tail 45–52 mm., tarsus 29–31 mm.

The typical race of this robin-chat was discovered on Cameroon Mountain at 7,000 ft. The race named *batesi* was secured at a later date in the Banso Mountains, where the birds were frequenting the wooded heights of this curious district where crooked dwarf trees grow among the rocks and in the dark wooded ravines. The two races are completely isolated from each other. It is a bird which lives in the undershrubs and in the true forest from 6,000 to 7,500 ft. It is quiet in disposition, perching on the ground or close to it on stumps and fallen trees. Spotted young with their parents have been observed abroad in March and June.

A nest was discovered wedged into a niche in the bole of a tall forest tree, 5 ft. from the ground and made chiefly of moist moss with a few skeleton leaves and some roots, lined with grass stems. Two pale greenish-blue eggs which it contained measured 22·6 × 15·4 mm. and 22·3 × 15·5 mm. One was immaculate, the other showed a very faint rusty speckling about the broad end.

Distribution and Races

C. isabellae isabellae Gray is restricted to Cameroon Mountain, where it ranges as far as the tree limit (above Buea) at 7,500 ft.

C. isabellae batesi Bannerman inhabits the Banso Mountains of Cameroon. Birds from Manenguba Mountain and Oku belong to this race. The entire upper parts are olive-brown and the head is paler than in the typical race. The chestnut of the tail is darker and the black area not so intensely black. On the under side this race is darker in tone and has rather more white on the belly than *C. isabellae isabellae*. The wing measures 74–79 mm., tail 48–55 mm.

FERNANDO PO ROBIN-CHAT

Cossypha insulana Grote

Two races of *C. insulana* occur, one a continental, the other an island form.

This bird has forehead, crown, nape and lores blackish washed with olive, the base of the feathers in front of the eye white, but the stripe usually concealed; ear-coverts are grey; mantle, back and rump are olive-brown. The upper tail-coverts are reddish chestnut; the tail is chestnut, the outer webs of the outer rectrices are reddish brown, as are also the central pair of rectrices. Wing-coverts are olive like the back. Primaries and secondaries are brown, the outer webs edged with olive. The entire under parts from chin to under tail-coverts and also the axillaries and under wing-coverts are rich orange, rather deeper coloured on the sides of the body. The eye is brown, bill black; legs and feet are slaty-flesh coloured. The bill measures (male) 12–13 mm.; (female) 12 mm.; wing (male) 73–75 mm., (female) 64–65 mm.; tail (male) 48–51 mm.; (female) 41–43 mm.; tarsus (male) 27–28 mm., (female) 25 mm. In total length this bird is just over 5 in.

It is said to be found locally in the island where it lives, but nothing has been recorded about its habits.

Distribution and Races

Cossypha insulana insulana Grote is restricted to the island of Fernando Po. Recorded localities: Bilelipi, Bakaki, Moko, Mount St. Isabel.

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It is said to be found locally in the island where it lives, but nothing has been recorded about its habits.

Distribution and Races

Cossypha insulana insulana Grote is restricted to the island of Fernando Po. Recorded localities: Bilelipi, Bakaki, Moko, Mount St. Isabel.

The species is represented on the mainland in the forests of Kupé Mountain (around 3,000–4,500 ft.) and adjoining uplands by *Cossypha insulana granti* Serle, which has the forehead, crown and nape similarly coloured to the mantle and back, being olive-green instead of blackish. This race is restricted to that area of the British Cameroons.

WHITE-BROWED ROBIN-CHAT

Cossypha polioptera nigriceps Reichenow

The crown of the head and lores of this bird are jet-black. A broad white streak passes from the base of the bill above and beyond the eye. Cheeks and ear-coverts, breast, sides of the body and under tail-coverts are bright orange, shading into white on the belly.

Mantle and back are olive, wing-coverts greyish. Primaries and secondaries are brown outwardly edged with olive, inner secondaries olive on both webs. The rump is olive, upper tail-coverts and tail are reddish chestnut; under wing-coverts and axillaries are orange. The eye is dark brown, bill black; legs and feet are brownish grey. Measurements are: Bill (male) 13–15 mm., (female) 12–13·5 mm.; wing (male) 80–84 mm., (female) 75–77 mm.; tail (male) 64–68 mm., (female) 56–59 mm.; tarsus (male) 26–28 mm., (female) 25–27 mm. In appearance this small bird is about the size of an English Robin (about 6 in. in length).

There are three races of this robin-chat in Africa, two of which come within our limits. The race named above is a native of the highland savanna of western Cameroons and northern Nigeria, and

the recent discovery that it lives in the Tingi Mountains of Sierra Leone has added much to the interest of its distribution. The typical race is well known in Uganda and the Elgon district of Kenya.

It is a bird of the savanna—admittedly the high savannas—rather than the mountains, and in Nigeria has recently been found in an extensive gloomy gallery forest in the Plateau Province at 2,000 ft., where it was flitting about on the forest floor, turning over the leaves in its search for insects. Its nesting habits are unknown. Like all robin-chats, it has a pleasing, merry song.

Distribution and Races

C. polioptera polioptera Reichenow ranges from Uganda east to Elgon and is recorded from northern Angola.

C. polioptera tessmanni Reichenow is found in the grasslands of eastern Cameroon and the Upper Kadei River. It is said to be distinctly darker than the next race.

C. polioptera nigriceps Reichenow has already been described. It ranges from the highland savannas of western Cameroon to the Plateau Province of Nigeria and has also been discovered in the Tingi Mountains of Sierra Leone near Birwa Peak.

BLUE-SHOULDERED ROBIN-CHAT

Cossypha cyanocampter cyanocampter Bonaparte

(see Plate 39, facing page 840)

THE adult Blue-shouldered Robin-Chat is a handsome bird; the orange under parts and rufous tail with black middle feathers are not, of course, distinctive in this group, but the verditer-blue patch on the shoulders is a striking character, and when combined with the broad white stripe over the eye, blackish crown and nape and orange throat, little doubt should remain of the identification. It is one of the medium-sized robin-chats (about 7 in. in total length), and is notable for its wonderful voice and power of mimicry. Measurements of skins from Upper and Lower Guinea show no appreciable difference. The wing measures 79–90 mm., tail 66–82 mm., tarsus 27–31 mm. The females are distinctly smaller than the males. There is a good deal of variation in plumage of this bird, due, in my opinion, to age rather than to geographical reasons.

It is an extremely widely spread bird in the forests of West Africa, and spends its days hidden in the dense thickets and seldom allows one to catch more than a fleeting glimpse of it. It never ventures into the open daylight but gives away its presence both by day and by night by its wonderfully sweet song. Strange and varied are its notes, with a quality all of their own. It is in addition a well-known mimic of the songs of other species.

It breeds throughout many months in all but the driest season, building its nest of decaying leaves and stems which it lines with fibres in dark thickets. Two eggs are laid with greenish-blue or pale bluish-green ground, more or less obscured at the broad end by dull indistinct mottlings and cloudings of rufous and lilac-grey. Measurements are 22–23·5 × 15–16·5 mm.

Distribution. The forest area from Sierra Leone, Liberia and the Gold Coast, through the forest reserves of Nigeria (though only recorded from Oshogbo, Oyo Province, and from Ibadan) to Cameroon and Gaboon.

In eastern Africa its place is taken from western Uganda to the Middle Congo and Upper Uelle district by *C. cyanocampter bartteloti* Shelley.

WHITE-CROWNED ROBIN-CHAT

Cossypha albicapilla (Vieillot)

(see Plate 42, facing page 984)

Two very distinct races occur, both in Upper Guinea. The typical race has the forehead and entire crown white, the feathers with black bases and very narrow black terminal fringe, the latter getting worn off by abrasion. These white feathers extend well down the nape and are slightly elongated. Lores, cheeks, ear-coverts, neck, mantle, back, scapulars and entire wings are brownish black. Feathers of the lower back and rump are rust-colour; upper tail-coverts and all but the middle pair of tail-feathers bright orange-rufous, the central rectrices black, as is also the outer web of the outermost tail-feather. The chin is black; throat and entire under parts, including the under tail-coverts, under wing-coverts and axillaries are rich orange-rufous. The eye is red; bill, legs and feet are black. The bill measures (male) 17–20 mm., (female) 15 mm.; wing (male) 124–131 mm., (female) 115 mm.; tail (male) 130–136 mm., (female) 115 mm.; tarsus (male) 34–37 mm., (female) 34 mm.

As will be seen from its dimensions, this is one of the largest of the robin-chats and is nearly 11 in. in total length, of which the long tail takes up just half. The white crown, extending well on to the nape, is not unlike a judge's wig, contrasting with the blackish cheeks. This race is depicted on p. 995.

Described first from the dry bush country of Senegal, this robin-chat has its counterpart in the Northern Territories of the Gold Coast and Nigeria and both are inhabitants of the thickest, darkest bush, especially where it fringes the swamps. Like most of its family it is excessively shy, and only when it flies from one thicket to another

can a glimpse of it be secured. To watch it one must know its haunts, and then by keeping perfectly still an opportunity may occur to observe it climbing about in the thicket or searching the floor of the undergrowth, peering this way and that, then disappearing again from sight. If seen at all it is usually solitary

Its nest has only quite recently been discovered, built in grass-woodland near a stream whose banks were covered with thick low vegetation. This was the nest of *C. albicapilla giffardi*, the Nigerian race, and it was placed in the hollowed-out top of a small tree-stump, the nest itself being very scanty and consisting of a few rootlets and tendrils. Two pale green eggs had the surface largely obscured by reddish-brown spots and small blotches. They measured 27–27·3 × 17·3–17·9 mm.

Distribution and Races

C. albicapilla albicapilla (Vieillot) is recorded from Senegal, Gambia, Casamance and Portuguese Guinea and may be found in the dry part of Sierra Leone.

C. albicapilla giffardi Hartert has the mantle and wings more jet-black, but the chief distinction is in the crown, which is black, each feather with a broad crescent-shaped white tip, giving it a scaly appearance. In this race the crown is more black than white, whereas in the typical race above the reverse is the case. The wing of *C. a. giffardi* measures 111–131 mm., the tail 112–135 mm., the males having much the larger measurements. The range is the savanna belt of the Gold Coast and northern Nigeria to the high plateaux of northern Cameroon. In Nigeria it is unlikely to range south of lat. 8° N. This race is figured on the coloured plate.

SNOWY-CROWNED ROBIN-CHAT

Cossypha niveicapilla

(see Plate 39, facing page 840)

Two races are found, one in Upper, the other in Lower Guinea.

The whole of the middle of the crown from the base of the upper mandible to the nape is white, with the feathers black at the base. Lores, sides of the crown, the area below the eye and ear-coverts are jet-black. Neck and collar are rufous orange. Mantle and wing-coverts are brownish-slate colour. Primaries and secondaries are dark brown, the outer webs being edged with bluish grey. Rump, upper tail-coverts and tail (except central rectrices) are rufous orange. The middle pair of tail-feathers and outer web of outermost rectrices are edged with black. The entire under parts, including under tail-coverts, under wing-coverts and axillaries, are rufous orange. The eye is dark brown; feet are olive-green; bill is greenish black. Measurements are as follows: Bill (male, female) 14–15 mm.; wing (male) 96–105 mm., (female) 90–98 mm.; tail (male) 90–100 mm., (female) 80–90 mm.; tarsus (male, female) 28–30 mm.

This is a smaller robin-chat than the last species, about 8 in. in total length, very similarly coloured to *Cossypha albicapilla albicapilla* but with a much shorter tail in comparison. The race of *C. albicapilla* which inhabits the same countries as *C. n. niveicapilla* has not the pure white crown of the latter species. The Snowy-crowned Robin-Chat has the same orange-rufous under parts and rump and the tail with black middle feathers, slate back and wings, and black cheeks and area surrounding the eye. The eye in this species is dark brown, whereas in the White-crowned Robin-Chat it is red. Both birds have black bills.

The typical race is that which is best known in our West African Colonies, and as it occurs from Senegal to Nigeria it has been more often observed than the race which ranges further south to Angola. Both races have two quite separate habitats. The birds in Nigeria, for instance, are found in clumps of dense thicket such as occur throughout the bush surrounding a tree or mound at the base of a rocky hill or by watercourses, but seem to be equally at home in leafy gardens. A pair will adopt one habitat or the other as their own particular territory and stick to it.

The Lower Guinea race likewise enjoys two distinct habitats—one characteristic of the savanna belt which occurs on the Cameroons plateau, as at Tibati and Genderu, the other open places in the forest where second-growth forest has taken the place of primeval growth.

Usually the birds are seen in pairs or singly, but where thickets of giyaiya and similar bushes, leafy mahogany and other shady trees, have caused an oasis in otherwise unattractive bush, several of these robin-chats have been seen together, chasing one another through and over the tree-tops. Much of their food is obtained on the ground—worms and insects of many varieties—while termites are always a special draw. The song is a series of rapid babbling notes, heard especially after rain or towards evening.

A cup-shaped, untidy nest is placed in a variety of situations such as in an orange-tree; another in the fork or hollow of a larger tree; another near the bole of a palm, or again in a creeper. It is made of decaying leaves and fibres, sometimes lined with dry grass. Two or three eggs form the complement and are deep greenish olive tinged with brown, the result of very fine brown spots. Twelve eggs of the typical race measure 20·6–23·9 × 16–17·4 mm.

Distribution and Races

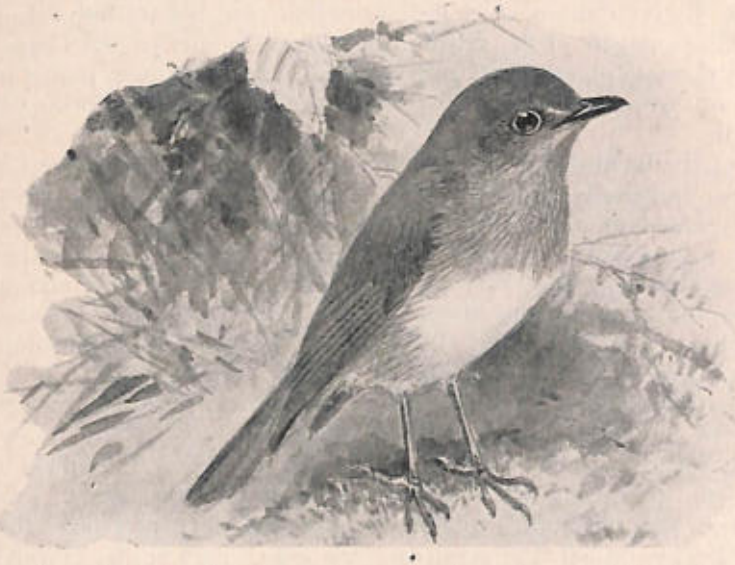
C. niveicapilla niveicapilla (Lafresnaye) ranges without interruption from Senegal and Gambia to northern and southern Nigeria and is a characteristic bird of all our four Colonies, though not universally distributed.

C. niveicapilla melanonota (Cabanis) differs from the above in having the back, mantle, coverts and wings jet-black instead of slate-colour and the rufous orange of the under parts, collar and tail rather richer in tone. The wing measures 88–108 mm., tail 85–100 mm. This race extends from British north-western Cameroon (Bamenda, Manengubo Mountain, 4,000–5,000 ft.) to northern Angola and via the Uelle River savanna across the continent to Uganda and Tanganyika. Specimens from the Upper White Nile and Abyssinia are somewhat intermediate.

WHITE-BELLIED ROBIN-CHAT

Cossyphicula roberti roberti

THIS little bird, which is not more than 5 in. in total length, looks very like a small edition of the British robin redbreast in plumage, except for its chestnut tail with the jet-black central feathers. It has more the appearance of a flycatcher in some ways, the bill being broad with well-developed rictal bristles, and the feet and legs weak



and the tail short. Its bright orange breast and white belly, olive upper parts and conspicuous tail should enable it to be recognised. Its white belly and black central tail-feathers distinguish it from *Cossypha insulana*, which is found on the same island. The measurements are as follows: Bill 12–13 mm., wing 65–68 mm., tail 42–46 mm., tarsus 21–23 mm.

All we know of this attractive little bird is that it is a silent, shy creature which is generally seen on the ground or in low undergrowth. Not only its general appearance but also its large black eye is reminiscent of our robin redbreast. Its legs and feet are blackish brown and the bill is black.

Distribution. Formerly thought to be restricted to the island of Fernando Po, where it was discovered at Bakaki and later at Banterbari, it has now been found on the West African mainland at Muambong (3,000 ft.) in the Kumba Division, British Cameroons.

Another race, *C. roberti rufescentior*, has been described from west of Lake Albert Edward.

WHISKERED REDBREAST

Sheppardia cyornithopsis (Sharpe)

(see Plate 39, facing page 840)

Two races of this redbreast occur in West Africa and at least one in East Africa.

This is a very small bird (about 5½ in. in total length) which is very like a European redbreast in coloration but not in habits, being olive above, with orange-rufous breast and flanks and a white belly, but without the large eyes of that bird. Its legs are pale grey and the bill is black, the latter being rather broad and flattened at the base and furnished with long black downwardly directed bristles which at close quarters give it the appearance more of a flycatcher than a member of the thrush family. It is such a shy bird living in the forest that it is very seldom seen alive. The wing of this redbreast measures 66–76 mm., the tail 46–56 mm. and the tarsus 21–26 mm.

The typical race which inhabits the forest country of southern Cameroon is so shy that it has seldom been seen except by natives, who catch it in snares baited with termites. It is a dweller in the deepest forest, as are its representatives in Sierra Leone and Uganda. During the day it hides in the undergrowth, but in early morning and late evening it ventures abroad and may be observed in forest clearings or tracks. It has the failing of an extremely inquisitive nature and can be attracted by anyone in the forest who keeps reasonably still.

Much of its food is secured on the forest floor by turning over the fallen leaves for grubs and insect life. Two birds will sometimes work together, one turning over the leaves, while the other pounces upon any dainty morsel which may be revealed.

A favourite nest site is that situated about 3–4 ft. above the ground in a bushy growth. The nest is a deep cup almost exclusively made of skeleton leaves. Two eggs are laid and are pale pinkish buff with pale red-brown markings, especially at the broad end. Measurements are not available.

Distribution and Races

Sheppardia cyornithopsis cyornithopsis (Sharpe) lives in the forests of southern Cameroon.

Sheppardia cyornithopsis aequatorialis (Jackson) lives in Kenya, Uganda and the highlands west of Lake Albert.

Sheppardia cyornithopsis houghtoni Bannerman lives in the forests of Sierra Leone and the Liberian-Ivory Coast frontier. From the typical race it may be distinguished by the deeper and richer tone of the orange-rufous on throat, breast and sides; the back is more tinged with russet and the white on the under parts is slightly reduced. Measurements are as in the typical race.

FOREST ROBIN

Stiphrornis erythrothorax

(see Plate 38, facing page 800)

THREE races of the Forest Robin come within our limits, one in Upper, two in Lower Guinea; yet another ranges to Uganda.

This is the miniature redbreast of West Africa, very much smaller than a European robin, measuring but 5 in. in the flesh and with a much brighter orange breast. The rest of the under parts are white and the upper parts olive-green. A striking white large spot in front of the eye is a good guide to identification when noted in conjunction with the very bright colouring of the throat and breast. The wing measures 63–68 mm., the tail 34–43 mm. and tarsus 21–23 mm.

As its name implies, this delightful little bird keeps entirely to the undergrowth of the high forest, from which it never departs. As it never comes out into the open, its presence will not be suspected unless its song is known. Occasionally it ventures into secondary thickets, especially when driver ants are on the move. Usually it is to be found alone, but when several males forgather a good deal of chasing and sparring is indulged in.

Much of its time is spent turning over the leaves on the floor of the forest, then hopping up to sit in the undergrowth, when it may be heard pouring forth its clear silvery notes with raised tail and quivering wings. It may be attracted within close distance by imitating its call-note, a long-drawn *peeee*. In the places where it lives it is by no means uncommon, but so far no one appears to have found and described its nest and eggs, which should not be difficult to discover.

Distribution and Races

Stiphrornis erythrothorax erythrothorax Hartlaub extends through the whole forest region from Sierra Leone to southern Nigeria. It will venture into canopied fringing forest and has been seen in Nigeria as far north as lat. 9° N. in such surroundings.

Stiphrornis erythrothorax gabonensis Sharpe has the chin and throat a richer and deeper shade of orange and the upper parts are slate-grey instead of olive-green. The wing measures 60–72 mm., tail 30–40 mm. This race ranges from British Cameroon to Gaboon and is resident in Fernando Po.

Stiphrornis erythrothorax xanthogaster Sharpe has chin, throat and breast golden yellow, belly pale yellow instead of white, and upper parts strongly washed with olive. The wing measures 61–66 mm., tail 27–37 mm. This race is restricted to south-eastern Cameroon and the Congo watershed.

Stiphrornis erythrothorax mabirae Jackson takes the place of the above races in eastern Belgian Congo, the Uelle district and in Uganda.

FIRE-CRESTED ALETHE

Alethe castanea (Cassin)

(see Plate 39, facing page 840)

Two races are found in our area.

This is a secretive but common bird, in size 8 in. in total length, and inconspicuously coloured. The upper parts are chestnut, with

dark wings and a partly concealed orange crown; the whole under parts from chin to under tail-coverts are whitish. The Fire-crested Alethe is one of those birds which congregate in companies, composed of various species, to prey on termites or driver ants, and glimpses of it can be obtained when so engaged as it flits about in

the gloom of the forest. Its note is a plaintive tremulous whistle. The eye is brown, bill black; legs and feet are pale blue. The wing of the typical race measures 86–98 mm., tail 62–81 mm. Young birds exhibit a great variety of plumage and are heavily spotted, as can be seen from the accompanying illustration.

This is one of the commonest birds of the forest undergrowth and a prominent member of all bird armies which accompany the driver ants. Its slowly uttered whistling song is known to everyone acquainted with the great forests, though as naturalists have pointed out, the bird is known to few. Outside the range of the forest the Fire-crested Alethe restricts its habitat to very dense bush, where it is equally difficult to observe.

The two races are very distinct. That which we find from Portuguese Guinea to the Gold Coast is easily distinguished by the black tail with broad white tips to the three outer feathers. In the alethe which takes its place from the forests of Benin south to Gaboon the tail is blackish fringed with chestnut on the basal half of the outer web.

A nest of *A. c. diademata* was found in Liberia in a hole in the side of a dead stump in a swampy place among bushes. The nest was made of fine black rootlets and green moss lined with mimosa leaves and rootlets. It contained three young on 5th October. The eggs are unknown.

The song of the White-tailed Alethe consists of a few sweet high-pitched notes, slowly uttered. The males are pugnacious, but usually the bird prefers to be solitary until attracted to an area where driver ants are foraging.

Distribution and Races

Alethe castanea castanea (Cassin), with its bright chestnut upper parts, ranges from southern Nigeria (Benin Division) and Cameroon Mountain through the Cameroon and Gaboon forests, and also occurs in Fernando Po.

Alethe castanea diademata (Bonaparte) has the upper parts olive-brown and the distinction in the tail as already described. The wing measures 87–100 mm., tail 72–80 mm. This race ranges from Portuguese Guinea to Togoland.

Alethe castanea woosnami Ogilvie-Grant has been described from the north-eastern Belgian Congo and is the form which occurs in Uganda.

BROWN-CHESTED ALETHE

Alethe poliocephala (Bonaparte)

(see Plate 39, facing page 840)

Two races come within our limits.

This alethe is very similar in appearance to the Fire-crested Alethe, the only point of difference being that whereas *A. c. castanea* has a

partly concealed gold-orange crown, the Brown-chested Alethe has a black crown and cheeks, with a white eyebrow; its brown chest is such pale fawn in colour that unless the two birds are seen together it would not be very noticeable unless compared with the white chest of *A. c. castanea*. Briefly, its appearance may be described as chestnut upper parts, blackish head and cheeks, white eyebrow, white under parts except the breast, which is fawn-colour, a rather heavy black bill and light-coloured greyish-white legs and feet. The measurements are: Bill 15–17 mm., wing 86–95 mm., tail 53–61 mm. and tarsus 26–28 mm.

The Brown-chested Alethe lives in similar localities and has similar habits to the Fire-crested Alethe. Of the two it is perhaps the commoner and is always to be seen in the bird armies attending driver ants. There it may be seen hopping about actively in front of the advancing ants, snapping up the insects and occasionally varying its diet by catching and swallowing tiny frogs.

It is a quiet bird with a characteristic habit of frequently and rapidly extending its wings over its back while it is perched on rocks or tree-stumps. As the birds chase one another through the undergrowth they utter a rather squeaky little song with a few melodious notes scattered here and there. The male, too, has a short whistle of medium pitch which it repeats at regular intervals.

The nest has not been found.

Distribution and Races

Alethe poliocephala poliocephala (Bonaparte) is restricted to Cameroon, Gaboon and Fernando Po. In British Cameroons it has been found in the Manenguba and Kupé mountain forests up to 6,500 ft.

Alethe poliocephala castanonota Sharpe inhabits the forests of Upper Guinea from Sierra Leone to the Gold Coast. It differs from the typical race in having chestnut-brown, not blackish, ear-coverts. As yet this species has not been recorded from Nigeria.

In the Belgian Congo and Uganda *A. p. carruthersi* is found, and around Mount Kenya *A. p. akeleyae* takes its place.

RED-TAILED MORNING-WARBLER

Cichladusa ruficauda (Hartlaub)

This bird has somewhat the appearance of a very large warbler. The plumage is rufous above, buff and greyish below, the tail bright rufous, broad and rounded. The purple legs are rather stout like the black bill, and the blood-red eye is a marked feature in life. In total length this morning-warbler measures 7½ in. The bill is 13–15 mm., wing 85–93 mm., tail 72–81 mm. and tarsus 24–27 mm.

The life-history of this bird, which barely comes within our limits,

is practically unknown. It is evidently a species which has little fear of man and will come about houses and palm plantations and hop about on the roads in the manner of a thrush.

Distribution. First described from Gaboon, it ranges to Benguella and has been collected at various localities near the coast.

RED-BACKED SCRUB-ROBIN

Erythropygia leucophrys ruficauda Sharpe

This is a small bird about 5½ in. in total length, brown above with rufous rump and a rufous fan-shaped tail with a broad black terminal band and white tips to the outer three feathers. The under parts are white, with the breast streaked with dark brown and a blackish moustachial stripe on each side of the white throat. The wings are ornamented with two white bars, which together with the white eyebrow and conspicuously marked tail are the most notable features to observe. The bill measures 12–14 mm., wing 63–67 mm., tail 50–60 mm. and tarsus 23–26 mm.

For field notes on this scrub-robin I refer the reader to my larger work, as the species barely comes within the limits of this book. Its habitat is similar to that of the scrub-robins described hereafter.

Distribution. Ranges from Portuguese Congo across the Belgian Congo at any rate to the Lufupa River, another race, *E. l. zambesiana*, taking its place in Nyasaland and Mozambique.

BROWN-BACKED SCRUB-ROBIN

Erythropygia hartlaubi hartlaubi Reichenow

The text figure of this little bird should enable it to be recognised. It is a small bird 6 in. in total length in the flesh, with a wing expanse of 8¼ in. Dark earth-brown above, white below, with a brown-streaked breast, its most conspicuous features are the double bar of white on the wing, the broad white eyebrow and the fan-shaped rufous tail with the terminal half black and broad white tips to all but the central feathers. The bill measures 14–16 mm., wing 62–69 mm., tail 55–65 mm. and tarsus 25–27 mm.

The Brown-backed Scrub-Robin is an inhabitant of open country, tree-covered plains and typical savanna, where, perched at the summit of some twig or bush, it may be heard singing a little song of a few loud clear notes. In elephant-grass country it will climb to the top of a tall stem, when it has been heard to give vent to a succession of loud clear whistles.

A nest was found on one occasion about 8 in. from the ground, in a mass of prickly creepers, which contained two eggs.

Distribution. Within our limits this bird is found in British Cameroon and surrounding country (Bamenda, Kumbo, Banyo and Yoko), whence it ranges south to northern Angola and across the Congo savanna to the Semliki valley, Uganda and Kenya.

Birds from the highlands of Kenya have been named *E. hartlaubi kenia* on account of their darker coloration but are closely approached by some specimens from Cameroon.

GOLD COAST SCRUB-ROBIN

Erythropygia leucosticta (Sharpe)

(see Plate 39, facing page 840)

THE figure which represents this bird at the top of the coloured plate will enable the species to be identified without the detailed description I gave in my larger work. The reddish-chestnut rump contrasts with the earth-brown upper parts, the under parts appearing white save for the dusky breast and the black moustachial

stripes bordering the throat. The white eye-stripe, double white wing-bar and the white tips to the fan-shaped tail are features which catch the eye. In length this scrub-robin measures about 6½ in. from bill to tail. The bill measures 15 mm., wing 83 mm., tail 67 mm. and tarsus 27 mm. This is the only specimen I have handled.

Since I wrote of this bird in my fourth volume, published in 1936, we have fortunately learned something of its habits. *Erythropygia leucosticta* is an extremely shy bird which can only be observed by most patient watching. It lives in the undergrowth of high forest and, like so many forest dwellers, is attracted by the passage of driver ants. Its movements are characteristic. It progresses by a short run, a pause, then another short run, and so on, and spends much of its life on or near the ground. A rapid lifting and depressing of its rather long tail, together with frequent bobbing of the body like a wheatear, will also attract one's attention to it. When alarmed it cocks its tail over its back, displaying the white under tail-coverts, and it utters a rapid *chit-chit-chit*.

Both this and the Brown-backed Scrub-Robin have a delightful song. A bird seen in the Peninsula forest of Sierra Leone was heard to give a prolonged trill, exactly like the rapid chiming of a number of silvery-toned little bells, repeated for hours on end.

The nest and eggs have never been found.

Distribution. First described from the Gold Coast and later found in Liberia, it has now been discovered in Sierra Leone in the undergrowth of the high forest on the Kambui hills and again in the forest reserve at York Pass.

BLACK SCRUB-ROBIN

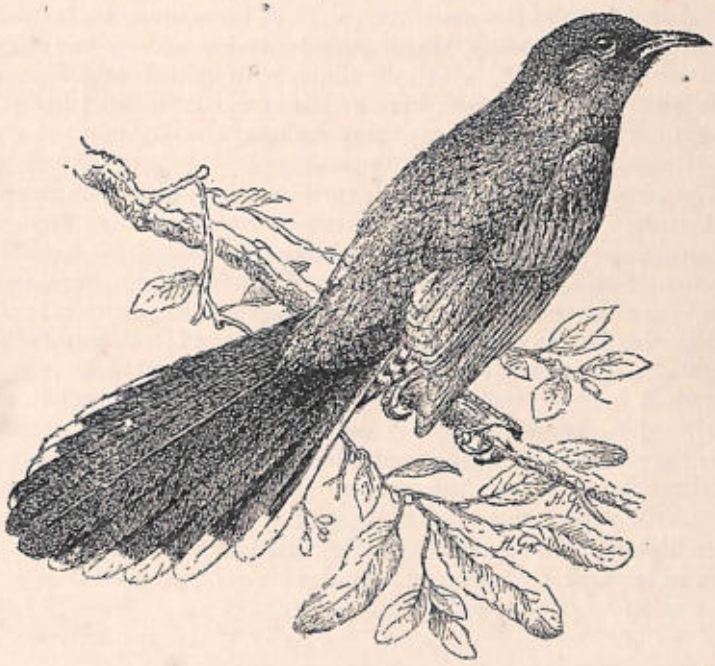
Cercotrichas podobe podobe (P. L. S. Müller)

This is a fine-billed, long and slender bird about 9 in. in total length with a graduated, white-tipped tail more than half the total length of the bird. It is entirely sooty-slate colour, but when it spreads its wings these will be seen to be pale rufous except at the tip and so contrast markedly with the sombre body plumage. The bill measures 14–15 mm., wing 83–100 mm., tail 96–110 mm. and tarsus 25–29 mm.

There is nothing robin-like about this black bird, which frequents the bushes in the semi-arid belt which stretches across the whole of Africa from the Senegal littoral to the Red Sea. It has more the appearance of a miniature blackbird than of a redbreast as it hops about with its tail raised, actively hunting for insects under the

bushes, occasionally thrusting its rather long bill into the sandy soil while its tail is held upright.

In the vicinity of Timbuktu it is extremely common, living in the acacia bushes which are a feature of the landscape. Its habits are definitely thrush-like and, like that bird, it has a song of varied flute-like notes which some consider rather screechy.



It has been found breeding in the Lake Chad area in April, May and June. Nests may be placed in crevices of tree trunks, between palm fronds and in roofs of disused buildings. They are untidy structures of leaves, feathers, shreds of native cloth and hair of animals. Two or three eggs are laid and are pale greenish in colour, dotted with greenish brown.

Distribution. The whole thorn savanna at the edge of the desert, ranging from Senegal, and probably Gambia, through the French Sudan and French Niger to northern Cameroon, then via Chad to Darfur, Kordofan and the Nile valley to reach the coast in the Red Sea Province and British Somaliland. It ranges in Nigeria as far south as Maidugari but is not reported from the Northern Territories of the Gold Coast, even the Upper Volta lying too far south of its range.

EUROPEAN REDSTART

Phoenicurus phoenicurus phoenicurus (Linnæus)

THE male of this well-known British migrant is a conspicuous bird with its bright rufous rump and tail, black cheeks and throat, rufous chest and snow-white frontal band on the forehead. The crown and back of the male are grey, but these areas are brown in the much duller female, which may be recognised by the rufous-chestnut rump and tail which she shares with her consort. The only bird with which confusion may arise is the Red-tailed Chat (*Cercomela*). The wing of the redstart measures 71–83 mm., the tail 51–61 mm. and tarsus 20–21 mm.

The redstart visits tropical Africa in winter but does not usually make its appearance in our area before November, remaining in the tropics on occasions until May. In eastern Africa birds have been observed migrating across the plains of Darfur in mid-September, so that it may possibly arrive in that month in the western French Sudan, though not recorded. Many come to the Gambia and others reach the Northern Territories of the Gold Coast and Nigeria, though it is never really plentiful anywhere and is generally seen singly in the more open bush or thickets about broken ground. Burnt areas and clearings are also frequented.

Distribution. Breeds throughout Europe, visiting Africa and Arabia in winter north of the Equator, reaching Abyssinia and Somaliland, and in the west Nigeria, Chad and the Shari in French Equatorial Africa. Dates and localities are given in my larger work. It visits all our Colonies in small numbers.

NIGHTINGALE

Luscinia megarhynchos megarhynchos Brehm

THE adult male and female in winter have the entire upper surface from forehead to rump uniform rufous brown, becoming brighter on the upper tail-coverts, which incline to chestnut. The orbital ring is whitish, the sides of the face and lores are grey tinged with brown; the ear-coverts are brighter brown; the wing-coverts are brown, darker than the rest of the upper parts. Primaries and secondaries are blackish brown edged and tipped with rufous brown, the inner secondaries being like the back. Tail-feathers are rich chestnut-brown. Chin and throat are whitish, and the sides of the neck and whole breast and sides of the body are washed with pale brown. The belly is white; under tail-coverts are buff or creamy buff; under wing-coverts are brown tipped with buff;

axillaries are creamy buff. The eye is dark brown, bill dark brown, base of lower mandible pale flesh-colour; legs and feet are grey-brown or pale flesh-colour. The measurements are: Bill 11–12 mm.; wing (male) 82–89 mm., (female) 78–84 mm.; tail 63–67 mm.; tarsus 26–28 mm.

I have given a detailed description of the nightingale, as its dull colouring is not in itself a very good guide to its identity. In total length it measures about 6½ in. and is more like a large warbler in general appearance than a member of the thrush family.

In its winter quarters in Africa it is to be found in the thickets and shrubberies of the savanna belt and from the end of October it is often really numerous, though at that season it is silent and draws little attention to itself as it skulks in the bushes and undergrowth. Later in the season and while still in its winter quarters its beautiful song may be heard. I have notes of birds in full song as early as 3rd January, and as the spring advances its familiar notes may be heard coming from the thickets which are taken up by other songsters in the vicinity. Opinion varies, but generally speaking the full-throated mellow notes which we associate with its haunts in southern Britain are never heard in the tropics, though the birds attempt a very good imitation.

In March and April the nightingales leave once more for northern climes, where they rear their young just in time to begin the journey south again.

Distribution. It breeds in Europe from England and North Germany to the Mediterranean and east to the Black Sea, wintering in Africa. It reaches Uganda on the east and the Cameroons on the west but does not penetrate south of the Ubangi-Shari savanna, nor enter the closed forest. It is very numerous in West Africa and is recorded from all our Colonies. Dates of its appearance in various localities are given in my larger work.

FAMILY SYLVIIDAE

Key to the genera of the Sylviidae

So far as is possible this key will be based on characters which can be seen when the bird is handled in the field rather than in a museum; such characters as colour pattern, relative size, presence or absence of bristles at the gape and—when distinctive—colour, will be employed as diagnostic rather than minute structural characters. The latter, when used, will if possible be qualified by

some other character more easily observed. The page references which follow in this key are to the smaller specific keys in which the species of the particular genus indicated are discussed, or where no specific key is required, as in the case of monotypic genera, the p? refers directly to that genus.

1. Tail bright chestnut, with broad white tips and black subterminal band or spot, fan-shaped; wing over 73 mm. .. .. *Agrobates*, p. 1019

   Tail not bright chestnut, but some tails patterned and others not.. 2

2. Tail exceedingly short, tip of folded wing reaching almost to (or in some cases even beyond) tip of tail *Sylvietta*. See separate key, p. 1058

   Tail-tip reaching far beyond tip of folded wing 3

3. Tail-feathers extremely broad, webs often disintegrated; wings short and rounded, shorter than tail; whole upper parts of plumage dark brown or chestnut; rump-feathers loose and long 4

   Tail-feathers not exceptionally broad; plumage not as described above in either colour or texture 6

4. Pronounced black moustachial stripe on either side of whitish throat .. .. *Melocichla*, p. 1099

   No moustachial stripe present 5

5. Under tail-coverts exceptionally soft, broad and long, reaching more than half-way down tail. Under surface of tail blackish with whitish tips. Tail with webs never frayed and disintegrated .. .. *Schoenicola*, p. 1044

   Under tail-coverts not exceptionally soft, broad and long, not reaching more than half-way down tail. Under surface of tail uniformly brown or chestnut, without pale tips. Tail with webs usually frayed and disintegrated .. .. *Bradypterus*. See separate key, p. 1036

6. Tail* fan-shaped but not strongly graduated, outer feathers falling normally short of central pair. Tail often patterned, not extending beyond outstretched feet. Backs streaked or uniform *Cisticola*. See separate key, p. 1074

   Tail strongly graduated, outer feathers falling very far short of central pair. Tail usually extends beyond outstretched feet 7

   Tail not strongly graduated but either square or rounded and never with white or buff tips followed by black subterminal spots 13

* Readers are advised to peruse carefully all three paragraphs under this section 6 before deciding to which group the bird required to be identified belongs.

7. Margin of wing-feathers bright chestnut. Bill rather long and black; back grey or vinous 8
Wing-coverts and margin of wing-feathers not bright chestnut 9
8. Wing-coverts as well as edge of primaries dark chestnut; tail with white tips, bill curved downwards *Heliolais*, p. 1098
Wing-coverts grey, edge of primaries light chestnut; tail-feathers not tipped with white; bill straight *Drymocichla*, p. 1056
9. Central tail-feathers greatly elongated, more than twice length of next pair; plumage of upper parts uniform green .. .. *Urolais*, p. 1055
Central tail-feathers elongated but not as described above 10
10. Striped feathers of head stiff and scale-like, wing-coverts black, edged with white. Very small bird (wing under 50 mm.). Back vinous, under parts buff *Spiloptila*, p. 1100
Feathers of head and wing-coverts not as described above. Back not vinous in colour 11
11. Bill very fine, delicate and short (exposed culmen not exceeding length of hind-toe plus claw), bill pinkish-flesh colour, not black. Plumage olive-grey above, buff below. Tail patterned .. .. *Phyllolais*, p. 1057
Bill not exceptionally fine (exposed culmen exceeds length of hind-toe plus claw). Bill always black. Plumage not as described in paragraph above 12
12. Tail of 10 feathers, long and highly graduated; plumage uniform grey or brown above, in one species barred below. No green or yellow in plumage and never with white edge to outer tail-feather
See separate key; *Prinia*, p. 1101, and *Herpystera*, p. 1105
Tail of 12 feathers* graduated, but not so much as in *Prinia*; plumage often with green or yellow in it and usually but not invariably with white or white border to outermost tail-feather. Under parts never barred, but in some species a black throat
Apalis. See separate key, p. 1045
13. Plumage of upper parts bright green with black cap and stripe through eye. Face buff. Bill short and flattened (Flycatcher-like). Rictal bristles prominent *Seicercus*, p. 1035
Plumage not as described above 14

* An exception is *Apalis pulchra*, which has 10 rectrices only, a very distinctive species with black band across white throat and breast, chestnut flanks, slate upper parts and black and white tail which in every respect except in number of rectrices is a typical *Apalis*.

14. Sides of face black, and black on breast 15
Sides of face not black, no black on breast 16

15. Belly grey or grey washed with olive .. *Bathmedonia*, p. 1106
Belly fulvous brown .. .. .. *Eminia*, p. 1054

16. Outstretched legs and feet extend beyond tail; colour of thighs contrasts with colour of body plumage; bill as long as head, wings short and rounded 17
Outstretched legs and feet not extending beyond tail; colour of thighs rarely contrasting with rest of plumage 18

17. Outer tail-feathers white; plumage mostly grey or brown, no yellowish-olive edging to wings
Poliolais. See separate key, p. 1067
Outer tail-feathers not white, plumage variable but always with olive or yellowish-olive edging to the wings
Camaroptera. See separate key, p. 1067

18. Whole plumage grey; tarsus long and very strongly scutellated, rough to touch. Legs and toes brightly coloured in strong contrast to plumage and almost reaching to tip of tail when outstretched; bill fine, nearly as long as head from base of skull, black in colour; wing rounded and short, 1st primary more than half length of next .. .. .. *Calamonastes*, p. 1043
Plumage not as described above; tarsus not noticeably scutellated or rough to touch 19

19. Tail graduated; bill comparatively long and straight, laterally compressed, never flattened (as in flycatchers); rictal bristles present (except in *Lusciniola*) though not always obvious 20
Tail not graduated, usually square; bill short and laterally compressed without rictal bristles (except in *Hippolais*, where bill is longer, flattened as in flycatchers and with rictal bristles) 22

20. 1st (i.e. extreme outermost) primary diminutive and very narrow, falling considerably short of tips of primary coverts .. .. *Acrocephalus*. See separate key, p. 1025
1st primary not short but broad and fairly long, i.e. about half length of 2nd primary and extending beyond tips of primary coverts 21

21. Crown blackish, upper parts streaked with black, rictal bristles obsolete .. *Lusciniola*. See separate key, p. 1025
Crown not blackish, whole upper parts uniform, unstreaked, rictal bristles short but obvious
Calamoecetor. See separate key, p. 1025

22. Bill much flattened (as in the flycatchers); rictal bristles prominent (except in *H. pallida pallida*); upper parts olive or pale olive-brown
Hippolais. See separate key, p. 1021
Bill not flattened as in flycatchers, but short and rather fine, rictal bristles obsolete 23
23. 1st (outermost) primary distinctly long, about half length of 2nd; small birds with short bills, often with yellow on breast or belly (except *E. badiceps*, which has a black band across the breast)
Eremomela. See separate key, p. 1063
1st (outermost) primary distinctly short, always less than half length of 2nd, often rudimentary 24
24. Axillaries and under wing-coverts lemon-yellow; upper parts more or less olive or green, and tinged with yellow .. .. *Phylloscopus*. See separate key, p. 1030
Axillaries and under wing-coverts never lemon-yellow; upper parts brown or grey without any olive-green or yellow tinge .. .. *Sylvia*. See separate key, p. 1013

Key to the species of Warblers in the genus Sylvia

1. Outer webs of outer tail-feathers not white 2
Outer webs of outer tail-feathers white 3
2. Crown of head uniform with back .. *Sylvia borin*, p. 1015
Crown of head contrasting with back, black in male, chestnut in female .. *Sylvia atricapilla atricapilla*, p. 1016
3. Wing-coverts and secondaries broadly edged with chestnut 4
Wing-coverts and secondaries not edged with chestnut . 5
4. Lores black, breast washed with vinous (strongly so in males); wing under 60 mm.
Sylvia conspicillata orbitalis, p. 1019
Lores white, no vinous wash on breast; wing over 60 mm.
Sylvia communis communis, p. 1014
5. Size large (wing over 72 mm.) *Sylvia hortensis hortensis*, p. 1017
Size smaller (wing under 72 mm.) 6
6. Throat and breast rufous or deep vinous
Sylvia cantillans and subsp. ♂, p. 1017
Throat white, breast not rufous or deep vinous in colour but whitish or very pale.. 7
7. Ear-coverts dark brown to blackish, white on outer web of outer tail-feathers only .. *Sylvia curruca curruca*, p. 1015
Ear-coverts pale brown, white on both webs of outer tail-feathers .. .. *Sylvia cantillans* ♀ and immature, p. 1017

EUROPEAN WHITETHROAT

Sylvia communis communis Latham

About 5½ in. in total length, brown above, whitish below, both sexes may be distinguished from the Lesser Whitethroat by the pronounced rufous-brown or chestnut patch on the wing, caused by the broad fringes to the greater coverts and the inner secondaries. In flight the outer tail-feathers show a considerable amount of white, much more so than in the Lesser Whitethroat, and the very white throat, often puffed out in excitement, is usually a marked feature, but probably less in evidence during the off-season. From most of the European Warblers wintering in West Africa the white outer tail-feathers and chestnut on the wing are distinguishing features. To save confusion in the field with the Lesser Whitethroat, look for the rufous in the wing and the pale brown legs. The Lesser Whitethroat has no rufous in the wing and has slate-coloured legs. The wing measures 68–75 mm. and tail 58–64 mm.

This is a common winter migrant to the whole of Upper Guinea, very few reaching on the west coast beyond the equatorial forest belt. To our area the European Whitethroat arrives in some numbers in October and November and has been recorded as early as 26th August from near Burem on the Niger. The majority spend the winter months in the savanna country and are more often encountered in the French Sudan and in the Northern Territories of Colonies than near the coast. The return journey north begins in mid-March, and examples have been observed passing through the Saharan oases as late as May. The crossing of the desert is evidently accomplished on a wide front.

In its winter quarters the whitethroat frequents gardens, scrub and thickets and some seem to be content to remain close to the fringe of the desert and to eke out an existence in such spots as Tillia Grove in French Niger Territory, living on tiny insects and the berries of the Salvadora.

Distribution. The whole of Europe from lat. 65° N. to the Mediterranean, breeding also in northern Africa, wintering in tropical Africa and reaching on the east the Zambesi and on the west the Congo, but avoiding the heavy forest.

LESSER WHITETHROAT

Sylvia curruca curruca (Linnæus)

THE lack of any chestnut in the wing is the main field character which distinguishes this species from the slightly larger whitethroat (*S. c. communis*) and to a lesser extent the reduced amount of white on the tail. In plumage the Lesser Whitethroat has entirely grey-brown upper parts, whereas the back of the Whitethroat is more of a reddish brown. Of the two the former has the whiter under parts. There is also a marked difference in the colour of the legs—in the Lesser Whitethroat these are dark bluish-lead or slate-colour and in the Whitethroat pale brown. As stated elsewhere, this last is quite a good character to look for in the field. The wing of the Lesser Whitethroat measures 60–70 mm., the tail 52–56 mm.

This is a much rarer visitor to West Africa in winter than the common Whitethroat and only a few examples have ever been recorded. There seems little doubt that all the Lesser Whitethroats from western Europe migrate south in winter in a south-easterly direction, crossing the Mediterranean via Greece and not spread over a wide front. The evidence available points to no regular migration down the West African coast, which accounts for the few records available from the vicinity of Lake Chad and the Shari, and the birds are encountered very rarely as far west as Bornu. They are later to arrive than *Sylvia communis* in their winter quarters, which appear to be in the eastern half of Africa rather than the west.

Distribution. A breeding bird in Europe from lat. 65° N. to the Mediterranean, wintering chiefly in the Egyptian Sudan, mainly to the east of the Nile valley, stragglers only occurring in the west: Zinder, Maidugari, Chad and Maniling. It does not extend south of lat. 5° N.

GARDEN WARBLER

Sylvia borin (Boddaert)

THE adult male and female have entire upper parts from crown to upper tail-coverts including the wing-coverts light brown washed with olive, the tail-coverts with paler tips. Minute whitish feathers surround the eye. The lores and a faintly indicated eye-stripe are greyish white; ear-coverts are a paler shade of brown than the cheeks. Primaries and secondaries are dark brown fringed with olive-brown, the extreme tips being greyish white in first plumage. The tail is grey-brown, with no white on the outer rectrices. Chin and throat are buffish white; the breast and sides of body are pale

buffish brown; the belly is whitish; the under tail-coverts are white, with brown bases. Axillaries and under-wing-coverts vary from bright yellowish buff to buff. The wing measures ♂72–82 mm. and the tail 51–57 mm.

From November onwards the Garden Warbler may be expected to arrive in West Africa, not in large numbers, but fairly well distributed in the savanna and forest clearings. It may be observed in gardens and compounds, behaving much as it does at home, for it is a secretive bird and chooses to creep about in search of its insect food in the more heavily foliaged trees and bushes. The birds skulk to such an extent that, were it not for their voices, they would easily pass unnoticed. The migration dates are the same as those mentioned for the Whitethroat—it arrives early in autumn and departs late in spring.

Distribution. Breeds throughout Europe except in southern Spain, wintering in Africa over a wide area south to the Equator, wandering at times to Natal or beyond. It is generally but sparsely distributed in West Africa in the winter months.

EUROPEAN BLACKCAP

Sylvia atricapilla atricapilla (Linnæus)

The Blackcap is known to most Europeans and, unlike many of the warblers, can boast a distinctive mark in both sexes, the cap or crown being black in the male, reddish brown in the female. The rest of the plumage is ash-grey without the white throat of the Orphean Warbler. It is about the same size as the Garden Warbler. Its melodious song, full of rich and varied notes, may be heard in the early spring prior to the birds leaving their winter quarters. The wing is 69–80 mm. and the tail 57–64 mm.

The Blackcap arrives in its winter quarters later than most of the other European Warblers and returns sooner in the spring, so that its sojourn in the tropics is not as protracted as that of its congeners. Very few reach West Africa, for there is no doubt that the trend of migration is in a south-easterly direction from European countries. That there is a line of migration down the west coast is proved, I think, by the numbers which pass in spring through the Canary Islands and Rio de Oro, but many blackcaps from Europe remain in the oases of the Sahara and do not penetrate the waterless desert to the south. Another favoured route is down the Nile valley, whence the passage migrants reach the southern Sudan and Kenya. In West Africa they have been reported from Gambia, Sierra Leone, Timbuktu and Ashanti, those from the Gold Coast being the furthest south in the west from which the bird has been recorded.

Distribution. The whole of Europe to the Mediterranean, also in northern Africa, migrating to tropical and subtropical Africa in winter but not south of the countries mentioned above.

ORPHEAN WARBLER

Sylvia hortensis hortensis (Gmelin)

This is a large, robust-looking warbler measuring 6½ in. in total length. It has a superficial resemblance to a Blackcap but is decidedly larger, and the blackish crown of the male Orphean is not clearly defined as is the black cap of the former species, and moreover is much duller (not jet-black as in *S. atricapilla*). Unlike the Blackcap, the Orphean Warbler has a pure white throat, and the entire under parts are much whiter. Another point of difference is in the tail, the white outer feathers in the Orphean being conspicuous, while they are not present at all in the Blackcap. The pale cream eye is still another distinctive feature to observe. The song of the two species (if heard) is not very dissimilar, and both utter the *tut-tut* note of alarm. The wing measures 73–83 mm. and the tail 65–70 mm.

The typical western race of the Orphean Warbler, which visits tropical Africa in winter only, does not appear to extend much beyond the country bordering the desert. In the central and southern Sahara the migration has been observed at the end of September and the early part of October, the birds remaining in the thorn scrub and dry savanna belt until April or even May. It is absent from West Africa for a very short time, which is understandable, as it has not so far to go to reach its breeding quarters as many of the European Warblers.

Distribution. Breeding in south-western Europe from France to Italy and in North Africa from Morocco to Tripoli north of the Atlas. Its northern range does not extend beyond Belgium and Luxemburg, where it is rare. Passage migrants pass through the Sahara to reach the French Sudan and French Niger Territory, where many spend the winter in the vicinity of Timbuktu, Taberréshat Wells and Tillia Grove.

SUBALPINE WARBLER

Sylvia cantillans (Pallas)

The adult male has the entire upper parts ash-grey, also the lores and ear-coverts, the latter being a darker shade of grey. The mantle and back are washed with brown. A narrow white stripe passes

from the base of the lower mandible, separating the grey cheeks from the throat. Median and lesser wing-coverts are grey, the feathers with brown bases; primary coverts are grey-brown, as are the primaries and secondaries, with buffish-white edges. The tail is dark brown, the outer pair with outer web-terminal portion and most of inner fringe white. Chin, throat, breast and sides of the body vary from pale pinkish to pinkish chestnut, many of the feathers being tipped with white. The middle of the belly is white. The under tail-coverts are white terminally, the bases like the breast. The eye is pale yellow ochre or light brown, with the orbital ring orange; the bill is black, the lower mandible whitish at base; legs and feet are light brown. The bill measures (from feathers) 8–9 mm.; wing (male) 54–64 mm., (female) 55–60 mm.; tail 49–55 mm.; tarsus 18–20 mm. Wing structure: Second primary shorter than primary coverts, equal to, or between, fifth and sixth primary.

The adult female has the entire upper surface pale grey-brown, white moustachial stripe indistinct, ear-coverts pale brown. The chin is whitish; throat, breast and sides of the body pale pinkish buff; the breast and sides are sometimes more pink than buff; middle of breast and belly are white. The tail is browner than in the male, with less white on the outer rectrices, and the wing-coverts with brown, not ashy-grey, fringes.

In total length this small warbler does not exceed 4 in. and is difficult to observe, owing to its skulking behaviour. In the field the white moustachial stripe is conspicuous at close quarters, and when the bird flies the white in the tail-feathers can be seen. The orange ring round the eye is also a feature to note.

All three races of the Subalpine Warbler are visitors from various parts of Europe, spending the winter in the dry bush country of West Africa. Its presence may be announced by the harsh *tac tac* which it utters or by a clicking alarm note. It does not sing in its winter quarters. Like so many other Warblers, this bird has a great liking for the Salvadora berries upon which it feeds when insect life is scarce.

I have given a fairly long account of the various races of this warbler and its habitat in West Africa in my larger work. For lack of space it can only be briefly mentioned in this handbook.

Distribution and Races

S. cantillans cantillans (Pallas) has been fully described above. It breeds in the countries of the western Mediterranean from Portugal to Sicily. It passes through the Saharan oases to winter in the western French Sudan and the French Niger.

S. cantillans albistriata (Brehm). This is an eastern Mediterranean race breeding from Greece to Asia Minor, wintering mainly in East Africa, but has occurred in the French Sudan and around Lake

Chad. It may be distinguished in the hand by the wing structure, the second primary being longer than the fifth, and the third to fifth emarginate on the outer web. The breast is deeper pinkish brown than in the typical race.

S. cantillans inornata Tschusi is the breeding bird of North-West Africa from Morocco to Tripoli. It has occurred as far south in winter as Tillia in French Niger. The breast is more brick-red than in either of the races mentioned.

As all three forms of the Subalpine Warbler come within our limits in winter and may occur side by side, it will be quite impossible for the field naturalist to distinguish which race he has under observation unless handled, and even then not without comparison in a museum.

SPECTACLED WARBLER

Sylvia conspicillata orbitalis (Wahlberg)

The grey head of the male and the pale yellow ophthalmic ring, together with the rufous edgings to the wings, conspicuously white throat and vinous-pink breast of the male should serve to distinguish this diminutive bird, whose total length is not more than 4½ in. The female is duller in colour and liable to confusion with the Lesser Whitethroat should they ever occur together, but the chestnut in the wing of the Spectacled Warbler is a sure means of distinction. Measurements are: Bill 8–9 mm., wing 52–57 mm., tail 42–50 mm., tarsus 17–18 mm.

This is a shy little bird which spends its time creeping about in the euphorbia, or lavender bushes, in the islands where it is resident, being found commonly from sea level to the higher ground on most of the islands.

Distribution. Very common in the Cape Verde Islands but, curiously enough, not yet reported from the opposite mainland of Senegal or elsewhere on the continent. The typical race inhabits Sardinia.

RUFOUS WARBLER

Agrobates galactotes (Temminck)

Two races of the Rufous Warbler come within our limits, one, the Lesser Rufous Warbler, being resident, while the typical race is a winter visitor from North Africa and the Iberian Peninsula.

A. g. galactotes is a rather large warbler (if indeed we are correct in considering it a warbler at all), measuring about 7 in. in total

length. Other dimensions are: Bill 14–17 mm., wing 82–91 mm., tail 66–71 mm., tarsus 25–28 mm. It is foxy-reddish brown above and whitish or cream-coloured below, with a conspicuous cream streak over the eye, the most noticeable feature being the rather long, broad, fan-shaped, highly patterned tail, in colour bright rufous chestnut, with broad white tips and a black subterminal band, the latter being most marked in life. The only bird with

which this migratory race can be readily confused is the resident African representative, *A. galactotes minor*, a smaller, deeper-toned bird, but one which it would be quite impossible to distinguish in the field from the European migrant. It may be noted, however, that the former race has not yet been found to range as far south in West Africa as any of our Colonies.

As already observed, the typical race of the Rufous Warbler is only a migrant to our area, which evinces a partiality for dry sandy places and may be observed in its breeding area on dusty roads and among the ubiquitous prickly pear plantations. There it nests and rears its young in North Africa and the northern Saharan oases, migrating in winter to the southern Sahara and the borders of the desert in French Sudan and French Niger.

The resident race, *A. galactotes minor*, is not easily distinguished from its northern cousin, but when compared it appears darker and

smaller. It is a characteristic species of the semi-arid belt, where in the breeding season it may be seen spreading and cocking its tail and flicking its wings. It is not a shy bird and will frequent the lower part of acacia bushes or the ground which is covered with scrub. Its notes are very sweet, somewhat thrush-like in tone but shriller.

A. g. minor makes its nest in thickets or in the fork of a low bush. The nest is a cup-shaped construction of leaves, roots, grasses and bark lined with finer material such as cotton and hairs. Three to five eggs are laid, smaller than those of the northern African race, bluish white or grey in colour, plentifully speckled, spotted and blotched with umber-brown and lavender, and measuring 19–21·3 × 15–16 mm. Nesting takes place from early spring until August.

Distribution and Races

A. galactotes galactotes (Temminck) breeds in northern Africa, southern Spain and Portugal, migrating to French Sudan and French Niger in winter. Not yet recorded from British territory.

A. galactotes minor (Cabanis) differs from the above in the tone of the mantle, crown and wings, which are warmer, more pinkish brown rather than fox-brown. In size it is smaller, with wing 74–84 mm., tail 63–70 mm. It is resident in the entire semi-arid belt of North Africa from Abyssinia and Kenya west through the Sudan to Sokoto, Bornu, northern Cameroon, French Niger, French Sudan and Senegal.

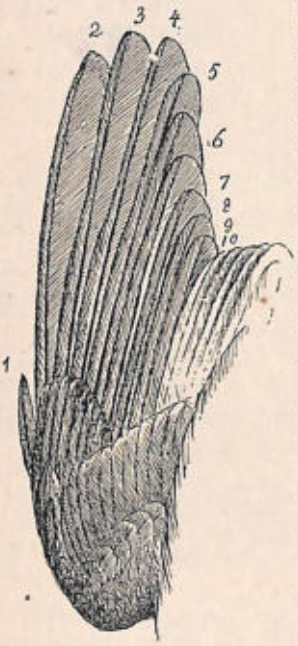
Key to the Tree Warblers of the genus Hippolais

1. Under parts yellow 2
   Under parts whitish or palest buff 3
2. Wing long (72–81 mm.), when folded reaching to tip of upper tail-coverts; 2nd primary longer than 5th. (See text figure on p. 1022.) .. .. *Hippolais icterina*, p. **1022**
   Wing short (63–69 mm.), when folded falling short considerably of tip of upper tail-coverts; 2nd primary shorter than 5th. (See text figure on p. 1023.) *Hippolais polyglotta*, p. **1023**
3. Size larger (wing 65–71 mm.), upper parts greyer, tinged with olive .. .. *Hippolais pallida opaca*, p. **1024**
   Size smaller (wing 59–66 mm.), upper parts browner, lacking olive tinge .. *Hippolais pallida pallida*, p. **1024**

ICTERINE WARBLER

Hippolais icterina (Vieillot)

THIS warbler, about 5½ in. in total length, with rather strikingly long wings, is clear olive above, pale yellow below, has a narrow yellow strip over the eye and a similarly coloured circle round it. Its brown wings are, as already noted, rather long and pointed, and in its appearance it can with difficulty be distinguished in the field from the Melodious Warbler. The latter, however, has very short wings. In the hand the Icterine Warbler can be known by the structure of the wing, the second primary being longer than the fifth, in which connection it must be remembered that the second primary is the first outermost long one, the first primary in these warblers being so small as to be easily mistaken by the uninitiated for a covert. (See text figure for structure.) The wing measures 72–81 mm., the tail 52–56 mm. and tarsus 18–21 mm.



Compared with the Melodious Warbler, this species has a very wide winter distribution in Africa, but it barely touches the area with which we deal and is, in fact, an extremely rare bird in West Africa.

A winter visitor from almost the whole of Europe, the Icterine Warbler's migrations are chiefly to the eastern half of Africa, where it reaches the Zambesi and Orange River Colony. In September it passes through the Sudan and Darfur in small parties and when it reaches its journey's end may be found among gardens, cultivated farms, palm groves and orchard bush. On passage it passes through arid country. Before its return to Europe its startling song may be heard, less pleasing to the ear than the notes of the Melodious Warbler, but more vehement and impossible to mistake for any other bird.

Distribution. Breeds in the greater part of Europe, traversing the Sahara in September on its way south to winter in eastern Africa as far south as Damaraland and Orange River Colony. Though recorded once from the Gold Coast and once from the Cameroons, it misses West Africa on its journeys and does not winter within our limits.

MELODIOUS WARBLER

Hippolais polyglotta (Vieillot)

This species, like the Icterine Warbler but slightly smaller, is olive above, pale yellow below, with a yellow eye-stripe and bright-coloured bill. The two species are hardly possible to distinguish in the field, but whereas the Icterine Warbler is very rarely met with in West Africa, the Melodious Warbler is a fairly numerous winter visitor and has been recorded from all our Colonies on many occasions. When in the hand it may be known by the wing formula, the second primary (i.e. the first long outer one) being shorter than the fifth. In comparison with the Icterine, the wing of the Melodious Warbler is strikingly short. The wing measures 63–69 mm., tail 49–55 mm. and tarsus 21–22 mm.

This South European Warbler winters exclusively in West Africa. The third week of October finds it in the latitude and vicinity of Timbuktu, and by December it has reached the Ivory Coast and Nigeria. It seems to be a regular though not very common visitor to the thick bush and clearings and is less often observed in plantations and gardens.

We have not much data to guide us as to its movements in West Africa. Probably it reaches its winter quarters by way of the Sahara, as it has been observed along the western edge of the desert during the autumn migration. It is more in evidence on the return journey in spring. At that season it is not in the least shy. About March the birds begin their trek northwards, but it has been obtained as late as 4th May as far south as lat. 15° N. As its name implies, it has a sweet song, but that is not often heard in the winter months.

Distribution. Breeds in south-western Europe from France to Italy and in northern Africa, wintering exclusively in West Africa from Gambia to the Cameroons. It is found in all British Colonies and intermediate territory between October and May.

TREE-WARBLER OR OLIVACEOUS WARBLER

Hippolais pallida (Hemprich and Ehrenberg)

THERE are two races of this warbler—*H. pallida pallida*, which is usually termed the Olivaceous Warbler, and *H. pallida opaca*, the Opaque Tree-Warbler.

The most striking feature about the Opaque Tree-Warbler is its rather long and very much flattened bill, with very pale under mandible, the small bristles at the base being scarcely noticeable. It is a small, dull grey-brown bird with creamy-white under parts, the upper parts being uniform in colour. Its total length, including the bill, is about 5¼ in.—almost the same size as the Melodious Warbler; but its longer bill, longer wing and lack of yellow on the under parts at once distinguish it from that bird.

The typical subspecies, *H. p. pallida*, is a rather smaller edition of *H. p. opaca*; it is about ½ in. shorter in total length, and both the wings and tail are shorter. Structurally the bill is less flattened when the two are compared.

The wing of *H. p. pallida* measures 59–66 mm., the tail 45–54 mm., the corresponding measurements of *H. p. opaca* being 65–71 mm. and 53–59 mm. Both these races have been found in west Africa.

H. p. pallida breeds in Egypt and Nubia and winters in the Sudan, and there is a resident bird which nests on the borders of Lake Chad and in Aïr which has also been taken in Bornu. It seems indistinguishable, though some naturalists have allied it with *H. p. reiseri*, a name given to the doubtfully separable breeding bird of Algeria. Both are dry-country birds.

The Opaque Tree-Warbler has been found, in winter only, in the southern Sahara and the semi-arid belt within our area. Its notably flat bill should enable it to be identified. It crosses the desert on its way north to breed in Spain and north-western Africa from the second half of April to mid-May. It is one of the latest summer visitors to arrive in Andalucia, but once there its presence is soon made known by its loud voice. Its song may be heard in winter also, but never for so long at a time.

Distribution of the Races

H. p. pallida breeds in north-eastern Africa, ranging south to Abyssinia and Darfur in the off-season and as far west as Chad.

H. p. opaca breeds in central and southern Spain and from Morocco to Tunisia, ranging south in winter to Nigeria and the Northern Territories of the Gold Coast.

Key to the Swamp- and Scrub-Warblers in the genera Acrocephalus, Lusciniola and Calamoecetor

1. 1st primary diminutive and narrow, falling far short of tips of primary coverts 2
   1st primary broad and fairly long, extending beyond tips of primary coverts 5

2. Upper parts, particularly crown, streaked with black*
   Acrocephalus schoenobaenus, p. 1028
   Upper parts uniform, including crown 3

3. Size very large (wing 88–103 mm., total length about 7–8 in.) .. *Acrocephalus arundinaceus arundinaceus*, p. 1026
   Size much smaller (wing 52–70 mm., total length under 6 in.) 4

4. Size larger (wing 62–70 mm.), 2nd primary longer than 6th; plumage olive-brown, rusty tinge slight
   Acrocephalus scirpaceus scirpaceus, p. 1026
   Size smaller (wing 52–56 mm.), 2nd primary shorter than 6th; plumage warm reddish brown or with strong rusty tinge, particularly on rump
   Acrocephalus baeticatus cinnamomeus or *A. b. nyong*, p. 1027

5. Head blackish, mantle streaked
   Lusciniola melanopogon, p. 1029
   Head brown or grey uniform with back 6

6. Upper parts grey-brown, rump not fulvous, 1st primary narrow and pointed; range restricted to island group
   Calamoecetor brevipennis, p. 1042
   Upper parts olive-brown, rump fulvous, 1st primary broad and rounded at tip; range restricted to Continent 7

7. Size larger (wing 71–77 mm.)
   Calamoecetor rufescens rufescens and *C. r. chadensis*, p. 1041
   Size smaller (wing 59–67 mm.)
   Calamoecetor leptorhyncha neglecta, p. 1042

* It is conceivable that the European Aquatic Warbler, *Acrocephalus paludicola* (Vieill.), whose winter quarters are not yet known but which occurs in northern Africa, may extend its winter range to within our limits, in which case it may be distinguished from the Sedge-Warbler by (1) the broad conspicuous pale line down the middle of the crown (not uniformly streaked as in *A. schoenobaenus*), and (2) by having the feathers of the rump and upper tail-coverts streaked, not uniform as in the Sedge-Warbler.

GREAT REED-WARBLER

Acrocephalus arundinaceus arundinaceus (Linnæus)

THERE can be no mistaking the Great Reed-Warbler, which is indeed a giant among the warblers, measuring 7½ in. in the flesh from bill to tail. Its all-brown upper parts, pale orange-tawny under parts, white throat, powerful bill and legs, and very broad dark brown tail should serve to distinguish it, remembering that it is a bird of the swamps or close vicinity. The measurements of this bird will be given in full: Bill 17–19 mm., wing 88–103 mm., tail 68–81 mm., tarsus 27–31 mm.

It is the typical race of the Great Reed-Warbler which winters in western Africa, the Asiatic subspecies (*zarudnyi*) occurring over the greater part of south-eastern Africa. The European bird has seldom been found south of the Equator.

To much of our area it is a regular winter visitor, and wherever swamps and reed-beds occur, irrespective of the surrounding country, there the Great Reed-Warbler may be found. It is not every swamp which holds a pair or more, and its distribution can only be described as local. It is usually November before it makes its appearance, but from then on its low-pitched but attractive song may be heard continually as the bird skulks in the heavy grasses and other foliage of the swamps. Watching in the direction from which the sound proceeds, a view of the songster may be secured as it creeps up the reed stem to gain a better view of its surroundings, only to drop down again quickly out of sight. It may be heard in southern Nigeria pretty regularly until about 10th March, when the migration north begins.

Distribution. Breeds throughout central and southern Europe, western Asia and North-West Africa, wintering in tropical Africa as far as the clearings of the Belgian Congo, but is rare south of the Equator. More commonly met with in West Africa between the Senegal and Congo Rivers than is the case in East Africa. It does not nest within our limits.

EUROPEAN REED-WARBLER

Acrocephalus scirpaceus scirpaceus (Hermann)

THE only Reed-Warbler occurring within our limits with which this species can be confused is the Tropical African Reed-Warbler (*A. baeticatus cinnamomeus*), and certainly, unless the two are seen together, when the European Reed-Warbler will be seen to be the larger of the two, there is nothing to distinguish one from the other.

Both are plain-coloured brown-backed birds, the African resident with a rather more rust-coloured rump. The European Reed-Warbler is about the same size as the Sedge-Warbler, but the latter species is easily recognised from it by its dark brown crown, distinct white eye-stripe and streaked or variegated upper parts. It is almost entirely confined to reed-beds and riverside bush, but though active, is secretive and seldom leaves cover. The total length in the flesh is slightly over 5½ in. The wing measures 62–70 mm., tail 49–55 mm. and tarsus 23–24 mm.

This plain-backed little warbler, which nests regularly in England, is one of those species which prefers to take a south-easterly course on its migrations rather than to proceed due south, which would eventually bring it within our limits. It is, on the contrary, rare in western Africa, and the data concerning its migrations which have been accumulated, though scanty, point to its crossing the Mediterranean from the toe of Italy eastwards rather than between Gibraltar and Sicily. Those Reed-Warblers which breed in Spain and perhaps locally in North-West Africa may find their way to West Africa by a direct north-to-south route, but their numbers are infinitesimal in comparison with those which pass along the Nile valley and through the Sudan to winter in Uganda, Kenya, Tanganyika and the Rhodesias, extending their winter range as far as the Zambesi but not often beyond.

The difficulty in distinguishing it in East Africa is complicated by the presence of the eastern subspecies and by the very similarly coloured Marsh Warbler (*A. palustris*), which has not yet been found to occur in West Africa. The Common Reed-Warbler arrives in the tropics from September onwards and remains until March and April.

Distribution. Breeds in western Europe from central Germany and Britain south to the Mediterranean, wintering in tropical Africa, mainly in East Africa, commonly south to the Great Lakes. Rare in West Africa but recorded from Gambia, Ivory Coast, French Niger and the Cameroons.

TROPICAL AFRICAN REED-WARBLER

Acrocephalus baeticatus cinnamomeus Reichenow

THE only way in which this resident bird can be distinguished from the European winter migrant (*scirpaceus*) is in its relatively smaller size. In total length it is about 4¾ in., with wing 52–56 mm., tail 40–49 mm. and tarsus 21 mm. Its upper parts are rather more tinged with rusty yellow and less with grey-brown or olive than the European bird, and the breast and sides are tinged with deeper

cinnamon-buff. In the hand the differences in wing formula may be noted. In *A. b. cinnamomeus* the second (first long outer) primary is shorter than the sixth, whereas in *A. scirpaceus* the second primary is appreciably longer than the sixth.

It is only in Chad territory that this bird has been found in our area up to date, but it can hardly be restricted to so small a range as the environs of Lake Chad, and its presence in suitable terrain further west may be suspected.

There is, in fact, a subspecies, *Acrocephalus baeticatus nyong*, which I described myself from specimens obtained in south-western Cameroon on the Nyong River. These are warmer brown in colour and deeper in tone throughout.

In my larger work I have given details of the nest and eggs of *A. b. cinnamomeus*. The eggs resemble those of *A. scirpaceus* but are smaller. The nests are indistinguishable, but, of course, *A. scirpaceus* does not breed in the tropics.

Distribution. A. b. cinnamomeus was first described from the vicinity of Lake Albert Edward and has since been found breeding in Darfur. It ranges from the Upper White Nile to north-eastern Rhodesia and westwards to Lake Chad and the Shari River.

A subspecies, *A. b. nyong*, has been described from Cameroon, as noted above.

SEDGE-WARBLER

Acrocephalus schoenobaenus (Linnæus)

The Sedge-Warbler is of the same size as the European Reed-Warbler, i.e. about 5 in. in length, but from all the three Reed-Warblers which occur within our limits (*arundinaceus*, *scirpaceus* and *baeticatus*) the present species is easily recognised by its striped dark crown and streaky (not plain) upper parts. From the Great Reed-Warbler it is, of course, at once distinguished by its so very much smaller size, apart from its markings, but in size it resembles the European and the tropical Reed-Warblers. It has, too, a very well-marked cream stripe over the eye. It must be remembered that we do not as yet know the winter quarters of the European Aquatic Warbler (*Acrocephalus aquaticus*), and should this bird ever be found in winter months within our area it should be noted that it, too, has streaked upper parts, but in the Aquatic Warbler the black streaks are jet-black and are vividly in contrast to the buff ground colour. Moreover, it has a broad yellowish-buff stripe down the centre of the crown flanked with black—a very definite guide to the identification of the species should it ever occur. In its field characters in Europe the Sedge-Warbler is known to be more catholic

than the other members of its family, being often found in tangled vegetation some way from water. It is, for all that, usually to be looked for among reeds. The measurements are: Wing 63–71 mm., tail 47–55 mm., tarsus 21–22·5 mm.

This well-known European bird, which breeds abundantly in Britain, is one of the earlier arrivals to reach its winter quarters. It is then widely distributed in Africa, reaching even Cape Province, and is extremely numerous in the vicinity of the Great Lakes. We find it passing through Egypt and the Sudan from the last days of August and throughout September. It has been seen in Darfur at the end of August and many remain there to pass the winter months. Early in March the birds from East Africa begin their long trek northwards to Europe. Considering that the main passage is certainly down the eastern half of Africa, it is not surprising that it is rarely recorded from West Africa.

The birds often give forth snatches of sweet song, even though in full moult, which they undergo in the water-borne vegetation of their winter home. As in Europe, swamps and reed-beds are their habitat, and their alarm croak will sometimes betray their presence in such places.

Distribution. Breeds over the greater part of Europe east to Turkestan, migrating to Africa for the winter months. Very widely distributed south to Cape Province but rarely recorded from West Africa, which territory it barely skirts. I have seen specimens from Chad, northern Nigeria and the Cameroons.

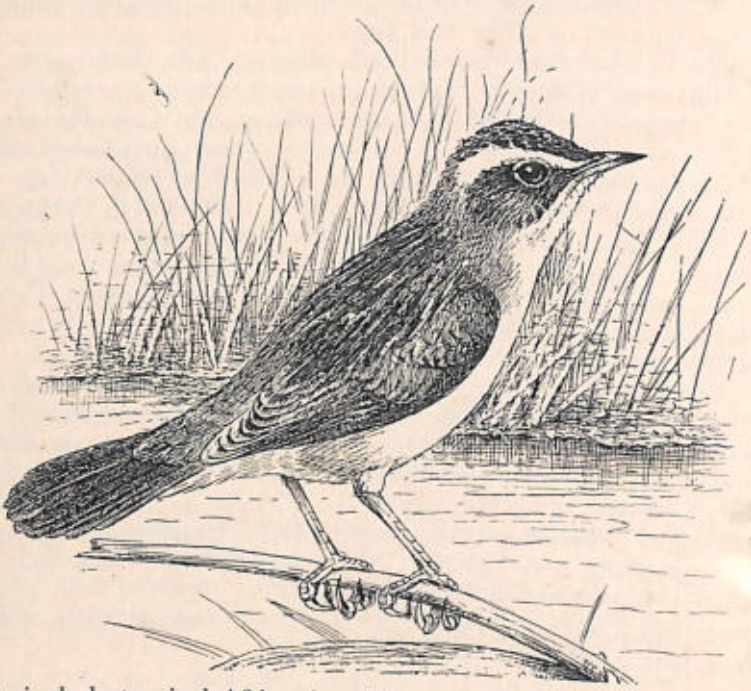
EUROPEAN MOUSTACHED WARBLER

Lusciniola melanopogon melanopogon (Temminck)

ABOUT 5 in. in total length, russet-brown upper parts streaked with black on the mantle and with an almost black crown, prominent white eyebrow broadening into a small white patch behind the eye, very white throat and belly, the breast and sides washed with russet, the Moustached Warbler is quite distinctively marked when closely observed. The bill is rather short and fine, and when handled the bird will be found to have a graduated tail, the outer rectrices being considerably shorter than the central pair, and an exceptionally long first (outer) primary which exceeds the length of the primary coverts. Superficially not unlike the Sedge-Warbler in appearance, but with much more rounded wing, blacker crown and whiter eye-stripe. It is a swamp-haunting bird in Europe. The wing measures 54–60 mm., the tail 50–56 mm. and tarsus 20–21 mm.

Distribution. The Moustached Warbler is a native of southern Spain, southern France, Italy, Dalmatia and Hungary. It is

believed to winter in Iraq and Palestine, but was discovered on one occasion near Lake Chad. Its winter quarters were never suspected



to include tropical Africa, but if it reaches Chad, however rarely, it is clear that we still have much to learn concerning it. Its alarm note is an oft-repeated harsh jarring rattle, and the song is said to be sweeter and more refined than that of the Sedge-Warbler.

GENUS PHYLLOSCOPUS

Field and museum keys to the Warblers in the genus Phylloscopus which occur in tropical West Africa, i.e. the Chiffchaff, Willow-Warbler, Wood-Warbler and Bonelli's Warbler

A. Field Key

1. Decidedly bright greenish above and very white belly *Phylloscopus sibilatrix*, p. 1033
   Not as above described 2
2. Brown above and whole under parts pure white; colour of rump contrasts with mantle .. *Phylloscopus bonelli*, p. 1034
   None of under parts pure white 3

3. Upper parts uniform and variable brown, under parts yellowish or whitish, no fulvous colour on flanks
Phylloscopus trochilus, p. 1031
As above, but flanks distinctly fulvous, legs darker
Phylloscopus collybita, p. 1032

NOTE. *P. trochilus* and *P. collybita* cannot always be differentiated in the field on colour characters.

B. TECHNICAL KEY

1. 6th primary emarginate on outer web, 2nd primary shorter than 7th .. .. *Phylloscopus collybita*, p. 1032
6th primary not emarginate on outer web 2
2. Wing not less than 70 mm., 2nd primary never shorter than 5th, 1st shorter than coverts
Phylloscopus sibilatrix, p. 1033
2nd primary always shorter than 5th, 1st longer than coverts 3
3. Rump colour contrasts with mantle
Phylloscopus bonelli, p. 1034
Rump colour does not contrast with mantle
Phylloscopus trochilus, p. 1031

NOTE. If the wing is moulting and so creates a doubt, the bird cannot be *P. collybita*, as this does not moult its wings in winter and spring.

WILLOW-WARBLER

Phylloscopus trochilus trochilus (Linnæus)

THE distinctions between the various warblers in the genus *Phylloscopus* are so fine that with the exception of the Wood-Warbler, with its much whiter under parts, the others are difficult to recognise in the field, especially during the winter months, when their distinctive notes are seldom uttered.

The olive-grey upper parts of the Willow-Warbler are subject to seasonal variation and abrasion, but on the whole it is a yellower bird than the chiffchaff and the legs are distinctly paler brown. Both birds have an eye-stripe which in the Willow-Warbler is more apparent and yellower in colour. When handled, the structure of the wing is diagnostic: the third and fourth primaries equal and longest, the fifth being shorter. The second primary is shorter than the fifth, usually between the fifth and sixth. The first primary is 3–6 mm. longer than the primary coverts, the third to fifth primaries with emarginate outer webs. The sixth primary is not emarginate on the outer web. Note that the second primary must be shorter

than the fifth. The measurements are as follows: wing (male) 64–71·5 mm., (female) 61–65 mm.; tail 47–55 mm.; tarsus 19–21 mm.

When heard, the song is a reliable guide—an ascending and descending warble. The distinctions between this bird and Bonelli's Warbler will be mentioned under the latter species.

This common European bird, which is so well known in Britain in summer, winters in tropical Africa, and some arrive very early in the autumn. The 7th August is the earliest date I can trace, when a specimen was secured at Ansongo on the Niger, but there are records from Uganda and Kenya in the same month. The majority come south in September, and the whole Sahara is crossed on a wide front, birds having been obtained in many of the oases during passage.

Unlike the chiffchaff, the Willow-Warbler continues its journey to reach Cape Province, and there is not a Political Division in Africa from which it has not been reported. It is widely spread in West Africa during the winter months. Altitude is no barrier to it, and we have records from the mountains of Cameroon up to 5,000 ft. between 11th October and 6th February. Early in March the return journey to Europe is made, and this lasts over several weeks.

It is clear that the Willow-Warbler both calls and sings while in its winter quarters, but is usually silent during December and January. Before their departure in March, birds have regained full song.

Distribution. Breeds throughout the greater part of Europe, migrating to tropical Africa in winter. None remain in southern Europe or northern Africa north of the Senegal River during the winter, but south of that they are found everywhere.

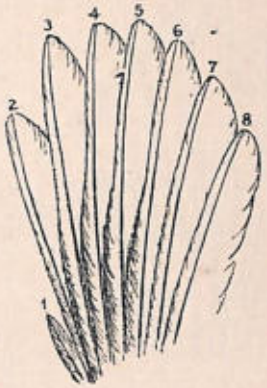
CHIFFCHAFF

Phylloscopus collybita collybita (Vieillot)

The Chiffchaff closely resembles the Willow-Warbler (*trochilus*) but is slightly smaller, duller olive, less yellowish in plumage and the legs are darker brown, sometimes appearing almost blackish. Both birds have an eye-stripe, which is paler and less obvious in the chiffchaff. The call-note is the best guide to identification, but in West Africa the bird is usually silent until just before departure.

Its well-known cry, *chiff-chaff, chiff-chaff*, is so well known to British bird-lovers that should it be heard in its winter quarters, it will quickly be recognised.

The wing structure is as follows: The second primary is mostly between the seventh and eighth in length. The third, fourth and fifth primaries are nearly always equal and longest. The first primary is 5–9 mm. longer than the primary coverts, the third to sixth primaries with emarginate outer webs. The measurements of the chiffchaff are: Wing (male) 56–65 mm., (female) 52–59 mm.; tail (male) 47–52 mm., (female) 41–48·5 mm.; tarsus 17·5–19·5 mm.



Although the chiffchaff spends the winter months mainly in Africa, its distribution is nothing like so extensive as that of the Willow-Warbler. It has, in fact, never been found in West Africa south of Gambia, though in East Africa it goes farther south but never apparently reaches the Equator. On the whole we know little about it in Africa, but it has been found up to 9,000 ft. in the Sudan and also along the Upper Niger on the borders of the western Sahara.

Distribution. Breeding in central, southern and western Europe, the chiffchaff winters in the Mediterranean basin and in Africa, but does not extend south of lat. 12° N. In West Africa it is reported from Senegal, Gambia and the French Sudan (Upper Niger) and in eastern Africa is reported to reach the Bahr el Ghazal, southern Abyssinia and northern Somaliland. Specimens recorded from the Guinea coast of West Africa were wrongly identified.

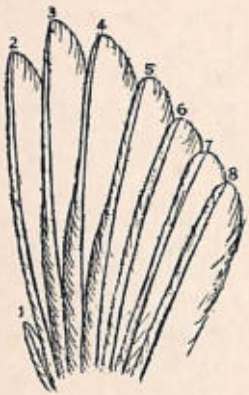
WOOD-WARBLER

Phylloscopus sibilatrix (Bechstein)

In colour the Wood-Warbler has the entire upper parts yellowish green, and a conspicuous yellow eye-stripe extends from the nostrils above and beyond the eye. Chin and throat are bright sulphur-yellow, the rest of the under parts being pure white, as are the under tail-coverts; legs and feet are pale yellowish brown. In structure the first primary is shorter than the primary coverts; the second primary is equal to the fourth or ± 1–3 mm., very occasionally approaching the fifth in length. The sixth primary is not emarginated on the inner web. The wing measures (male) 75–81 mm., (female) 71–76·5 mm.; tail (male) 46–52 mm.; (female) 44–49 mm.; tarsus 17–18·5 mm.

Compared with the Willow-Warbler and the Chiffchaff, it is much larger in size. It has also much greener upper parts and longer wings, in which respect it resembles the Icterine and Melodious Warblers, both of which, however, have entirely yellow under parts. The Wood-Warbler is entirely restricted to woodland except when on passage.

The Wood-Warblers which breed in northern and central Europe are widely spread in Africa in winter north of the Equator, a rather brighter South European race having been described, but not always recognised as a valid race. The latter seems to remain north of the Sahara. Many of the northern birds pass over the Sahara and through the French Sudan and French Niger to reach various points in West Africa, where they have been obtained in many localities reaching the coast in southern Nigeria, but not penetrating to the extreme west, as there are no records from Gambia, Sierra Leone or Liberia.



Records are too scanty to admit definite statements regarding its migrations. In its winter quarters it prefers to frequent the trees with open, spreading foliage. It has been noted in our area from 20th September onwards and remains fairly late, as examples seen in Togoland and the Gold Coast during the first ten days of May go to prove. At that time the birds indulge in short bursts of song. Wherever trees are found, including the more or less open forests, there may the Wood-Warbler be found.

Distribution. Northern and central Europe generally; a brighter race, *P. s. erlangeri* Hartert, in Mediterranean countries is possibly distinct. Winters in Africa north of the Equator to the Ituri and Uelle Rivers, in Uganda and West Africa.

BONELLI'S WARBLER

Phylloscopus bonelli bonelli (Vieillot)

Bonelli's Warbler closely resembles the Willow-Warbler (*trochilus*) in size and colour of the upper parts, but Bonelli's has more yellow on the rump and edges of the wings. The under parts of Bonelli's Warbler are entirely white, there being no yellow on the throat and breast, as in the Willow or the Wood-Warbler. The call-note is a soft chirrup. In habits there is also a distinction between Bonelli's Warbler and the Chiffchaff and Willow-Warbler, the first named having a more buoyant flight, being more active and preferring

(like the Wood-Warbler) the tops of trees, whence they dart out like flycatchers taking insects on the wing. The *collybita* and *trochilus* groups are more leaf-searchers.

The wing structure is as follows: The second primary mostly falls between the sixth and seventh; the third and fourth primaries are equal and longest; the fifth is very slightly shorter; the first primary is about 6 mm. longer than primary coverts; the third to fifth primaries have emarginate outer quills, the sixth primary is not emarginate on the outer web; the tail is very square. The wing measures (male) 63–68 mm., (female) 59–64 mm.; tail (male) 46–50·5 mm., (female) 43–48; tarsus 18–19 mm.

This is another migrant to Africa from middle and southern Europe which also nests in Africa north of the Sahara. In winter both European and African birds move south to spend the off-season in the countries bordering the southern edge of the Sahara. It is much more rare further east; those which migrate through the Anglo-Egyptian Sudan belong to an eastern form (*orientalis*) which does not come within our limits.

Bonelli's Warbler loves the dry country which is to be found so extensively in the French Sudan, French Niger, Chad and northern Cameroons. Around Timbuktu the acacia bushes are sometimes alive with them hunting diligently for insects, even during the heat of the day. As it is a late breeder, it remains late in its winter quarters. It is very seldom heard to sing in the tropics, even in springtime.

Distribution. Breeds in the highlands of central and southern Europe and locally in the Middle Atlas and Tunisian Atlas. Winters mainly in southern Sahara and in the country between Timbuktu and Zinder. There is no evidence that Bonelli's Warbler winters south of lat. 10° N. or north of 17° N. or east of 15° E. Within our area Marua and Mora in northern Cameroons, from which it is recorded, are close to the southern range of the species.

BLACK-CAPPED FLYCATCHER-WARBLER

Seicercus herberti (Alexander)

Two races of this bird come within our area. The typical subspecies is an island race restricted to Fernando Po; the other lives on the mountains of Cameroon.

S. herberti is a very small bird (about 3½ in. in total length) which was discovered by Boyd Alexander. At close quarters the colouring of the plumage is distinctive—black crown, pale rust-coloured face and throat with a black streak passing across the cheeks and

through the eye, bright golden-green upper parts and grey under parts with whitish belly. A short fine bill, black above, pale below, is guarded with short black bristles; a rounded wing and short tail are points to note. The island race measures: Bill 9·5–10 mm., wing 46–55 mm., tail 28–33 mm., tarsus 19 mm. The continental race (*camerunensis*) has wings 50–56 mm., tail 31–36 mm.

Until 1948 it was believed that the continental race was restricted to Cameroon Mountain, but it has since been found on Kupé and Manenguba Mountains at 3,000–6,5000 ft. There it was observed singly, in pairs and in small parties in the foliage of the trees and the undershrub of the true forest. It finds its food by searching the leaves and small branches for insects, flitting daintily about the foliage. The song is a short melodious warble, frequently repeated.

Distribution and Races

S. herberti herberti (Alexander) is found on Fernando Po.

S. herberti camerunensis (Ogilvie-Grant) occurs on Cameroon Mountain, Kupé Mountain and Manenguba Mountain. This race has the stripe over the eye and the cheeks pale brown; the chin and throat are buffish white, not rust-colour.

Key to the species of the genus Bradypterus

1. Size large (wing (♂) over 65 mm., tail over 70 mm. in length) .. .. *Bradypterus grandis*, p. 1040
   Size smaller (wing under 65 mm., tail under 70 mm. in length) 2
2. Variable amount of white on belly 3
   Belly not white but grey or with yellow wash 6
3. Breast, sides and under tail-coverts bright chestnut *Bradypterus castaneus*, p. 1038
   Breast, sides and under tail-coverts not bright chestnut 4
4. Bill narrow and long for size of bird (12–14 mm. in length); tail also long (56–61 mm.) *Bradypterus brachypterus*, p. 1037
   Bill shorter and more stumpy (11–12 mm. in length); tail short (52–56 mm.) 5
5. Upper parts dark brown washed with chestnut; belly and thighs pure white .. *Bradypterus mariae youngi*, p. 1039
   Upper parts chestnut-brown; only middle of belly white; thighs brown .. .. *Bradypterus camerunensis*, p. 1039
6. Under surface very distinctly chestnut; species restricted to Fernando Po .. .. .. *Bradypterus lopesi*, p. 1040
   Under surface browner washed with olive; species restricted to Manenguba Mountain, British Cameroon *Bradypterus manengubae*, p. 1038

KIVU SWAMP-WARBLER

Bradypterus brachypterus centralis Neumann

THE very broad fan-shaped tail of this Swamp-Warbler, which is entirely dark brown on the upper parts, is characteristic of the genus. The feathers of the upper tail-coverts have a disintegrated appearance and those of the rump are long and soft. This particular subspecies has a certain amount of white on the throat and belly and is distinctly streaked with black on the crop. It is, in fact, a small edition of the Giant Swamp-Warbler (*B. grandis*), but whereas the latter has been obtained only on the Ja River, the Kivu Swamp-Warbler has, in Cameroon, only been found on the Nyong River. The smaller bird measures under 6 in. from bill to tail, whereas the larger bird is more than an inch longer in total length and appears to be a considerably bigger bird. Swamp-Warblers are difficult to observe, owing to the nature of the ground they frequent and to their retiring disposition, but may be located by their notes. The Kivu Swamp-Warbler measures: Wing 54–57 mm., tail 56–61 mm., tarsus 21–23 mm.

The appearance of birds in Cameroon indistinguishable from those obtained in the Kivu district, the type locality, points to the distribution of this race being continuous across the French and Belgian Congo north of the forest. In the bed of the Nyong River the Swamp-Warblers were living among high grass and were located by the rapidly uttered liquid ringing cries coming from the grass.

B. brachypterus and its races resemble the Reed-Warbler breeding in colonies in reed-beds over water. During its short flight from stem to stem it makes short snapping noises, presumably with its wings. It is not quite such a swamp-lover as the birds in the genus *Calamoecetor*, and one species at any rate is found in long grass away from water.

Two races of *B. brachypterus* occur in our area.

Distribution and Races

B. brachypterus centralis Neumann has the entire upper parts dark brown tinged on the rump with rufous; the chin and throat are white; there is buff on the breast and narrow streaks on the crop; the middle of the belly and the lower breast are white. This race ranges from Ruanda to the Cameroons, probably by way of the Uelle River.

B. brachypterus chadensis Bannerman is browner below; the under parts are strongly tinged with rufous, and it lacks the white on throat and belly. The wing measures 58 mm., tail 61 mm. Apart from its larger size, it is nearest to the typical subspecies from Abyssinia. *B. b. chadensis* was described from Lake Chad.

CHESTNUT GRASS-WARBLER

Bradypterus castaneus Reichenow

THE whole plumage of this bird on the upper surface is bright chestnut-brown, as is also the tail. Chin and upper throat are white bordered with pale chestnut, which overspreads the breast and sides. The belly is white; thighs are dusky. The bill is black; legs and feet are brownish-flesh colour. Measurements are: Wing 60–62·5 mm., tail 59–62 mm., tarsus 25–26 mm.

This bird cannot be termed a Swamp-Warbler, as its home is in the long grass often at a distance from water. There it keeps hidden near the ground while uttering its unforgettable ringing notes. Its nest and eggs have never been discovered.

Distribution. The Bamenda and Kumbo district of the Cameroons from 5,000 ft. upwards, also at Lake Oku and on the Manenguba Mountain in the same Montane region. In the latter country it was found in the tangle of shrubs and thick herbage on the edge of the forest.

MANENGUBA MOUNTAIN FOREST WARBLER

Bradypterus manengubae Serle

THIS is a new species, discovered since vol. v of *The Birds of Tropical West Africa* was published (*cf.* vol. viii, p. 424).

This bird has lores in front of the eye black, a pale buff stripe above the eye and ear-coverts dusky. The forehead, crown and entire upper parts are very dark brown; the tail and wings are darker, with black shafts and rufous-brown fringes to the coverts and secondaries. The chin is very pale brown, shading on the throat and breast into fulvous brown, darker on the sides and flanks. The middle of the belly is pale, with slight yellowish wash. The under tail-coverts are fulvous brown; the eye is brown and the bill blackish brown; the feet are light brown. The bill measures 12 mm.; wing (male) 61 mm., (female) 59 mm.; tail 54 mm.; tarsus 23 mm. (1 male, 1 female measured, after Serle.)

The only examples observed were solitary, threading their way with brisk movements through the forest undergrowth and keeping close to the ground. The female uttered a loudish *chip, chip, chip.*

Distribution. The Manenguba Mountain forest, British Cameroons (6,000–6,500 ft.).

YOUNG'S FOREST WARBLER

Bradypterus mariae youngi Serle

THIS is a new subspecies, discovered since vol. v of *The Birds of Tropical West Africa* was published (*cf.* vol. viii, p. 424).

The entire upper parts of this species from crown to upper tail-coverts are uniform dark brown with chestnut wash. The wings and tail are blacker, with dark chestnut-brown fringes to the coverts and secondaries. Above the eye is a narrow pale brown stripe. The ear-coverts are dusky; the chin is white, the throat buff with definite black shaft-streaks; the upper breast and sides are brown, the lower breast white in the centre and the whole of the belly pure white. The bill measures 11–12 mm.; wing (male) 57–60 mm., (female) 58 mm.; tail 54–56 mm.; tarsus 23–24 mm.

Distribution. The forested slopes of Cameroon Mountain (4,500–6,000 ft.), British Cameroons.

CAMEROON SWAMP-WARBLER

Bradypterus camerunensis Alexander

THE adult male and female have the entire upper parts dark brown, slightly tinged with rufous. The lores are blackish brown; above the eye a broad light brown eyebrow-streak passes from the base of the bill beyond the eye. Primaries, secondaries and wing-coverts are dark brown margined with rufous brown. The tail is dark brown. The chin is white tinged with buff; the breast and sides of body are paler brown than the back, the breast with but a faint trace of streaking or mottling. The middle of lower chest and belly are white; under tail-coverts are reddish brown. The under wing-coverts and axillaries are brown; the small feathers along the margin of the wing below the carpal joint are white. Soft parts are not recorded. The bill measures 11–12 mm.; wing (male) 57–60 mm., tail (male) 52–56 mm., tarsus 22–24 mm. The immature is more

smoke-brown in colour without any rufous tinge on the plumage; those parts which are white in the adult are tinged with yellow in the immature, and the breast and throat are streaked with dull black.

This broad-tailed Swamp-Warbler measures about 5 in. in total length. There is nothing distinctive about its plumage, and the best guide to its identification is its ringing cries uttered from the depths of the high grass.

Distribution. Restricted to Cameroon Mountain (about 7,000 ft.).

FERNANDO PO SWAMP-WARBLER

Bradypterus lopesi (Alexander)

This bird is the same size as the bird on Cameroon Mountain, but in colour is chestnut-brown throughout. Its detailed description is as follows. The entire upper parts are dark chestnut-brown; a broad eyebrow-stripe of pale chestnut passes over the eye. Lores and ear-coverts are dusky brown. Primaries and secondaries are dark brown, the outer webs fringed with chestnut-brown; wing-coverts are chestnut-brown, browner on the inner webs. The tail is like the upper parts, much abraded, as is often the case in this genus. Under parts are pale chestnut, darker on the breast and sides; under tail-coverts are chestnut-brown; under wing-coverts and axillaries are dark brown mottled with paler brown. Soft parts are not recorded. The bill is 11–12 mm.; wing* (male) 59–60 mm., (female) 56–58 mm.; tail (male, female) 50–55 mm. (much abraded); tarsus 22–25 mm. The structure of the tail is a striking example of the decomposition so often found in the rectrices in members of this genus, the whole of the webs being worn away towards the tip.

Distribution. Restricted to the island of Fernando Po.

GIANT SWAMP-WARBLER

Bradypterus grandis Ogilvie-Grant

This bird resembles closely the Kivu Swamp-Warbler already described on page 1037 but is much larger in size, measuring 7¼ in. from bill to tail. The black streaks on the breast are heavier and the sides of the body and breast darker brown, and have no indication of the rufous tinge, as in *B. b. centralis*. Legs and feet are grey. The bill measures 14 mm., wing 66·5 mm., tail 76 mm. and tarsus 26 mm.

* Special care must be taken when measuring birds with abnormally concave wings to flatten them against the ruler, otherwise a millimetre or two will be lost.

The bird was discovered living in the same patches of big grass in which the Cane-Warbler (*Calamoecetor rufescens*) makes its habitat. Nothing is known of its habits.

Distribution. Southern Cameroon, in the vicinity of the Ja River.

RUFOUS CANE-WARBLER

Calamoecetor rufescens Sharpe and Bouvier

Two races of this Cane-Warbler are recognised in our area. The typical subspecies is a dull brown-coloured bird of which a glimpse is seldom obtained, with fulvous wash on the rump, white chin and throat and belly; the rest of the under parts are light grey-brown tinged with buff on the flanks. In size it measures about 6½ in. from bill to tail. The legs are rather stout for the size of the bird and the feet very powerful, as becomes a bird which clings to thick cane-grass rather than perches. Its notes are rich and deep, the bird remaining hidden in dense cover. Measurements are: Bill 15–18 mm., wing 72–78 mm., tail 62–74 mm., tarsus 27–30 mm. The other race (*chadensis*) will be mentioned hereafter.

This bird lives where swampy ground is covered with giant grass. It is only quite recently that the nest of *C. rufescens* has been described—a substantial, deep open cup, built over water and attached to growing weeds or aquatic plants by grass blades. It is outwardly constructed of dried blades of grass and lined with plant stems and fine strips of grass. Eggs are greyish white tinged with green, heavily spotted and blotched with black, dark grey and yellowish brown, with ash shell markings, the average size being 19·6 × 14·9 mm.

Distribution and Races

C. rufescens rufescens Sharpe and Bouvier has been found to occur in northern Nigeria and south-western Nigeria (Abeokuta, and Iganmu swamp, Lagos, both nesting), through British and French Cameroons to Portuguese Congo and also on Fernando Po. Numerous races have been recognised in tropical Africa, but only one other comes within West African limits.

C. rufescens chadensis (Alexander) is more of a grey-brown on the upper parts, and the rump is washed with fulvous, and especially the flanks and thighs. The wing measures 71–77 mm., tail 65–70 mm., tarsus 26–30 mm.

This bird is found on the shores and islands of Lake Chad.

CAPE VERDE ISLANDS CANE-WARBLER

Calamoecetor brevipennis Keulemans

The adult male and female have the whole upper parts mouse grey-brown with a tinge of olive on the back and rump. Ear-coverts and lores are grey-brown; light feathers surround the eye, and in some specimens a faint pale line passes from the base of the bill to the eye. Primaries and secondaries and coverts are grey-brown, the quills outwardly edged with olive-brown. The tail is brown; throat white, breast washed with smoke-brown; sides are rather browner, and the belly is white tinged with yellow. Under tail-coverts are white tinged with buff; axillaries are white, under wing-coverts buffish white. The eye is brownish ochre or hazel; bill, upper mandible brown, lower yellow or yellowish grey; legs and feet are slate-grey, claws brown. The bill measures (male) 14–16 mm., (female) 14–15 mm.; wing (male) 64–67 mm., (female) 62–66 mm.; tail (male) 57–62 mm., (female) 58–62 mm.; tarsus (male) 26–27 mm.; (female) 24·5–26 mm. Wing formula: Fourth and fifth are equal and longest, the first primary is more than half the length of the second, narrowing to a point at the tip. Tarsi are short and slenderer than in *rufescens* group. Immature birds are russet-brown above, with the under parts whitish or yellowish white washed with buff, particularly on the sides.

In colour this bird resembles very closely *C. rufescens chadensis*, but the wing formula is different, which accounts for my retaining it as a species.

In my larger work I have given an account of the habits of this species, for which there is no space here.

Distribution. The Cape Verde Islands (São Nicolau, São Thiago and Brava islands).

LESSER CHAD CANE-WARBLER

Calamoecetor leptorhyncha neglecta (Alexander)

This is but a small edition of *C. rufescens chadensis*, from which it is practically indistinguishable in plumage, though slightly less washed with fulvous on the thighs. Only in its smaller dimensions can it be

recognised. The bill measures 13–14 mm., wing 59–67 mm., tail 54–63 mm., tarsus 24–26 mm. The bird is olive-brown washed with fulvous above and dull whitish below. It keeps out of sight in the densest cover, and only by its alarm note will its presence be detected.

The presence of a large and a small Cane-Warbler living side by side in the grass islands of Lake Chad is comparable to the two species of this genus which live side by side on Lake Bangweulu.

Among outstanding characters of this form are the large grasping foot, the long slender straight bill and the blunt wing.

There is still much to be learned about the habits of all these Cane-Warblers. Their songs and calls have never been described in detail, though the species is known to be noisy during the nesting season. An inquisitive bird, it may be seen creeping up the reed-stems to gain a view of any intruder. It lives in the swamps and keeps much to the base of the densest vegetation or papyrus.

Nests identified as belonging to *C. leptorhyncha* are described as resembling Reed-Warblers', bound to two or three reed-stems. Eggs have not been described.

Distribution. C. l. neglecta has been found only on Lake Chad, but there are other races recognised, the typical *C. leptorhyncha leptorhyncha* being found in Kenya Colony and other forms ranging through eastern Africa from the White Nile to Rhodesia.

PALE WREN-WARBLER

Calamonastes cinereus cinereus Reichenow

This warbler is about 4¾ in. in total length and entirely grey in plumage, with black bill and reddish-brown legs and feet. The latter are doubtless the best guide to the bird's identification in life. If the wings are lifted, the white lining to the quills and the white under wing-coverts would be noticeable.

The entire plumage is cinereous grey; wings are grey-brown, the wing-coverts toning with the back. Small feathers on the carpal joint are white. Upper tail-coverts and tail are grey, like the back. The chin is greyish white, fading into grey on the throat and breast, paler in shade than the upper parts and becoming still lighter on the long flank-feathers and thighs. The middle of the belly is inclining to white but mostly concealed by the greyer tips, which have a faint wash of buff. The under tail-coverts are rather long and greyish; axillaries and under wing-coverts are white mixed with grey-brown along the inner bend of the wing. The eye is blackish brown, the bill entirely black; legs and feet are orange or reddish brown, and rather long. The bill (from feathers) is 12 mm., wing

61 mm., tail 49 mm., tarsus 22 mm. (one measured in British Museum, sex not indicated). Reichenow gives measurements of the type as: Wing 60 mm.; tail 55 mm.; tarsus 22 mm.

Distribution. Portuguese Congo and the western Belgian Congo south to the Kasai, another race, *C. c. katangae*, occurring in the Katanga district.

FAN-TAILED SWAMP-WARBLER

Schoenicola brevirostris alexinae (Heuglin)

THE adult male and female have the whole upper parts from crown to rump earth-brown tinged with fulvous. There is an indistinct pale stripe above the eye; lores are greyish, ear-coverts brown, darker than the crown. Primaries and secondaries are dark brown, outwardly edged with fulvous inclining to rust-colour. Upper tail-coverts are very long and blackish brown. The tail is very broad, graduated and rounded at tip, almost black in colour, all but the four central feathers with broad pale tips, very noticeable from the underside. Chin, throat and most of the under parts are whitish, the breast being washed with pale brown on either side and the flanks fulvous brown. Under tail-coverts are brown, merging into pale tips; axillaries and under wing-coverts are cream. The eye is grey; the bill is black above, greyish white below; feet are light horn-colour. The bill measures (male, female) 10–11 mm.; wing (male) 55–64 mm., (female) 55–61 mm.; tail (male) 70–85 mm., (female) 68–80 mm.; tarsus 19–20 mm.

This Swamp-Warbler may be recognised by its peculiar tail, very broad and graduated and half the total length of the bird. The tail-feathers are evenly graduated and the under tail-coverts extremely long. It has been figured in volume v (p. 82) of my larger work.

The Fan-tailed Swamp-Warbler also has a distinctive whistle which it utters from the top of a grass-stem, for it is a bird which lives in the long grass in swampy country, where it is usually encountered singly, perched on a long grass stalk. When it flies, which it does with feeble butterfly-like action, it jerks its long tail up and down. On the whole it is a shy bird but is easily flushed a first time, though it soon becomes alarmed, when it is difficult to dislodge

again. If really frightened it can fly swiftly. At sunrise birds may be seen taking cruising flights low over the grass-tops.

A nest has been found deep down in a large tuft of coarse grass about 2 in. above the ground. It was loosely constructed of soft dry grass lined with a few blades of more wiry grass. It is a very difficult nest to locate, as the owners are experts at leaving it without giving away its presence. The eggs are unknown.

Distribution. In West Africa from Sierra Leone to the Cameroons and Belgian Congo, ranging east to Kenya, Uganda and Abyssinia and south to northern Rhodesia. Its place is taken by the typical subspecies in South Africa.

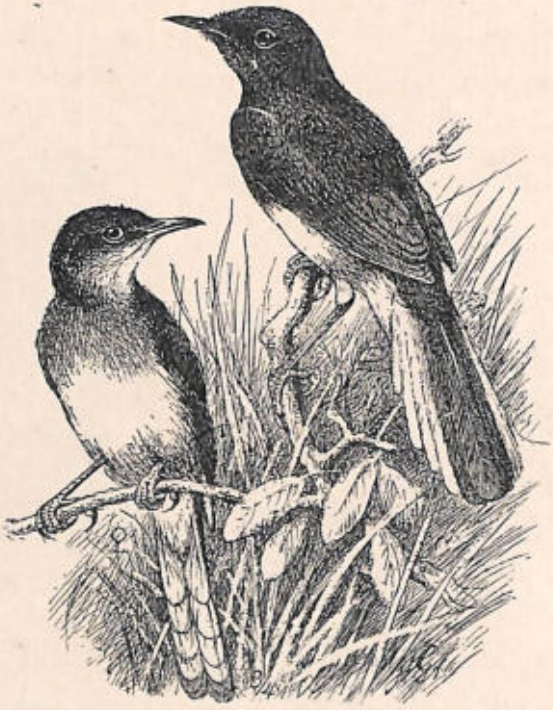
Key to the species of Bush- and Forest-Warblers in the genus Apalis

1. Back, mantle and wing-coverts bright olive-green or yellow, contrasting strongly with black or grey crown 2
   Back, mantle and wing-coverts grey, slate or olive-brown, crown usually same colour as back or but slightly different 5
2. Belly bright yellow .. .. *Apalis jacksoni minor*, p. 1051
   Belly not yellow 3
3. Throat entirely black .. *Apalis binotata binotata*, p. 1050
   Throat white 4
4. Breast yellow; mantle olive-green.. *Apalis caniceps*, p. 1050
   Breast not yellow; mantle yellow *Apalis nigriceps nigriceps*, p. 1052
5. Throat pale rufous 6
   Throat slate-colour or brownish 7
   Throat white 8
6. Pale rufous of throat continued on to breast; lores and feathers round eye dark like crown, not rufous *Apalis rufogularis rufogularis* ♀, p. 1046
   Pale rufous of throat not continued on to breast; lores and feathers round eye rufous *Apalis bamendae bamendae*, p. 1054
7. Belly cream-colour .. *Apalis rufogularis rufogularis* ♂, p. 1046
   Belly grey .. .. *Apalis sharpii*, p. 1049
8. Black band across chest; flanks bright chestnut *Apalis pulchra pulchra*, p. 1048
   No black band across chest; flanks not chestnut .. 9
9. Crown and nape exactly same shade as back; throat much more whitish than breast *Apalis goslingi goslingi* and subsp., p. 1053
   Crown and nape browner than back; throat not contrasting with breast *Apalis cinerea cinerea* and subsp., p. 1047

SLATE-BREASTED FOREST-WARBLER

Apalis rufogularis rufogularis (Fraser)

This is a small bird extremely slender in build which, including the rather long tail, measures about 4½ in. in total length. Both sexes are conspicuous by reason of the large amount of white in the tail, which catches the eye as the birds flit about at the tops of forest trees. The males are mainly slate-colour, including the breast, with white lower chest and belly sharply defined from the



dark upper breast. The females are more olive above and have pale rufous breast and throat. Both have all but the two middle pairs of tail-feathers white. The middle tail-feathers in the male are slate-brown, slightly tinged with olive in the female. Measurements are: Bill 10–11 mm., wing 44–50 mm., tail 39–51 mm., tarsus 16–18 mm. The bill is black; legs and feet are brownish-flesh colour.

This is a true forest species which may be seen flitting from tree-top to tree-top in the manner of Long-tailed Tits at home. It seems to be found in the forest canopy in the Cameroons and southern Nigeria (Owerri Province) and has been secured at lower

elevations in Fernando Po and in the eastern Congo, where it has been observed among tangled semi-undergrowth.

Distribution and Races

A. rufogularis rufogularis (Fraser) ranges through the forests of southern Nigeria east of the Niger, Cameroon, Gaboon and Fernando Po.

A. rufogularis sanderi Serle has the chin, throat and breast black, the buff wash on belly much reduced, the head and nape blackish brown shading into black on the forehead, sides of face and ear-coverts and the mantle; back and wing-coverts darker. This race was discovered on the Ogun River in the Lagos district of south-western Nigeria.

BROWN-HEADED FOREST-WARBLER

Apalis cinerea (Sharpe)

THREE races of this warbler occur in West Africa whose characters will be given hereafter.

The typical race was described from Mount Elgon and ranges westwards to Cameroon Mountain. It is about 5½ in. in length with a long tail (over 2½ in. when full grown). The male is slate-grey above with grey-brown crown and brown middle tail-feathers. Chin and throat are white, the breast washed with buff, and the rest of the under parts are white tinged with pale buff. Under tail-coverts are white and most of the outer tail-feathers. This little bird has reddish-brown eyelids, a light brown eye, black bill and reddish-flesh legs and feet. The female is like the male but has a purer brown crown, less grey-brown. The measurements of *A. cinerea cinerea* are: Wing 50–57 mm., tail 48–63 mm., tarsus 19–20 mm.

It is an inhabitant of the foliage of tall trees, where it may be encountered usually in parties but

sometimes singly or in pairs. It has been seen in mixed bird parties moving through the foliage from ground level to tree-top, but more often nearer the canopy. It catches its insect food by exploring the leaves and branches but will also take insects on the wing.

Its note is a high-pitched *pirr, pik, pik, pik*, and a monotonous song described as *pink-pink-pink-pink, ad infinitum*. It is an easily recognised bird, especially by the white markings on the long slender tail and by its actions.

Distribution and Races

A. cinerea cinerea (Sharpe), described above, is found in Kenya, Uganda and on Cameroon Mountain.

A. cinerea funebris Bannerman differs from the above in its more sooty-grey upper parts, darker crown and head and more dusky under parts. The wing measures 54·5–56 mm., tail 55–57 mm. The mountain forests of British Cameroon (except Cameroon Mountain) are its habitat, including the Banso Mountains and Oku district (5,000–7,000 ft.).

A. cinerea sclateri (Alexander) differs from the typical subspecies in having the under parts creamy buff, lacking the white abdomen. It is much paler throughout than *A. c. funebris* and has wing 51–56 mm. and tail 47–59 mm. This race is restricted to Fernando Po, where it occurs on Mount St. Ysabel at 5,000 ft. and is locally distributed elsewhere in the island.

BEAUTIFUL FOREST-WARBLER

Apalis pulchra pulchra Sharpe

(see Plate 43, facing page 1101)

This is a striking bird, slate-coloured above, including the crown; the chin and throat are white and also the breast, which is crossed by a broad black band. The sides of the abdomen and flanks are bright chestnut, the middle of the belly and under tail-coverts white. The tail, of ten feathers only, is a conspicuous feature in this bird, being long and graduated in shape, the middle two pairs of tail-feathers black with white tips, the remainder black with the terminal third white except for the outermost pair, which are entirely white. The bill is black; legs and feet are brownish-flesh colour. The wing measures 50–58 mm., tail (male) 55–61 mm., (female) 52–54 mm.

This is one of the highland species which constitute a close link between the great mountains of East Africa (Kenya and Elgon) and those of British Cameroon. It is an extremely dainty bird, tame but elusive, which has a habit of sidling up and down the stems of the herbage with its long tail cocked at an acute angle, uttering its shrill cries: *tzéēeyé, tzéēeyé, tzee-tzee-tzee.*

It seems that it is common in all the mountain forest around Oku and Bamenda among the trees, and ventures into the hedges of the compounds. It has also been observed in the bamboo thickets and around the lake at Oku, searching the gnarled trees or creeping like a mouse through the undergrowth. The nest has not yet been discovered.

Distribution. The Cameroon highlands (Bamenda, Genderu, Oku, Kumba) and the mountain ranges of East Africa, where it occurs in the forests of Mounts Kenya and Elgon. A race has been described from the south-eastern Belgian Congo.

SHARPE'S BUSH-WARBLER

Apalis sharpii Shelley

THIS small bird measures about 4½ in. in length and is evidently a rare species, living in thick bush and consequently seldom seen. The entire plumage is slate-colour, very dark on the crown; cheeks and throat, lores and ear-coverts are as the rest; the mantle is a shade paler, becoming lighter again on the rump, the long feathers of which are more bluish grey. Wings and tail are brown edged with grey on the outer webs, the tail being graduated and with narrow whitish tips. The breast and belly are grey, considerably paler than on the throat, which is almost sooty. Under tail-coverts are pale dove-grey, almost white. The eye is brown or red-brown; the bill is black, with the lower mandible grey; legs and feet are dark reddish-flesh colour. The bill measures 12 mm., wing 47–48 mm., tail 46–47 mm. and tarsus 16 mm.

The exact locality in the Gold Coast where Sharpe's Bush-Warbler was secured will never be known, but it must be extremely uncommon, for it seldom figures in collections from West Africa. Within the last forty years it has turned up twice only. A bird in mixed bush and forest in the Ivory Coast was obtained in 1922 about 175 miles from the sea. Next it was found on the Birwa plateau in Sierra Leone—a pair flitting about among the lower branches of the tree-ferns lining a ravine. The male was secured and was in breeding condition on 20th July.

Its life-history is entirely unknown.

Distribution. Known only from the Gold Coast, Ivory Coast and Sierra Leone.

GREY-CAPPED BUSH-WARBLER

Apalis caniceps (Cassin)

THE broad yellow band across the white under parts is the most conspicuous feature in this little bird, which measures about 4½ in. in total length. The detailed description of its plumage is as follows. The crown, lores and cheeks are clear grey, ear-coverts tinged with brown; mantle and rest of the upper parts are green. Wing-coverts, primaries and secondaries are brown, the outer webs bordered with green like the back, the extreme tips of the quills and secondaries greyish white. The tail is brown, washed and bordered with green, but the middle pair of rectrices are narrowly tipped with white. Chin and throat are white, the upper breast is bright yellow; the rest of the under parts are white, the flanks washed with grey. The under tail-coverts are white; under wing-coverts and axillaries are pale yellow. The eye is reddish brown; the bill is black; legs and feet are flesh-colour. The bill measures 10–11 mm.; wing (male) 50–55 mm., (female) 49–52 mm.; tail 35–40 mm.; tarsus 20–21 mm.

This wide-ranging warbler is apparently confined to the lower levels in orchard bush country, but we really know very little about it. It was first discovered at the Camma River, Gaboon, and from other localities in which it has turned up it is evidently an inhabitant of dense scrub and bush-covered country. We find it ranging across Africa to the Semliki valley and Uganda. Recently its range has been discovered to extend westwards into southern Nigeria, where it was found nesting near Lagos, and others have since been collected at Abeokuta. The half-domed nest was suspended 12 ft. high in a "bottle-brush" tree beside water. It was made of fine grass held together by gossamer. Two young were in the nest in August. The eggs are unknown.

Distribution. Portuguese Congo to western Nigeria, ranging by way of the Ubangi and Shari Rivers across the continent to the Bahr el Ghazal and Uganda.

MASKED BUSH-WARBLER

Apalis binotata binotata Reichenow

(see Plate 43, facing page 1101)

ABOUT 4 in. in total length. the Masked Bush-Warbler is an inhabitant of second-growth forest, and owing to its colouring is easily recognised. It is green above, with slate-coloured head, black cheeks and throat, the throat and upper breast being bordered with white; the belly is white, and each side of the breast is greenish

yellow. These are the chief points to note. The tail is green, narrowly tipped with yellow; the under tail-coverts and under wing-coverts are yellow. The bill is black; legs and feet are flesh-colour. The wing measures 43–52 mm. and the tail 34–40 mm.

The sexes are very similar in colour, but the female has a broader and longer white band bordering the black throat, thus reducing the amount of black on the crop. The green feathers on the breast are often intermixed with yellow.

This bird has not yet been found in Nigeria, but in British Cameroon it occurs in the vicinity of Manenguba Mountain and in southern Cameroon is evidently fairly common in the old clearings near the Ja River, frequenting the small trees and vines hanging from the larger trees. From observations elsewhere within its range it is just as likely to be seen in the tree-tops of forest giants.

Nests taken in southern Cameroon in March and July contained eggs. Probably only two are laid. The nest is a loosely woven pocket suspended from a twig and composed entirely of Usnea attached to the twig by gossamer fibres. Eggs are dull greenish blue marked with small dots and smears of light red.

Distribution. Ranges from British Cameroons south to northern Angola, across Africa to Uganda and Kenya. Other races have been described from Ruwenzori and Kivu, but a specimen from Fort Portal is indistinguishable from those from the Cameroons.

JACKSON'S BUSH-WARBLER

Apalis jacksoni Sharpe

(see Plate 43$_1$ facing page 1101)

Two races of this bird come within our limits, but not the typical subspecies, which is found in Uganda and Kenya. That which is described at length in my fifth volume of *The Birds of Tropical West Africa* is the race *A. jacksoni minor*, which inhabits southern Cameroon, and another race has recently been described from the highlands of British Cameroon and named *A. jacksoni bambuluensis*, whose distinctions will be given later.

Jackson's Lesser Bush-Warbler, as the southern Cameroon bird was named, is extremely conspicuously coloured, the males with black throat and cheeks flanked by broad white moustachial streaks, grey crowns, bright green upper parts, yellow under parts, grey wings with some white edging and graduated grey tails with white tips. The females are similarly coloured but grey instead of jet-black on the face and throat. Like the males, they have the throat bordered by the white streaks. The bill is black; legs and feet are light flesh-colour. Measurements are: Wing 46–51 mm. and tail 44–53 mm.

The race which chiefly concerns us was discovered in the forests of southern Cameroon, where, being a bird of the tree-tops, it is extremely difficult to observe. That it comes nearer to earth at times was proved when the race from the Cameroon Mountain district was discovered frequenting lower growth. One, in fact, was shot in an acacia-like tree near a village and another in a wooded ravine. We know practically nothing about its life-history.

Distribution and Races

Apalis jacksoni minor Ogilvie-Grant has already been described. It appears to be restricted to the forests of southern Cameroon.

Apalis jacksoni jacksoni Sharpe was described from Mount Elgon and ranges to Uganda. Specimens from Angola have been allied with this, the typical subspecies, which, compared with *A. j. minor*, has a broader area of black in males or grey in females on the throat and is rather larger in its measurements.

Apalis jacksoni bambuluensis Serle was discovered in the British Cameroons at Lake Bambulue in the Bamenda Division at 6,000 ft., where it lives in the Montane forest. The male of this race has the crown and nape jet-black instead of grey and the olive-green of the upper parts shades darker. The female is also a darker bird than examples of the same sex in the other two races. The wing measures 52–55 mm., tail 54–64 mm.

BLACK-CAPPED BUSH-WARBLER

Apalis nigriceps nigriceps (Shelley)

THIS is a beautiful bird about 4½ in. in length and strikingly coloured, golden-yellow above except for the jet-black crown and cheeks, white below, the breast being separated from the throat by a broad band of black, the sides of the breast splashed with golden. Like the rest of this genus, the tail is markedly graduated, slate in colour and broadly tipped with white except on the middle feathers. Its red eye is also a striking feature. The adult female differs from the male in having a slate-coloured crown, with the under parts greyer, and in place of the jet-black band at the base of the throat an ill-defined band of greyish slate. The wing measures 43–48·5 mm., the tail (male) 43–48 mm., (female) 36–39 mm.

As this Bush-Warbler extends its range from southern Cameroon through the whole of Upper Guinea to Sierra Leone, we may hope that some of the other members of this genus, now known from Lower Guinea only, will eventually be found to have a wider distribution.

The Black-capped Bush-Warbler has now been recorded from widely separated areas of British territory, but we still have much to

learn concerning it. On the Birwa Plateau of Sierra Leone little parties of two to six were fairly common in the tree-fern gullies, flitting about among the lower branches and uttering quiet little cries—*whit, whit, whit.* Hard-shelled beetles form a large part of their diet. In British Cameroons the same little birds were observed in restless parties exploring the foliage of old second growth and climbing about the creepers festooning the primary forest trees on the edge of clearings. The nest and eggs are unknown.

Distribution. First discovered at Aburi in the Gold Coast, the bird is found in British and French Cameroons as far as the Ja River. Westwards it has been discovered on the Birwa Plateau in Sierra Leone, but not in intermediate territory.

Another race, *A. nigriceps collaris* van Someren, takes its place in Uganda and the Ituri.

GREY BUSH-WARBLER

Apalis goslingi Alexander

Two races of this warbler occur in West Africa.

It is everywhere a rare bird which has seldom been collected. Just over 4 in. in total length, it is entirely grey in plumage, slate-grey on the upper parts and crown and pale smoke-grey on the under parts; only the throat is pale buff, and the middle of the belly is white. The eye is red; the fine bill black; legs and feet are flesh-colour. The tail is brown, all but the middle pair of rectrices being tipped with white. The wing measures 45–49 mm., tail 40 mm.

This very rare bird has seldom been seen, but is believed to live principally in trees along forested river banks.

Distribution and Races

The typical subspecies, *Apalis goslingi goslingi*, described above, was discovered on the Guruba River, an affluent of the Uelle. It has also been obtained in southern Cameroon near Bitye and again on the Ituri River near Avakubi in the Belgian Congo.

A race *Apalis g. hardyi* Bannerman was described in 1923 from Bandama in the Ivory Coast. It has a greyer head, the back washed with olive, clearer grey under parts lacking the buff tinge, deeper buff throat and purer white belly. The wing measures 44 mm. This race from Upper Guinea has not been found beyond the Ivory Coast.

BAMENDA BUSH-WARBLER

Apalis bamendae bamendae Bannerman

(see Plate 43, facing page 1101)

THIS bird has a brown forehead washed with pale rufous, the lores and ear-coverts and a narrow rim round the eye also being pale rufous. The crown and rest of the upper parts are grey, strongly washed with olive-brown, the bases of the feathers being grey, the terminal portion olive-brown. Wing-coverts, primaries and secondaries are dark brown, the quills and secondaries edged with paler brown or greyish. The tail is dark brown; chin and throat are pale rufous. The rest of the under parts are grey washed with fulvous, the middle of the belly being washed with buff. The under tail-coverts are grey tipped with fulvous; the thighs also are fulvous. Under wing-coverts and axillaries are cream-coloured, as is the edge of the wing below the carpal joint. The eye is pale brownish yellow; the bill is black; the legs and feet are flesh-colour. The bill measures 11 mm.; wing (male, female) 50 mm.; tail (male) 44 mm., (female) 37 mm.; tarsus 18 mm. The adult female has the under parts greyer than in the male, lacks the fulvous wash on the under parts and the buff middle of the belly, which is whitish.

This is a tiny bird; the males are not more than 4½ in. in length, the male having a slightly longer tail than the female. It will be noted that this bird has no white in the tail, which is a characteristic of many members of this genus, and apart from the pale rufous face there is nothing very striking about it. Its habits are unknown other than what we can infer from what we have learned about other members of the genus.

Distribution. The British Cameroons, specimens having been examined from Bamenda, Chang and Kumbo. Other races have been described in East Africa from the mountains of Tanganyika territory: *A. b. chapini* and *A. b. strausae*.

BLACK-HEADED STREAM-WARBLER

Eminia cerviniventris (Sharpe)

(see Plate 43, facing page 1101)

THE adult male has the entire head, neck, throat and upper portion of the breast jet-black. Mantle, back and scapulars are rufous brown. Primaries, secondaries and wing-coverts are brown, the primaries with narrow fulvous edge, the secondaries fringed outwardly with rufous brown. The tail is brown and graduated, but

in only one of the specimens examined is the tail in good condition. Below the black upper breast a bright chestnut patch extends on to the foreneck on either side, which joins across the breast to form an almost complete breast-band; a few black feathers extend on to the lower breast below the chestnut band. The rest of the under parts are fulvous brown strongly washed with pale chestnut on the sides. Thighs and under tail-coverts are light brown. Under wing-coverts and axillaries are pale chestnut or cream-colour washed with chestnut. The eye is dark red-brown; the bill is black; the legs and feet are leaden blue. Measurements are: Bill 12–12·5 mm.; wing (male) 56, 57, 58 ? mm., (female) 52 mm.; tail (male) middle pair 50 mm., (female) 45 mm. strongly graduated; tarsus (male) 24–26 mm., (female) 23 mm. (4 males, 1 female measured). Only one male had a complete tail.

An apparent female differs from the male in having the black of the head duller, not jet-black, and in having the chin and throat palest buff. A black patch on the upper breast and the rest of the breast and under parts are fulvous brown washed with pale chestnut. The bright chestnut breast-band of the male is wanting in the female.

Distribution. Until 1930 this species was believed to be restricted to the Gold Coast, specimens being known from Denkera in Ashanti and from Kwissa. Its discovery in 1930 in Sierra Leone (Sandaru, 1,200 ft.) and later (June 1937) on Nimmini Mountain in the same British Colony added considerably to its known distribution. Of its life-history we know absolutely nothing.

GREEN LONGTAIL

Urolais epichlora (Reichenow)

(see Plate 43, facing page 1101)

THREE races of this bird were recognised in my larger work, but doubt has been cast on the validity of *U. e. cinderella* Bates from the Oku district of Cameroon since it was described, and it may be best to refer all birds from the mountains of Cameroon to the typical subspecies with a race on Fernando Po.

The total length of the Longtail from bill to tail-tip is about 6 in. It is entirely green on the upper parts with the central tail-feathers longer than the others, all being graduated in length and ribbon-like. A broad yellow streak passes from the bill to the eye. Primaries and secondaries are blackish brown fringed outwardly with green. The tail is dark brown, fringed on both webs with green and tipped with buff. Chin and throat are white tinged with cinnamon-buff, the rest of the under side being much as the throat, but the breast

mottled with grey. The centre of the belly is white and the under tail-coverts are yellow. The bill is black; legs and feet are brown. The wing measures 51–55 mm., the tail in males 75–80 mm., in females 65–68 mm. (middle rectrices).

The Longtail is a graceful little creature which inhabits the woods on the sides of mountains and the wooded ravines. Although it is primarily a high mountain forest bird, it has been found as low as 3,000 ft. in a very different habitat of old second growth and in isolated trees in grass savanna. It is found in pairs or small parties, often mingling with other species in mixed flocks. Its flight has been described as dancing, the long tail waving about in a breeze. The only song heard is a repetition of one sharp note, not unlike *Prinia* but faster. Its eggs are as yet undiscovered.

Distribution and Races

Urolais epichlora epichlora Reichenow was discovered on Cameroon Mountain, where it ranges from 3,000 ft. upwards, and has since been found at Kumbo (6,000 ft.) and Oku (7,000 ft.) on Manenguba and Kupé Mountains. The Oku specimens were named *cinderella* on account of their supposedly dusky under parts and darker green upper parts.

An island race, *U. epichlora mariae* Alexander, takes the place of the typical bird on Fernando Po. It has the upper parts brighter green, more yellow on cheeks and neck, and a longer tail. The wing is 54 mm. and tail about 123 mm.

RED-WINGED GREY WARBLER

Drymocichla incana Hartlaub

(see Plate 43, facing page 1101)

This is an easily recognised bird, in colour entirely French-grey above, palest on the forehead, darkest on the upper tail-coverts. The tail also is grey. The primaries are dark brown; a broad patch of bright chestnut on the wing is caused by the chestnut outer webs of the basal half of the quills from the third to ninth primary, the inner secondaries blending with the grey back. Chin, throat and belly are white, the breast and sides washed with grey. Under wing-coverts are white and those of the tail whitish. The bill is black; legs and feet are dull olive. The wing is 55–61 mm. and the tail 46–56 mm. In total length the Grey Warbler is about 5½ in.

An inhabitant of savanna country in the Cameroons, family parties have been observed in the small trees scattered over the grasslands. In the Upper Uelle district it has been found in low woods in the vicinity of water.

Distribution. In West Africa this bird has not yet been found in Nigeria or other countries further west, but its range includes the Tibati Plateau of the Cameroons, whence it extends across Africa by way of the Uam, Bamingui and Uelle Rivers to the Bahr el Ghazal and Upper White Nile.

ACACIA WARBLER

Phyllolais pulchella (Cretzschmar)

This small bird, 4½ in. in total length, greyish olive-brown above, pale yellowish buff below, with graduated tail, the outer web of the outer feather being white, might easily be mistaken for a Phylloscopine Warbler. Being an inconspicuous bird, its plumage must be described in more detail. The forehead, crown and entire upper parts are greyish brown washed with olive; the lores, small feathers surrounding the eye, and ear-coverts are yellowish-buff. Lesser wing-coverts like the back, median and greater coverts are brown, as are also the primaries and secondaries, the latter being narrowly tipped with white. On each side of the rump is a partly concealed patch of silky-white feathers tinged with buff. Upper tail-coverts are brown washed with olive. The tail is dark brown and graduated, all the feathers except the middle two pairs are broadly tipped with white, the outermost with the outer web also white. Chin, throat and entire under parts are pale yellowish buff, including the under tail-coverts, under wing-coverts and axillaries. The eye is light brown; bill, upper mandible brown, lower flesh-colour; legs and feet are dark flesh-colour. The bill measures 8–9 mm.; wing (male) 43–47 mm., (female) 42–47 mm.; tail (male) 40–45 mm., (female) 37–40 mm.; tarsus 16–17 mm.

In the acacia-clad plains, where it lives in the trees and not in the surrounding grass, the Buff-bellied Warbler, as it is sometimes termed, is a relatively common species which figures in all collections brought home from within its extensive range. Its favourite haunts are the tops of the smaller acacia trees, and it will ascend in places to 6,500 ft. above sea level. It is a charming little bird possessing an attractive warbling song, but little seems to be known concerning it, and its nest and eggs remain undescribed.

Distribution. Described first from Kordofan, the Acacia Warbler is spread over the Sudan, Abyssinia and Eritrea, across the plains of Darfur to the shores of Lake Chad. It occurs in the savannas of Uganda and Kenya southward to the Ituri district of the Belgian Congo. No races have been recognised.

Key to the species of Crombecs in the genus Sylvietta

1. Upper parts except crown, dark olive-green 2
   Upper parts not dark olive-green but mostly pale grey or pale grey-green 5
2. Belly and ventral region entirely bright yellow
   Sylvietta denti hardyi, p. 1061
   Belly and ventral region not entirely bright yellow .. 3
3. Breast bright yellow
   Sylvietta flaviventris flaviventris and subsp., p. 1060
   Breast not bright yellow 4
4. Belly white or greyish white
   Sylvietta virens virens and subsp., p. 1060
   Belly pale dull yellow .. .. *Sylvietta denti denti*, p. 1061
5. Under parts mostly pale chestnut or tawny buff; crown same colour as back
   Sylvietta brachyura brachyura and subsp., p. 1058
   Under parts not pale chestnut but white and pale yellow; crown not same colour as back
   Sylvietta ruficapilla rufigenis, p. 1059

SENEGAL CROMBEC OR NUTHATCH-WARBLER

Sylvietta brachyura Lafresnaye

Two races come within our limits, the typical race being widespread in Upper Guinea.

The entire upper parts from crown to upper tail-coverts are grey tinged with brown; a cream or buff eye-stripe varying in intensity individually passes from the base of the upper mandible over and beyond the eye. Wing-coverts are like the back. Primaries and secondaries are grey-brown, the inner secondaries washed with grey on both webs, the primaries with narrow whitish edges when fresh moulted. The tail is greyish brown, toning with the back, inclining to buffish at the tips with some of the upper tail-coverts buff, but usually concealed by the long greyish rump-feathers. The chin is white; throat and entire under parts are tawny buff. The middle of lower breast and belly are white, under tail-coverts buff, under wing-coverts tawny buff, and axillaries paler buff. The eye is light brown (sienna); bill is dark pinkish flesh-colour, tip and culmen are dark horn; legs and feet are dark flesh-colour or light brown. Measurements are: Bill 10–11 mm.; wing (male) 51–61 mm., (female) 50–58 mm.; tail (male) 20–23 mm., (female) 20–24 mm.; tarsus 16–18 mm.

This minute bird with an apology for a tail has a total measurement of only 3½ in. and in appearance has a superficial resemblance

to a nuthatch. It is well named the Nuthatch-Warbler. It is a quiet, unobtrusive bird, frequenting the little trees of the arid belt. It spends much of its time searching diligently for insects in the thorn thickets and bushes, or working the twigs and leaves of the trees much in the manner of a nuthatch.

This is the only member of the genus—a widely spread one in Africa—which extends right up to the edge of the desert in summer, with evidence of its breeding far north in the Combretaceae country. It has a relatively loud double or single call which is sometimes followed by a short sweet warble, but it has many and various notes as well, one being described as almost a trill.

Eggs have been found at Timbuktu on 17th June and another at Argungu, Nigeria, on 10th June. The nest is described as a little slight pouch suspended by gossamer from the lateral shoot of a tree at a height of 3–4 ft. It was made of fine plant-stems, gossamer and bark fibre, lined with fine rootlets and decorated externally with little brown seeds. Two eggs appear to be the normal clutch. In colour these are dull white spotted with pale grey and rufous. One egg measures 16·5 × 11·5 mm.

Distribution and Races

S. brachyura brachyura Lafresnaye ranges over the entire semi-arid belt from Senegal and Gambia to northern Nigeria, Shari-Chad and eastwards to the Red Sea. Several races have been named from East Africa but only one other comes within our limits, i.e.:

S. brachyura carnapi Reichenow, found in the grasslands of eastern Cameroon to the Bamingui River. It is more richly coloured, more chestnut than buff on the under parts and darker grey on the upper parts than the typical subspecies. Its wing measures 51–62 mm.

RED-CHEEKED CROMBEC

Sylvietta ruficapilla rufigenis Reichenow

This Crombec is quite unlike any other members of this group in West Africa by reason of its chestnut cheeks and the chestnut half-moon on the breast enclosing the white throat. Grey-green above with chestnut on the hind crown, brown rounded wings and the astonishingly short tail shared by all species of the genus are the main features of this little bird, which measures in all 3½ in. The wing measures 57–60 mm. and the tail 18 mm.

Distribution. Barely comes within our area. The type was collected at Leopoldville and another near Thysville, nearer the Congo mouth. It ranges to the Kasai. Nothing is known concerning it except that it inhabits dwarfish trees.

GREEN CROMBEC

Sylvietta virens virens Cassin

THIS small bird, measuring at the most 3½ in. from bill to tail-tip, is sombrely coloured with dark brown crown, olive-green back, whitish belly and pale rufous foreneck. Its tail is so small that even its little short rounded wings reach to the end of it when folded. It has a pale eyebrow-stripe, and when the wings are lifted the under wing-coverts will be seen to be yellow—the only trace of bright colouring in the plumage, and that generally invisible. The wing measures 44–52 mm. and the tail 15–19 mm.

This tiny bird, scarcely more noticeable than an insect, has been caught on various occasions in snares set in the gloom of the southern Cameroon forests and has recently been found in British Cameroons moving about in the tree-tops and occasionally flitting to the fruit trees in a nearby plantation. Its sharp little call, *pirit, pirit*, is uttered as it searches the small twigs for insects.

Recently specimens have been secured at Kumba, British Cameroons, which were frequenting the trees in the farm clearings and the old second growth. The nest is suspended from bushes in the grass, nicely constructed little pockets like the nests made by some Sunbirds. The eggs have a white ground and are speckled.

Distribution and Races

S. virens virens Cassin extends from the Ubangi-Shari west to British and French Cameroons, ranging south through the Cameroon forest country to Gaboon. Its place is taken in northern Angola by:

S. virens tando Sclater, with greener upper parts (except on crown) and whiter under parts and wing 48–53 mm.

Another race, *S. virens baraka* Sharpe, occurs in the Uelle district of the Belgian Congo and extends to Uganda.

WHITE-BELLIED CROMBEC

Sylvietta flaviventris (Sharpe)

Two races of this Crombec occur in our area, both in Upper Guinea.

The crown and forehead are dark brown, a pale buff stripe passing from the base of the upper mandible above and beyond the eye to the level of the hind crown. Ear-coverts are brown with black shafts. Lores are pale dirty white or buff; mantle, back and scapulars are dull olive-green. Wing-coverts are brown edged with olive; primaries are blackish brown edged with olive-yellow, the secondaries being similar but the fringes less yellow. The tail is

brown narrowly edged with olive-yellow. Chin and throat are whitish washed with buff, the sides of the throat being buff, becoming darker, more cinnamon-brown, on the upper breast. The breast is bright yellow, extending in some examples further on to the belly than in others; the belly is white; flanks are smoke-colour. The under tail-coverts are white, broadly tipped with yellow; thighs are light brown washed with yellow; axillaries and under wing-coverts are yellow, the latter being white at the base. The eye is light brown; bill, upper mandible brown, lower flesh-colour; legs and feet are flesh-colour. Measurements are: Bill 10 mm.; wing (male) 46–50 mm., (female) 44–46 mm.; tail (male, female) 15–16 mm.; tarsus 16–17 mm.

The yellow breast and white belly, together with the pale eye-stripe, are the points to note in this minute bird, which measures only 3 in. The yellow thighs contrast with the white belly and so are rather conspicuous in the field.

Although the White-bellied Crombec has a wide distribution it is often difficult to find, as it has a habit of reverting to the tree-tops, when its minute body is easily lost to sight in the foliage. It is known to take part in "feeding drives" in the forest and then comes close to the forest floor. Described as not shy and a jolly little songster, it may attract attention to itself by its voice. It seems to be found both in forest (probably second-growth) and in thickets of dense bush, visiting plantations in savanna country.

It makes an open pocket-shaped nest of fibrous materials bound with spiders' silk and suspends it within a thicket about 4–8 ft. from the ground. The eggs are white, profusely spotted with pale green. Only two are laid.

Distribution and Races

S. flaviventris flaviventris (Sharpe) extends throughout the forested area of Upper Guinea from Sierra Leone to the Gold Coast.

Another slightly different race occurs in Ashanti which ranges to Nigeria. This is *S. flaviventris nigeriae* Bannerman, and it differs in having the crown slate-grey washed with brown instead of dark brown, the throat being whiter and the white of the belly extending further up the breast. The wing measures 45–49 mm.

LEMON-BELLIED CROMBEC

Sylvietta denti Ogilvie-Grant

Two races of this crombec are found in West Africa, and the typical race will therefore be described in detail. The adult male has the forehead and crown brown, the small feathers surrounding the eye and on the cheeks whitish with black tips, ear-coverts brownish

tinged with olive; whole upper parts dull olive, wings and tail brown edged with dull olive. Chin and upper part of the throat are like the cheeks; the middle of the throat is tinged with rufous buff gradually merging into dull olive on the breast. The sides are pale greenish yellow; belly is pale dull yellow, perhaps slightly brighter in the males than the females. Under tail-coverts are pale yellow; under wing-coverts and axillaries are white tipped with pale yellow. The eye is light brown; the bill is black (both mandibles); legs and feet are greyish-horn colour. Measurements are: Bill (male) 9 mm., (female) 8 mm.; wing (male) 49–50 mm., (female) 46–48 mm.; tail (male) 18 mm., (female) 15–17 mm.; tarsus 15–16 mm. The adult female resembles the male, but the yellow on the belly is of a duller shade. It is about 3 in. in total length.

There is no race of *S. flaviventris* inhabiting Lower Guinea, so that the comparison I have given in a later paragraph under *S. denti hardyi* to enable these two species to be differentiated in Upper Guinea need not be repeated. From the Crombecs of the *S. brachyura* group, with their all pale chestnut under parts, Dent's Lemon-bellied Crombec is distinguished at a glance by its under parts of pale yellow. This same characteristic and its blackish bill distinguish it from *S. virens virens*, with its pale chestnut throat, white belly and very dark crown with a pale eyebrow and light-coloured under mandible. These two Crombecs (*S. virens* and *S. denti*) are found inhabiting the same country.

Dent's Lemon-bellied Crombec is a forest species which was originally described from the Ituri, whence it ranges through the equatorial forest to southern Cameroon. In the last-named country its nest has been discovered—pocket-shaped and made of short leaf petioles, not woven together but held by gossamer threads running among them, finally extending over the twig to which the pocket is suspended to form the attachment along the twig, not to just one point. Outside the nest are many particles of trash hanging to the gossamer threads, which tremble at the slightest breath. The bag is lined with fibres and two eggs are laid; these are yellowish-clay colour, mottled with umber brown and grey. Egg measurements are 16·5–19 × 11–12 mm. Compared with the nest of *S. flaviventris*, it is easily recognised even at a distance.

Distribution and Races

S. denti denti Ogilvie-Grant ranges from the Semliki valley to southern Cameroon across the Congo forest.

S. denti hardyi Bannerman was discovered in Sierra Leone and probably ranges through all the forested country of Upper Guinea, though it has not been found east of the Gold Coast, where it seems to be common. From the typical race *S. d. hardyi* is distinguished by its brighter green upper parts and paler and duller under parts

(especially in the female). The cheeks are greyish and lack the spotted appearance of *S. denti denti*. The wing of *S. d. hardyi* measures 42–52 mm. and the tail 16–18 mm. Hardy's Yellow-bellied Crombec is apt to be confused with the White-bellied Crombec (*S. flaviventris*). The dark grey crown of *S. d. hardyi* and the all-black mandibles may help to distinguish it, as in *S. f. flaviventris* the crown is dark brown and the mandibles are not black, the upper being brown and the lower flesh-colour. Small points of distinction, but it is by bearing minute differences in mind that enables these small birds to be correctly identified.

Key to the species in the genus Eremomela

1. Black band across chest, crown chestnut
Eremomela badiceps badiceps, p. **1066**
No black band across chest, crown not chestnut .. 2
2. Crown and cheeks yellowish *Eremomela scotops congensis*, p. **1066**
No yellow on crown or cheeks 3
3. Upper parts uniform pale greyish brown, crown like back
Eremomela griseoflava alexanderi and subsp., p. **1063**
Upper parts not as above, crown grey and back olive-yellow or washed with olive-yellow 4
4. Crown in strong contrast with mantle; lores and ear-coverts black .. .. *Eremomela elegans canescens*, p. **1065**
Crown not in strong contrast with mantle; lores and ear-coverts not black.. .. .. *Eremomela pusilla*, p. **1064**

GREY-BACKED EREMÓMELA

Eremomela griseoflava alexanderi Sclater and Praed

(see Plate 43, facing page 1101)

In both adult male and female the crown, nape, mantle and back are pale grey-brown, rather browner on the back, greyer on the crown and nape. Lores and a stripe over the eye are white; ear-coverts are greyish. The rump is tinged faintly but distinctly with yellow. Wing-coverts are like the back. Primaries and secondaries are grey-brown with paler tips and edges, especially noticeable when fresh moulted. The tail is grey-brown, darker at the tip. Chin, cheeks and throat are white; the breast is white washed with ashy buff; the rest of the under parts are pale sulphur-yellow. The under tail-coverts are white, faintly tinged with yellow; under wing-coverts and axillaries are greyish white; legs and feet are slate-colour. The bill measures 9–10 mm., wing 50–55 mm., tail 26–30 mm., tarsus 17–18 mm.

In total length this bird is about 4 in. Care must be taken not to confuse it with *Eremomela pusilla*, but the latter has a green (not grey-brown) back, more yellow on the rump and a yellow patch at the bend of the wing. Moreover *E. pusilla* has a yellow breast as well as belly. Although the ranges of these two little birds may almost meet in northern Nigeria and the French Sudan, the Grey-backed Eremómela is found nearer the desert edge, while the Green-backed Eremómela is widely spread in the savanna country and the adjacent semi-arid belt.

This species is a familiar bird in the acacia trees which grow in the strip of border country next the Sahara desert—a lifeless land in which the presence of *Eremomela griseoflava* is welcomed by the traveller. It has a weak little song but is on the whole inconspicuous, most of its life being spent searching the twigs for tiny insects. In the Azare district of Nigeria it has been seen commonly in flowering ereodendron trees. It is a very early feeder and soon after the sun is up disappears from view, doubtless seeking the shade of a leafy tree in which to repose.

It breeds from mid-June onwards, building a tiny transparent cup of a nest, slung by the rim to two twigs. Usually it is placed in a bush 4–6 ft. above ground. The two eggs are white with grey undershell and dark maroon surface spots. They average 14·7 × 11·1 mm.

Distribution and Races

E. griseoflava alexanderi Sclater and Praed ranges from the Middle White Nile and Kordofan westwards to Chad, northern Adamawa, northern Nigeria, French Niger and French Sudan, inhabiting in the west the strip of transition country between the desert and savanna.

Its place is taken in the south-western savannas of the Congo by *E. griseoflava salvadorii* Reichenow, with pale greyish yellow-green upper parts.

GREEN-BACKED EREMÓMELA

Eremomela pusilla Hartlaub

(see Plate 43, facing page 1101)

This small bird, which measures about 4 in. in total length, has a grey-brown crown, greenish-yellow back inclining to yellow on the rump, brown wings and tail, the outer webs edged with green, a white throat and upper breast and lemon-yellow belly, flanks, thighs and under tail-coverts. The under wing-coverts are yellow, and also the small feathers at the bend of the wing. The wing measures 46–54 mm., the tail 35–44 mm. The bill is blackish above,

pale yellowish below. The legs and feet are brownish-flesh colour. Distinctions between this and the Grey-backed Eremómela have been mentioned under *E. griseoflava*.

This is the commonest of the Eremómela warblers in West Africa, with a wide range throughout the whole of the savanna to about lat. 12° N., where it occurs as far as the Combretaceae country, but not much beyond, the paler Grey-backed Eremómela taking its place in the arid strip beyond. It is not found as far north as Timbuktu, for instance, but in the south it reaches the coast at many points from Gambia to Nigeria.

Trees and shrubs are essential to its habitat, but it is absent from true forest. When not breeding, the birds go about in little parties foraging in the tree-tops and flitting from tree to tree. The flight is undulating with an occasional glide. As they fly they utter a soft *chee-chee*. Caterpillars, grubs and insects form their prey.

The nesting season extends from February till May, and second broods have been found in August. The nest itself is a tiny cup made of bits of leaf held together by vegetable fibre and is built in bushes at a height of 3–4 ft. from the ground. Eggs (two form the clutch) are pale greenish blue, blotched and spotted with brown with underlying markings of purplish grey. They measure 14–15 × 10·5–10·9 mm.

Distribution. The whole West African savanna from Senegal to northern Cameroons. Common in all British Colonies from coastal districts to about lat. 12° N. but not in forest country. In western French Sudan it approaches the desert more closely, ranging to about lat. 15° N. in the Mopti district.

YELLOW-BREASTED EREMÓMELA

Eremomela elegans canescens Antinori

The clear grey head with a black streak through the eye, bright golden-green upper parts and brown wings edged with green, yellowish upper tail-coverts, white throat and bright yellow breast and belly should enable this bird to be identified without trouble. The bill is black; legs and feet are yellowish flesh. The wing measures 51–57 mm. and the tail 36–42 mm.

This is a bird of the little trees in open woodland country, but it only comes within our limits in a very small area and not at all in Upper Guinea. It is a scarce bird, and its nest has not yet been discovered.

Distribution. From the Anglo-Egyptian Sudan this species ranges westwards through Darfur and the Uelle river district of the northern Belgian Congo and the Ubangi-Shari to eastern Cameroons.

GREEN-CAPPED EREMÓMELA

Eremomela scotops congensis Reichenow

THE bright yellow on the forehead, cheeks and under parts of this little bird is the most conspicuous feature; the rest of the upper parts are olive-green, and the wings and tail are brown. It has black in front of the eye and an all-black bill, and is rather larger than the other eremómelas we have been discussing, being about 4½ in. in total length. These characters should enable it to be recognised in the limited area in West Africa to which it is restricted. The wing measures 55–56 mm. and the tail 40–41 mm.

This bird is restricted to open woodland, where small parties may be encountered travelling through the higher trees, searching the twigs and leaves for creeping insects. Its note is a constantly uttered *squeechee* and the song five or six high liquid notes.

Distribution. The Congo savannas in the region of Leopoldville.

RUFOUS-CROWNED EREMÓMELA

Eremomela badiceps badiceps (Fraser)

(see Plate 43, facing page 1101)

THE adult bird is sufficiently strikingly garbed to be easily identified, the dark grey upper parts contrasting with the bright reddish-chestnut cap and the broad jet-black band across the white throat. The rest of the under parts are greyish, whiter on belly. The tail is brown, as are the wings. In size it is about 4½ in. in total length.

Young birds are totally different, with the bright yellow throat (with or without an indication of the black band which it assumes later), dull yellow under parts and olive-brown upper parts. In some stages the chestnut cap is indicated by a few bright feathers among the others, but birds at this stage are liable to confusion with so many other immature birds of other species that little reliance can be placed on colour as a means of identification. Adults have a wing measurement of 51–56 mm. and tail measurement of 34–38 mm.

Little twittering cries from the tree-tops of the forest, more especially in second growth, may attract one's attention to this little bird, which goes about often in small parties, fluttering about among the leaves, seeking its nourishment of berries, seeds and insects. It is described as very active in its movements and by no means uncommon in some places; especially has it been observed in the Gold Coast, sometimes in company with sunbirds and *Pholidornis rushiae*. The more wooded area around Abrobonko and Akuapim is a favourite haunt.

Although there is plenty of evidence of breeding in the forests of southern Cameroon, as well as further west, its nest and eggs have not been discovered. Doubtless these are safely situated from prying human eyes in the tree-tops.

Distribution. Ranging in West Africa from northern Angola to the Upper Congo and through the Cameroon forest country to turn up again in southern Nigeria and the Gold Coast. It is found also on Fernando Po. The limits of its western range are uncertain. There are old museum skins labelled respectively "Sierra Leone" and "Liberia" in the British and Bremen Museums, but no recent collections from these countries have contained a specimen.

A race *E. badiceps latukae* Hall has recently been separated from the Imatong Mountains, southern Sudan, which has a less rufous cap.

In the forests of Elgon and on the Uganda-Congo border yet another race, *E. badiceps turneri* van Som., occurs.

Key to the species in the genera Poliolais and Camaroptera

1. Outer tail-feathers white 2
   Outer tail-feathers not white 3

2. Whole under surface grey
   (*a*) Crown same colour as back, no rufous on face
   Poliolais lopesi lopesi ♂, p. 1068
   (*b*) Crown contrasting with back, sides of face washed with rufous .. .. *Poliolais lopesi lopesi* ♀, p. 1068
   Whole under side not grey, belly olive-brown or washed with green
   (*a*) Throat grey, no rufous on cheeks
   Poliolais lopesi alexanderi ♂, p. 1069
   (*b*) Throat white, cheeks washed with rufous
   Poliolais lopesi alexanderi ♀, p. 1069

3. Ear-coverts and superciliary stripe bright yellow
   *Camaroptera superciliaris superciliaris** and subsp., p. 1072
   Ear-coverts and superciliary stripe (if present at all) not yellow 4

4. Under parts from chin to vent washed with bright or sulphur-yellow, upper parts uniform olive-brown
   Immature birds of *Camaroptera chloronota*, p. 1069
   or *Camaroptera brevicaudata* and subsp., p. 1070
   No bright yellowish wash on the under parts 5

* Young birds have the breast also yellow, and superciliary less distinct.

5. Back grey or brown 6
Back green or washed with green
Camaroptera chloronota chloronota (adult), p. 1069

6. Back grey, particularly mantle
Camaroptera brevicaudata brevicaudata (summer), p. 1070
Camaroptera brevicaudata tincta (perennial dress), p. 1071
Back and crown uniformly light brown
Camaroptera brevicaudata brevicaudata (winter), p. 1070

WHITE-TAILED WARBLER

Poliolais lopesi Alexander
(see Plate 43, facing page 1101)

THREE races occur in our area, the typical subspecies being restricted to Fernando Po, and two in the Cameroon Montane district, one of which is confined to Cameroon Mountain. Their distinguishing characters will be mentioned hereafter.

The sexes of this bird are dissimilar, and the immature are quite unlike the adults.

The description which follows is that of the Cameroon Mountain race, *P. lopesi alexanderi* Bannerman. In this race the forehead and crown are dark grey, merging into olive on the mantle; the sides of the head, chin and throat are slate-grey, fading into olive on the sides of the neck. The rest of the upper parts are dark olive-green, paler on the rump; the lesser wing-coverts like the back and the rest of the wings are dark brown, with the outer margins of the secondaries edged with olive. The two central pairs of tail-feathers are dark brown, the second pair having the shaft white; outer tail-feathers are white. The chin is whitish; throat is slate-grey and the rest of the under parts are pale olive-green, becoming ashy towards the middle of the breast and belly and faintly washed with brownish on the flanks. The middle of the belly is inclining to white; the thighs are olive-brown, under tail-coverts buff. Under wing-coverts and axillaries are white, the coverts becoming yellowish towards the bend of the wing. The bill is black, legs and feet are dark, and the eye is hazel.

The bill (male) is 13 mm., (female) 12 mm.; wing (male) 55 mm., (female) 50 mm.; tail (male) 35 mm., (female) 25 mm.; tarsus (male, female) 23 mm.

The adult female has the head and cheeks chestnut as in the typical subspecies, but the whole upper parts are olive-green, the wings dark brown outwardly fringed with rufous brown. The tail is as in the typical subspecies. Chin and throat are white, merging

into chestnut on the cheeks and into dusky olive on the breast. The middle of the breast and belly are pale yellowish, the sides and flanks olive-brown, the long flank-feathers merging into rufous or rust-brown terminally. The under tail-coverts are buff; under wing-coverts and axillaries are white and lemon-yellow along the inner bend of the wing.

In total length this warbler is about 4 in.

The White-tailed Warbler is a bird of the mountain forests, where it lives near the ground in the undershrubs and especially in the tangled thickets which appear in those places where a fallen tree admits the light. On Fernando Po the typical race was found frequenting thick bush, and it was found breeding in November.

In size and build, but not in coloration, *Poliolais* is very similar to *Camaroptera*, with a rather long straight bill and a very short tail which, unlike *Camaroptera*, has white outer rectrices. The male is mainly olive-green above with a grey head, the female being more conspicuous by reason of the chestnut crown and cheeks. No one has described its nest or eggs.

Distribution and Races

Poliolais lopesi lopesi Alexander is restricted to Fernando Po. The male has the entire upper parts and crown dark sooty-grey, in the female dark olive-brown above with a chestnut crown. The wing is 49–55 mm. and tail 24–32 mm., the males having a longer tail than the females.

Poliolais lopesi alexanderi Bannerman has already been described. It is restricted to Cameroon Mountain.

Poliolais lopesi manengubae Serle has the upper parts dark grey in the male, lacking the brownish tinge of the typical subspecies. The grey of the under parts is paler. The female has an olive-brown crown instead of chestnut as in the females of the other races. The wing is 49–56 mm. It is found in British Cameroons on Manenguba and Kupé Mountains between 5,000 and 6,500 ft.

GREEN-BACKED CAMAROPTERA

Camaroptera chloronota Reichenow

(see Plate 43, facing page 1101)

Two races come within our limits in Upper Guinea, one of which ranges to southern Cameroon.

The Green-backed Camaroptera has a total length of about 4½ in., of which the bill takes up 11–15 mm. The wing measures 47–59 mm. and the tail 20–32 mm. in the typical race. The long straight bill with the upper mandible curving at the tip sharply over

the lower is a characteristic feature of the whole genus. Inconspicuously coloured dark green above, grey below, it, like the rest of its genus, is remarkable for the short tail and comparatively long legs, yellowish brown in colour, with dull tawny-yellow thighs. This marked contrast of the thighs with the colour of the belly is a feature which is shared by all the Camaropteras and is thus a good distinguishing character of the whole group.

C. chloronota has a habit of cocking its tiny tail over its back, when it looks distinctly wren-like. A common bird over a wide area in second-growth thickets, it does not penetrate into the thick primary forest, but is to be seen often in clearings in small trees and bushes, in villages, towns and stations. It is usually met with singly or in pairs and is a quiet, unobtrusive little bird, distinctly shy of being observed. It has a weak little song and makes mewing little cries, rather like *C. brevicaudata* but weaker. Its *wheet, wheet* will betray its presence before it is seen.

Its nest is a beautiful little structure made by uniting the leaves of a spray to form the outside frame with one or more leaves for a roof. It differs only from the nest of the Grey-backed Camaroptera in that the interior is composed entirely of soft white down strengthened by cobwebs. The two eggs resemble those of *C. brevicaudata tincta* (to be described hereafter) but have larger, more distinct markings. They measure 17–17·5 × 12·5 mm.

Distribution and Races

C. chloronota chloronota Reichenow extends from southern Cameroon and Fernando Po through southern Nigeria to Dahomey and Togoland.

C. chloronota kelsalli Sclater takes its place in the Gold Coast (Ashanti) and ranges to Sierra Leone. It is distinguished by having the breast uniform grey without an olive-green wash on the crop, and by buffish red round the eye and on the ear-coverts. The wing measures 47–54 mm. and the tail 15–25 mm.

GREY-BACKED CAMAROPTERA

Camaroptera brevicaudata Cretzschmar

(see Plate 43, facing page 1101)

Two races occur in West Africa, one in the coastal and forested area, the other—the typical race—in the semi-arid belt from west to east.

The Grey-backed Camaroptera can best be distinguished when in full adult plumage by its *grey* back, as its name implies, the yellowish-olive wings alone showing any colour. At the bend of the wing a lemon-yellow border is noticeable should the bird quiver

its wings, the yellow under wing-coverts becoming visible then along the edge. This species is greyish on the throat and cheeks, becoming whitish on the belly, the orange-buff thighs contrasting with the pale belly. In the bush the olive wings are what first catch the eye. In size this camaroptera measures in the flesh about 5 in. and has a longer tail (over 40 mm. from the root) than the Green-backed Camaroptera already dealt with. From that species the grey back of *C. brevicaudata brevicaudata* is the best distinguishing feature, plus the decidedly longer tail. Even immature birds should not be confused, as at all stages *C. chloronota* has a greener back and in immature *C. brevicaudata* the back is more olive-brown. In point of fact, *C. chloronota* is found only in the country of *C. brevicaudata tincta*.

The measurements of the typical race are: Bill 13–14 mm., wing 49–58 mm., tail 33–41 mm. and tarsus 20–23 mm.

The plumage changes and moults of this bird are interesting, but space will not permit discussion here. The changes are described on page 133 of my fifth volume of *The Birds of Tropical West Africa*.

The habitat of *C. b. brevicaudata* is in the drier parts of West Africa, continuous in its range from east to west of the continent and equally at home in jungle, woodland and bush, in the last frequenting mainly the better vegetation on the banks of wadis. It threads its way through the thickets with surprising agility, making occasional little mewing cries, by which it may be recognised.

The forest race, *C. b. tincta*, is not necessarily confined to forest country but is universally distributed in the coastal area, where it occurs mainly on farmlands and the thicker parts of the orchard bush. It avoids the pure forest. Usually seen in pairs, it is not at all shy and will even enter houses in its search for spiders. A variety of calls are attributed to it, from a grasshopper-like stridulation to a startling *twik, twik, twik*. Bill-snapping is also a habit in which it indulges.

Nests are built close to the ground, the leaves of a shrub being neatly sewn together to form a pocket which contains a lining of fine dry grass. Two eggs complete a clutch. In ground colour they are glossy white, sparingly and evenly spotted with small brown and lilac spots. The eggs measure 15·5–16·25 × 11·5–12 mm. (*C. b. brevicaudata*) and 16–18 × 11–12 mm. (*C. b. tincta*).

Distribution and Races

C. b. brevicaudata (Cretzschmar) ranges from Kordofan and Darfur to the Bahr el Ghazal across the semi-arid belt to include every political division from Senegal to northern Cameroon. I find no distinction between birds of East and West Africa.

C. b. tincta (Cassin) takes the place of the above in the coastal area to which the forest extends, i.e. Sierra Leone to the Congo River, ranging to the Great Congo Forest. This race occurs in all

the lower is a characteristic feature of the whole genus. Inconspicuously coloured dark green above, grey below, it, like the rest of its genus, is remarkable for the short tail and comparatively long legs, yellowish brown in colour, with dull tawny-yellow thighs. This marked contrast of the thighs with the colour of the belly is a feature which is shared by all the Camaropteras and is thus a good distinguishing character of the whole group.

C. chloronota has a habit of cocking its tiny tail over its back, when it looks distinctly wren-like. A common bird over a wide area in second-growth thickets, it does not penetrate into the thick primary forest, but is to be seen often in clearings in small trees and bushes, in villages, towns and stations. It is usually met with singly or in pairs and is a quiet, unobtrusive little bird, distinctly shy of being observed. It has a weak little song and makes mewing little cries, rather like *C. brevicaudata* but weaker. Its *wheet, wheet* will betray its presence before it is seen.

Its nest is a beautiful little structure made by uniting the leaves of a spray to form the outside frame with one or more leaves for a roof. It differs only from the nest of the Grey-backed Camaroptera in that the interior is composed entirely of soft white down strengthened by cobwebs. The two eggs resemble those of *C. brevicaudata tincta* (to be described hereafter) but have larger, more distinct markings. They measure 17–17·5 × 12·5 mm.

Distribution and Races

C. chloronota chloronota Reichenow extends from southern Cameroon and Fernando Po through southern Nigeria to Dahomey and Togoland.

C. chloronota kelsalli Sclater takes its place in the Gold Coast (Ashanti) and ranges to Sierra Leone. It is distinguished by having the breast uniform grey without an olive-green wash on the crop, and by buffish red round the eye and on the ear-coverts. The wing measures 47–54 mm. and the tail 15–25 mm.

GREY-BACKED CAMAROPTERA

Camaroptera brevicaudata Cretzschmar

(see Plate 43, facing page 1101)

Two races occur in West Africa, one in the coastal and forested area, the other—the typical race—in the semi-arid belt from west to east.

The Grey-backed Camaroptera can best be distinguished when in full adult plumage by its *grey* back, as its name implies, the yellowish-olive wings alone showing any colour. At the bend of the wing a lemon-yellow border is noticeable should the bird quiver

its wings, the yellow under wing-coverts becoming visible then along the edge. This species is greyish on the throat and cheeks, becoming whitish on the belly, the orange-buff thighs contrasting with the pale belly. In the bush the olive wings are what first catch the eye. In size this camaroptera measures in the flesh about 5 in. and has a longer tail (over 40 mm. from the root) than the Green-backed Camaroptera already dealt with. From that species the grey back of *C. brevicaudata brevicaudata* is the best distinguishing feature, plus the decidedly longer tail. Even immature birds should not be confused, as at all stages *C. chloronota* has a greener back and in immature *C. brevicaudata* the back is more olive-brown. In point of fact, *C. chloronota* is found only in the country of *C. brevicaudata tincta*.

The measurements of the typical race are: Bill 13–14 mm., wing 49–58 mm., tail 33–41 mm. and tarsus 20–23 mm.

The plumage changes and moults of this bird are interesting, but space will not permit discussion here. The changes are described on page 133 of my fifth volume of *The Birds of Tropical West Africa*.

The habitat of *C. b. brevicaudata* is in the drier parts of West Africa, continuous in its range from east to west of the continent and equally at home in jungle, woodland and bush, in the last frequenting mainly the better vegetation on the banks of wadis. It threads its way through the thickets with surprising agility, making occasional little mewing cries, by which it may be recognised.

The forest race, *C. b. tincta*, is not necessarily confined to forest country but is universally distributed in the coastal area, where it occurs mainly on farmlands and the thicker parts of the orchard bush. It avoids the pure forest. Usually seen in pairs, it is not at all shy and will even enter houses in its search for spiders. A variety of calls are attributed to it, from a grasshopper-like stridulation to a startling *twik, twik, twik*. Bill-snapping is also a habit in which it indulges.

Nests are built close to the ground, the leaves of a shrub being neatly sewn together to form a pocket which contains a lining of fine dry grass. Two eggs complete a clutch. In ground colour they are glossy white, sparingly and evenly spotted with small brown and lilac spots. The eggs measure 15·5–16·25 × 11·5–12 mm. (*C. b. brevicaudata*) and 16–18 × 11–12 mm. (*C. b. tincta*).

Distribution and Races

C. b. brevicaudata (Cretzschmar) ranges from Kordofan and Darfur to the Bahr el Ghazal across the semi-arid belt to include every political division from Senegal to northern Cameroon. I find no distinction between birds of East and West Africa.

C. b. tincta (Cassin) takes the place of the above in the coastal area to which the forest extends, i.e. Sierra Leone to the Congo River, ranging to the Great Congo Forest. This race occurs in all

our Colonies except Gambia, which lies within the range of the typical subspecies. It is distinguished by the darker shade of the body plumage, especially on crown, back and breast. The wing measures 50–60 mm. and the tail 32–44 mm.

Various other races of *C. brevicaudata* have been described. In Uganda we have *C. b. abessinica* and in the coast land of Kenya *C. b. griseigula*, while *C. b. harterti* is confined to Angola. There are several other recognised forms in addition to those mentioned.

YELLOW-BROWED CAMAROPTERA

Camaroptera superciliaris (Fraser)

(see Plate 43, facing page 1101)

THREE races have been described from West Africa. The typical race is an island form.

This is by far the most brightly coloured of the Camaropteras in West Africa and consequently may be identified with little difficulty. Green above, whitish below, with ashy breast and sides, the features which arrest attention are the yellow cheeks and superciliary, yellow edge of the wing at the bend, yellow under tail-coverts and the yellowish thighs. The bill is jet-black, rather long and straight, as in all members of the genus. It may be remarked that the young birds have a bright yellow throat and chest which makes them even more conspicuous than their adult parents. Adults have wing measurements, in the typical race, of 46–50 mm., the tail being 24–31 mm.

Dense second-growth thickets in the forested area, as well as the forest undergrowth, is the home of this camaroptera, which attracts attention by the peculiar whining tone of its cry, reminding the listener of the cry of a lamb or kid heard at a distance. It is a secretive species, much more often heard than seen. It spends much of its time searching the leaves and twigs for insects, like the rest of its family.

Few observations have been made upon it, and its eggs have not been discovered by a European.

Distribution and Races

Camaroptera superciliaris superciliaris (Fraser) is restricted to Fernando Po.

Camaroptera superciliaris flavigularis Reichenow ranges from southern Nigeria (Owerri Province) and British Cameroons to Gaboon, extending east to the Semliki valley. No specimen has yet been obtained from Nigeria west of the Niger to determine the race, which is expected to be *flavigularis* as far west as Lagos. It differs from the island race in the darker green of the upper parts, less

yellowish green; and in having the under parts much greyer. The wing measures 44–52 mm. and tail 25–30 mm.

Camaroptera superciliaris willoughbyi Bannerman ranges from Sierra Leone to the Gold Coast. *C. s. willoughbyi* has the upper parts brighter green than in *C. s. flavigularis*, but not so yellowish green as in *C. s. superciliaris*. The under parts are less grey than *flavigularis*, more resembling the typical race in this respect.

GENUS CISTICOLA

It is to be hoped that any serious student of West African birds will have access to the fifth volume of my larger work, for in this handbook it is not possible to do more than give a very condensed account of this difficult group of warblers with which the name of the late Rear-Admiral Lynes will ever be associated. Nor has it been possible to reproduce in the handbook the coloured figures of these birds depicted on Plate 5 of the volume cited. The key which follows, and the few text figures, will enable the reader to visualise the appearance of the Cisticoline Grass-Warblers in general, but they are so much alike that it is wellnigh impossible, without going into great detail, to give characters by which the various species can be recognised from one another. Some, it is true, have streaky upper parts, others plain upper parts; some are larger, some again smaller; and all have their peculiar characteristics of habitat, song and nest, which will assist the expert field observer to differentiate between them; but only months of study will enable him or her to name a Grass-Warbler at sight.

To give a description of a single specimen, however detailed, is apt to mislead anyone attempting to name a particular cisticola in this way, as the majority have more than one dress and some species exhibit a bewildering difference between winter and summer garb, quite apart from the juvenile plumages through which they pass.

In short, it is quite impossible to describe the members of this genus succinctly. Reliance must therefore be placed, so far as the identification of species is concerned, mainly on the key which follows. Those in possession of my larger work will find the plumages described there in great detail by Admiral Lynes. Most of the field observations which follow are his also, and have been taken, as Lynes prepared them, from my *The Birds of Tropical West Africa*. Additional notes from ornithologists in West Africa have supplemented his account, among whom mention must be made of Dr. William Serle, who has paid special attention to the birds of British Cameroon.

Key to the genus Cisticola
(after Lynes)*

1. Small or very small birds from size and build of *Phylloscopus proregulus* to *Ph. trochilus*; male wing 47–57 mm., female but little smaller 2

Medium-sized birds from size and build of *Sylvia communis* to *Sylvia borin* (male wing 58–68 mm., female smaller in varying degree, little to much) 5

Large birds about size of *Sylvia nisoria* but rather stouter build (male wing 65–75 mm., female much smaller).

(*a*) Bill robust and only moderately curved; hind neck bright red; tail-pattern dark; seasonal changes slight .. .. *Cisticola robusta santae*, p. 1091

(*b*) Bill short, thick and very curved, almost Finch-like; hind neck never bright red; tail-pattern average; seasonal changes very great
Cisticola natalensis strangei, p. 1093

2. Pattern back, the whole upper side—except for a more or less plain and conspicuous reddish or brownish rump, and in summer males (only) a strong or bright-coloured head-top—a variegated pattern, mainly of buffs or light browns, heavily marked with black or dark brown; inner and outer toes of unequal length; typical behaviour Lark-like with aerial antics; habitat open fields 3

Plain back, contrasting with head; head-top always bright red; typical behaviour, song from perch; habitat bush 4

Plain back, the whole upper side plain and practically concolorous brown to foxy red, little or no contrast between head-top and back; inner and outer toes equal; typical behaviour, song from perch; habitat savanna.

(*a*) Upper side red or reddish and entirely plain .. (*b*)
Upper side brown, plain or marked; 1st primary scimitar-shaped.
Tail with dark subapical spots
Cisticola brachyptera brachyptera, p. 1094

* The whole of the credit for this masterly key—a most exacting key to compile—must be given to Admiral Hubert Lynes. The comparatively small task of the writer has been to eliminate from Lynes's original key those species which do not occur within our limits, and to make the necessary adaptations and adjustments.

(*b*) Upper side bright foxy red; 1st primary scimitar-shaped .. *Cisticola troglodytes troglodytes*, p. 1095
Upper side dull brownish red; 1st primary blade-shaped. Tail without dark apical spots
Cisticola rufa, p. 1095

3. Tail never very short (three-fourths of wing or longer) and of spotted fan-pattern; male summer head-top strong pattern of brown.
(*a*) Tail of spotted fan-pattern above as well as below; primaries of average shape
Cisticola juncidis uropygialis, p. 1077
(*b*) Tail of spotted fan-pattern below, but plain black pattern above; primaries narrow
Cisticola aridula aridula, p. 1079
Tail always short or very short (three-fifths of wing or shorter) and of plain black pattern above and below (except *eximia* in winter dress, tail four-fifths of wing, and of spotted fan-pattern below); male summer head-top nearly plain and red (or exceptionally black).
(*a*) Size not very small (wing (male) 52–58 mm.); legs and feet big and strong
Cisticola brunnescens lynesi, p. 1081
(*b*) Size very small (wing (male) 47–53 mm.); legs and feet small and weak.
Rump pattern uniform rufous, unstreaked and contrasting with back .. *Cisticola eximia occidens*, p. 1082
Cisticola eximia winneba, p. 1083
Rump pattern streaky, uniform with back
Cisticola ayresii gabun, p. 1080

4. Size not very small (wing (male) 54–58 mm.); pattern back in winter, plain back in summer dress; bill, legs and feet all strong, inner toe slightly shorter than outer toe.. .. .. .. *Cisticola ruficeps ruficeps*, p. 1097
Cisticola ruficeps guinea, p. 1096

5. Back at all seasons strong pattern of buffs, browns or greys, marked with dark brown to black 6
Back at all seasons plain, or no more than faintly dappled 7

6. Head-top reddish, in more or less distinct, though only exceptionally in bright, contrast with the back. Pattern of upper side mostly very bold and black; tail-tips white or whitish; typical habitat swamps. Bill strong and rather long .. *Cisticola galactotes amphilecta*, p. 1091
Cisticola galactotes zalingei, p. 1091

7. Wing very blunt, first primary broad-blade shaped. Tail never longer than wing, in summer dress markedly shorter; back always grey in summer and browner in winter dress, quite plain at all seasons; typical habitat savanna.
   (*a*) Head-top and wing edging not separate coloured, but like back; face red or reddish
   Cisticola erythrops erythrops, p. 1089
   (*b*) Head-top and wing edging red, either in more or less conspicuous contrast with back, or as conspicuous features of general colour pattern; face not at all red-tinted
   Cisticola cantans swanzii and subsp., p. 1088
   Wing contour variable, mostly blunt; 1st primary (ordinary) blade-shaped 8
8. Lores wholly black; typical habitat mountain bush
   Cisticola discolor discolor, p. 1088
   Cisticola discolor adametzi, p. 1088
   Lores wholly whitish or light coloured 9
9. Head-top strong red, strikingly in contrast with the back; size rather small (wing (male) 58–64 mm., female rather (*ca.* 12%) smaller than male) 10
   Head-top concolorous with, or rather redder than, back; size larger (wing (male) 62–68 mm., female much smaller than male); wing-contour very rounded, 2nd primary shorter than 10th; back quite plain or only faintly dappled 11
10. Red of head-top very bright; an eyebrow (often conspicuous); tail-feathers broadish and cross-ribbed and very boldly spotted; bill brown; frequents rocky ground and is a remarkably silent bird
   Cisticola emini petrophila, p. 1086
   Cisticola emini admiralis, p. 1087
   Red of head-top darker; no eyebrow; tail-feathers of average width, not cross-ribbed and rather less boldly spotted; bill very black; frequents clearings in forest woodland and has chattering song-call
   Cisticola anonyma, p. 1084
11. Bill very robust and very black; head-top and back concolorous, blackish or foxy-coloured; tail-pattern bold, and rectrices rather broadish; frequents outer edges of forest woodland and has loud whistling song-call
   Cisticola lateralis lateralis, p. 1083
   Cisticola lateralis modesta, p. 1084

Bill distinctly long and little curved, protrusive; head-top slightly redder than back; tail-pattern very bold and rectrices markedly broad; frequents open bush or woodland, and has pleasant bubbling song-call
Cisticola bulliens, p. 1087

GOLD COAST FANTAIL-WARBLER

Cisticola juncidis uropygialis (Fraser)

THIS is one of the smallest of the group. It has a patterned back, the whole upper side (except for a more or less plain and conspicuous reddish or brownish rump, and in the summer males only, a strong or bright-coloured head-top) a variegated pattern, mainly of buffs or light browns, heavily marked with black or dark brown; inner and outer toes of unequal length. The tail is of spotted fan-pattern* above as well as below; the wing primaries are of average breadth and shape. Principal measurements are: Wing (male) 49–53 mm., (female) 46–50 mm.; tail in summer 30–34 mm., in winter 40–44 mm.

The Fantail-Warbler is found on open grass and waste lands, edges of cultivation, more often than not in, or close to, damp spots, in any case during the breeding season, where there are soft green narrowish grass-blades growing, since these are essential for the construction of the nest. In the off-season it may be seen skulking among the grass and herbage, making short low flights when flushed and hiding quickly again, displaying no more than occasional evidence of joy. When breeding the cock bird makes himself very conspicuous, rising into the air to a considerable height, but not more than 100 ft. or so, and cruises around over his mate (or, if only pairing, a prospective mate) with dipping flight, uttering a series of sharp, resonant little chirps or scratchy squeaks, thus—*zit* (1 or 2 seconds) *zit zit* . . . , each chirp synchronising with a dip in the flight. This is the song-call, and it attracts the ordinary listener's attention up to at least a hundred yards' range. The alarm call, or at any rate *an* alarm call, used to warn the hen bird, is an excited quick repetition of the song-call, *zit zit zit*, generally made flying close up to her when on or near the nest in the grass. It is particularly these courting antics, i.e. the combination of aerial evolutions and

* The term "spotted fan pattern" is defined by Lynes as a tail-pattern composed of rectrices, each of which in upper view has darkish-coloured webs and a pale or white tip, immediately succeeded by a black subterminal spot; and in a lower view, the webs paler and greyer, the spot denser black and consequently in stronger contrast with the webs than in the upper view, and the pale tips in equally strong contrast.

song-calls, and the type of nest by which *juncidis* can be infallibly recognised in the field, even when breeding alongside *aridula*, one of the species it has so often been mistaken for in the museum. *Juncidis* never snaps the wings, that is, never makes clicks.

The nest is remarkable in that it is of the soda-bottle type, about 6 × 2½ in., with the entrance facing skywards. It is made by binding together a number of soft green grass-blades with plant fibres and cobwebs and lining copiously with plant down. The bird breeds in May in the Gold Coast (Winneba) and in July to August in French Sudan and French Niger apparently. In northern Nigeria eggs have been found in June to September. Eggs show two varieties: (*a*) white, freckled and spotted, and (*b*) blue, spotted and

blotched, but plain white and plain blue are also to be found. The eggs average 14·25 × 10·75 mm.

Distribution and Races

C. juncidis uropygialis occurs over the whole of northern tropical Africa from Senegal to northern Cameroon and from south-western Arabia to the southern Sudan.

In Equatorial Africa *C. juncidis perennia* Lynes takes its place in Kenya, Uganda and Tanganyika.

The darker *C. juncidis terrestris* (Smith) is the race found in South Africa north to Angola.

DESERT FANTAIL-WARBLER

Cisticola aridula aridula Witherby

ANOTHER very small bird, with a pattern back as described for *C. juncidis uropygialis*, but the general effect is more golden-sandy colour. The tail is different; it is of spotted fan-pattern below, but plain black* pattern above. The wing primaries are narrow.

Principal measurements are: Wing (male) 48–52 mm., (female) 46–50 mm.; tail (male) in summer 34–38 mm., in winter 36–40 mm.

The habitat of this Fantail-Warbler is in the semi-arid belt; open, dry and even semi-arid grasslands in which the grass is short. It is seldom found on cultivated ground and keeps to low elevations, being rarely found above the level of the coastal plain or interior plateau. It may be encountered breeding alongside the last species

* Plain-black pattern is the term used by Lynes to describe the tail when the black pigment pervades the whole web, obliterating the contrast of the black subterminal spot and producing the "plain-black" pattern. The tail of *C. aridula* viewed from above is typical.

in the driest spots frequented by *C. juncidis*, but may be recognised by its quite different antics and nest.

When breeding, until alarmed the cock bird does not make himself nearly so conspicuous as *C. juncidis*. His song is a monotone repetition (we once counted as many as sixteen) of a single high-pitched, quite small, and rather tinkling bell-like note—*ting* (½ sec.) *ting . . . ting . . .*, given either perched on top of a low shrub or tall grass, or making a low aerial cruise, without any remarkable antics. But directly alarmed he makes himself conspicuous, darting about in the air over his mate to drive her away from the intruder, uttering excited, sharp little cries—*tuc . . . tuc . . .* and snapping his wings loudly. These antics are quite unlike any of *C. juncidis* (one of whom may very likely be performing over the same spot at the same moment). The flight is quite low, 30 ft. or less, erratic, and alternated with rapid downward swoops nearly to the grass, then up again, and it is during these swoops that the wing-snapping is made. The performance is this: *tuc . . . tuc* (vocal), then swoop down with *snap* (1 sec.) *snap . . . snap . . .* (wings), then up again and repeat. The wing-snapping is quite peculiar and obviously mechanical, not vocal; its sound is exactly reproduced by snapping the finger and thumb.

This cisticola breeds during the rains (July to September), making a nest of the ball type with side-top entrances. It is nearly twice as high as broad, about 6 × 3 in. It has a scanty roof and untidy entrance hole, and is always built in grass, either near the ground in a small grass tuft or to about a foot above it in 2 ft. high grass. The eggs of the West African race have never been found. Those of the South African and Angolan races vary from white to pale turquoise, either plain or marked with fine spots and speckles of red and madder.

Distribution. The Sudanese arid belt, extending from the Nile westwards to northern Nigeria (Kano, Chad), Bornu (Maidugari), French Damergou, French Niger (Zinder, Tawa, etc.) and French Sudan (Gao and Burem). Not found yet west of Burem, at the north-eastern angle of the Niger.

In the drier parts of Kenya, Uganda and Tanganyika *C. aridula tanganyika* Lynes is found, and in Angola *C. a. lobito* Lynes takes its place.

GABOON CLOUD-SCRAPER

Cisticola ayresii gabun Lynes

This is a streaky-backed very small bird, the rump also being streaked, with weak legs and feet, as illustrated in the key. The tail is of plain-black pattern above and below. The male in summer has

the head-top nearly plain and red. Measurements are: Wing (male) 47 mm., (female) 42 mm.; tail (male) 21 mm., (female) 25 mm. (a notably short tail).

Distribution. Only known from the coastal district of Gaboon, particularly around Port Gentil.

HIGHLAND CLOUD-SCRAPER

Cisticola brunnescens lynesi Bates

This mountain bird, restricted as it is to a small area of British territory, should easily be recognised. The male has the crown and nape dull rust-brown; in the female only the forepart of the crown is reddish, the rest boldly mottled like the back. A distinct pale stripe extends beyond the eye. The upper parts of the body in both sexes are heavily mottled with black and umber-brown; the female is less distinctly marked and is brighter than the male. The under parts are strongly suffused rusty-buff save for the chin and throat,

which are white. The tail is of the plain-black pattern above and below, with tips and outermost edgings almost pure white. This dress is probably perennial. It is a larger bird than those previously described, with strong legs and feet. Measurements are: Wing (male) 50–54 mm., (female) 47–48 mm.; tail 26–29 mm. in both sexes.

The Highland Cloud-scraper was discovered first in the vicinity of Oku, British Cameroons (about 6,000 ft.), and is now known to range over the open grassy mountain sides from 5,600 to 9,000 ft. In their behaviour they are remarkably like the *Mirafra* group of Larks, inhabiting open treeless country. The cocks rise to some height, where they cruise about high overhead with very remarkable

cloud-scraping antics, including song. They attract attention by the sounds they make in the air while flying—a series of clicks with something of a buzzing quality in the tone. They fly about with irregular, jerky, nervous flight, then drop down to a grass-stalk.

The breeding season is believed to be from February to April inclusive, but the nests and eggs of this race have not actually been obtained. The *brunnescens* group of Cisticolas builds a ball-type nest, on or nearly on the ground in short grass, many of the green blades of which are bent down and woven together in a bower over the roof of the nest.

Distribution. This is the only representative of the *brunnescens* group in West Africa and is restricted to the highlands of British Cameroon (Oku, Banso and Bamenda districts).

The typical subspecies is found in Abyssinia, and there are various races scattered throughout eastern Africa extending to Cape Province, of which *C. b. nakaruensis* from the Kenya highlands and *C. b. lindii*, which ranges from Kenya to the country west of Kilimanjaro, may be instanced.

NIGERIAN CLOUD-SCRAPER

Cisticola eximia occidens Lynes

This is a very small bird, about the size of the chiffchaff (*Phylloscopus collybita*) but a trifle less slimly built. In summer (June to about November) the upper side is strongly mottled brown, buff and black throughout in the hen, but the cock has a plain dark red-brown head-top. Both sexes have a short and very black-looking tail, lightly tipped with white, and the lower side is plain whitish with markedly contrasting rust-red flanks and thighs. In winter both sexes are alike, more buffy in colour and more striped in pattern above, and their tails are markedly longer. Young birds look like warm-coloured editions of their parents in winter dress, plus light sulphur-yellow breasts. Adult birds measure: Wing (male) 48–52 mm., (female) 44–48 mm.; tail (in summer) 28–32 mm., (in winter) 35–39 mm.

There are two races of *C. eximia* in Upper Guinea; the one mentioned above is the form found everywhere except on the coastal strip of the Gold Coast.

The habitat of *C. eximia* is open, short grass-flats and plains, and particularly water-meadows. In summer the cock bird makes itself conspicuous by his courting and joy antics. Rising out of the grass which conceals his mate, with whirring wings like a big bumble bee, he mounts skywards until almost out of sight and then begins to cruise round singing—a small cricket-like chirpy *preep, preep, preep,* with occasional variations—and crackling his wings. In two or three minutes he descends with a thunderbolt dive with flexed wings almost to the ground, then an up-swerve or two and a final flop into the grass.

The nests are of the regular Cloud-scraper type such as has been described under *C. brunnescens lynesi*, though the thin water-grass with which they are constructed does not admit of a good bower being made. The eggs of the West African races have not been found. Those of the typical *C. eximia*, which number two or three in the clutch, are white, well marked with purplish-brown and rust-red spots and dots and some grey secondary markings. They average 16 × 11·4 mm.

Distribution and Races

C. eximia occidens Lynes ranges widely over West Africa from Sierra Leone to Nigeria, excluding the coastal strip of the Gold Coast, where its place is taken by *C. eximia winneba* Lynes. Compared with *C. e. eximia* and *C. e. occidens*, this Winneba race differs in having the colour tints of the whole plumage black, buffs and reds, markedly weaker. The wing is 46–49 mm. and the tail 28–29 mm.

The typical subspecies, *C. eximia eximia* Heugl., ranges from Abyssinia to Uganda and the Belgian Congo. No other races occur.

WHISTLING GRASS-WARBLER

Cisticola lateralis lateralis (Fraser)

This is quite a large cisticola with wing 62–68 mm. in males, the females being very much smaller, with wing 50–56 mm. Tails are: (male) 50–56 mm., (female) 42–48 mm. The bill of this Grass-Warbler is very robust in comparison with many in the genus and is very black. The head-top and back are concolorous, blackish or foxy-coloured. The back is quite plain and the tail-pattern (see illustration in key) bold. The wing contour is very rounded, the second primary being shorter than the tenth (see illustration in key).

The full breeding dress is very distinctive, viz. the upper side is

plain sooty-black, with a russet wing edging and the lower side very white. In youth and immaturity the dress is quite different, all the adult black being instead bright foxy-red, and until they are about two months old young birds have light sulphur-yellow breasts. There seems also to be an intermediate foxy phase of dress in adult life which is not yet at all understood.

The bird may be found in light woodland, the edges of (but not inside) forest, etc. It prefers the more open or cleared parts of woodland with patches of forest hard by. Soft vegetation and moist climate are essential to its requirements. The male is an attractive songster, and when so engaged perches upon the topmost twig of a tree, perhaps 70 ft. from the ground, or on a telegraph wire.

The nest is a small domed structure with side entrance, thickly built of fine grasses and small fibres. A favourite site is in a pepper bush and quite exposed. Thorn-trees also attract it for nesting purposes. The eggs are three or four in number; pale green or pale blue, sparingly speckled with brown. (The Uganda race lays pale blue eggs.) Eggs measure 18·2–18·8 × 13–13·2 mm.

Distribution and Races

C. lateralis lateralis is found throughout West Africa from Portuguese Guinea to British Cameroons. The sooty-brown and sooty-black phases occur together in the western part of the range as far to the eastward as the Gold Coast, beyond which only the sooty-brown phase is found.

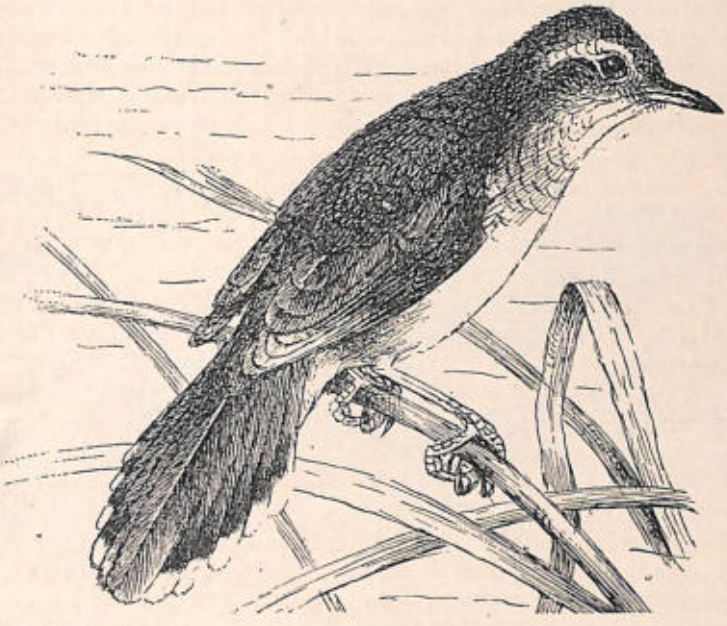
Beyond Cameroon, i.e. from French Congo to Angola and the Belgian Congo, occurs *C. lateralis modesta* (Bocage), which is smaller, browner and duller but with brighter-coloured flanks. The wing is 58–66 mm.; tail (summer) 49–55 mm., (winter) 52–60 mm. It has an equally robust but shorter bill.

CHATTERING GRASS-WARBLER

Cisticola anonyma (v. Müller)

In this species the lores are pale-coloured, almost whitish, and the dark rust-red head-top and hind neck are in contrast to the dark sepia back and rump. The under parts are white, faintly tinged on the breast and more strongly on the flanks with ochraceous buff; the thighs are more rusty. There is no white eyebrow. The wing is in harmony with the back, there being no separate coloured edging to the feathers. The tail is of the distinct spotted-fan pattern above and below and is figured in the key. The bill is black; legs and feet are dark flesh-colour. The sexes are alike. The wing (male) measures 59–63 mm., rarely 64 mm., (female) 51–55 mm.; tail (male, female) 50–55 mm.

The Chattering Grass-Warbler frequents grassy clearings in the forest woodlands, commonly around the edges of villages among the grass and bushes. In such surroundings it may be seen roaming in parties or family groups, cocking its tail and balancing itself on grass-stalks or bushes, giving forth its chattering notes.



In British Cameroons it is to be seen everywhere in the more open cultivated parts or in second growth from bushes on the seashore to 6,000 ft. on the mountain, though it is much more in evidence at the lower levels.

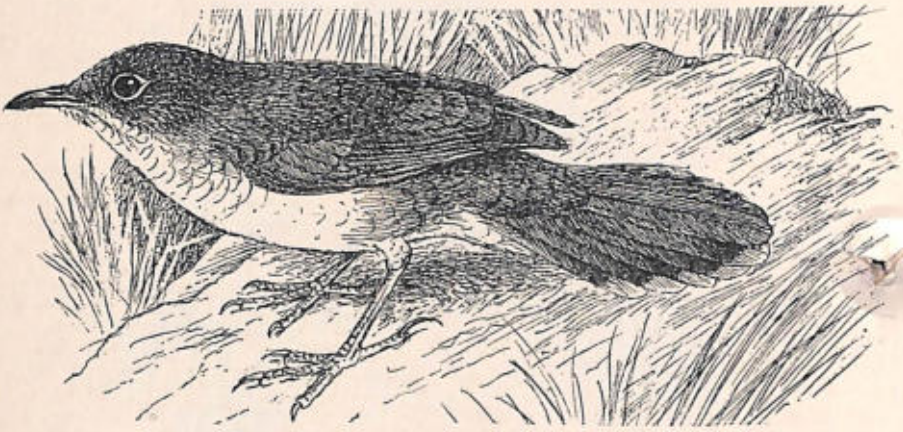
Nesting takes place in all but the wettest months. The birds nest about native farms in grass and herbage not more than 15 in. from the ground. The nests are globular, built of dry grass-heads and spider silk and lined with fine grass. The small entrance is at one side. The nest may be quite exposed and placed in an oil-palm, often wedged between the base of a frond and the trunk and situated not more than 4 ft. from the ground. The eggs, which are two in number, have a blue or greenish-blue shell either clearly spotted with brown of various shades or indistinctly blotched. The shell markings are grey. Average size is 16·7 × 12·7 mm.

Distribution. Widely spread in southern Nigeria and in British Cameroons. To the south it ranges to the Lower Congo basin. The ranges of *C. anonyma* and *C. lateralis* widely overlap.

ROCK-LOVING GRASS-WARBLER

Cisticola emini Reichenow

THIS Rock-loving Cisticola is represented by two races in West Africa, but the typical *C. emini emini* does not occur. The best known is *C. emini petrophila*, which has a superficial resemblance to *C. anonyma*. Like that bird, it has a plain dark back and red head-top and is about the same size, but the habitat of the two is very distinct. In brief, the head is rusty brown; wings and tail are dark brown, the rest of the upper parts brownish grey. A pale stripe passes over the



eye; the ear-coverts are light brown and the under parts of the body sandy. The wing measures (male) 58–64 mm., (female) 52–56 mm.; tail (in summer) 46–50 mm., (in winter) about 52 mm.

Bare rocks with a sprinkling of stunted bush growth, low grass and herbage form the characteristic habitat of this bird. In the non-breeding season it moves about unobtrusively searching for food, frequently coming out of cover on to the bare rocks to hop and run about in the open, with a good deal of tail action. It often carries its tail cocked. Even in the breeding time it is remarkable for its quiet habits.

It breeds during the rains, and the cock has then been heard to utter a musical, though weak song. The nest is of the typical ball type, but in neither of the West African races have the eggs been found.

Distribution and Races

C. emini petrophila Alexander ranges from northern Nigeria and central Darfur south to about lat. 4° N. in the north-eastern border of the Belgian Congo.

C. emini admiralis Bates has been found to inhabit the rocky bluffs near the Niger in the French Sudan (Kulikoro district) and ranges to Sierra Leone, where it has been taken in the Tingi Mountains (4,500 ft.) and on Birwa Peak. This race is a very rich, deeply coloured edition of the summer dress of *C. e. petrophila*, all the colour tints being markedly richer and deeper. Detailed field notes on this race are given fully in my larger work, but in its rock-loving habits it resembles the Nigerian bird.

The typical *C. emini emini* is found in Tanganyika and *C. e. teitensis* in south-eastern Kenya, while *C. e. bailunduensis* is restricted to Angola.

BUBBLING GRASS-WARBLER

Cisticola bulliens Lynes

This is one of the plain-backed species which can be dismissed briefly, as it barely comes within our limits. It is remarkable for its distinctly long and slightly curved bill (about 14 mm.). The head-top is slightly redder than the back; the under parts are white, tinted with rusty buff. The tail-pattern is very bold and the rectrices are markedly broad. Measurements are: Wing (male) 63–68 mm., (female) 51–55 mm.; tail (male) (summer) 52–56 mm., (female) 44–48 mm.; (male) (winter) 56–64 mm., (female) 47–53 mm.

Open bush and woodland is the habitat of this cisticola, from the saltings at sea level and foothills covered with coarse grass to the terraces a few hundred feet above the sea. The bird has a pleasant bubbling song-call, easily recognised.

It builds a ball-type nest and lays four eggs, which vary greatly in colour and are described in my larger work.

Distribution. Angola from Mossamedes north to the Lower Congo.

BROWN-BACKED GRASS-WARBLER

Cisticola discolor Sjöstedt

Two races of *C. discolor* are found in West Africa, both inhabitants of the mountainous area of British Cameroon.

This species is entirely plain throughout, the head-top and hind neck being rich rust-red, the back and rump in marked contrast, rich umber-brown. The chin, throat and belly are rusty-cream colour, the breast and sides smoke-brown. The wing practically harmonises with the back; the tail is almost plain, obsoletely spotted-tan pattern, with the middle rectrices plain, the others with dull buff tips and subterminal smudges. The sexes are alike and the

measurements are: Wing (male) 59–63 mm., (female) 57–59 mm.; tail (male) 55–59 mm., (female) 50–54 mm.

The typical race of this Grass-Warbler lives on Cameroon Mountain, where it frequents the native farms about Buea and the second-growth bush which extends up the side of the mountain to the Mussacko hut at 6,000 ft. Sheltered spots clothed with bushes are favourite nesting places. It has a loud, emphatic song—a rapid repetition of *switch-a-bee*, and as its alarm note a short chatter.

The nest is ball-shaped with a side entrance, built of dry grass and lined with plant down, well concealed in the herbage. The eggs are pale greenish blue speckled and blotched with sepia and lilac; they measure 16·5–19 × 12·5–13·6 mm.

Distribution and Races

C. discolor discolor Sjöstedt is restricted to Cameroon Mountain.

Another race, *C. discolor adametzi* Reichenow, which differs from the typical race in having the tail of quite distinct spotted-fan pattern, inhabits the neighbouring mountains of British Cameroon. It was discovered at Bamenda and has since been found on Mounts Manenguba and Kupé. It is reported to be an abundant highland species from 3,000 to 9,000 ft., inhabiting the dense shrubby undergrowth of forest clearings and the shrubby borders of the main forest.

SINGING BUSH-WARBLER

Cisticola cantans (Heuglin)

THE three races of this Bush-Warbler which come within our limits do not include the typical subspecies restricted to Abyssinia and Eritrea. It is a widely spread bird, the best-known race being *Cisticola cantans swanzii*, ranging from Gambia to Nigeria.

It is a small, dark-coloured bird, with little seasonal colour change and a remarkably long bill (13 mm.) for its size. In summer it is dark slate-grey above with rust-red head-top and wing edging, and whitish to buff under parts. The tail is of very conspicuous spotted-fan pattern. In winter it is browner and less grey. Measurements are: Wing (male) 53–57 mm., (female) 48–52 mm.; tail (male) (summer) 42–48 mm., (winter) 50–54 mm. In the field this bird is very like *C. erythrops* and may also be confused with *C. ruficeps guinea*.

As to its habitat, *C. cantans* frequents thick bushes and rank undergrowth, always of a soft and luxuriant, never hard or thorny nature. Provided its environment is neither too hard nor too wet, its adaptability makes for a wide distribution in savanna country, plantations and gardens in residential quarters. As its specific name implies, it is a great songster, the song-calls being generally made from a perch on top of a bush or small tree.

C. cantans has one striking characteristic. It builds a remarkable nest of tailor type, beautifully made of one large leaf, the sides of which are drawn together and sewn with fine silk, the point of the leaf being drawn up to form the bottom. The leaves of one kind of grass form the next layer, and the lining is of some kind of thistle-down. Eggs are white, blotched with pale rufous, and measure 16–17·75 × 11·5–12·13 mm.

Distribution and Races

C. cantans swanzii (Sharpe), described from the Fanti country of the Gold Coast, ranges from Gambia to Nigeria and is the race which occurs in Sierra Leone. The full breeding dress is very distinctive, the upper side being plain sooty black with a russet wing edging, and the lower side very white.

C. cantans concolor (Heuglin) ranges from the Upper Nile westwards to Nigeria, where it fuses with the race above. It is a light-coloured edition of *C. c. swanzii*.

C. cantans adamauae Reichenow occurs in the Cameroon highlands and north-west Congo, probably fusing to the east with *C. c. belli*, the Uganda race. It has a redder head than *swanzii* and is larger in size, with wing 57–59 mm. and tail 47–55 mm.

Other subspecies have been described from Kenya and Tanganyika, of which *C. cantans pictipennis* is the most widely distributed and the typical form from Abyssinia.

RED-FACED GRASS-WARBLER

Cisticola erythrops erythrops (Hartlaub)

This is a comparatively large, deeply coloured and red-faced bird with strong seasonal differences of dress. The summer plumage is quite plain throughout—the forehead tawny-red shading into the dark grey of the rest of the upper side, becoming more russet on the rump. Below it is silky white suffused with tawny ochre except on chin and lower belly. The face is tawny red. The wing is like the back, with no separate coloured edging as in *C. cantans*. The tail is of bold spotted-fan pattern above with large whitish tips tinted with ochre. Measurements are: Wing (male) 60–66 mm., (female) 53–57 mm.; tail (male) (summer) 50–56 mm., (winter) 61 mm., (female) (summer) 45–51 mm.

There is considerable similarity between *C. erythrops* and *C. cantans*. Both live chiefly among thick bushes and rank jungle undergrowth of a soft nature; both have loud piping or whistling song-calls, uttered from inside cover, but distinctive of their kind; neither has any aerial courting display.

Their nests are alike and alone among the cisticolas are tailor-made, with properly sewn-up broad soft leaves. The nest of *C. erythrops* set in the sack of leaves is a deep cup of dry grass-blades lined with brownish pappus, not with white down as in *C. cantans*. Eggs vary from bluish green and dull greenish white, spotted and blotched with pale red and lilac, to those which have a creamy-white ground densely speckled with light red-brown and grey. They measure 16–19 × 12–13·5 mm. Much more detail is given in my larger work.

When breeding, *C. erythrops* is distinctly elusive, and even the cock is then difficult to watch. The breeding season is during the rains according to locality. In the off-season it is said to be less shy than *C. cantans* and to be more gregarious, six to ten birds being seen together. As a party they may be observed in rest-house gardens feeding in flower beds, shrubs and trees.

Distribution. Widely spread through West Africa from Gambia to the Congo River, ranging from the coast to well into the interior. This is the commonest cisticola inhabiting the grass and bushes of old cleared land.

RUFOUS GRASS-WARBLER

Cisticola galactotes (Temminck)

Two races come within our limits, but not the typical subspecies which is the South African race.

The Rufous Grass-Warbler is one of the more heavily patterned cisticolas. The head-top is reddish in more or less distinct contrast with the back. The feathers of the back have their middles black and the borders grey, the pattern of the upper side being in consequence very bold and black. The face is rusty-whitish. The wing edging is russet-red, with the coverts mottled like the back; the tail is of fan-spotted pattern above and below, with the tail-tips whitish. The under parts are white washed, except on chin and lower belly, with rusty-buff. The above is the summer (and perennial in some localities) dress. Measurements are: Wing (male) 60–66 mm., (female) 53–57 mm.; tail (male) (summer) 50–54 mm., (winter) 59–63 mm., tail (female) (summer) 43–47 mm., (winter) 52–56 mm.

In winter in those localities where there is a change of plumage, the crown and nape are much redder, of a rusty hue, and the fringes of the feathers of the upper parts are deep rusty-buff. It is probable that an annual moult takes place in those areas where there is a distinct annual cycle of wet and dry seasons.

Typically a marsh-loving bird, its favourite, if not only, habitat appears to be wet or damp spots. The borders of swamps, marshes,

lakes and rivers are chosen as its home, and the bird nests among the luxuriant vegetation associated with such places. In such areas as the delta of the two Skarsies Rivers in Sierra Leone the birds are common on the extensive sedge-swamps lying behind the mangrove belts. As the breeding season approaches the males indulge in a spectacular courting flight, but in the off-season they are shy and difficult to approach.

The nest is of the ball type, generally built 2–4 ft. above floor level in swamps among the grasses and water-weeds or on dry ground among varied herbage or bushes. It is often much decorated with cocoons and coloured bits of plants. Three or four eggs are laid and are unique in coloration among West African Cisticolas—salmon-pink thickly marked with fine spots and stipples of dark red-brown and secondary grey markings. The average size is 18·3 × 12·9 mm. A set taken in Sokoto had ground colour white with a pinkish bloom and were heavily and uniformly spotted. They measured 16·5–16·9 × 12·4–12·8 mm.

Distribution and Races

C. galactotes amphilecta Reichenow extends from Senegal to northern Cameroon and the north-western and central Congo basin. In Nigeria this race is found in the western and southern districts only.

C. galactotes zalingei Lynes ranges from central Darfur to Lake Chad and part of northern Nigeria, extending west to about lat. 1° E. on the Niger. In summer this race is practically indistinguishable from the last, but in winter it differs in the striking contrast between the black striping of the upper parts and the markedly brighter and lighter rufous and buff ground. Dusky pectoral patches are present in winter which are absent in *C. g. amphilecta*.

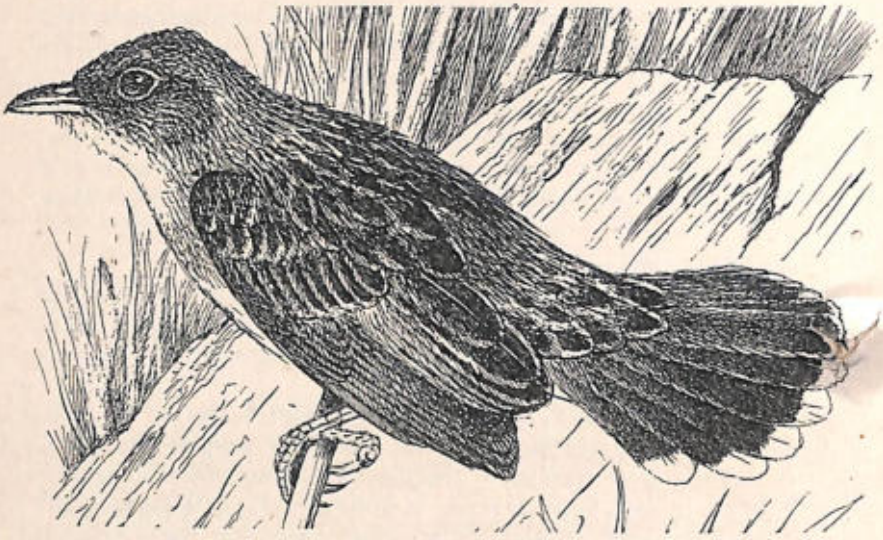
BAMENDA ROBUST GRASS-WARBLER

Cisticola robusta santae Bates

THE restricted habitat of this Grass-Warbler should enable it to be recognised, as in its breeding (and probably perennial) dress it is a handsome species. Its head-top and hind-neck are reddish brown; the upper parts are buff to brownish, heavily striped with black; the tail is almost black with white tips, and the under parts are whitish tinged with rusty-buff. The bill measures 12 mm. and is robust; the wing (male) is 61–67 mm., (female) 54–56 mm.; the tail (male) is 43–47 mm., (female) 40–44 mm. The tarsus is very strong and measures 25–26 mm. It is a mountain species which probably retains the same plumage all the year round. It inhabits typical

wasteland clad with rank grass sprinkled with shrubs and other herbage.

In the breeding season the cock may be seen on guard, giving his song-call from the top of a low bush. The call is also uttered on the wing during a love-flight from one song-perch to another, with fluttering wing action. This song will attract attention from a hundred yards distance—a kind of piping ripple.



The nest, of the ball type, is built near or even on the ground in a clump of grass, the living grass blades being bent and woven over and around the dome of the nest. Eggs number two or three, varying from turquoise to white, fairly well marked with reds and red-browns. No one has yet found the eggs of the race which occurs in West Africa.

Distribution and Races

The Cameroon Montane area (but not apparently on the mountain) and the Banso Mountains are its habitat (Bamenda, Kumbo and Santa, 5,500–7,000 ft.). This is the only representative of the species in West Africa.

Its place is taken by *C. r. nuchalis* in Uganda, *C. r. ambigua* in the highlands of central and eastern Kenya and by several other localised East African subspecies, such as *C. r. aberdare* in the Aberdare Range, the typical race having been described from the central plateau of Abyssinia.

STRIPED GRASS-WARBLER

Cisticola natalensis strangei (Fraser)

THE measurements of this bird are as follows: Wing (male) 67–73 mm., (female) 54–60 mm.; tail (male) (summer) 43–51 mm., (winter) 57–65 mm.; tail (female) (summer) 40–44 mm., (winter) 46–54 mm. It will be remarked that in this Cisticola there is a great difference in the size of the sexes, the male being so very much larger than the female.

"One of the two giants of the genus, with a strong, almost Finch-like bill, and unusually strongly built for a warbler, the cock nearly as big as the corn-bunting (*E. miliaria*), but his mate conspicuously (about 20%) smaller. In summer the whole upper side dark sepia brown, mottled in two shades, the lower side white, and the tail of spotted fan pattern. In winter, very different, viz. the whole upper side buff with black stripes, with the tail in harmony, besides being much longer. In summer the cock bird makes himself conspicuous as much by the persistent frog-like alarm-calls with which he resents intrusion into his territory, as by his courting performances, which include moderately high aerial cruises with a loud *klink klunk* song-call."

The above is the account which Admiral Lynes prepared for my larger work, and he added that its habitat shows much variation, typically, rank grass with more or less low shrubs and other herbage, often on the verge of cultivation; it includes areas of quite small clearings in savanna woodland or forest country, more often dry than moist ground, the choice depending on the suitability of the growth of grass for nest building.

The song-perch may be a low one, such as *C. robusta santae* will choose, or 20–30 ft. or more on a tree-top. This is altogether a more demonstrative bird, alert to give warning to his mate and conspicuous in his love-making, rising well up into the air and then making a "butterfly" cruise with jerky wing action, uttering his strident calls. In winter, in his new striped dress, he might easily be considered to represent a different species, with such an obviously longer tail than in summer.

As is usual in this group of birds, the breeding season is during the rains. The nest is precisely the same as that described for *C. robusta santae*, but is apparently always built in more or less thick, bushy tufts of long grass, with the base never quite touching the ground. The bower is woven first, and the nest is then built inside it. The eggs vary from a white to blue ground, either heavily or sparingly marked with dull claret and brownish spots with ashy shell markings. They measure 16·6–20 × 13·5–14·3 mm.

Distribution. The whole of West Africa from Senegal to Cameroon and the Lower Shari River. It occurs commonly in all our Colonies.

To the east it fuses with the Uganda race *C. n. valida*, but not with *C. n. huambo*, the Angolan race, in the south. Another subspecies, *C. n. kapitensis*, inhabits the drier parts of Kenya Colony to the east of the highland region.

SHORTWING GRASS-WARBLER

Cisticola brachyptera brachyptera (Sharpe)

THE shortwing is just the opposite in build and in appearance to the last giant species described. It is, in fact, one of the smallest of the group, certainly one of the commonest and equally the most widely spread. Its habitat is savanna country, park woodland, anywhere among the trees; in heavier wooded country, in clearings, and along the forest edges, well out into the open; but a few trees are essential to it for song-posts.

In summer it has a plain back, the head-top and hind neck being brown and nearly concolorous with the back; the latter is usually faintly dappled. The under parts are white, with the breast lightly tinged with rusty-buff. The wing harmonises with the back but is edged with russet-brown. The tail is of spotted-fan pattern above. In winter the tints are warmer throughout and the back is conspicuously marked in striped pattern with blackish.

Measurements are: Wing (male) 48–50 mm., (female) 43–45 mm.; tail (male) (summer) 29–33 mm., (winter) 35–39 mm.; tail (female) (summer) 29–33 mm., (winter) 35–39 mm.

It is a minute, slim-proportioned little bird. A characteristic habit, invariable everywhere, of the cock bird during the breeding season is to take up his post on top of a tree, bush or tall grass-head commanding his territory and give forth his little song, more or less throughout the day. Any slim-proportioned bird seen perched up thus is almost sure to be of this species. The song is a very feeble affair, high-pitched, wispy little notes, inaudible beyond fifty yards. The breeding cock indulges in some fine aerial antics. The bird rises from his song-perch with whirring wings and then proceeds to cruise around in circles, the cruise ending in a thunderbolt dive nearly to the ground, an upward swerve and finally a flop into the grass.

The nest is woven to growing grass—a semi-covered cup-shaped structure of fine grass or leaves heavily lined with pappus-silk. Eggs, two or three in a clutch, have either a white or pale blue ground covered with reddish-brown markings of varying intensity. They measure 14·5–15·9 × 11–11·75 mm. The bird breeds during the rains, the male taking no part in incubation.

Distribution. West Africa from Senegal to the Congo eastwards across the Sudan to the Nile valley and across the northern part of the Congo basin eastwards to the western edge of Uganda and Tanganyika, where it fuses to the eastward with the neighbouring races *C. b. hypoxantha* and *C. b. ankole* and to the southward in Angola with *C. b. loanda* over a wide area.

FRASER'S RUFOUS GRASS-WARBLER

Cisticola rufa (Fraser)

THERE was formerly some difficulty in distinguishing between this and the next species of cisticola to be described until it was discovered that *C. rufa* has the first primary blade-shaped, whereas in *C. troglodytes* it is scimitar-shaped, as illustrated in the key. *C. troglodytes* is much brighter rufous above than *C. rufa* and has, in addition, a plain black tail pattern.

Fraser's Rufous Grass-Warbler has the upper parts entirely plain in both winter and summer dress, the head-top and back a concolorous dull rust-brown. The tail is of obsolete spotted-fan pattern above and below, with pale tips. The under parts of the body are white washed lightly on the breast, more strongly on the sides and flanks with light rust-brown. Measurements are as follows: Wing (male) 48–52 mm., (female) 44–47 mm.; tail (male, female) (summer) 30–34 mm., (winter) 37–38 mm.

We do not know very much about this bird, but from specimens collected its habitat appears to be neither typical semi-arid nor typical savanna country, but something between the two. It seems to be very local in its distribution.

The nest and eggs are not known.

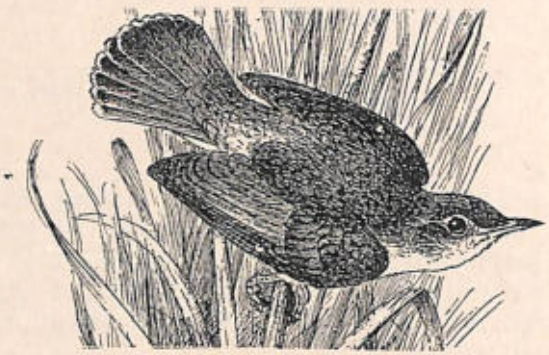
Distribution. West Africa from Gambia through the French Sudan, Upper Volta, northern Nigeria, Chad Territory to the Shari and northern Cameroons (Adamawa Province).

SANDY GRASS-WARBLER

Cisticola troglodytes troglodytes (Antinori)

THIS Grass-Warbler can be identified by size and coloration from all other cisticolas except *C. rufa*, and the characters which separate these two have been given under the last species. The Sandy Grass-Warbler is entirely plain-coloured above, a rich, bright foxy red. The under parts are white, the breast is strongly and the sides and flanks are very strongly washed with bright rusty buff. The tail is of very nearly plain black pattern above, and spotted-fan pattern

below, with reddish-white tips. Summer and winter dresses are identical. Measurements are: Wing (male) 45–49 mm., (female) 41–45 mm.; tail (male) (summer) 29–33 mm., (winter) 31–35 mm.; tail (female) (summer) 30–32 mm., (winter) 31–35 mm.



Only in a very small area does this Cisticola come within our limits and overlap the range of *Cisticola rufa*. In the localities where it occurs it is common, but in its general distribution decidedly local. The two types of savanna country in which it is found may be described as (*a*) open orchard woodland with smallish trees and much longish grass, typical habitat of *Cisticola brachyptera*, (*b*) luxuriant park woodland with large spreading thorny acacias and patches of thick bush.

The nest and eggs have not yet been described.

Distribution. The valleys of the Upper Nile and uppermost White Nile, northern Uganda and the Nyanza Province of Kenya Colony, extending west through Darfur and the Ubangi Shari to eastern Cameroon and Nigeria.

REDPATE GRASS-WARBLER

Cisticola ruficeps (Cretzschmar)

Two races occur in West Africa, the typical subspecies ranging as far west as Chad and the Shari River, but the Upper Guinea race, *C. r. guinea*, is the one which concerns us most.

In summer dress *C. ruficeps* has a plain drab brown-coloured back and rust-red head-top in strong contrast, the upper tail-coverts being rusty red-brown. The under parts are pure white, no more than delicately tinged with rusty-buff. The wing harmonises with the back; the tail is of bold spotted fan-pattern above and below, with large and conspicuous white tips.

In winter dress the plumage is strikingly different, the head-top being brighter red, the back in strong contrast sandy to rusty-buff in colour, heavily though softly streaked with dark brown to blackish. Upper tail-coverts are bright rust-red like the head. Measurements are: Wing (male) 54–58 mm., (female) 49–53 mm.; tail (male) (summer) 37–41 mm., (winter) 44–48 mm.; tail (female) (summer) 34–38 mm., (winter) 39–43 mm.

In size alone this Grass-Warbler may be compared with the Wood-Warbler (*sibilatrix*).

It lives in typical Sudanese bush where the hard thorny type of vegetation is dominant, with the trees more or less scattered and plenty of grass. It frequents too the more luxuriant growth where the type of country described encroaches upon the savanna. One learns to associate *C. ruficeps* more with bushes than with grass, with habits much like those of a bush-loving *Sylvia*, like the white-throat. *C. ruficeps* has no aerial love-dances or courting display at any season. When courting, the cock utters a few musical notes and has a call-note resembling a rattling trill.

The breeding season is in the rains. The nest is always of ball type, placed low in the grass and herbage, with opening in the side. The eggs are very variable, as exhibited in a large series of *C. r. ruficeps*, though only one clutch of *C. r. guinea* has been taken. The ground may be white, blue or pale green, marked with great variety and density of pattern with various reds and claret-brown blotches and spots with greyish-purple shell marks. The average size of the typical race is 16 × 12 mm.

Distribution and Races

C. ruficeps ruficeps Cretzschmar ranges from Kordofan to the Shari River (where it fuses with the next race) and extends through Darfur to Lake Chad, where it again fuses with *C. r. guinea*.

C. ruficeps guinea Lynes inhabits the western part of the Sudanese arid belt and adjoining edges of the savanna from about Lake Chad and the Bornu and Plateau Provinces of Nigeria and the Adamawa Province of Cameroon westwards through the Northern Territories of the Gold Coast to Gambia. This is a deeper-coloured, warm reddish-brown race, not very different from *C. r. ruficeps* in summer, but decidedly richer in winter dress. The wing measures 53–57 mm.; tail (summer) 37–39 mm., (winter) 43–47 mm.

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RED-WINGED WARBLER

Heliolais erythroptera (Jardine)

(see Plate 43, facing page 1101)

Two races come within our limits, but it is the typical race which occurs in Upper Guinea.

It is a bird which is not difficult to recognise in either summer or winter dress. In summer the crown and nape are smoke-grey, the mantle and back browner-grey and more pinkish on the rump, the long feathers on each side golden buff. The wings are grey-brown, with the wing edging bright chestnut. Chin and throat are white merging into tawny buff on the breast, white again on the belly. The under tail-coverts are tawny. The sexes are alike. It is about 5 in. in total length, the tail being patterned and graduated, the feathers with white tips and black subterminal spots. Measurements are: Bill 13–15 mm.; wing 53–55 mm.; tail (male) 48–52 mm., (female) 42–45 mm. In summer the bill is black; legs and feet are pale yellow.

In winter dress it might be mistaken for a different species. Then the whole upper parts from crown to rump are pinkish pale chestnut, with the edge of the wings as in summer but quills more blackish. The bill is rufous brown above, white below. Thus the seasonal change is very marked.

It is a woodland bird which prefers areas where long grass is to be found beneath the trees. In such places in savanna country within its range it may be seen either singly or in small parties up to four in number. Restless little birds, they are always on the move and draw attention to themselves by their loud call-notes—one a high-pitched *chirrrr*, the other a squeaky *pseep, pseep, pseep*. On such occasions they often choose a conspicuous perch on a bush, but they will also call when moving through the bush.

A nest was in course of being built in a small shrub in grass woodland on 4th June at Loko, Nigeria. The nest is sewn between leaves and is built of fine dead grass. The eggs, which number two, have a green ground and are clouded with pinkish fawn. Measurements are 17·5 × 12·5 mm.

Distribution and Races

Heliolais erythroptera erythroptera (Jardine) has once been recorded from Casamance and is known chiefly from the Gold Coast and Nigeria, where it seems to be locally distributed from the coastal plains, such as at Accra, to the Northern Provinces of both countries.

Heliolais erythroptera jodoptera (Heuglin) occurs in the grasslands of northern to eastern Cameroon and the north-eastern Belgian Congo, ranging eastwards via the Ubangi and Upper Uelle. It

differs from the typical race only in its larger size and longer bill. Measurements are: Bill 14–16 mm.; wing (male) 54–60 mm., (female) 55–57 mm.; tail 53–59 mm.

MOUSTACHED SCRUB-WARBLER

Melocichla mentalis mentalis (Fraser)

This is a large and conspicuous bird for a warbler, the males being 7½–8 in. long, including the very broad and long tail. Almost entirely earth-brown in colour on the upper parts with the forehead chestnut, the cheeks, lores and throat are white, with a conspicuous

black stripe on the malar region and a white stripe over the eye. The bill is heavy, blackish above, greyish below, and the greyish legs and feet are equally strong in build. From the gape strong but short black bristles protrude. The under parts are light brown, inclining to tawny on the flanks and sides, with a whitish belly. The measurements are: Bill 14–17 mm., wing 70–80 mm., tail 82–92 mm., tarsus 27–32 mm. The males are slightly the larger of the sexes.

Long grass and the proximity of water appear to be the two

essentials in the habitat of this large warbler, which may be looked for in the tangled undergrowth of pools, watercourses, swamps, kurimis and the outskirts of fringing forests. A fleeting view may be had of it clinging to some reed-stem or tall stalk projecting above the grass, but it always remains close to cover, into which it dives at the slightest provocation. It is a ground feeder and seldom flies far. Although often quite silent it is the possessor of a not unpleasant gay song, which is to be heard most frequently during the early rains. It has also a scolding alarm cry which is uttered from the dense grass in which the birds skulk.

In the Niger and Plateau Provinces of Nigeria nests are found in June and July during the rains. The nest is an open cup-shaped structure built compactly of grass on or near the ground. Three eggs form the usual clutch. The eggs are very handsome, varying from rich red-brown to puce, with the shell obscurely but thickly freckled with various shades of lilac and brown. Eggs average 22·5 × 15·7 mm.

Distribution and Races

From Portuguese Guinea to the northern Cameroon highlands and French Equatorial Africa and northern Belgian Congo, this species is widely spread throughout the grass savanna. It is found in all our Colonies except (to date) Gambia.

In eastern Africa its place is taken in Uganda and Kenya by *M. mentalis amauroura*, in Tanganyika by *M. m. orientalis* and in Angola by *M. m. grandis*.

SCALY-FRONTED WARBLER

Spiloptila clamans (Temminck)

This is a charming little bird, so small in size (about 4½ in. long, of which nearly half is taken up by the tail) and yet so arresting in its ways as to be not easily overlooked. Very lively, as it has been described, with a tinkling little song, the Scaly-fronted Warbler is an inhabitant of acacia scrub and small bushes on the borders of the desert. Its vinous-coloured back is relieved by the scale-like black and white feathers on the crown and wing-coverts. Its tail is very long for its size, measuring over 2 in. in males, and is very strongly graduated, being light brown in colour with broad white tips and black subapical markings to all but the central pair. Detailed measurements are: Wing 43–49 mm., tail (male) 50–62 mm., (female) 46–50 mm.

Although travellers are sure to meet with the Scaly-fronted Warbler along the fringe of the Sahara, yet it may fairly be classed a desert bird, for it penetrates far beyond the borders. All the way

GREEN LONGTAIL
MASKED BUSH-WARBLER
YELLOW-BROWED CAMAROPTERA
GREY-BACKED CAMAROPTERA

JACKSON'S BUSH-WARBLER
BAMENDA BUSH-WARBLER
SIERRA LEONE PRINIA
GREEN-BACKED CAMAROPTERA

GREEN-BACKED EREMÓMELA
GREY-BACKED EREMOMELA
RED-WINGED GREY WARBLER

BEAUTIFUL FOREST-WARBLER

RUFOUS-CROWNED EREMÓMELA
RED-[illegible]D WARBLER
WHITE-T[illegible]LED WARBLER
♂ and ♀ (in grass)
BLACK-HEADED
STREAM-WARBLER

from Lake Chad to Timbuktu it may be seen in the little bushes, perching in full view without any attempt at concealment. It has an apology for a song—one sharp note, rapidly and constantly repeated. In November little family parties may be seen going about silently in the sandy desert.

The nest is usually built well into the dwarf scrub only a few inches from the ground. It is bottle-shaped and semi-domed, made of dry bits of plants and lined with finer material and Sodom-apple down. Eggs number three and are dull white with tiny red spots.

Distribution. The whole of the semi-arid belt extending from Kordofan and the Nile valley through Darfur and Chad Territory to French Niger and French Sudan as far west as Timbuktu. It has occurred as far south almost as Maidugari in Bornu, but is rare south of Lake Chad apparently.

Key to the species in the genera Prinia (Longtail Warblers) and Herpystera (Banded Warbler)

1. Under parts mainly grey 2
   Under parts uniformly whitish or buff 3
   Under parts barred black and white
   Herpystera bairdii bairdii, p. 1105
2. Chin and upper throat white or cream, flanks grey tinged buff .. .. .. *Prinia leucopogon leucopogon*, p. 1104
   Chin and upper throat grey like breast, flanks fulvous
   Prinia leontica, p. 1103
3. Face washed with rufous, tail very long, when full grown exceeding in length rest of body *Prinia molleri**
   Face not washed with rufous, tail when full grown not exceptionally long, not as long as rest of body
   Prinia subflava subflava and subsp., p. 1102

* This insular species is restricted to São Thomé and is not dealt with in the text. Details will be found in my larger work, vol. v, p. 228, and vol. viii, p. 439. It has a chestnut forehead, grey upper parts and creamy-white under parts. The tail is long and graduated, grey in colour and tipped with black and white except the middle pair of tail-feathers.

WEST AFRICAN PRINIA

Prinia subflava Gmelin

For the reason why this Prinia or Longtail must bear the name *subflava* in place of that employed in my fifth volume, see my Addenda to *The Birds of Tropical West Africa*, vol. viii, p. 439, where the desert race is also included.

The three races of *P. subflava* which occur in West Africa are restricted each to its special environment—a coastal race, a desert race and a tree savanna race in the intermediate area. Consequently it is one of the commonest of the African *Sylviidae*, spread as it is all over tropical and South Africa.

The typical subspecies has a marked seasonal change of plumage. In summer the little bird is rather dark greyish brown, with a distinct white eye-stripe and black bill. The tail (with very pale tip and subterminal dark area) is short in summer dress (about 1¾ in.), but in winter the tail is strikingly longer (quite ½ in.), which in so small a bird (measuring about 2½ in., excluding the tail), gives it a very different appearance at that season. The winter plumage, when the tail is long, is light brown, which wears and bleaches a pale fawn-colour, and the bill is then brown. The under parts at all seasons are pale fawn, and the throat is white. At every stage from the quite young bird to the adult the rufous-brown edges to the wing-feathers are a guide to identification. Many mistake it for a cisticola.

So diverse are the types of country inhabited by this little bird, ranging from the dry thorn country inhabited by *P. s. desertae* to the damp coastal savanna in which we find *P. s. melanorhyncha*, with the tree-savanna belt lying between these two extremes inhabited by *P. s. subflava*, that a general description of its habitat is impossible.

The dark coastal race is especially characteristic of the weedy tangles along the borders of rice-fields or in abandoned clearings, and with the destruction of forest and succeeding growth of shrubs and thickets the longtail is likely to spread wherever such conditions prevail.

The intermediate race, *P. s. subflava*, is a common bird in the vicinity of towns and villages where the ground has once been cultivated, and it is in such places that the nests are most readily found. In northern Nigeria nests have been found between the end of July and the first fortnight of October.

The nest is a domed structure either of interwoven grass strips forming an open meshwork or sometimes enclosed in drooping leaves through which the grass blades are threaded. It is usually situated 3–5 ft. above the ground. Three eggs form the usual complement. All have a glossy surface, varying from cream to blue or greenish blue spotted and blotched with shades of brown and pale lilac. The average size is 14·88 × 11·23 mm.

Distribution and Races

P. subflava subflava Gmelin ranges across the tree savanna belt from Senegal and Gambia to central Cameroon and across Africa to the Sudan south of 9° 30′ N. to include northern Uganda and part of Abyssinia. The wing measures 43–52 mm.; tail (winter) 45–59 mm., (summer) 37–50 mm.

P. subflava desertae Macdonald inhabits the dry country north of the range of the typical race. In the French Sudan this race ranges eastwards from Mopti to Sennar and western Abyssinia; in West Africa roughly between lat. 10° and 16° N., but in East Africa occurring further south to 8° N. in Abyssinia. In breeding dress this bird has the upper parts more ash-grey, but when not in breeding dress they are brighter and more tawny.

P. subflava melanorhyncha (Jardine and Fraser) inhabits the coastal area south of the range of the typical subspecies from Sierra Leone to southern Cameroon. It is found in all open country from forest clearings to the bare hill-tops. This race has no seasonal dress. It is a more richly coloured race than the typical subspecies and is darker brown above.

SIERRA LEONE PRINIA

Prinia leontica Bates

(see Plate 43, facing page 1101)

This is an all-grey, typically prinia-like bird, with buff flanks and ventral region and whitish belly. The black bill is rather long, as long as the head; the grey tail has very narrow white tips to the darker subapical markings; but the general colour of this bird's plumage is ash-grey apart from the buff flanks. A striking feature is the white or creamy-white eye. In total length this species measures 5 in., of which the tail takes up 2¼ in. The wing measures 51–55 mm. and the tail 47–53 mm.

In its mode of life this bird resembles others in the genus. It frequents thickets bordering streams and is common in the ravines of the mountains, where it may be seen dodging about in bushes, often in parties of several individuals. It has a habit of cocking its tail, and as it flits about among the tree-ferns it utters a series of high-pitched cries.

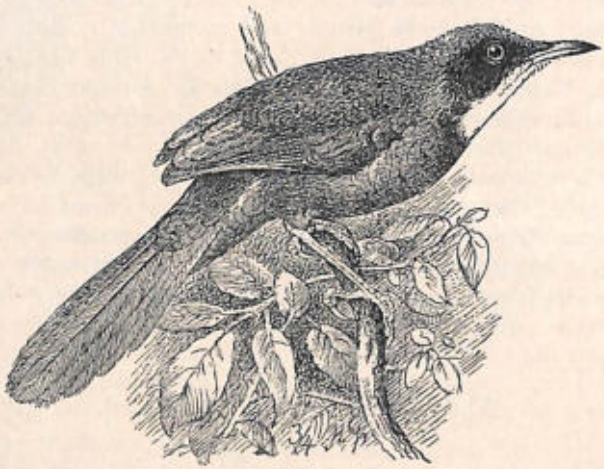
Its nest and eggs have not yet been discovered.

Distribution. Known only from Sierra Leone and French Guinea. It was found on Birwa Peak up to 4,500 ft. and again in the Tingi Mountains and on Mount Nimba in French Guinea.

WHITE-CHINNED PRINIA

Prinia leucopogon leucopogon (Cabanis)

This bird is ash-grey in plumage with black lores and ear-coverts and a scale-like forehead only noticeable at very close quarters. It has a white throat (often stained yellowish) and white edge to the wing, which latter is otherwise brown. A rather long and



markedly graduated tail is grey in colour. The eyes are brown or reddish brown; the legs are flesh-colour and the bill is black. In total length this Prinia measures 5½ or 6 in., of which the tail measures about 2¾ in. from the root. The wing measures 52–61 mm.; the tail (from between central rectrices) (male) 61–67 mm., (female) 52–58 mm.

This Prinia may be met with in thick undergrowth in pairs or family parties, calling attention to itself by its shrill calls *chipee-chipee*. The borders of streams and rubber plantations are favoured

haunts, but it will also visit orchards and gardens. Such is its habitat in British Cameroons, where it ascends some of the mountains to 5,000 ft., notably Manenguba, ranging to the coastal plains. In southern Cameroon it is a bird of the more open ground around the villages. In the latter area this Prinia invariably sews together the long elliptical leaves of a species of *Aframomum*, which is abundant in old clearings, filling the enclosed sack with strips of grass and lining it with fine fibres. The sewing is done with tough cobwebs, which are passed through holes punctured in the leaves. The resultant nest is deep and narrow. No downy lining is used such as some cisticolas favour. The eggs vary from pale greenish blue to white and are sparingly marked with rather large and distinct blotches of reddish chocolate and various shades of lilac-grey. They measure 17–19 × 12–13 mm.

Distribution. British and French Cameroon south to Portuguese Congo, ranging east to the Ubangi and western Belgian Congo. In the eastern Congo it merges with the Uganda and Kenya race, *P. l. reichenowi*. In British Cameroons it extends from the Tibati Plateau to Manenguba Mountain and is also widely spread in the low country.

BANDED PRINIA

Herpystera bairdii bairdii (Cassin)

THERE is no mistaking this Prinia for any other species. All brown above, including the long graduated tail with white tips, the wings are spotted with white, each of the coverts and also the inner secondaries having a white tip. It is the under parts, however, which are unmistakable, banded as the bird is in black and white from chin to vent, the bars appearing white on a black ground, the black predominating. In total length this Prinia measures about 6–6½ in., of which the tail, with its long middle tail-feathers, measures about 2¾ in. from the root. The bill and legs are blackish, and small black bristles spring from the gape. The wing measures 51–58 mm., the tail (male) 64–78 mm., (female) 60–65 mm.

A shrill ringing and rapid *plee, plee, plee* betrays the presence of this little bird from a damp tangle of undergrowth, either on the sea cliffs or bordering some stream meandering through cultivation or second-growth bush. On Cameroon Mountain, where it ascends to 4,000 ft., it is equally common away from water, but will always seek the shade of trees. It is a restless little bird, and when a glimpse of it is obtained it will be seen flicking its wings and cocking its long tail above its back, uttering the while a sharp *chip, chip*.

The nest is placed in a tangle of grass or bushes, more rarely

among big sedge on a river bank. It is made of dry strips of grass-leaves with a lining of grass-tops and no down, and is partially roofed. Three eggs are laid, either with clouded markings or finely freckled with chestnut on a pale bluish-green ground. The shell markings are light red and grey. Eggs measure 16–18 by about 12·5 mm.

Distribution. British and French Cameroon, Gaboon and the Belgian Congo, ranging eastwards via the Aruwimi and Uelle Rivers.

In East Africa *P. bairdii melanops* takes its place.

BLACK-FACED RUFOUS WARBLER

Bathmedonia rufa rufa (Reichenow)

THE male of this seldom-seen species is a conspicuously coloured bird in its livery of bright rufous chestnut, jet-black face, throat and breast, the last flanked by chestnut patches, and the slate-tinged olive belly. Wings and tail are the same bright rufous chestnut as the rest of the upper parts, only the forehead being black.

The female is much more sombrely coloured. It, too, has the black forehead, face, throat and breast; but the back, tail and wings are olive-brown, the belly being the same as in the male and no chestnut anywhere on the plumage. A black bill and bluish-slate coloured legs complete the picture. The wing measures 51–65·5 mm.; the tail (male) 55–60 mm., (female) 48–51 mm.

Its habitat is the impenetrable sedges and bracken by streams in forested country such as that which clothes the country of southern Cameroon, though its recent discovery in British Cameroon has added many hundreds of miles to its known distribution. It is said never to leave the tangle of thick vegetation among which it loves to spend its life, but it may be glimpsed now and then as it climbs to the top of the thicket to get a view of its surroundings, cocking its tail at right angles and making sharp, rapid little cries.

Its nest is a bulky pile lined with fine tops of *Panicum* grass. The eggs do not appear to have been taken or described.

Distribution. The forest country of southern Cameroon, especially that through which the Ja River winds; also British Cameroon, where it has been found at Nyassoso (2,000–3,000 ft.), thus extending its range far to the north.

Another race, *B. rufa vulpina*, takes its place in the Aruwimi River district and ranges via the Uelle River to Kenya and Uganda.

FAMILY HIRUNDINIDAE

Key to the Swallows and Martins

1. Bill scarlet, tipped with yellow; culmen arched. Head velvety black glossed dark blue, contrasting with oily-green glossed mantle; shafts of middle pair of rectrices protrude slightly beyond margin of feathers
Pseudochelidon eurystomina, p. **1135**

Bill and plumage not as described above 2

2. Rump bright rufous chestnut 3

Rump not rufous chestnut 5

3. Size very large (wing over 138 mm.)
Hirundo senegalensis senegalensis and subsp., p. **1116**

Size smaller (wing under 138 mm.) 4

4. Under parts white streaked with black
Hirundo abyssinica puella and subsp., p. **1119**

Under parts white or pale chestnut unstreaked
Hirundo rufula domicella and subsp., p. **1115**

Under parts entirely deep rufous chestnut
Hirundo semirufa gordoni, p. **1118**

5. Throat dark chestnut 6

Throat not dark chestnut 7

6. Belly and under tail-coverts pure white, chestnut of throat continued on to breast
Hirundo lucida lucida and subsp., p. **1110**

Belly and under tail-coverts varying from cream-colour to rufous buff; chestnut of throat not continued on to breast .. .. .. *Hirundo rustica rustica*, p. **1109**

7. Belly and under tail-coverts pure white 8

Belly and under tail-coverts not pure white 15

8. Upper parts entirely brown 9

Upper parts glossy blue, at any rate on mantle 12

9. Throat grey-brown, uniform with breast
Riparia paludicola minor and subsp., p. **1126**

Throat pure white, contrasting with breast 10

10. Broad white stripe on each side of forehead
Riparia cincta cincta, p. **1125**
No white stripe on each side of forehead 11

11. Size larger (wing over 98 mm.), brown crop-band dark, sharply defined from throat and belly
Riparia riparia riparia, p. **1124**
Size smaller (wing under 98 mm.), crop pale brown merging into white of throat and belly and not sharply defined therefrom .. .. *Riparia congica*, p. **1124**

12. Crown and forehead entirely chestnut
Hirundo smithii smithii, p. **1114**
Crown and forehead entirely brown
Pseudhirundo griseopyga gertrudis and subsp., p. **1120**
Crown and forehead either entirely glossy blue or with chestnut forehead 13

13. Forehead chestnut, crown glossy blue
Hirundo aethiopica, p. **1111**
Forehead and crown glossy blue 14

14. Rump white; no white patch on wing
Delichon urbica urbica, p. **1129**
Rump glossy blue, conspicuous white patch on wing
Hirundo leucosoma, p. **1112**

15. Tail with white spots on inner webs 16
Tail uniform, without white spots on inner webs .. 19

16. Crown glossy blue or steel-green 17
Crown dark brown or mouse-colour 18

17. Under parts glossy blue, white patch on throat
Hirundo nigrita, p. **1113**
Under parts pale fulvous, chestnut patch behind each eye
Lecythoplastes preussi, p. **1122**

18. Upper parts dark brown or blackish
Ptyonoprogne rufigula rufigula and subsp., p. **1128**
Upper parts mouse-grey
Ptyonoprogne obsoleta buchanani, p. **1127**

19. Axillaries and under wing-coverts pure white 20
Axillaries and under wing-coverts not white 21

20. Plumage bronze-brown .. .. *Psalidoprocne petiti*, p. **1134**
Plumage dark oily green
Psalidoprocne orientalis reichenowi, p. **1135**

21. Whole plumage dark brown 22
Whole plumage glossed with oily green or steel-blue .. 23

22. Outer edge of outer primary in adult male rough to the touch, furnished with minute barbules; size larger (wing over 96 mm.) .. *Psalidoprocne fuliginosa*, p. 1130
Outer edge of outer primary smooth to the touch, adult males not furnished with minute barbules on outer primary; size smaller (wing under 96 mm.) *Lœcythoplastes fuliginosa*, p. 1123

23. Tail square, throat smoke-grey and unglossed, contrasting with breast .. .. *Psalidoprocne nitens nitens*, p. 1132
Tail strongly forked, throat glossy, resembling breast 24

24. Plumage glossed with steely-bluish-green, tail when full grown longer than wing *Psalidoprocne obscura*, p. 1131
Plumage glossed with oily green, tail when full grown shorter than wing .. *Psalidoprocne chalybea*, p. 1130

EUROPEAN SWALLOW

Hirundo rustica rustica Linnæus

FULLY adult specimens of the European Swallow are easily distinguished from the other West African member of its family with whitish under parts and chestnut throat (i.e. *lucida*) by its longer streamers to the outer tail-feathers, the latter never attaining the long tail of the European bird. In immature dress it is almost impossible to distinguish on the wing *H. rustica* and *H. lucida*. The European Swallow, with its chestnut throat, glossy blue upper parts and wings, white under parts with blue breast-band and white mirrors in the tail-feathers, is a bird which most will think they know at sight, but be careful not to confuse it with the Red-chested Swallow described next. The wing measures 116–130 mm.

From early in September until well on in November swallows may be seen on passage in West Africa, many remaining to winter from the latitude of Senegal southwards, but many more passing through and across the French Sudan on their way further south. Sometimes immense numbers may be seen, as witnessed one November at the foot of the Kambui hills, Sierra Leone. The birds do not appear to keep to any special route, but parties may be seen flying south or north after January is out, for the northern passage is a leisurely affair, lasting from February until the stragglers come along at the end of May.

No European Swallow ever remains to breed in the tropics, but in the off-season it is spread over the whole continent from the Sahara and Lybian desert to Cape Province, mainly south of the semi-arid belt.

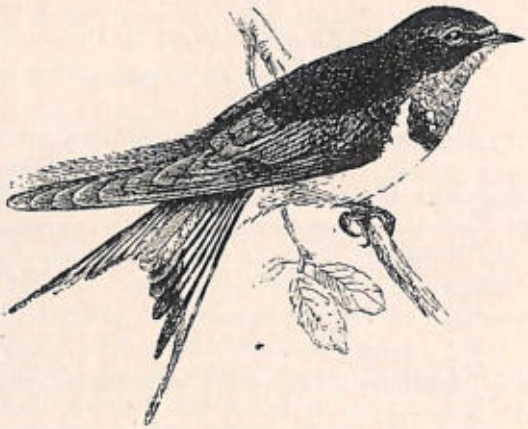
Distribution. Breeds throughout Europe, western Asia and Africa north of the Atlas, spending the northern winter in Africa mainly in the tropical belt, but many reaching the Cape and south-western Africa.

RED-CHESTED OR GAMBIAN SWALLOW

Hirundo lucida J. Verreaux

THREE races of *H. lucida* come within our limits.

Like the last species, this is a chestnut-throated swallow with steel-blue upper parts, white under parts and a blue breast-band. It is not by any means easy to distinguish between this Swallow and the European migrant (*H. rustica rustica*) in life. The former never attains the long streamers in the tail that are characteristic of the



adult *H. r. rustica*, but immature birds from Europe have short streamers like the adult of *H. lucida*. There is always a much broader breast-band below the chestnut throat in *H. r. rustica*, but there again it is necessary to see both species sitting side by side to appreciate the difference. While the Red-chested Swallow is resident, the European Swallow is but a winter visitor which has usually departed by April. In flight there is little to choose between them, *H. lucida* appearing to be (as it is) smaller than *H. r. rustica*. Perhaps one of the surest guides in adults lies in the longer tail-streamers of the European migrant. The wing of *H. lucida* measures 109–118 mm., and although there is a slight overlap, it is a shorter-winged bird as a rule than the European Swallow.

Residents in Gambia have named this the Singing Swallow, presumably on account of its pretty twittering notes. It is a resident

species nesting in Gambia from mid-February until May. The usual swallow's nest of mud is made and is attached to bungalows and the roofs of buildings. It is a small cup of mud lined with feathers. Four eggs are laid with white ground heavily blotched and spotted with brownish red. Eggs measure 17·5–18 × 12·5–15 mm.

Distribution and Races

H. lucida lucida Verreaux ranges from Gambia and Senegal through the Northern Territories of French and British possessions to the Gold Coast.

Another race, *H. lucida clara* Bates, takes its place along the borders of the desert from French Sudan (Timbuktu) to Zinder in French Niger territory, and has been taken at Jebba on the Niger. This desert race is distinguished from the typical subspecies by the paler tone of the chestnut on the throat and breast. It is a highly domestic bird, nesting on the native houses in large numbers.

One other race, *Hirundo lucida subalaris* Reichenow, distinguished by the broader and darker chestnut forehead and the darker throat and breast, is restricted to a small area near Stanleyville on the Upper Congo River.

ETHIOPIAN SWALLOW

Hirundo aethiopica Blanford

(see Plate 44, facing page 1116)

In this bird the forepart of the crown is deep chestnut, the rest of the crown and entire upper parts are glossy steel-blue, showing steel-green in certain reflections. The tail is steel-blue, all but the middle pair of rectrices with large white mirrors on the inner web, the outer rectrices tapering to fine blackish points. The under parts are buffish, becoming white on the belly. On each side of the breast is a patch of glossy steel-blue, but the patches do not meet. The wing measures 103–110 mm.

It is a small swallow, about the same length from bill to tail as *H. lucida*, i.e. 5½ in., but lacking the deep chestnut throat and upper breast of that bird and with a much broader chestnut forehead, the patch extending about 11 mm. towards the crown, as against 3 mm. in *H. lucida*. Moreover, in *H. aethiopica* the throat and breast are never deeper coloured than pale buff, showing little contrast with the whiter belly. Neither species has very long attenuated outer tail-feathers, as in adult *H. rustica rustica*. In both the glossy steel-blue upper parts, wings and tail are of a similar tone, but the white mirrors in the tail of *H. aethiopica* are very much smaller than in *H. lucida*—a distinction which is unlikely to be noted unless the bird is handled.

The Ethiopian Swallow is one of the best known of its family in West Africa, where it is widely spread and may be found in pairs or family parties or in large flocks up to a hundred strong. It is a bold, trustful bird which will happily roost in a native hut or rest-house and allows an observer to approach it very close, even to witnessing its courting. When perched on a wall peg or other convenient projection the male pours forth its little song while the hen sits and twitters contentedly. Suddenly both will dash out of the door in excited flight, then both will return and hover opposite the site in the room where they intend to build their nest.

The semicircular nest of mud pellets is built close against the roof. Three glossy eggs freckled with rufous and grey are laid, and these measure 17–18·5 × 12–15 mm. The breeding season in Bornu is April to June.

Distribution. Resident throughout the year in French Sudan, French Niger, northern and southern Nigeria, northern Cameroon, ranging eastwards through Chad and Darfur to the Nile, Uganda and Kenya Colony. Details of its local range are given in my larger work.

PIED-WINGED SWALLOW

Hirundo leucosoma Swainson

(see Plate 44, facing page 1116)

This is another small swallow, 5 in. in length, with a wing expanse of 9½ in. Both when in flight and at rest the identity of this swallow can be determined easily, for it is the only Swallow in West Africa which has a conspicuous white patch on the wing.

The forehead, crown, mantle, back, rump and also the upper tail-coverts are bright glossy steel-blue, the white bases to the feathers of the mantle showing if the feathers are disarranged. Primaries and outer secondaries are glossy blue with purplish reflections, the inner secondaries being for the most part white, with only the tips and shafts glossy blue, thus forming, with the inner greater wing-coverts, which are also white, a broad white area when the wing is spread. The tail is glossy steel-blue with green reflections, the middle pair plain, the next pair with a small white spot on the inner web and all the remaining rectrices with large white mirrors increasing in size outwardly, the outer pair elongated somewhat and tapering to a point which extends about 10 mm. beyond the next longest feather. On each side of the breast there is a small patch of glossy steel-blue. Chin and entire under parts, under tail-coverts, under wing-coverts and axillaries are satiny white. The eye is brown; bill and feet are black. Measurements are: Bill 7–8 mm.;

wing 95–100 mm.; tail (outer rectrices) 42–46 mm., (to fork) 32 mm.; tarsus 9 mm. *Note.* A specimen from Axim has the plumage conspicuously glossed with steel-green instead of blue.

Immature birds are not represented in the national collection, but are believed to be brown-headed, with much less blue gloss on the upper parts.

It is in the tree-savanna that this swallow is usually found, frequenting the small native hamlets and the open country, but it is by no means common anywhere, though more often met with in the Gold Coast than elsewhere in its rather extensive range. We know very little about it except that it is apparently a resident species in the area where it is found. Parties may occasionally be seen on the telegraph wires and flying around buildings in the towns. It is usually encountered in pairs.

Nests are similar in shape but smaller than those of *Hirundo rustica* in England and are built in public places and sometimes against walls inside a hut. In Sierra Leone nesting takes place in April and May and is continued well into June. Eggs have not been taken.

Distribution. The whole of Upper Guinea from Senegal and Gambia to southern Nigeria; more numerous in the Gold Coast and southern Nigeria than it appears to be in Gambia and Sierra Leone. In most places it is distinctly local.

WHITE-THROATED SWALLOW

Hirundo nigrita Gray

(see Plate 44, facing page 1116)

THE very distinct white spot on the throat of this species is a sure guide to its identity, and no close description of it need be given. The whole of the body plumage above and below are brilliant electric blue. The tail-feathers, except for the central pair, which are entirely blue, have the whole of the middle of the inner web white, the rest of the tail being blue. The measurements are: Bill 8–9 mm.; wing 103–111 mm.; tail (outer rectrices) 36–41 mm., (inner rectrices) 31–34 mm.

This is a very beautiful swallow, which we associate almost exclusively with forest streams and rivers. It is a resident where it occurs and is usually met with in pairs, each pair frequenting a particular part of a stream which is influenced by the presence of a suitable nesting place, invariably where a fallen tree has stranded in the stream in such a way that one or two large snags project from the water but are completely isolated from the banks. In this comparative security from predators the bird attaches its cup-like nest to the under side of the projecting branch. In Liberia, where

this swallow is not uncommon, it almost invariably selects a nest site such as I have described, and similar nests built against stumps in the river have been found in the Cameroons, but the favourite site is unquestionably a tree which has fallen into the stream. The birds fly gracefully and easily within a few feet of the water, resting now and again on posts or sticks driven into the river bed and more rarely on projecting rocks.

Eggs are spotted and speckled with reddish brown on a pinkish-white ground and measure 18–19 × 12·4–13 mm.

Distribution. Locally distributed on streams and rivers of the forest belt from Sierra Leone to the Congo, ranging east to the Uelle River district and south to the Kasai. It is found in all British Colonies except Gambia.

WIRE-TAILED SWALLOW

Hirundo smithii smithii Leach

(see Plate 44, facing page 1116)

THE bright chestnut crown and the very long streamers on the tail should enable this swallow with its all-white under parts and glossy blue upper parts to be easily distinguished. The wire-like extremities of the outer tail-feathers extend about 70 mm. (i.e. about $2\frac{3}{4}$ in.) beyond the rest of the tail in adult males but are so slender that they are not always easily seen in flight. It is a small swallow, about $4\frac{1}{2}$ in. in total length (excluding the outer tail-feathers). The measurements are: Wing 105–116 mm.; tail (outer feathers) (male) 62–110 mm., (female) 55–83 mm.

Any open country will attract the Wire-tailed Swallow, which, unlike the last species discussed, is a gregarious bird and may sometimes be encountered in quite large flocks. Usually two or three will be seen hawking over village clearings or round the tops of rocky hills or swooping low over pools and around villages on river banks. In the evening especially they join up and fly in unison about a village, over roofs and walls and through open doors. It is a tame bird which seems to prefer the proximity of man and his buildings.

Nests may be attached to a variety of objects—a rock rising from a river, a cement railway culvert, the roof of a disused store or rest-house, and so on. The breeding season is a protracted affair, and eggs have been discovered from the end of October until May. Eggs are white speckled or spotted with red-brown, the average size being 16·1 × 12·6 mm.

Distribution. Although so widely spread in tropical Africa this Swallow has not been recorded from west of the Gold Coast, but

from that country to Angola it has been found locally. It is found in widely separated parts of northern Nigeria and in British Cameroon as high as Bamenda. In East Africa we find it recorded from various localities between the Sudan and Abyssinia and Natal.

RED-RUMPED SWALLOW

Hirundo rufula Temminck

(see Plate 44, facing page 1116)

THREE races of this swallow have been described from our area.

The forehead, crown, back, lesser wing-coverts and scapulars of this bird are glossy deep indigo-blue. A narrow line of chestnut passes from above the eye to the bill. Ear-coverts are brown tinged with chestnut. A broad collar of dark chestnut encircles the back of the neck and extends on to the cheeks. Greater coverts, primaries and secondaries are black, the coverts and secondaries being glossed with blue and steel-green. The rump is chestnut, of a paler shade than the collar. Upper tail-coverts are like the mantle. The tail is black, glossed with steel-green and deep blue, but not very strongly. Outer tail-feathers are elongated. The under parts from chin to vent are white, more or less washed with buff; under tail-coverts buffish white basally, broadly tipped with blackish steel-green; under wing-coverts and axillaries white. The eye is black, bill is black; feet are brown. Measurements are: Bill 7–8 mm.; wing 110–117 mm.; tail (male) (outer rectrices) 85–95 mm., (female) 70–90 mm., (inner) (male) 40–42 mm., (female) 38–40 mm.; tarsus 13–14 mm.

It appears on the wing to be much the same size as the European Swallow but may be distinguished from that bird by the chestnut cheeks and band round the hind neck and by the chestnut rump. It lacks the chestnut throat and forehead of our European bird and has no blackish breast-band, the whole under parts being buffish white. The outer tail-feathers extend about 1½ in. beyond the rest of the tail. In flight the dark blue upper parts appear black.

The northern grass-woodland and the southern part of the semi-arid belt is the area in which this swallow is found. We find it common in Gambia and thence all the way through the dry country to northern Cameroon. In the more southern parts of its habitat it associates with the Wire-tailed Swallow. In the Northern Provinces of Nigeria it is found generally over the country. The birds will resort to village huts and rest-houses in which to roost, and sometimes a flock of fifty or more will settle on tall trees by a river bank and indulge in bursts of song until just before sunset.

This swallow builds a retort-shaped mud nest with a projecting

spout, the latter as much as 12 in. long in some cases. Nests may be attached to the under side of a bridge, as at Jebba, or under the overhanging bank of a ravine. They are plentifully lined with feathers. Both in its daily life and breeding habits it is a sociable bird. Eggs may be either pure white or with a few fine orange-brown spots. They measure 20·3 × 14·2 mm.

Distribution and Races

Hirundo rufula domicella Hartlaub and Finsch, described in full above, ranges from Senegal and Gambia through the Northern Territories of the Gold Coast and Nigeria to northern Cameroons (Garua); then eastwards through Darfur to the Sudan. Recently recorded from Abeokuta, south-western Nigeria, in April and May.

Hirundo rufula kumboensis Bannerman differs from *domicella* in having the under parts uniform pale rufous. The wing measures 113–119 mm. It is restricted to the highlands of British Cameroon around Kumbo and Oku (5,500–7,000 ft.).

Hirundo rufula disjuncta Bates is similar to the Cameroon highland race in its dark under side but is apparently a short-winged bird with wing of 110 mm. It is found only on the Birwa Peak and Plateau, Konno district, Sierra Leone (4,700 ft.).

H. rufula emini Reichenow takes the place of the above in Kenya and Uganda.

The typical *H. rufula rufula* Temminck is found in Africa north of the Sahara.

MOSQUE SWALLOW

Hirundo senegalensis Linnæus

Two distinct races occur in West Africa, and a third encroaches on our borders.

This is by far the largest swallow in West Africa (8½–9 in. in total length), with very long wings and a wide expanse. Its rufous under parts, nuchal collar and rump show up conspicuously, the rest of the upper plumage being very dark blue, almost blue-black, including the crown, wings and tail, the last with the outer rectrices elongated about 2 in. beyond the next longest. Measurements are as follows: Wing 140–153 mm.; tail (outer rectrices), 92–114 mm., (inner) 40–54 mm.

For the differences between the Mosque Swallow and the Rufous-chested Swallow see page 1118.

The flutter-and-sail flight of this large swallow is characteristic, and the bird is also the possessor of a peculiar note which has been likened to the toot of a tiny tin trumpet, described also as a reedy squeak.

WIRE-TAILED SWALLOW
Hirundo smithii smithii

WHITE-THROATED SWALLOW
Hirundo nigrita

GORDON'S RUFOUS-CHESTED SWALLOW
Hirundo semirufa gordoni

LESSER STRIPED SWALLOW
Hirundo abyssinica

PIED-WINGED SWALLOW
Hirundo leucosoma

RED-RUMPED SWALLOW
Hirundo rufula

ETHIOPIAN SWALLOW
Hirundo aethiopica

The whole of the savanna belt is its habitat, and thus it is one of the most familiar of its family, for it is locally quite numerous in its haunts. It is most often observed in the middle savanna area between forest and steppe, and though never seen in large flocks, as are some other swallows, it may frequently be encountered in one or two pairs together, sweeping over the countryside.

The Mosque swallow is not usually attracted to buildings on which to make its nest, preferring some large hollow tree such as a baobab in which to rear its young, its mud nest being plastered to the interior of the trunk. It is not a colonial builder. In the mountains some large forest tree is generally chosen for the purpose.

Its presence in Senegal and Gambia is seasonal, the birds arriving in May and remaining to breed in the Colony. The same movements have been observed in the French Sudan and in Darfur, the majority leaving the more arid districts in the north during the winter. Lat. 14–15° N. is about as far north as it has been observed in our area. It nests in the early rains.

Distribution and Races

1. *H. senegalensis senegalensis* Linnæus, from Senegal to northern Cameroon, roughly confined to the thorn-scrub, savanna and

grass-woodland north of lat. 8° and south of lat. 15° N. It ranges across Chad to Darfur and Kordofan.

H. senegalensis saturatior Bannerman inhabits the country south of lat. 8° N. from the Gold Coast eastwards and is the race which is found in the highlands of British Cameroon around Kumbo. It is chiefly confined, however, to the coastal strip and to the forest clearings in the area indicated. It is distinguished by the much darker shade of chestnut on the rump and under parts. The wing measures 147–151 mm.; tail (outer feathers) 105–114 mm.

H. senegalensis monteiri Hartlaub is almost as dark as *saturatior*, but is distinguished from both the above races by having a large white patch on the inner webs of all but the middle pair of tail-feathers. It ranges from Angola to the Congo basin and across the Belgian Congo south of the forest to Kenya and Tanganyika.

GORDON'S RUFOUS-CHESTED SWALLOW

Hirundo semirufa gordoni Jardine

(see Plate 44, facing page 1116)

SEEN from below, this swallow looks very like the Mosque Swallow, both birds having rufous-chestnut under parts, but the Rufous-chested Swallow is much the smaller of the two and has longer outer tail-feathers. The white markings on the tail of the Rufous-chested Swallow are conspicuous in flight, and particularly noticeable are the long fine outer streamers, especially when viewed from below. Another point of difference is that in the Rufous-chested Swallow the cheeks are blackish, while in the Mosque Swallow they are chestnut, which colour is continued in the Mosque Swallow in a collar round the neck. The Rufous-chested Swallow has no collar, the head, neck, mantle and back all being uniform dark blue and only the rump chestnut. Measurements are: Wing 110–122 mm., tail (outer rectrices) (male) 111–124 mm., (female) 105–116 mm., (inner rectrices) 40–47 mm.

In its habits the present species closely resembles the European Swallow. It is a bold, handsome bird which may be met with in a wide variety of country. It is a familiar sight sweeping low over level open ground and may frequently be seen on the telegraph wires. it often alights to bask in the open roads and to enjoy a dust bath. In the coastal districts it arrives in March just after the European bird has left and remains until October, when it leaves the district. Its migrations are little understood, and where it betakes itself when it departs from the coast is by no means certain. Preparatory to leaving a district the birds gather into flocks and are then often seen

entering dwelling houses to catch flies on the ceiling. The song is a pretty twitter.

A favourite nesting site is a hollow on the under side of a fallen tree or in the bole of a living one. It breeds from March to July in British Cameroon, building a substantial mud nest in the shape of a flask with a tubular entrance some 2 in. in diameter leading into the chamber which is lined with feathers and fine grass. Nests are often attached to the under side of bridges and the interior of culverts as well as to hollow tree-trunks. In Cameroon at Missallele several pairs built in an old lighter lying in a creek. The same nests are used year after year. Eggs are white, sometimes faintly speckled, and number three to five in the clutch. The average size is 19·34 × 14·05 mm.

Distribution. From Senegal and the French Sudan to northern Angola, then across the savanna belt to Darfur, Kenya and Uganda. Widely but locally spread in West Africa but not yet reported from Gambia. It is migratory and occurs in both semi-arid and grass woodland belts and in large clearings in the forest. The typical subspecies is a South African bird.

LESSER STRIPED SWALLOW

Hirundo abyssinica Guérin

(see Plate 44, facing page 1116)

Two races have been described from West Africa. The typical subspecies is restricted to Abyssinia and does not come within our limits.

This is a small swallow, about 5 in. in length to the fork of the tail, the outer tail-feathers varying much in length according to age, but in old males some 2½ in. beyond the fork, tapering and in some specimens extremely narrow. The wing expanse is about 11 in. The Striped Swallow, as its name implies, should be recognisable by its heavily striped under parts, black on a white ground. The whole crown and the rump are bright golden rufous and the rest of the upper parts bright glossy blue, the wings being blackish. *H. a. puella*, which is the most widely spread of the races, has a wing of 97–106 mm.; the outer tail-feathers measure (male) 78–117 mm., (female) 77–84 mm., the inner rectrices 37–41 mm.

The Striped Swallow is locally distributed all through the semi-arid belt and reaches the Northern Provinces of Sierra Leone on migration. It is found, too, in the grass-woodland and has been observed flying round the rocky hills in northern Nigeria. From the various records sent to me I have not been able to make out to what extent it is migratory. In the Southern Provinces it is more rarely encountered, pointing to very local distribution, depending,

perhaps, on suitable nesting sites. At certain seasons of the year it is quite common about Cape Coast from mid-February onwards. All over Nigeria it may be encountered here and there, but by no means everywhere. As noted above, rocky outcrops are very much favoured.

It nests under verandas, eaves of houses, in culverts and under bridges. Whether the birds so commonly seen around the outcrops build on the face of the rocks has still to be proved.

Distribution and Races

H. abyssinica puella, Temminck and Schlegel, ranges from Sierra Leone (Konno district) to Nigeria, reaching the coastal provinces of the Gold Coast and Nigeria and extending inland to the Upper Volta, Bornu and Zaria Provinces.

H. abyssinica maxima Bannerman, which is much more heavily striped on the under parts and is a larger bird (wing 109–116 mm.), is found in the highlands of British Cameroons (5,000–7,000 ft.) on Mt. Manenguba and in certain parts of Nigeria, where it was reported nesting.

H. abyssinica bannermani Grant and Praed takes the place of *puella* in Darfur, having the striping on the under parts much finer, but where the meeting ground of these two races occurs is uncertain. The typical race is restricted to Abyssinia, and another form, *H. a. unitatis*, is found in South Africa.

GREY-RUMPED SWALLOW

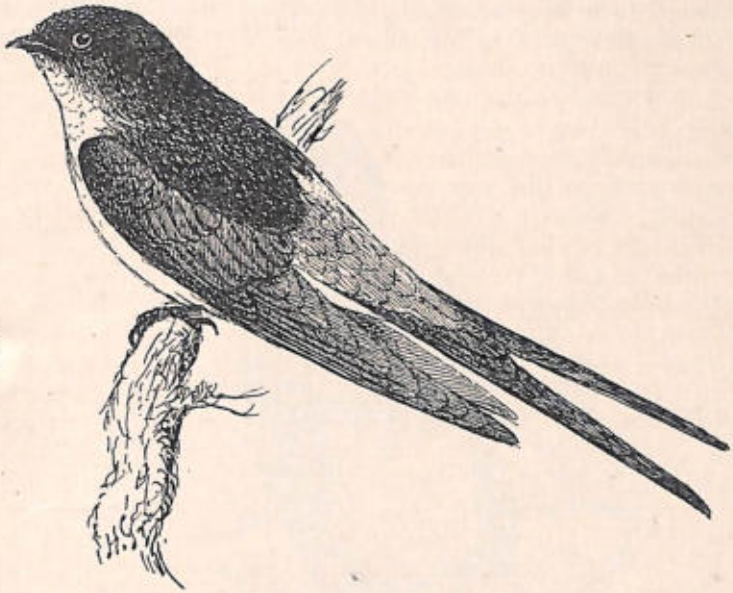
Pseudhirundo griseopyga Sundervall

THREE races are described from West Africa, not including the typical subspecies, which is restricted to the eastern side of the continent.

The best known in West Africa is *P. g. gertrudis*, the Cameroon-Nigerian bird, separated on account of its smaller size. It is a small, very slimly built swallow, in total length about 5½ in., including the outer tail-feathers, which protrude over 1½ in. beyond the tail-fork. The head and rump are brown; the wings, tail and back very dark blue, slightly glossy, and the whole under parts white. There are no white mirrors in the tail-feathers, and the brown head and rump in contrast to the dark back are unique features not exhibited in other swallows in our area. They appear very white in flight viewed from below. Its wing measures 89·5–94 mm. and tail (male) (to tip) 75–91 mm.

In the somewhat limited area in which this swallow has been found it cannot be termed a common bird. Once the breeding

season is over the birds appear in localities where they are not normally seen—here today and gone tomorrow. It is a species which haunts the wide open spaces and is not to be associated with forest country. It has a strong preference for the neighbourhood of water, and that must be almost second nature, for this swallow makes its nests in colonies on river sandbanks. The holes may be spread over a large area and are dug in flat sand, the entrance penetrating for



2–3 ft. into the ground at a fairly steep angle. A little grass is introduced into the holes with which to line the nesting cavity. Two or three very fragile white glossy-shelled eggs are laid, and these average 17·05 × 11·8 mm.

Distribution and Races

P. griseopyga gertrudis Grote, which is slightly smaller than the typical race, was described from Garua, northern Cameroons, and has been found breeding in Nigeria at several places on the Niger sandbanks (Lokoja, Okpai) from November to February.

P. griseopyga liberiae Bannerman has a clear brown rump, not grey or greyish brown as in *P. g. gertrudis*. It was discovered on the Kru coast of Liberia, and has now been found in south-western Sierra Leone at Blama.

P. griseopyga melbina (Verreaux) has the rump dark greyish brown and a darker crown than in the other races described. It has been found in Gaboon and on the Lower Congo.

PREUSS'S CLIFF-SWALLOW

Lecythoplastes preussi Reichenow

THIS rare swallow must be described in greater detail. The following is taken from my larger work. The adult male and female have the forehead and crown, mantle, back and wing-coverts blackish, glossed slightly with dark blue, the white bases of the mantle feathers often showing, but those of the back concealed. Behind the eye a rufous-chestnut patch or triangular streak. Area below the eye pale

rufous. Primaries and secondaries dull black without gloss. Feathers of the lower rump cream to sandy buff; upper tail-coverts browner with fulvous edges. Tail dark brown, a white oblong spot on all but the middle pair of rectrices. Entire under parts pale fulvous brown, under tail-coverts similar with blackish terminal portions edged with fulvous. Under wing-coverts and axillaries pale fulvous. Eye very dark brown; bill black; feet dark brown. Measurements are: Bill

6 mm.; wing (male) 92–99 mm., (female) 93–96 mm.; tail (male) (outer feather) 50–54 mm., (female) 50–52 mm., (inner) (male) 41–42 mm., (female) 38–40 mm.; tarsus 11 mm. In total length about 4½ in. this is a very small Swallow. The tail is strongly forked, but the outer feathers do not taper to a point.

Of all the members of its family this is one of the most interesting. Its colonies seem to be scattered widely, and the choice of situation for the nests seems to be equally as wide. One colony consisted of many nests thickly plastered on to a granite rock projecting over the Niger below Ansongo, the rising river coming dangerously near to flooding this honeycomb mass of nests. Another colony was found on a cliff near Lokoja. All these nests had tunnels leading to the nest chamber 6–7 in. long. When the colony is in a building, as in the rest-house near Mongonu, where the nests were stuck to the beams supporting the roof, the mud nests were fully enclosed with a round entrance hole but without a projecting tunnel. Another colony at Nasarawa was built in the thatched roof of a native hut. Eggs number two or three, creamy or pinkish white, covered with fine brick-red speckles. In some a dark zone appears round the broad end. The average size is 18·81 × 12·87 mm.

Distribution. First discovered at Edea in Cameroon, its range extends eastwards to the Uelle district of the Belgian Congo and west as far as Timbuktu in French Sudan. Colonies have been found at various points along the Niger and it has been recorded from various localities in northern Nigeria and the Northern Territories of the Gold Coast.

FOREST CLIFF-SWALLOW

Lecythoplastes fuliginosa Chapin

ENTIRELY dark brown in plumage, including the wings and tail, the crown with a blackish oily-green gloss and the chin and throat tinged with rust-colour, this small bird, 4½ in. in length, has the tail only slightly forked. The wing measures 86–93·5 mm., the tail 43–46 mm.

Very little is known about this Cliff-Swallow, which until quite recently was known only from the forest area of southern Cameroon. Its discovery in 1948 at Kumba, British Cameroons, has extended its range considerably to the west.

Its nest has never been found, but it is believed that it will make a mud nest like *L. preussi* and not burrow holes in the ground like the Rough-winged Swallows.

Distribution. British and French Cameroons.

EUROPEAN SAND-MARTIN

Riparia riparia riparia (Linnæus)

THE Sand-Martin will be recognised in its winter quarters by those who are familiar with it at home in Great Britain. Mouse-brown above, with brown breast separating the white throat from the rest of the white under parts, short slightly forked brown tail and darker brown wings—such are the main features of this Palaearctic migrant to tropical Africa. It is a small bird (about 5 in. in length), with but one other martin in our area liable to confusion with it on account of similar colouring and breast-band, and that is *Riparia cincta cincta*, a much larger bird with considerably longer wing, additional distinguishing features being the white marks on either side of the forehead in front of the jet-black lores and the square, not forked, tail. The measurements of the European bird are: Wing 101–110 mm., tail 49–57 mm.

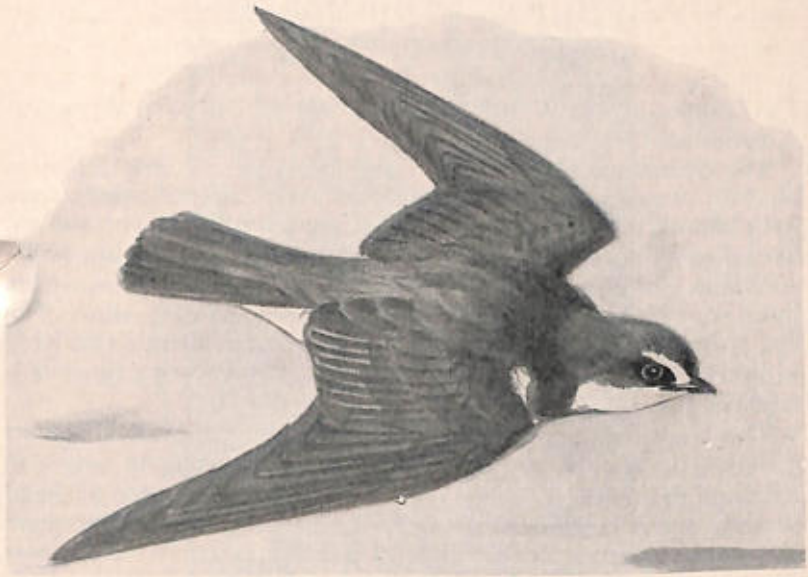
It is very rarely that the Sand-Martin has been recorded from West Africa, and even then from nowhere south of Sierra Leone. It is the least common of the swallow family which crosses the Straits of Gibraltar, though many thousands have been observed in Andalucia in May and October, Great numbers pass through Egypt, and it is believed that the majority of the birds which winter in Africa pass down the valley of the Nile. Even in Darfur Sand-Martins have not been observed on passage, and certainly it seems not to travel in any numbers down the West African coast. The only mainland records are from Gambia and one from Taberréshat in the French Sudan. A few pass through the Saharan oases and others through the Canaries and Cape Verde islands. The main body from Europe must surely migrate in a south-easterly direction to reach the Great Lakes by way of the Nile valley, so few are the records of birds from West Africa. It is a species which travels in large flocks, feeding by day over water or crops and roosting in reed-beds.

On the Lower and Middle Congo there lives a Sand-Martin (*Riparia congica* Reichenow) with a very slightly forked tail which in appearance can hardly be distinguished from the European Sand-Martin, but the breast-band is more diffused and the wing shorter (93–94 mm.). Its upper parts are mouse-brown. Rows of its tunnels may be seen in places where the sand bars have been cut away by the water so as to present a steep face. In its behaviour the Congo Sand-Martin resembles the European bird, nesting in colonies as described during the period of low water. As the European Sand-Martin does not reach the Lower Congo, there should be no difficulty in recognising the Congo breeding birds in that area.

BANDED MARTIN

Riparia cincta cincta Boddaert

THIS fine large martin, measuring 6–7 in. from bill to tail, has a long wing and consequently wide wing-span in flight. It has a very broad, almost triangular-shaped black bill with jet-black patch in front of the eye surmounted by a broad white streak passing back on each side of the crown. Earth-brown in colour above, with dark brown wings and tail and no white markings on either, the under



parts are entirely white except for the dark brown band across the chest which cuts the white area into two. Unlike most of its family, it has a quite square tail, the feathers of which are rounded (not pointed) at the ends. The wing measures 120–135 mm. and the tail 56–64 mm.

The status of the Banded Martin in West Africa is not easy to determine. There is still a possibility that it breeds within our limits, but there is no definite proof. It certainly appears to be migratory, arriving during the summer or early autumn, but whether these birds are migrants from south of the Equator has still to be proved. It has been suggested that it breeds in Gambia, and it has definitely been found nesting in Abyssinia in May in horizontal burrows dug by itself in the high banks of wadis.

Those which have been seen in West Africa have always been

alone or in pairs and between the months of June and October. Between the latter month and April it is to be found breeding in many countries of South Africa from Natal to Angola.

Distribution. Widely spread in South Africa and only found in West Africa as a migrant, no nesting colony has yet been discovered in our area. It has been found in northern Cameroon (October), Shari River (July), northern Nigeria (August), Volta River (August) and Principe Island (June). It has been reported from Gambia, but this needs confirmation.

SUDAN SAND-MARTIN

Riparia paludicola minor (Cabanis)

Two races occur in West Africa; that named above has the widest distribution.

The crown and entire upper parts are brown. Lores incline to blackish. Primaries, secondaries, wing-coverts and tail-feathers are dark brown. Chin, throat and breast are grey tinged with brown, becoming white on the belly and sides. Under tail-coverts are white. Axillaries and under wing-coverts are brown, the feathers along the inner edge of the wing barred, dark brown tipped with white. The eye is brown; bill is slate-black; feet are slate-colour. The wing measures 91–97 mm., the outer tail-feathers 36–41 mm., inner tail-feathers 36–37 mm.

This is a true Sand-Martin in its habits, the choice of its habitat governed largely by the presence of suitable terrain in which to excavate its nesting holes. These may be in the pumice banks of shallow watercourses or in the steep banks of the River Niger where these are composed of stiff clay, as at Ségu, where a colony was discovered. It is a common bird near Lokoja, breeding in the sand-banks. The holes penetrate 18–24 in. into the sand and have a diameter of about 2 in. At the end of the tunnel a nest is made of dry grass lined with soft feathers. Two or three dull white eggs form the clutch and measure 15·6–18·1 × 11·5–13 mm. The above is the description of the nests of *R. p. minor*, which ranges from the Nile to northern Nigeria.

In the mountains of British Cameroon there is another race which was found nesting in a roadside bank in open grassy mountainous country at 6,000 ft.

Distribution and Races

R. paludicola minor (Cabanis) extends from the Upper Blue Nile through Kordofan and Darfur westwards to Chad, French Sudan (Ségu) and northern Nigeria, where it has been found breeding at Lokoja and Zaria (in December).

Its place is taken in British Cameroons by *R. paludicola newtoni* Bannerman, which is darker on the upper parts than any other race and is distinguished by the grey rather than brown tone of its

plumage. This race has been found at Bamenda, Banso and Bamessing, excavating its nests in October (*circa* 6,000 ft.).

The typical subspecies is a native of South Africa. In Uganda and Kenya it is replaced by *R. p. ducis* Reichenow.

ASBEN CRAG-MARTIN

Ptyonoprogne obsoleta buchanani (Hartert)

This is a small martin about 5 in. in total length with the entire upper parts pale sooty-brown, including wings and tail; with a large white spot on the inner web of all but the middle tail-feathers. The

throat is whitish; the rest of the under side is pale smoke-grey. The wing measures 110–115 mm. and the tail 40–48 mm.

It is a bird of beautiful flight, gliding without wing movement along the face of cliffs. Usually in pairs, it has never been observed over cultivation.

The nest is made of mud and is attached to the perpendicular face of a cliff or rock. It is lined with feathers and wool. The eggs are white with a few scattered reddish-brown spots.

Distribution. The race here described is restricted apparently to the mountains of the southern Sahara, where it was observed in various parts of the Aïr Massif. The type came from Mount Baguezan.

Other races of the Crag-Martin inhabit the Hoggar (*R. o. spatzi*), while the typical subspecies is a native of Arabia.

RED-THROATED ROCK-MARTIN

Ptyonoprogne rufigula (Fischer and Reichenow)

Two races of this Rock-Martin come within our limits.

It is a darker bird than the Crag-Martin just described, the plumage of the upper parts being dark sooty-brown with a pinkish-fawn coloured throat and forechest, the rest of the under side being dark brown. Its total length is about 4¾ in., the long wings measuring 105–116 mm. The tail, which is brown like the rest of the upper parts, is ornamented with white spots on the inner web of all but the middle feathers. The tail measures 42–50 mm. (outer feather) and is fan-shaped when spread.

The typical race of the Red-throated Rock-Martin is found mainly in East Africa, but ranges across the continent to the Gold Coast and the lowland of Nigeria. In the north of Nigeria and in the highlands of British Cameroon there lives a darker race which I separated under the name *P. rufigula bansoensis*.

It seems that both in East and West Africa this Rock-Martin has largely forsaken the rock-faces against which to affix its shallow nest, preferring to build in native houses or on the joist or other support, or against the side wall under a veranda. The open shallow cup is made of mud and lined with feathers. Two eggs are laid, spotted and speckled with yellow-brown and chestnut on the white ground, the markings sometimes forming a wreath round the large end. Measurements are: 17·7–18·6 × 12·8–13 mm.

Distribution and Races

P. rufigula rufigula Fischer and Reichenow, which has already been described, is found over a wide area in tropical Africa from southern Abyssinia to Tanganyika and westwards through French Equatorial Africa to the lowland parts of Nigeria and the Gold Coast (Ashanti).

P. rufigula bansoensis Bannerman is distinguished by its very much darker coloration throughout, the upper surface being dark sooty, the throat darker rufous. The wing measures 107–114 mm. It breeds in the Banso Mountains, Manenguba, Oku, etc., in the British Cameroons (6,000–8,500 ft.) and is also the race which inhabits the loftier granite kopjes in northern Nigeria (Plateau and Benue Provinces) and those of French Cameroon (Yaundé district).

EUROPEAN HOUSE-MARTIN

Delichon urbica urbica (Linnæus)

This migrant from Europe is too well known to require more than passing description. Deep glossy blue above, including the forehead, broad white rump, rather deeply forked tail without white spots or markings, and no elongated outer feathers, pure white under parts and white-feathered feet are features which distinguish it from all other swallows and martins in West Africa. Its wing measures 104–113 mm. and the tail (to outer feather) 57–63 mm.

It is seen in West Africa sporadically and then mainly during the period of migration. Very few skins have been sent home in collections, notably from Gambia, but there are sight records by reliable observers from the Ivory Coast and especially from the Owerri Province of Nigeria, where a large number were seen on passage on 14th March in company with European Swallows. It is also recorded from the Cape Verde Islands and from Principe.

The majority of House-Martins must winter south of the Guinea coast, and though they pass through the southern oases of the Sahara on passage, few reach the particular area which includes the British Possessions in West Africa, their route lying further to the east.

Distribution. Breeds throughout Europe and east to the Yenesei, the main body wintering in Kenya, Uganda, the Sudan, Tanganyika and Rhodesia south to Natal. A few winter in Gambia, but otherwise only on passage in West Africa.

CAMEROON MOUNTAIN ROUGH-WINGED SWALLOW

Psalidoprocne fuliginosa Shelley

THE entire plumage of this bird is dull chocolate-brown without gloss. The tail, which is rather darker, is strongly forked. In total length this rough-wing measures 5 in., the wing (male) 104–111 mm., (female) 98–105 mm., the tail (to outer feather) (males) 57–65 mm.

Originally discovered on Cameroon Mountain at 9,000 ft., though it may be seen as low as Buea at 2,500 ft., it cannot be confused with any other swallow, either there or on the island of Fernando Po, where it is locally distributed.

It is commonly seen on Cameroon Mountain, but never more than a pair or two can be observed close to the ground or about clearings, but in certain places where the forest ends high up on the mountain-side between 8,000 and 9,000 ft. they are sometimes numerous. They progress with an easy, unhurried flight and often swoop up a few yards then pause and glide down again. On rare occasions they have been seen to perch on the tops of cane-grass. When engaged in hawking they utter a whispered *see-su* and have another note like *tchuk tchuk* which is difficult to associate with a swallow.

This rough-wing has been found nesting in a cave near a waterfall behind Buea: fifteen pairs were counted. The nests resembled small neatly felted pads of what resembled bleached moss placed on sloping ledges afforded by the broken roof of lava. Two young were found in a nest on 13th January.

Distribution. Cameroon Mountain and locally on Fernando Po. There are no subspecies, and it is not represented in East Africa.

SHARI ROUGH-WINGED SWALLOW

Psalidoprocne chalybea Reichenow

THE Rough-winged Swallows in this genus are by no means easily distinguished one from the other. The shape and length of the tail are probably the best guides to their identification when on the wing, and the different species have characteristic flight which can only be learned with experience.

P. chalybea is an almost black swallow with oily-green sheen, 5–6 in. in total length and with an acutely forked tail. It has smoke-grey axillaries and under wing-coverts, so that it should not be confused with *P. petiti petiti*, another still longer tailed species with white under the wing. A third member of this group, *P. nitens*, has a short square tail, which distinguishes it from all the others.

Measurements are as follows: Wing (male) 95–97 mm., (female) 89–91 mm.; tail (outer rectrices) (male) 71–84 mm., (female) 65–70 mm., (inner) (male) 40–45 mm., (female) 36–40 mm.

This swallow was described from Victoria at the base of Cameroon Mountain and extends across Africa to the Ituri. It is a regular inhabitant of forest clearings in the country through which its range extends. Usually it is associated with the Square-tailed Rough-wing (*P. nitens*), from which it is easily distinguished by its deeply forked tail. It perches occasionally on the bare branches of high trees, but it never alights on the ground as do the swallows in the genera *Hirundo* and *Lecythoplastes*.

Its nest has not been found; but the rough-wings often nest in holes in banks, and it is likely that this species does likewise. Sometimes parties of these swallows may be seen, but it is also to be encountered in pairs.

Distribution. Central Africa from the low ground below Cameroon Mountain eastwards through the Ubangi-Shari country and the clearings of the northern Belgian Congo to the Ituri.

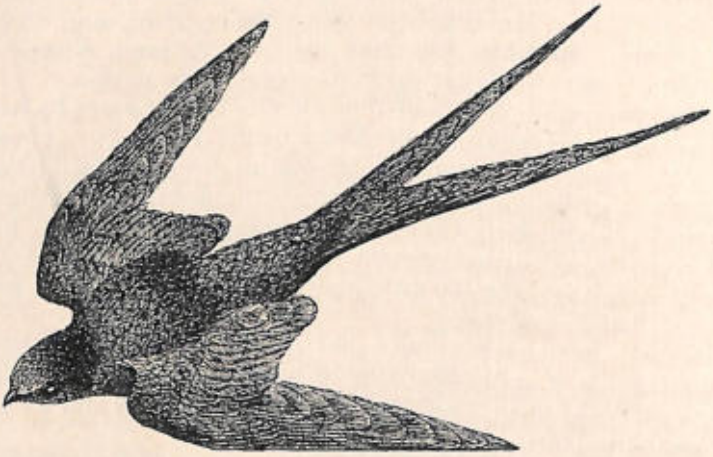
FANTI ROUGH-WINGED SWALLOW

Psalidoprocne obscura (Hartlaub)

THE entire plumage of this swallow is dark bluish green, including the wings and tail. The tail is very strongly forked, and its shape is the best means of identifying the bird on the wing (see the accompanying text figure). It varies much in length, however. Measurements are: Wing (male) 90–102 mm., (female) 87–95 mm.; tail (outer feathers) (male) 90–115 mm., (female) 78–94 mm., (inner) (male) 40–46 mm., (female) 36–44 mm.

This fine swallow must be familiar to many by reason of its striking appearance on the wing and its wide distribution in West Africa. It is primarily a bird of the grass-woodland belt, and there it may be seen in small parties here and there, but it is distinctly local. Moreover, it is a migratory species about whose movements we still have much to learn. In parts of its range it seems to prefer the outskirts of fringing forest and kurimis, but the accounts which have reached me point to its having been found alike in flooded areas near rivers, in Liberia, in the dry northern parts of the Gold Coast,

in grass woodland country of southern Nigeria and in the mining area of northern Nigeria, in which country lat. 9° 30′ N. would seem to be its northern limit. To the Plateau Province of Nigeria it is certainly a migrant, arriving in March and leaving in October, after rearing its young.



Nesting is suspected in the disused tin-mine shafts at Old Jemaa, and nests have been found in June and August in roadside cuttings. The excavations are straight horizontal burrows about 2 ft. long, ending in a chamber lined with vegetable fibre and a little moss. Eggs are immaculate white and measure 17–19·5 × 12–13·5 mm.

Distribution. West Africa from Sierra Leone to British Cameroons, occurring locally in all our Colonies, subject to migratory movements everywhere. It is to be found from the coastal districts to the Northern Territories.

SQUARE-TAILED ROUGH-WINGED SWALLOW

Psalidoprocne nitens nitens (Cassin)

This is a very small swallow (about 4½ in. in length) and very dull oily-green in colour on a brown ground colour, the plumage being slightly glossy except on the greyish-brown throat. Wings and tail

are blackish. The tail is square, not forked, as in the other members of this group of Rough-winged Swallows—all of which are dark, unicoloured birds. The shape of the tail is by far the best guide to this bird's identification, for the other species have markedly forked or scissor-shaped tails which give them a very different appearance on the wing. Its dimensions are: Wing 86–100 mm., tail (male) 49–51 mm., (female) 42–48 mm.

The discovery in 1936 of this species in the Tingi Mountains of Sierra Leone, thus extending its range throughout the whole of the forest area of West Africa, was an event of some interest, proving that it has much the same range as the Fanti Rough-wing with which we have dealt already. On the Birwa Plateau of Sierra Leone it was to be seen hawking over second-growth forest, and there it would occasionally perch on the small trees. From May to November they were present in that area, but whether, like the Fanti Rough-wing, it is subject to definite migrations on the coast remains to be proved.

It is a bird which may be seen sailing in endless curves over cleared land in southern Cameroons almost any time of the day, a freshly burned clearing always attracting it. It is an abundant species in the clearings in the lowland forest of British Cameroon in the Kumbo Division.

This swallow nests in holes bored in clay banks of streams and in pits dug for pitfalls for animals in the forest. Usnea and moss are used for the lining. Eggs are white, two in number and measure 16–19 × 11–13 mm.

Distribution. Extends from the Congo mouth through French Gaboon and Cameroon, southern Nigeria and the Gold Coast to Sierra Leone. It ranges east through the northern equatorial forest region to the Ituri and Semliki valleys, where a race (which is doubtfully distinct from the typical subspecies) has been described.

spe-

PETIT'S ROUGH-WINGED SWALLOW

Psalidoprocne petiti Sharpe

This is an entirely sooty-brown swallow with a long and very markedly forked tail; the under side of the wing (axillaries and under wing-coverts) is white, and as the white patch is large it can be plainly seen from below as the birds fly overhead. It can very easily

be distinguished by its long forked tail from the short square-tailed *P. nitens nitens*, which is black under the wings. Measurements are as follows: Wing (male) 98–105 mm., (female) 92–101 mm.; tail (outer rectrices) (male) 72–82 mm., (female) 60–70 mm., (inner) (male) 45–50 mm., (female) 40–44 mm. The plumage is glossy, the purplish-brown reflections being prominent in certain lights, especially on the crown and mantle.

When I wrote my large work, Petit's Rough-wing had already been obtained in a number of localities in the highlands of Briti[illegible] Cameroons, and nesting was suspected. Since then it has b[illegible] found breeding in April, June and October, the nests always being single and the tunnel excavated by the birds in banks of streams or

roadsides. The two eggs are laid on a pad of moss at the end of the tunnel and are white. They measure 18·9–20 × 13·1–13·3 mm.

In southern Cameroon, where Petit's Rough-wing is particularly common in the vicinity of the Ja River, it is generally seen in company with *P. nitens*, sailing in endless curves over the cleared land, at almost any time that one looks for it; sometimes, especially in the afternoon, it may be seen perched on a bare twig, but if watched it soon sails away. Very seldom has any note been heard from this swallow, but it has been known to utter a "weeping" call as it passed close to the observer.

Distribution. First discovered in Portuguese Congo, the range of this swallow is known to extend through the forest country of southern Cameroon to the Cameroon highlands, where it is found regularly between 2,500 ft. and 7,000 ft. in the Bamenda-Banso mountains. It is recorded from many other places, including Manenguba Mountain. West of British Cameroons this species does not occur.

On the Loango coast, Portuguese Congo and Angola a very closely allied species, *Psalidoprocne orientalis reichenowi* Neumann, is found, the range of which overlaps that of *P. petiti*; otherwise *reichenowi* would be considered a race of *petiti* rather than of the East African species *P. orientalis orientalis*. It is similar to *P. petiti* in appearance and size except that its plumage is very dark green rather than bronze-brown. Both birds have white under the wing. These two Rough-wings, which do not interbreed and are so similar in appearance, were described from opposite banks of the same river.

AFRICAN RIVER-MARTIN

Pseudochelidon eurystomina Hartlaub

This all-black bird, about the size of the European House-Martin, measures about 5½ in. from bill to tail. It has long pointed wings which when folded extend about 20 mm. beyond the tail, the latter being short (about 2 in. from root to tip) and practically square in shape. The bright scarlet bill, which is short and slightly decurved with a high culmen and large prominent open nostrils, is in striking contrast to the black head, as is the scarlet eye. In flight the bird looks like a rather large black swallow with red beak. The wing measures 118–128 mm. and the tail 44–48 mm.

This is a most remarkable member of the swallow family, so spectacular that a separate sub-family *Pseudochelidoninae* has been proposed for its inclusion. Its anatomical position in the avian world is discussed in *Ibis*, 1938.

It seems that it is restricted to a very small area in tropical Africa, notably to the Congo River. Naturalists who are familiar with it are very few, but Dr. Chapin of the American Museum has studied it, as also has Dr. Schouteden of the Musée Congo Belge.

The River-Martin, so I am assured, has much the look of a swallow, beating its wings rapidly except for brief spells of sailing.

The tail appears stubby and the head rounded and larger than a typical Swallow's. The swarming of these birds over their nesting grounds is a characteristic sight. On the sand they shuffle or walk about like swallows, and as they rise they make a loud chattering sound. Food is practically all obtained on the wing. They are apparently subject to local migration.

The birds nest in colonies on the sand bars, the surface of which is pitted with their nests. The holes resemble those of Sand-Martins, the tunnels dipping obliquely for a yard or more from the shelving surface of the bar and ending in a rounded pocket in which a few fine twigs and leaves may do duty for a nest. The birds bree March, when the river is low. Two or three white eggs are la which measure 22·4–26 × 16·4–17·9 mm.

Distribution. The sand bars of the Middle Congo River between Lukolela and Basoko; obtained also at Lake Onangué.

FAMILY CAMPEPHAGIDAE

Key to the Cuckoo-Shrikes

1. Entire plumage bright blue — *Cyanograucalus azureus*, p. 1144
   Plumage not blue 2

2. Upper parts entirely grey 3
   Upper parts not grey 4

3. Under parts mostly white .. .. *Coracina pectoralis*, p. 1141
   (*a*) Throat dark grey like upper parts (♂)
   (*b*) Throat not dark grey (♀)
   Under parts grey like upper parts
   Coracina caesia preussi and subsp., p. 1143
   (*a*) Lores blackish (♂).
   (*b*) Lores not blackish (♀).

4. Under parts glossy dark green or glossy purple 5
   Under parts not glossy dark green or purple but either yellow, chestnut or barred black and white 7

5. With brilliant scarlet or orange shoulder-patch on wing
   Campephaga phoenicea ♂, p. 1138
   No scarlet or orange shoulder-patch on wing 6

6. Under parts glossy purple
   Campephega quiscalina quiscalina ♂, p. 1140
   Under parts glossy green . .. *Campephaga petiti* ♂, p. 1138

7. Under parts heavily barred — *Campephaga phoenicea* ♀, p. 1138
   Under parts chestnut .. .. *Lobotos lobatus*, p. 1145
   Under parts yellow 8

8. Back and rump barred .. .. *Campephaga petiti* ♀, p. 1138
   Back uniform without any trace of barring 9

9. Tail olive-brown or olive-green without any black, tipped and edged with yellow
   Campephaga quiscalina quiscalina ♀, p. 1140
   Tail (except olive central feathers) black, broadly tipped with yellow .. .. .. *Lobotos oriolinus*, p. 1145
   (*a*) Male with glossy dark green head and well-developed lobe below eye
   (*b*) Female without lobe, or with lobe but slightly developed, and dark brownish head

PETIT'S CUCKOO-SHRIKE

Campephaga petiti Oustalet

THE males of this species, which are entirely glossy blue-black with steel-green reflections in certain lights, black wings and tail, are medium-sized birds about 8 in. in length, with a square tail (except for the outer rectrices, which fall much short of the others), short black bill and short rounded wings. The females and immature males are much more conspicuous—bright yellow barred with black on the back which is washed with olive-green, the crown uniform olive-brown, the wings and tail black and yellow and the whole under side bright yellow, the young males with large black spots on the breast, the adults but indistinctly flecked. Measurements are: Wing 91–103 mm., tail 65–88 mm.

The habitat of Petit's Cuckoo-Shrike is not confined to the primeval forest, for in British Cameroons it has been collected in high rain forest, in second-growth shrubbery and in small woods in highland savanna country. It is a rare bird and one concerning which we know very little. Its nest has not been found.

Distribution. From northern Angola the range of this bird extends northwards through the Congo Basin, Gaboon and the South Cameroon forest area to British Cameroons, where it has been recorded from near Chang, Yoko, the Bamenda-Kumbo area, Muambong and Mount Kupé. From the Cameroons its range extends eastwards across the Belgian Congo to Uganda and Kenya.

RED-SHOULDERED CUCKOO-SHRIKE

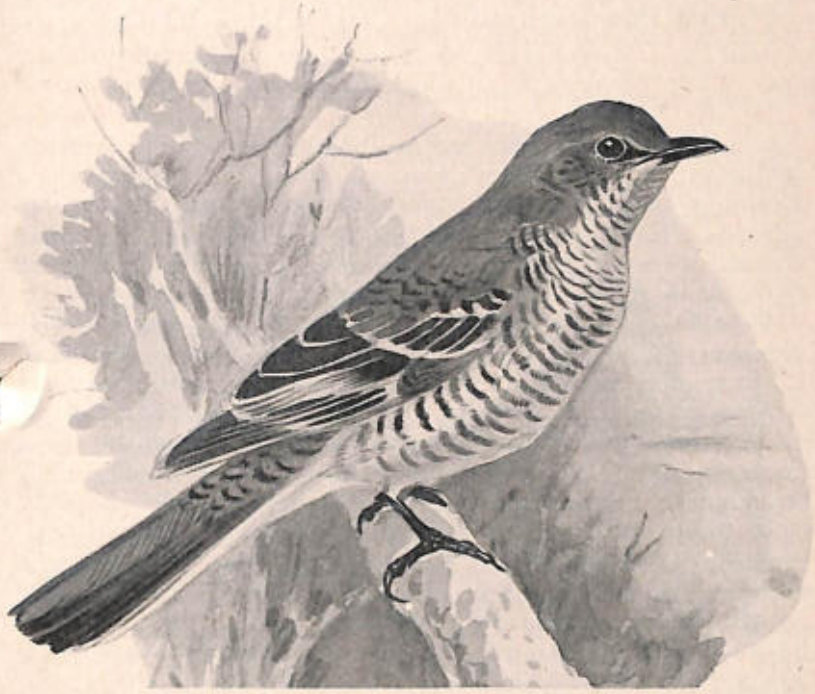
Campephaga phoenicea (Latham)

(see Plate 45, facing page 1197)

THE male of this cuckoo-shrike is an easy bird to recognise, being dark glossy blue with black wings and tail and brilliant scarlet or yellow shoulder-patches but normally scarlet. In length it is about 8 in. and has black bill and legs, the upper mandible ending in a small hook. The female is brown above; the rump is crossed with narrow black crescentic bars, with yellow tips on the brown wings and yellow on the side of the breast. The under parts are mostly white narrowly barred with black. The tail in the hen bird is dark brown, the outermost feather with a broad yellow edge, conspicuous when spread. Measurements are: Wing 93–105 mm., tail 80–100 mm. The female is shown on p. 1139.

The most widely distributed of its family in tropical Africa, the Red-shouldered Cuckoo-Shrike is a bird of thickets and woodlands

in savanna country and of the more open parts of the forest. Whether it is resident everywhere that it occurs I am not prepared to state. In Gambia, Sierra Leone and the Gold Coast it seems to be partially migratory. In Sierra Leone it is more often seen from May to December than after Christmas, while in Kumasi, in the Gold Coast, it is seen only during the northern winter.



Cuckoo-shrikes prefer the thicker woodlands where there is ample leafy cover, and there they may be encountered flying low from tree to tree or examining the foliage of some lofty giant. Caterpillars form a large proportion of the food supply, but various insects are consumed also and are caught both in the air and on the ground. Usually silent, the birds are generally in pairs, the female following behind the male as they thread their way through the bushes.

The nest has not been found in West Africa, but one taken in Uganda was placed in the fork of a leafless tree, built of tree-moss and lichen, bound together by spiders' webs. Two eggs in this nest were yellowish green spotted with purplish. It breeds in Bornu in June and July.

Distribution. The grass-woodland and tree savanna from Senegal

and Gambia to southern and eastern Cameroons and in East Africa from the Blue Nile to Uganda. Within our West African limits it is found in all political areas. It occurs in our British Colonies, and in Nigeria may be met with up to lat. 11° N., being sparsely distributed in the Niger, Benue, Plateau and Bauchi Provinces and also south of the forest in the coastal Provinces.

PURPLE-THROATED CUCKOO-SHRIKE

Campephaga quiscalina quiscalina Finsch

(see Plate 45, facing page 1197)

THE male of this beautiful bird is almost indistinguishable in the field from the male of Petit's Cuckoo-Shrike, which, however, has an entirely glossy green under side and lacks the purple sheen of *C. quiscalina*. As the range of the two species overlaps, except in Upper Guinea, where *C. petiti* does not occur, it has been considered advisable to give a rather fuller description of *C. quiscalina*.

The adult male has forehead and crown glossy steel-green merging into glossy purple on the hind neck and into glossy steel-green again on the mantle, scapulars, entire back and wing-coverts. The rump is glossy bluish green. Lores are black; ear-coverts and entire cheeks glossy purple. Primaries, secondaries and greater coverts are black, narrowly edged with glossy steel-green, more broadly on the inner secondaries. The tail is black, fringed with glossy bluish green. Chin, throat and breast are glossy purple merging into glossy steel-green on the flanks. Under tail-coverts are black margined with glossy green; axillaries purple, under wing-coverts glossy green with purple reflections. The eye is described variously as black, red-brown, dark brown and red. The bill is black, the gape orange-red; legs and feet are very dark brown.

Measurements are: Bill 12–14 mm.; wing (male) 96–105 mm., (female) 93–103 mm.; tail (male) 76–84 mm., (female) 80–88 mm.; tarsus 18–20 mm.

The adult female has the crown and nape grey or brownish grey; lores whitish with greyish-brown edges to the feathers, in front of and behind the eye a small black patch; eyelids white above and below. Ear-coverts are dusky streaked with white. Mantle, entire upper parts, wing-coverts and inner secondaries are rather bright olive-yellow, the quills being brown externally edged with the same colour as the back. The tail is olive-brown, the outer rectrices having the outer web yellow and some of the inner ones washed with yellow. Chin and throat are whitish with slight buff wash. Breast and entire under parts, including the under tail and wing-coverts and axillaries, are bright yellow. The eye is dark brown; bill and feet are black.

In southern Cameroon this is a bird of the forest which is rarely seen but is not particularly shy and can be collected without much difficulty. It lives on caterpillars, and other larvae have been found in its stomach. From the few localities where it has been obtained in Upper Guinea between Sierra Leone and the Gold Coast it would appear to be mainly a forest bird, frequenting clearings and the edges of the woods, but sometimes it may be seen in more open country as at grass-fields in Sierra Leone. One bird has been heard to sing a few modulated whistling notes, and a plaintive cry has also been recorded.

We know all too little about its life-history, and its eggs have not been discovered.

Distribution. The typical race ranges from northern Angola to Sierra Leone throughout the whole extent of the forest region, but has not yet been recorded from Nigeria. Examples have been examined from Sierra Leone, French Guinea, Liberia, the Gold Coast (many localities), British and French Cameroon, Rio Benito and Gaboon, Portuguese Congo and northern Angola. How far east this race ranges in the Belgian Congo is not certain.

Its place is taken in Uganda by *C. quiscalina martini* Jackson, which the race found in western Kenya as far as the Rift valley and anges to the Ituri. Yet another subspecies has been described from Tanganyika.

WHITE-BREASTED CUCKOO-SHRIKE

Coracina pectoralis (Jardine and Selby)

THE pure white breast, dove-grey upper parts and head with conspicuous black lores, grey and black wings and blackish tail enable this cuckoo-shrike to be easily recognised. The males have dark grey throats; the females white, with only an indication of grey on the crop. In size the White-breasted Cuckoo-Shrike measures about 10 in. from bill to tail. The wing of this bird measures 130–152 mm. and the tail 98–112 mm.

It is one of the most widely spread of its family found not only throughout most of the savanna country but in the southern part of the semi-arid or thorn-scrub belt. It does not occur in the forest area. In the western part of its range—Gambia, Senegal and Portuguese Guinea—it seems that it is a partial migrant, arriving in the rains, but whether all leave the district in the dry weather is en to doubt. From the accounts received it appears to be rather in the west but is certainly more often encountered in the Gold oast and Nigeria and has been described as fairly common outside the forest. It is to be seen singly or in pairs in the open woodlands

and may be recognised by its slow flapping flight. The call is a high querulous *pseeu*, little more than a squeak. When moving about the higher foliage of the trees with long hops from branch to branch, the same note is uttered in a lower, more conversational manner.

A nest of this bird was taken in Portuguese East Africa 60 ft. up a tree, saddled on the end of a thin branch. It was a flimsy platform of soft weed-stems mixed with lichen and lined with beard-lichen. The two eggs were blue-green profusely blotched and clouded with pale sepia. A nest has not yet been found in West Africa.

Distribution. Ranges on the west from Senegal to Damaraland, including all our Colonies, and in East Africa from the Sudan to the northern Transvaal. Between lat. 8 and 16° N. its range is apparently uninterrupted from Senegal to Abyssinia. Apart from the forest, it is universally but sparsely distributed over the greater part of tropical Africa in savanna country.

PREUSS'S GREY CUCKOO-SHRIKE

Coracina caesia preussi (Reichenow)

THE adult male has the lores and stiff hair-like feathers at the base of the bill black; forehead and small feathers surrounding the eye pale grey, becoming darker grey on the crown. Ear-coverts and entire body plumage above and below are uniform blue-grey. Primaries and secondaries are greyish black, the latter edged with grey and the inner secondaries with a greyish wash. Wing-coverts are grey like the rest of the body plumage. Long feathers of alula or bastard wing are blackish. Chin and throat are rather more dusky grey than the rest of the grey under parts. The tail is blackish, the middle pair of feathers with blue-grey fringe on both webs and a general blue-grey wash throughout. Under tail-coverts are like the rest of the under surface. Axillaries are paler grey than the under wing-coverts. The eye is black; bill and feet are black.

Measurements are: Bill 15–16 mm.; wing (male) 113–121 mm., (female) 111–116 mm.; tail (male) 91–97 mm., (female) 92–97 mm.; tarsus 22–23 mm.

The adult female differs from the normally coloured male in having no black lores or feathers at the base of the bill, these being grey like the ear-coverts and but slightly duskier than the surrounding grey plumage. The grey tone of the body plumage is distinctly paler than in the male, particularly on the under surface.

In total length this all-blue-grey bird measures about 8½ in. Both the wings and tail are rather long. Preuss's Cuckoo-Shrike is usually a silent species and evidently difficult to keep under observation. It has been heard to utter a soft whistle. It is generally to be seen singly or in pairs in the highest branches of primary forest trees, in which it moves rapidly from branch to branch with a quick flutter of wings.

In my larger work I included two races of this bird, as I believed that those which inhabited the Oku district of the Cameroon

highlands situated at 7,000 ft. could be distinguished by their more sooty-grey plumage from the typical birds on Cameroon Mountain collected at a much lower altitude. A series obtained since that date in the Oku region does not bear out my contention, and it seems therefore that *Coracina caesia okuensis* Bannerman must be sunk into the synonymy of *C. c. preussi*.

Distribution. Preuss's Cuckoo-Shrike was described from Buea on Cameroon Mountain at 3,000 ft., and others have been obtained in the Bamenda-Banso mountains and north of Kumbo at 6,000 ft., Oku at 7,000 ft. (from which the type of *C. c. okuensis* was described) and from the isolated Kupé Mountain.

In the forest country of East Africa *C. caesia pura* (Sharpe) takes its place.

BLUE CUCKOO-SHRIKE

Cyanograucalus azureus (Cassin)

(see Plate 45, facing page 1197)

THE beautiful all-blue plumage of this cuckoo-shrike, the males with darker throats, the females with the throats of the same blue as the rest of the under parts, is a sure guide to the identification of this bird. The black bill has a small sharp hook at the tip of the upper mandible, and the feet too are black. The flight-feathers of wings and tail are also black, but the upper tail-coverts are long and reach half-way down the tail. It is a bird whose plumage is best described as prussian blue. As a coloured illustration is included it does not require more detailed description. The measurements are: Wing 102–120 mm., tail 77–95 mm.

Despite its attractive colour this bird no doubt easily escapes notice, as it lives mainly in the tops of the tall forest trees. It seems to be found in all the West African forest region but is nowhere so plentiful as in southern Cameroon, where it has been described as the commonest cuckoo-shrike in the forest; but that is not to say it is common. It will sometimes draw attention to its presence by the peculiar creaking and grating noises which it makes.

In the forest reserves of Sierra Leone they have been observed to go about in small parties, from a pair to half a dozen together, the birds carefully searching the under side of the leaves for insects. On rare occasions a pair will descend close to the ground and join on to a foraging bird army. Field naturalists in the Gold Coast agree that it is by no means common in the restricted forest area.

The nests of eggs have never been found. The bird is believed to breed in the forest canopy at a great height—well beyond the range of a 12-bore gun.

Distribution. The whole forest region of Sierra Leone, Liberia, the Gold and Ivory Coasts, Nigeria, British and French Cameroons, Gaboon and the Loango coast. To what extent this bird ranges throughout the Congo forest I am uncertain. It has been obtained in the Ituri forest at Irumu, in the eastern Congo, and is likely to be found both in the main forest and in the gallery forests of the north. It is surprising that it has not been recorded from Uganda.

WATTLED CUCKOO-SHRIKE

Lobotos lobatus (Temminck)

(see Plate 45, facing page 1197)

This bird is about the size of the Red-shouldered Cuckoo-Shrike (*Campephaga phoenicea*), i.e. about 7½ in. in length. Its colouring is distinctive: glossy green head, chestnut rump and under parts, green mantle, green and black wings and a brightly patterned black and yellow tail, these colours being about equally proportioned, with the yellow at the tip. The soft parts are equally striking, for this cuckoo-shrike has a dark red eye and a pale orange fleshy wattle below each eye. The wing measures 93–97 mm., and the tail 82–83 mm.

A full description of this very rare bird is given in my larger work and need not be repeated, as the species is illustrated in this handbook in colour. We know no more about it today than when I wrote of it in 1939, and no further example has been secured.

We do not know from which country the type specimen in the Leiden Museum was obtained, but the only other examples in museums—two in Leiden and three in the British Museum—known to me were obtained in the Gold Coast. It is a forest bird, and the last example to have been shot was reposing in a densely foliaged kola tree by a native path in the forest of Ashanti at Mampong.

Distribution. The Gold Coast forests, Ashanti.

ORIOLE CUCKOO-SHRIKE

Lobotos oriolinus Bates

(see Plate 45, facing page 1197)

The general colour of this brilliant bird is bright golden yellow, with the upper parts washed with olive, the whole head of the male glossy deep green with two large fleshy wattles round the gape, orange in colour. In flight, or with the rectrices spread, the tail is seen to be black and yellow, the wings black with olive-yellow shoulders. The female is similarly coloured except that the head is

dull blackish mixed with yellow, and the wattles are negligible in size. The colour of the bill, which is black, is an important feature to recollect, for in other respects this bird is very difficult to distinguish in coloration from *Oriolus brachyrhynchus laetior*, which has a reddish bill. The wing measures 92–100 mm. and the tail 73–82 mm.

Only in the extreme south of our area does this bird occur, so that residents in our British Possessions will look for it in vain. It is reputed to be an inactive bird, never seen in flight, but always perched, silent and solitary, among the leaves of some small tree, as witnessed in the Zima country of Cameroon. In colour, and when so perched, its resemblance to the Black-headed Oriole is so close that even the native boys, used to collecting birds, were unable to distinguish it unless a view of the black bill could be obtained.

These birds live mainly on caterpillars, but grasshoppers and insect remains have also been found in the stomach. So far as I know, the nest and eggs are unknown.

Distribution. Southern Cameroon, especially the Zima country near the Bumba River; Gaboon and the Belgian Congo as far east as Medje in the Ituri district.

FAMILY DICRURIDAE

Key to the Drongos (Dicruridae)

1. Tail not forked when closed but square-tipped, outer and middle pair of rectrices almost equal in length. Wing under 114 mm. Gloss very dark blue
Dicrurus sharpei, p. 1151

   Tail forked when closed, outer rectrices exceeding central pair in length and curving slightly outwards 2

2. Hind neck and upper part of mantle sooty black with slight, if any, gloss, contrasting with highly glossy blue feathers on crown 3

   Feathers of hind neck and upper part of mantle equally glossy with crown, there being no apparent contrast or "dull unglossed area" 4

3. Mantle and back dull blue-black, in marked contrast to glossy wing-coverts and crown. Outer tail-feathers not exceeding 117 mm. (measured from between base of middle feathers) .. .. *Dicrurus modestus coracinus*, p. 1148

   Mantle and back with decided blue gloss, showing less contrast to other parts. Outer tail-feathers exceed 117 mm. in length .. *Dicrurus modestus modestus*, p. 1149

4. Quill lining (i.e. the under side of the wing-feathers) very light in colour, almost silvery white in some cases; gloss on body plumage steel-blue
Dicrurus adsimilis adsimilis, p. 1147
Quill lining not inclining to silvery white but dark shining grey or blackish 5
5. Entire plumage strongly glossed with steel-blue, almost metallic greenish blue in some reflections; wing not exceeding 121 mm. .. *Dicrurus atripennis*, p. 1150
Entire plumage very dark purplish blue-black, only slightly glossy; wing normally exceeding 121 mm.
Dicrurus adsimilis atactus, p. 1148

GLOSSY-BACKED DRONGO

Dicrurus adsimilis adsimilis (Bechstein)

Two races come within our limits, the only other now recognised being *D. a. atactus*.

This all-black, glossy-plumaged bird measures about 9 in. in total length; the feathers are glossed with dark steel-blue, both above and below, including the wing-coverts. Primaries are black on the outer web, grey-brown on the inner. The tail is black glossed with blue and is forked; the black bill is powerfully hooked and is bordered with black bristles. A vermilion red eye assists in giving it a fierce demeanour. Its aggressiveness to other birds is notorious, despite its small size. Measurements are: Wing 120–136 mm., tail to outer feather 97–115 mm. (seldom over 110 mm.).

The quarrelsome disposition of this little fury has earned for it names in most native languages extolling this characteristic, but of the courage which it possesses when attacking birds many times its size it leaves one in no doubt. A common sight is a Drongo in hot pursuit of a harrier-hawk, and cuckoos of all species come in for these furious onslaughts as well as many inoffensive birds such as starlings and orioles.

The Glossy-backed Drongo is found in almost every type of country, with a preference for open cultivated land, so long as a convenient perch is at hand from which to sally forth and obtain its prey. A locust-bean is a favourite for this purpose. It is attracted by swarming ants, and insects of all kinds are devoured, including butterflies, whose wings are snipped off first. It is usually met with singly or in pairs and seems to be resident all the year round in the habitat of its choice. No species is more imbued with territorial instinct, and no other bird, large or small, is permitted to encroach on its domain.

Before sundown the drongo engages in aerial evolutions, rising vertically from its perch and diving steeply with still wings. The bird has a variety of calls, some harsh, others quite pleasant.

The nest is often placed in locust-trees and is a slight structure slung between the fork of a small branch, often at a considerable height. The eggs or young are usually visible through the fragile platform. Two or three eggs are laid and have a cream or white ground either blotched heavily with red or reddish brown or sparsely spotted with the same colour. Measurements are: 20·4–24·3 × 16–18·2 mm.

Distribution and Races

D. adsimilis adsimilis (Bechstein) ranges over the whole of the drier parts of Africa from Senegal to the Sudan south to Cape Province, but not in the forest country.

Its place is taken by *D. adsimilis atactus* Oberholser in the moister coastal belt and forest clearings from Sierra Leone to southern Nigeria, where in the vicinity of Lagos it meets the range of another species, *D. modestus coracinus*. The latter I included in my larger work as another race of *adsimilis*, but it has now been shown that these two breed side by side and must therefore belong to different species. *Coracinus* consequently becomes a race of *D. modestus modestus*.

D. a. atactus has the black upper parts glossed with deep velvety blue with a decided purplish tinge, wings and tail as in *D. a. adsimilis* but rather more steel-blue, and the under parts glossed with velvety blue. The bill measures 18–20 mm., wing 121–137 mm., tail (to outer feather) 106–117 mm. In total length this bird is 10 in. long and has a wing expanse of 15 in.

D. a. atactus may be distinguished from *D. modestus coracinus* by having the nape and back glossy instead of dull matt and by having a longer bill.

VELVET-MANTLED DRONGO

Dicrurus modestus Hartlaub

Two races occur in our area, the typical subspecies an island race whose distinctions will be given in the last paragraph, and a subspecies which has a wider continental range.

In volume v, pp. 331 and 338, of *The Birds of Tropical West Africa* these races were erroneously included as races of *adsimilis*.

The mainland representative, *D. modestus coracinus* Verreaux, is a fine big drongo with very strongly forked fish-like tail, black plumage with wings and tail glossed with darkest blue, contrasting with the almost unglossed velvet-black mantle and back, bright red eye (in

adults) and powerful hook-tipped black bill, making it a conspicuous species, particularly when in pugnacious mood, chasing other birds or sallying forth from its perch swooping after insects, which it catches in flight.

From *D. adsimilis atactus* the velvety unglossed mantle is the best distinction. The range of the two just overlaps in southern Nigeria, and in that area somewhat intermediate examples have been found, adding to the difficulty of naming them correctly. The

Velvet-mantled Drongo is a much larger bird than either the Shining Drongo (*D. atripennis*) or the Square-tailed Drongo (*D. sharpei*), so recognition should be easy in that direction.

It is a conspicuous noisy bird which keeps chiefly to the tops of the high forest trees, where its exaggerated fish-shaped tail is a good field character. This drongo is not confined to the forest, but will venture on to the neighbouring farmland and into the grass woodland wherever there are large trees. It is just as pugnacious and "territorially conscious" as the smaller Glossy-backed Drongo, and the account of that bird's courage in attacking larger enemies applies equally to the present species. Large birds are much more readily attacked than small ones. From its perch in some tree the Drongo will make circular flights after insects, sometimes dropping to the ground to pounce upon a grasshopper. A chattering song and metallic screech have been attributed to this bird.

The nest is believed to be slung in the fork of a bough, but in neither West nor East Africa have eggs been taken.

Distribution and Races

Dicrurus modestus modestus Hartlaub is restricted to Principe Island in the Gulf of Guinea. It and *D. modestus coracinus* have the same

sooty-black neck and mantle which distinguish them from the *D. adsimilis* group, but in the case of *D. m. modestus* the mantle and back have a certain amount of dark blue gloss which is absent in the mainland race. Moreover, *D. m. modestus* is considerably larger than *D. m. coracinus*. Measurements are: Bill 20–21 mm.; wing (male) 132–139 mm., (female) 126–132 mm.; tail (male) (to tip) 125–126 mm., (female) 118–121 mm.

The representative race on the mainland, *D. modestus coracinus* Verreaux, ranges from southern Nigeria (near Lagos) through the low-lying forests of Cameroon and Gaboôn, south to Landana, also along the Uelle and Upper Congo Rivers, extending east to Uganda and Kavirondo. It is noteworthy that it is this, and not the typical subspecies, which is found on Fernando Po. Its distinctions are given above, and the measurements are: Bill 18 mm.; wing (male) 122–135 mm., (female) 117–130 mm.; tail (male) (to tip) 106–116 mm.

SHINING DRONGO

Dicrurus atripennis Swainson

This is the glossiest of all the drongos in Africa, the steel-green reflections on the plumage being very pronounced in some examples. The tail is exceptionally long for its size and measures about 4½ in. from base to tip. The species is one of the smaller of the West African drongos and is even slightly smaller than the open country species *D. adsimilis adsimilis*. It is most likely to be confused with *Dicrurus sharpei*, but Sharpe's Drongo has a much shorter and not forked tail, and is less glossy and darker blue, never showing the brilliant steel-green gloss which specimens of *D. atripennis* so often exhibit. Both are forest species, but whereas *D. atripennis* frequents the depths of the primeval forest, *D. sharpei* shuns it and frequents the second growth. *D. atripennis* has a dark red eye; in *D. sharpei* the eye varies from orange or orange-red to blood-red. They may be distinguished by the characters given from the larger forest drongos I have already dealt with. The wing of *D. atripennis* measures 103–121 mm.; the tail (to tip) (male) 96–106 mm., (female) 88–98 mm.

This is a lively, noisy bird, always seen in companies of five or six in the larger bird armies and the most conspicuous of all the species assembled. Of all the drongos in West Africa this is the one which penetrates to the depths of the forest. It may be seen in the second growth also, and wherever they are their loud notes, melodious whistles and harsh cries draw attention to their presence. It is everywhere common throughout the whole forest region.

Much of its time is spent below the lower canopy in company

with flycatchers and bulbuls, evidently finding the help of these birds useful in routing out the beetles and other insects from their hiding places. It lives exclusively in the denser parts among thick shrubs and low trees and may be seen often very close to the ground. Its small size does not deter it from flying at the eyes of hawks and hornbills in the air, and one which had just returned from such an onslaught in Sierra Leone was observed to sing a clear and loud triumphal song. This drongo is very fond of chasing its own species and seldom appears to be still for a moment.

The nest has been found slung between a forked branch about 10 ft. from the ground. It was so shallow that almost the whole of the sitting bird was visible from below. The eggs do not appear to have been taken.

Distribution. The whole of the West African forest country from Sierra Leone to the Congo, ranging eastwards to the East Congo forest. It has been found in all the forest reserves of our British Colonies, but is less numerous in the west of its range than it is in Lower Guinea, where it is said to be the commonest drongo.

SHARPE'S SQUARE-TAILED DRONGO

Dicrurus sharpei Oustalet

(see Plate 46, facing page 1212)

THIS, the smallest of the drongos, appears black in colour, glossed with very dark blue. In total length it is about 7¼ in. from bill to the tip of the rectrices. The shape of the tail, square-cut and not forked, as in the other members of the genus, is by far the surest guide to its identification in the field. Its bill, too, is smaller than the fork-tailed drongos but is given an equally fierce aspect by the prominent stiff black bristles springing from the gape. The eye, which is more orange than red, as in the other drongos, is conspicuous. Comparison between it and the Shining Drongo is made under *D. atripennis*. The measurements are: Wing (male) 104–112 mm., (female) 99–106 mm.; tail (male) 86–90 mm., (female) 81–93 mm.

The habitat of Sharpe's Drongo is second-growth forest and old farm clearings in the vicinity. It is often to be seen near villages in the tangled growth of old cleared ground. Although we must reckon it a forest species, yet it does not penetrate to the innermost wilds as does the Shining Drongo. It is usually to be seen in pairs and is less often seen in the bird armies than *D. atripennis*. It lives at a higher level and for the most part is out of range of a 12-bore gun. Moreover, in the countries where it occurs it is rather local

in its distribution. The area which it inhabits is much the same as that of the Shining Drongo, but the two species have different habitats, as will have been observed.

Several nests of this drongo have been found in thick-topped trees and are neatly woven little cups of fine *Usnea* stems with some lichens stuck in, the cup attached or slung hammock-fashion to two twigs by gossamer threads. Either one or two eggs are laid. These are creamy white or pinkish cream, either with a zone of lilac spots round the broad end or with a zone of lavender grey and a few tiny dark brown specks. Measurements are: 22–24 × 15–15·5 mm.

Distribution. From Portuguese Guinea, Sierra Leone, the Gold Coast (where it is extremely local) to British Cameroon (Bamenda, 4,500 ft.) and the second-growth forests of southern Cameroon. It has not yet been reported from Nigeria, and the record from Gambia is doubtfully correct without further confirmation.

FAMILY PRIONOPIDAE

Key to the Helmet-Shrikes (Prionopidae)

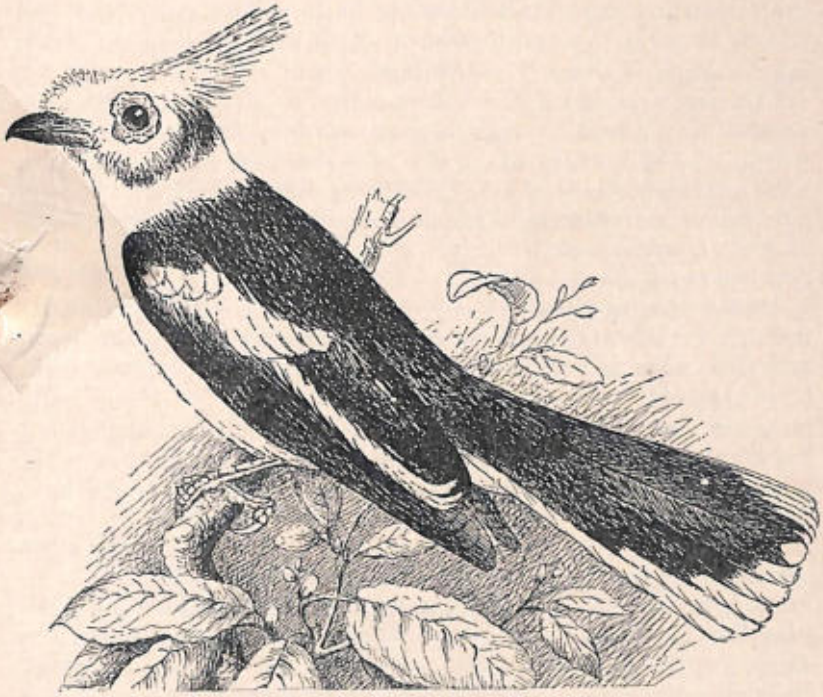
1. Belly chestnut or buff, bill in adults red; eye-wattles but slightly developed 2
   Belly white, bill black; eye-wattles large and prominent .. 3
2. Belly buff, entire throat and cheeks black
   Sigmodus caniceps caniceps and subsp., p. 1155
   Belly chestnut, sides of throat bluish
   Sigmodus rufiventris rufiventris, p. 1156
3. Crest of white plumes long and straight in adults, feathers of forehead not curling inwards to form high ridge .. .. .. *Prionops plumata plumata* p. 1154
   Crest shorter, feathers of forehead curving inwards to form high ridge *Prionops plumata adamauae* and *P. p. concinnata*, p. 1154

LONG-CRESTED HELMET-SHRIKE

Prionops plumata (Shaw)

ALTHOUGH three races of this helmet-shrike were included in my larger work from West Africa, it is only the typical *P. plumata plumata* with which residents in our four Colonies will be concerned.

This is a very conspicuous bird about 9 in. in total length, with long white ornamental crest which the bird can hold erect or droop



over the mantle, the longest plumes being 40 mm. or more in length. Those on the forecrown are hair-like and erect, giving the bird's forehead a bushy appearance. Surrounding the eye is a fleshy yellow wattle. Plumage is all white below, mainly greenish black above; a broad collar of white at the base of the neck separates the slate nape from the black mantle. A white bar extends the whole length of the wing. The tail is black, broadly tipped and bordered with white. A rather long black bill, with upper mandible hooked, and orange-yellow legs assist to make the adults of this helmet-shrike easy of recognition. The wing measures 113–126 mm. and the tail 92–101 mm.

The habitat of this bird is varied. In Sierra Leone, the Gold Coast and Nigeria it is to be found in open grass-woodland, orchard bush and various parklands as well as along the wooded banks of streams, while, not content with that, it has been encountered on the dry northern plains of northern Cameroon alighting on bushes, often near the ground.

It is a gregarious species, going about in small parties of eight to ten or even fifteen individuals. The flocks work through the woodlands, flying low from tree to tree. Trunks and branches are searched for insects, and if something is detected on the ground a bird will drop upon it. These shrikes are not on the whole noisy birds but possess an attractive call uttered in flight, nor are they shy, often approaching an observer to within ten yards.

The nest is placed in the fork of a tree, 15 ft. or more from the ground. It is a neat structure of grass woven with spiders' webs, by which it is also fastened to the tree. Eggs number three or four and have a ground colour of pale bluish green with a confluent zone of light brown and lilac spots at the large end. They measure 21·4–22·6 × 16·4–16·6 mm.

Distribution and Races

Prionops plumata plumata (Shaw) ranges from Senegal and Gambia through French and Portuguese Guinea, Sierra Leone, the Ivory and Gold Coasts, Dahomey and Nigeria north of the forest belt, both in grass-woodland and semi-arid country.

A race named *P. plumata adamauae* Reichenow is very similar but has a shorter and more curly crest than the typical subspecies. It inhabits the dry northern plains of lowland Adamawa, and I have seen specimens from Yola and Garua.

A third race, or one which some might prefer to treat as a full species, is *P. plumata concinnata*. It has the white plumes of the crown raised in a helmet-shaped crest instead of the elongated white plumes extending over the nape, as in *P. p. plumata*. It comes within our limits in the eastern Cameroon grasslands, ranging eastwards through Ubangi-Shari, the Uelle region and Darfur to the valleys of the Blue and White Nile. It is a common bush bird all over the plains. The wing measures 110–122 mm. and the tail 87–101 mm.

RED-BILLED SHRIKE

Sigmodus caniceps Bonaparte

(see Plate 45, facing page 1197)

Two races occur in our area, both in Upper Guinea.

It is a handsome bird with its bluish crown of stiff short feathers and the bright colours of the bill, eye and legs. In detail, the forehead, forepart of the crown and lores are bluish grey, the crown-feathers extending over the black hind crown, the grey-blue feathers not surrounding the eye. The rest of the head, cheeks, chin, throat, neck and upper back are black, faintly glossed with oily green below the nape. Wing-coverts and scapulars are like the back. Primaries are black, with a broad patch of white on the inner web on all the quills. Secondaries are black without any white. The tail is black glossed with oily green like the back. The breast is pure white, sharply defined from the black throat but merging on the belly into saffron-buff, which becomes rather darker on the thighs and under tail-coverts. Axillaries and under wing-coverts are black. The eye is yellow; eye-wattles are red. The bill is red, lighter at the tip; legs and feet are red. The bill measures 20–22 mm. (exposed), the wing 107–123 mm., the tail 72–82 mm. and the tarsus 20–21 mm.

It is a forest species about which we have much to learn. It has been observed not only in forest reserves, as near Owerri in southern Nigeria, but in kurimis and dense bushy growth near streams. Parties of birds up to ten in number have been seen hunting through the taller trees in a straggling manner in those places where the canopy is more or less continuous but making longer flights to isolated trees when the birds progress in threes or fours. Seen from below it presents a stumpy appearance with noticeable white in the primaries. It has a sharp cry and a loud piping note, but when progressing through the undergrowth does so silently.

The Red-billed Shrike objects to coming into the open and must be sought in rain forest or secondary growth. The flight is fast, but it flies no great distance at a time. This is another species concerning which we know nothing about its breeding habits.

Distribution and Races

Sigmodos caniceps caniceps Bonaparte, described above, extends from Sierra Leone to Dahomey and Togoland, keeping to the forest country or dense bush. It does not occur in the Northern Territories.

Its place is taken by *Sigmodus caniceps harterti* Neumann in southern Nigeria, ranging between Lagos and Owerri, no specimens having been found east of the Owerri Province to date. There is nothing to stop it ranging continuously to the base of Cameroon Mountain

or beyond. In the Niger Delta it cannot be uncommon. It differs from the typical race by having the blue-grey of the crown extending completely round and below the eye and further down the nape. It may also be slightly smaller. The wing of three females was 112–114 mm.

GABOON RED-BILLED SHRIKE

Sigmodus rufiventris rufiventris Bonaparte

THE adult bird is conspicuously marked, but is not very often observed in its forest home. The colouring is very definite: red bill in adult (black in immature), grey-blue crown and cheeks, black upper parts and throat, white breast, chestnut belly and black tail and wings, the latter with a large white patch in flight but invisible at rest. The black eye is surrounded with a yellow rim or small wattle. The wing measures 111–117 mm. and the tail 71–76 mm.

We find this fine shrike both in the primeval forest and also in second growth, but never apparently in the vicinity of villages. Restricted as it is to Lower Guinea, British residents in our West African Colonies will not meet with it, which is a pity, as it is a handsome bird. In southern Cameroon it is not really common, though it goes about in bands of half a dozen, flitting one at a time from one tree-top to another, uttering a peculiar cry and making a loud snapping noise attributed to its bill. It feeds on grasshoppers and cicadas, and no doubt insects of various species which it finds in the trees.

No description of its nest or eggs has been published, but it is known to breed at widely different times of the year in the manner of many tropical birds.

Distribution. Southern Cameroon, Spanish and Portuguese Guinea to the Loango Coast, perhaps ranging into the Ubangi country.

A well-characterised race, *S. rufiventris mentalis*, with much darker chestnut under parts and a darker grey-blue crown, is found along the Uelle River and in the Semliki valley.

FAMILY LANIIDAE

*Key to the Shrikes (Laniidae) but not including the Helmet-Shrike (Prionopidae)**

1. Tail abnormally long and strongly graduated, central feathers over 155 mm. in length; upper parts streaked; bill yellow.. *Corvinella corvina corvina* and subsp., p. 1172
   Tail not abnormally long, central feathers under 155 mm. in length; bill not yellow 2

* The key to the helmet-shrikes appears on page 1152.

2. Whole plumage above and below blackish 3
Whole plumage not blackish 4

3. Plumage glossed with blue; bill from feathering under 20 mm. in length.. .. *Laniarius poensis poensis*, p. **1177**
Plumage sooty-black without blue gloss on feathers; bill from feathering over 20 mm. in length
Laniarius leucorhynchus, p. **1176**

4. Without any green on plumage of upper parts 5
With some green on plumage of upper parts 36

5. Under parts scarlet or bright yellow 6
Under parts not scarlet or bright yellow 8

6. Under parts bright yellow
Laniarius atroflavus atroflavus and subsp., p. **1175**
Under parts scarlet 7

7. Crown of head glossy blue-black like back
Laniarius erythrogaster, p. **1175**
Crown of head contrasting with back:
(*a*) Crown greenish yellow
Laniarius barbarus barbarus, p. **1174**
(*b*) Crown rufous orange *Laniarius barbarus helenae*, p. **1174**

8. Crown of head chestnut 9
Crown of head not chestnut 10

9. Scapulars entirely white:
(*a*) Large white patch on primaries
Lanius senator senator, p. **1170**
(*b*) No white patch on primaries
Lanius senator badius, p. **1172**
Scapulars black with a few concealed white spots as on rump .. .. *Laniarius lühderi*, p. **1180**

10. Upper parts, including mantle, spotted and mottled with white (and buffish in female) on black or brown ground; tail very short (under 55 mm. in length)
Nilaus afer afer and subsp., p. **1187**
Upper parts not as described above; tail over 55 mm. in length 11

11. With white on some part of tail-feathers (usually much white) but in one species confined to narrow white edging to outer feather and tips to others 12
With no white on any part of tail-feathers 23

12. With some chestnut or traces of rufous on wings .. 13
With no trace of chestnut or rufous on wings 17

13. Broad white or cream stripe bordered with black, passing from base of bill above and beyond eye 14

No broad white or cream eye-stripe bordered with black as described above 15

14. Forehead and middle of crown black
Tchagra senegala senegala and subsp., p. **1189**
Forehead and middle of crown brown
Tchagra australis ussheri and subsp., p. **1188**

15. Chestnut wing-coverts and inner secondaries with narrow black wavy bars .. .. .. *Lanius souzae*, p. **1167**
Wing-coverts and inner secondaries not barred 16

16. Breast white, with rosy wash in male; squamated with wavy bars in female .. *Lanius collurio collurio*, p. **1168**
Breast pale rufous or whitish, washed with rusty buff, and no bars or squamations .. .. *Lanius gubernator*, p. **1169**

17. Crown of head mostly black or black glossed with blue 18
Crown of head dove-grey, ash-grey or whitish 20

18. Forehead white .. .. .. *Lanius nubicus*, p. **1162**
Forehead black or black glossed with blue 19

19. Primaries with broad white patch
Lanius collaris smithii, p. **1163**
Primaries entirely black, no white patch *Lanius newtoni*, p. **1164**

20. Forehead black 21
Forehead grey 22

21. Upper tail-coverts white; black of ear-coverts continued in band down neck *Lanius excubitorius tschadensis*, p. **1165**
Upper tail-coverts pale grey; black ear-coverts not continued in band down sides of neck .. *Lanius minor*, p. **1162**

22. Outer tail-feathers pure white, with black shafts
Lanius excubitor leucopygos, p. **1160**
Outer tail-feathers not white, mostly blackish with white tips .. .. *Lanius mackinnoni*, p. **1166**

23. Crown all or mostly black, blue, or black glossed with blue 24
Crown not black, blue, or black glossed with blue .. 32

24. Wings chestnut, black V-shaped mark on shoulders
Antichromus minutus minutus, p. **1191**
Wings not chestnut, no V-shaped mark on shoulders .. 25

25. Whole rump pure white (not washed with grey) .. 26
Rump not pure white 27

26. Bill large (over 21 mm.), no raised ridge on culmen
Chaunonotus sabini sabini ♂ and subsp., p. **1186**
Bill smaller (under 20 mm.), raised ridge on culmen
Dryoscopus senegalensis ♂, p. **1184**

27. Broad white stripe over and beyond eye
Dryophoneus bocagei bocagei, p. **1182**
No broad white stripe over and beyond eye 28

28. Feathers of rump with large white concealed spots or patches 29
Feathers of rump uniformly grey or whitish mixed with grey 30
29. Broad white horizontal band down blue-black wing *Laniarius ferrugineus major* and subsp., p. **1178**
Wing uniformly blue-black, no white horizontal band *Laniarius turatii*, p. **1180**
30. Wing-coverts and primaries and secondaries broadly edged with greyish white *Dryoscopus gambensis gambensis* and subsp., p. **1182**
Wing-coverts and primaries not broadly edged with greyish white but almost uniform 31
31. Narrow white line from base of bill to eye; crown and nape greyish violet-blue *Dryoscopus angolensis boydi* ♂, p. **1185**
No white line from base of bill to eye; crown and nape black glossed dark blue .. *Dryoscopus senegalensis* ♀, p. **1184**
32. Under parts fawn-colour or yellowish buff 33
Under parts not fawn-colour or yellowish buff 35
33. Tail very dark brown, almost black *Dryoscopus gambensis gambensis* ♀ and subsp., p. **1182**
Tail not very dark brown or blackish 34
34. Legs and feet pink or pinkish violet; tail greyish brown *Dryoscopus angolensis boydi* ♀, p. **1185**
Legs and feet blue or blue-grey; tail rufous-brown or olive-brown *Chaunonotus sabini sabini* ♀ and subsp., p. **1186**
35. Feathers of sides and flanks heavily barred with blackish; tail brown or brown tinged with rufous (narrow white edging to outer feather having disappeared through abrasion) .. .. .. *Lanius collurio collurio* ♀, p. **1168**
Feathers of sides and flanks not barred; tail clear rufous *Lanius isabellinus*, p. **1168**
36. Throat scarlet or crimson or strongly washed with scarlet 37
Throat without any trace of scarlet or crimson 40
37. Black band below crimson throat across breast *Telophorus viridis*, p. **1196**
No black band across breast 38
38. Lores and frontal band black, black band continued through eye *Chlorophoneus multicolor multicolor* ♂ and subsp. ♂, p. **1192**
Lores and frontal area white, whitish or grey, no black band through eye 39
39. Feathers of lores pure white; size large (bill over 23 mm. in length from feathers) *Malaconotus cruentus cruentus* ♂ and ♀ and subsp., p. **1199**

Feathers of lores not pure white but tinged greyish; size smaller (bill under 18 mm. in length from feathers)
Chlorophoneus multicolor multicolor ♀ and subsp. ♀, p. 1192

40. Throat and breast black
Chlorophoneus multicolor melanistic variety (*nigrithorax*), p. 1192
Throat and breast not black 41

41. Under parts not yellow unless around vent 42
Under parts bright yellow (or orange) 45

42. Glossy dark blue band across chest *Neolestes torquatus*, p. 1202
Without any band across chest 43

43. Secondaries and wing-coverts spotted with pale yellow 44
Secondaries and wing-coverts plain green without any spots; crown and mantle grey, throat pure white
Chlorophoneus kupeensis, p. 1195

44. Size small (wing under 88 mm.), narrow yellow streak over forepart of eye .. .. .. *Nicator vireo*, p. 1201
Size considerably larger (wing over 88 mm.), no yellow streak above eye .. .. .. *Nicator chloris*, p. 1200

45. Size very large (wing over 110 mm.) 45
Size much smaller (wing under 110 mm.) 46

46. Wing-coverts blackish, tipped with yellow
Malaconotus lagdeni, p. 1198
Wing-coverts green, tipped with yellowish white
Malaconotus poliocephalus poliocephalus and subsp., p. 1197

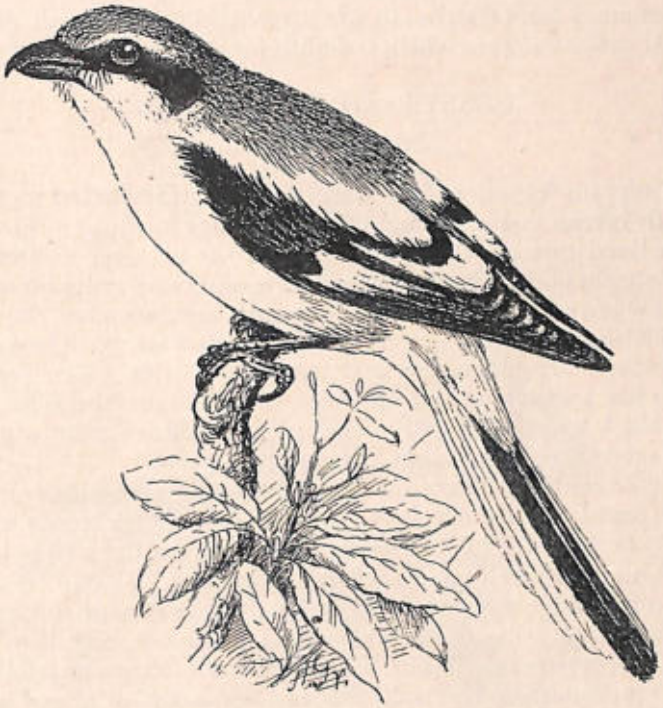
47. Forehead and superciliary stripe yellow
Chlorophoneus sulfureopectus sulfureopectus, p. 1194
Forehead and superciliary stripe not yellow
Chlorophoneus multicolor (orange-breasted phase), p. 1192

WHITE-RUMPED GREY SHRIKE

Lanius excubitor leucopygos Ehrenberg

In life this is a very conspicuous bird whose pale pearly-grey back may betray its identity, but as there are other species with which it might be confused I include a detailed description. The sexes are alike. The forehead, crown and rest of the upper parts are pearl-grey, becoming white on the rump and upper tail-coverts, the latter tinged again with grey. Scapulars are white but mostly hidden. A black band passes from the base of the bill through the eye. Ear-coverts are black. Lesser wing-coverts are grey, remaining coverts black. Primaries are black with a broad white speculum; secondaries are mostly white, but the outer web is black, the amount varying on each feather, the extreme tips being white. The two middle pairs of tail-feathers are black, the next pair black on both

webs but broadly tipped with white which extends slightly up the margin of the outer web, next pair white on the whole of the outer web and broad tip; the rest of the inner web is black; the two outermost rectrices are white with blue shafts. The entire under parts, axillaries, under wing and tail-coverts and quill lining are pure white. The eye is black and grey; the bill is black; the feet are



brownish black. The wing measures 96–103 mm.; the tail (male) 100–106 mm., (female) 90–103 mm.

This is a desert bird—one with which a traveller in the French Sudan, French Niger and Chad territories will be familiar, all the way from "the lake" to Timbuktu. It is widely spread too in the Egyptian Sudan, making its home in any desert in which there are thorn bushes, even in dry waterless areas. *Acacia tortilis* bushes serve it both as a perch and a retreat in which to build its nest. Both shrike and bush have a continuous range across the Sahara from its northern to its southern edge. Not only small insects and coleoptera fall prey to this shrike but grasshoppers and nestlings and other birds' eggs. Usually it is encountered singly or in pairs.

The nest is built in acacia thorns and is lined with wool and

feathers. The eggs—two in number—are creamy white spotted with pale brown and mauve. A clutch taken at Agadés, southern Sahara, on 6th August measured 24·5 × 17·7 and 24·5 × 18·2 mm.

Distribution and Races

The borders of the desert from the vicinity of Timbuktu to Lake Chad and across the southern Sahara to the Anglo-Egyptian Sudan. It has not been found south of Zinder or that latitude.

Specimens from Timbuktu are approaching the North African race *L. excubitor elegans*, which is slightly larger and has a greyer rump.

LESSER GREY SHRIKE

Lanius minor Gmelin

This migrant from northern countries is a darker-backed race than the last species discussed, and the broad black forehead meeting the black band through the eye distinguishes it at once. Normally it has a strong pinkish-mauve tinge on the otherwise white breast and flanks when adult. The crown and mantle are dove-grey, the wings black with a band of white across the middle feathers. Two central tail-feathers are black, the next pair tipped with white, the next partly black with base and tip white, the two outermost pure white with black shafts. The bill is black; legs and feet are brown. The wing measures 112–123 mm., the tail 84–93 mm.

The Lesser Grey Shrike is a European bird which winters in East Africa and is most unlikely to occur as far west as the country we mainly deal with. Only in the desert between northern Nigeria and Aïr is it ever likely to occur. It has once been taken at Zinder.

It is a passage migrant through Egypt from August to October, the birds appearing to concentrate on a narrow migratory route stretching between the White Nile and Somaliland, which is followed until the Equator is reached, after which the shrikes spread widely over the country south of the Equator, reaching Damaraland and the Orange River Colony. Once only has it been recorded from Portuguese Congo.

NUBIAN OR MASKED SHRIKE

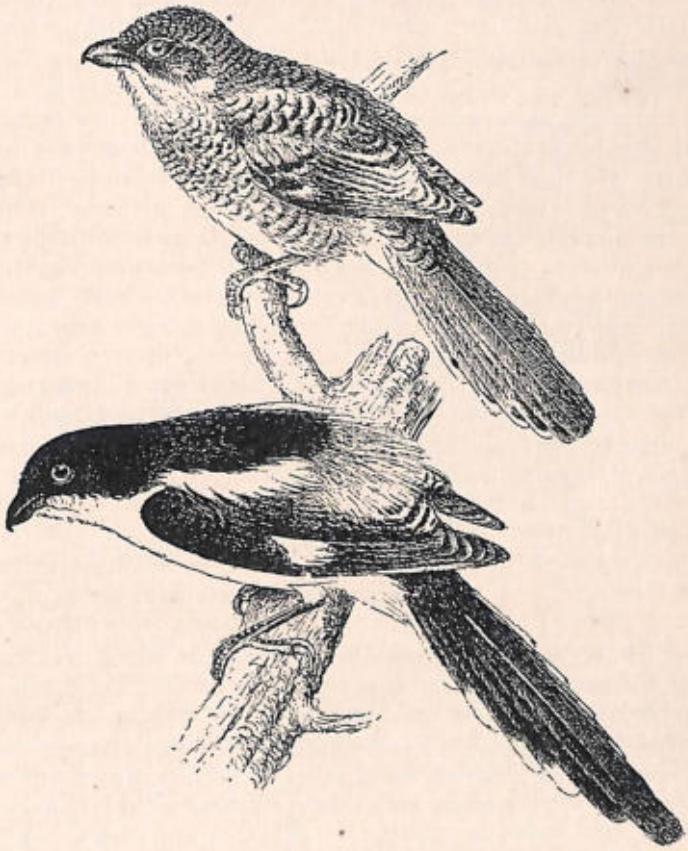
Lanius nubicus Lichtenstein

This shrike has a broad white frontal band, blue-black crown and mantle, white scapulars, under parts white washed with buff, black wings with white bar across, outer tail-feathers white, remainder black. Total length 7 in. It breeds from Asia Minor to Persia and winters in Iraq, Arabia and East Africa, south to Lake Rudolph. It is a rare vagrant in West Africa, recorded from Zinder and Lake Chad.

WEST AFRICAN FISCAL SHRIKE

Lanius collaris smithii Fraser

THE adult male and female of this common shrike have the crown and back glossy black, the scapulars pure white and the rump grey. The wings are black with conspicuous white mirrors, and the tail, which is long and much graduated, has the middle two pairs of



rectrices black, the remainder black with broad white tips, the white extending up the outer web of the outer feather to a varying extent. The entire under parts are white, the female having a slight shade of cinnamon on the flanks. The wing measures 82–92 mm. and the tail 100–115 mm. (seldom to 120 mm.).

In the accompanying text figure the young bird is illustrated. The whole upper side is then chestnut-buff, narrowly barred with black;

the under parts are buffish, with indistinct broken bars on the breast and flanks. The tail is black, with chestnut margins. The prominent white markings of the adult are not assumed until after the moult. In total length this shrike when fully grown is about 9 in.

The habitat of the Fiscal Shrike is the tree-savanna, and as its range includes all the coastal area which is not forested it has a wide distribution. Unlike *Lanius excubitor*, it does not occur along the borders of the desert. It is found both north and south of the forest, but its numbers soon thin out when the savanna gives place to the semi-arid belt. Reports from our four British Colonies and from British Cameroon point to its being rather local.

Its favourite habitat is a large open space such as a station clearing in grass-woodland country. Here it will take up its stance on a shrub and sit very still until it sees a grasshopper or other insect moving, when it will swoop down upon it, returning to its perch to devour it.

The nest is usually placed in a bush about 10 ft. from the ground. It is a shallow cup of grass, roots, cotton seed, etc. Eggs number four and are pale blue-grey freckled and spotted with light brown, with a girdle round the widest part. Egg measurements have not been recorded.

Distribution. From Sierra Leone to the northern Cameroon grasslands, ranging east to south-western Uganda, restricted to open country, tree-savanna and thorn scrub, but found along the northern Belgian Congo to the Bahr el Ghazal.

NEWTON'S FISCAL SHRIKE

Lanius newtoni Bocage

A BLACK AND WHITE Fiscal Shrike similar in size to the common West African Fiscal, which it resembles in size, but is blacker in appearance, having an all-black back, no grey on the rump, all-black wings without the usual conspicuous white wing-patch of the Fiscals, and less white on the sides of the back, only the tips instead of the whole of the scapulars being white. The wing measures 93 mm. and the tail 111 mm. (Only one male specimen in the British Museum.)

This shrike is likely to resemble the last species described in many of its habits, but no naturalists have made any notes concerning it. It is restricted to the island of São Thomé in the Gulf of Guinea and is apparently rare or very local.

GREY-BACKED FISCAL SHRIKE

Lanius excubitorius tchadensis Grote and Neumann

THIS is a large handsome black, grey and white shrike. The upper parts are grey including the rump, and the under parts white; these areas are divided by a broad black band continued from the black forehead through the eye and on to the wings, which are black with a broad white patch most conspicuous in flight. The basal half of the tail is white, the terminal half black. A heavy black bill and powerful blackish-brown legs complete the picture of this large Grey-backed Shrike, which from bill to tail measures 10 inches. The long tail and somewhat Babbler-like habits, as observed by reliable naturalists, serve to distinguish it in the field from other shrikes. The wing measures 116–120 mm., the tail 133–142 mm.

The adult female differs from the male in having a large patch of very dark chestnut on each side of the body, which is concealed by the closed wing.

Although only coming within our limits in northern Cameroons and the Shari, it has a much wider distribution to the east and is not uncommon in Darfur and the country to the south. In the former it may be met with as soon as the woodlands are entered in the western basin, and it is well known to naturalists in the southern Sudan. Unlike most shrikes, it is gregarious, being almost always found in parties, companies of as many as twelve or fifteen being seen together. Although named *tchadensis*, it is not at all likely to be found where woodland does not exist. In northern Cameroon at a place south of Marua two females were thought to have had their nests in some trees by a dried-up watercourse, but as yet their eggs remain undescribed.

Distribution. The typical race, *L. e. excubitorius*, is found in the valley of the White Nile and south to Kenya; the birds from Chad, Shari (Fort Lamy) and northern Cameroon (Marua) are paler, especially on the forehead, in which the bases of the feathers are

white rather than grey, and examples from Darfur show the same tendency and may be included with *L. e. tchadensis*. The race is not very stable and the limits of range are not possible to define, but I accepted it in my larger work.

MACKINNON'S GREY SHRIKE

Lanius mackinnoni Sharpe

THE colouring of this shrike is very distinctive, the whole of the upper parts including the rump being of the same grey colour, the scapulars forming a conspicuous white oblong patch on each side. A broad white eye-stripe extends above the black ear-coverts; the

wings are entirely black (an uncommon feature in this genus, where most of the members have a large white wing-patch). The under parts from chin to vent are white in both sexes, the females being distinguished by the partly concealed chestnut patch on the flanks. The long black tail has white tips to all but the middle pair of feathers. The wing is 84–91 mm. and the tail 92–104 mm.

Discovered first in Kenya Colony, where it frequents open sparsely inhabited country freely dotted with acacia bushes, its range has now been found to extend to British and French Cameroon and Gaboon. On the lower slopes of Cameroon Mountain it seems confined to second-growth bush, farms and gardens, spending long periods perched on telephone wires in the vicinity of Buea.

This is one of the true "Butcher-birds" which have earned their name (our British Red-backed Shrike is one of them) from their unpleasant habit of impaling their victims on thorns. Mackinnon's Shrike has been seen feeding on a sunbird impaled in this way, and another had impaled a nestling which had no doubt been taken from the nest.

Small frogs, grasshoppers and various insects make up its normal menu. This shrike is known to imitate very cleverly the calls of other birds, and it has itself a varied but sweet selection of notes. Imbued with strong territorial rights, it drives away other birds which encroach upon its domain.

The nest is a bulky affair of fine fibres, grass and weed-stalks. One examined in southern Cameroon contained two eggs, which were creamy white, finely spotted and speckled with yellowish brown and lilac-grey, with a wreath round the broad end. Measurements are 23–23·5 × 17·5–18 mm. A nest found on Manenguba Mountain, British Cameroon (6,500 ft.) was placed in a tree in a grassy hollow on the mountainside and contained a single nestling on 29th March.

Distribution. In West Africa from Cameroon Mountain (Buea) and Manenguba Mountain (6,500 ft.) south to the Lower Congo, thence across Africa by way of the northern Belgian Congo savannas to Uganda, Kenya and Tanganyika.

SOUZA'S SHRIKE

Lanius souzae Bocage

This is a small shrike, about the size of the Red-backed Shrike (7 in. in total length), which it resembles more than any other, but the long white patches on each side of the back distinguish it in the field, while the very narrow tail-feathers at once proclaim its distinctness from all other shrikes except the very long-tailed Yellow-billed *Corvinella*, in which genus it has sometimes been placed. Grey above, with a sandy-brown wash, rufous margins to the wings, black band on the face and whitish under parts are features to observe. The tail is long but does not exceed 3½ in., and on account of the extreme narrowness of the rectrices it looks longer. It is sharply graduated, and all but the middle feathers have white tips. The wing measures 79–88 mm. and the tail 76–87 mm.

Distribution. Similar in its habits to the next species described, Souza's Shrike is a resident bird in the Congo basin, ranging south to Benguella and eastwards across Africa to Nyasaland and Mozambique, northern Rhodesia and Tanganyika highlands near the north end of Lake Nyasa. It is, of course, a non-migratory species.

EUROPEAN RED-BACKED SHRIKE

Lanius collurio collurio Linnæus

This bird, with which we are familiar in England, is a striking object in its fresh spring plumage, the male with pale grey head, black facial band, rufous back and wings, white throat and pinkish breast. The female is much duller and has the crown and mantle brown, the cream under parts with narrow black crescentic bars, giving it a scaly appearance. Wing is 87–98 mm. and tail 70–82 mm.

Although tropical Africa is the winter habitat of this shrike, even those birds which breed in the extreme west of Europe migrate in an easterly or south-easterly direction before crossing the Mediterranean by way of Syria, Palestine and Transjordania to continue down the east coast, being found in every political area between the Sudan and Cape Province. It is practically unknown in the west anywhere north of the Equator. It has, however, been taken near Garua in northern Cameroon. It does not breed in Africa.

Distribution. Europe and western Asia, wintering in tropical Africa but only a rare vagrant to West Africa.

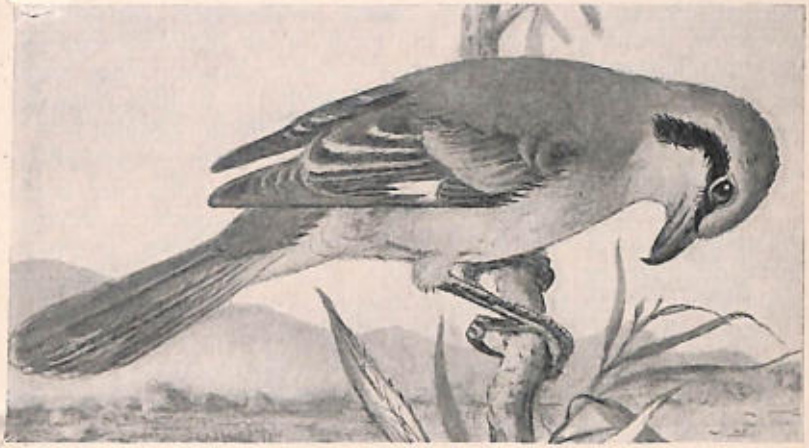
ISABELLINE RED-TAILED SHRIKE

Lanius isabellinus Hemprich and Ehrenberg

This is an isabelline-coloured shrike with reddish tail and rump, pinker below, browner above, and having a total length of 7½ in. with wing-span of 11¼ in. On the sides of the face appears a black band and in the males a white patch in the wing, which shows plainly in flight but is otherwise only just discernible. Wing is 88–100 mm. and tail 75–87 mm. In volume v, p. 369, of *The Birds of Tropical West Africa* I included this bird as a race of *L. collurio.**

* My friend the late Claud B. Ticehurst drew my attention before his death to the error of making *L. isabellinus* a subspecies of *L. collurio* when the structure of its wing differs from that species and agrees with that of *L. cristatus*. In *L. collurio* the second primary is longer than the fifth; in *L. isabellinus* and *L. cristatus* it is shorter than the fifth—a perfectly valid specific distinction. In George Olivier's *Monographie des Pies- Grièches*, 1944, that author retains *Lanius isabellinus* as a full species, and after further comparison of specimens in the British Museum with *L. collurio* and *L. cristatus* I agree that the Isabelline Shrike has strong claims to specific rank as here retained.

This Asiatic species has recently been discovered to winter as far west in Africa as the French Chad Territory, though it had been obtained many years ago in Bornu. It is a desert species, as might be implied from its coloration.



Distribution. A breeding bird in central Asia, Mongolia and Transbaikalia, migrating in winter to north-western India, south-western Iraq, south-western Arabia and eastern Africa in Sudan, Abyssinia, Somaliland, northern Uganda, Kenya Colony, ranging west to Chad territory, to which it seems to be a regular visitor to the area around Fort Lamy. It has also been taken near Maidugari.

EMIN'S RED-BACKED SHRIKE

Lanius gubernator Hartert

I INCLUDE a fuller description than usual of this shrike, as it seems to have escaped notice, though evidently it has a wide but perhaps local distribution.

In the adult male a jet-black frontal band passes above the bill and is continued in a broader band through the lores, eye and ear-coverts. The forehead is whitish, gradually merging into clear grey on the crown, which colour overspreads the nape and mixes with the bright chestnut of the mantle. Scapulars, back, rump, lesser wing-coverts and upper tail-coverts are bright chestnut. Greater coverts are blackish edged with chestnut. Primaries and secondaries are blackish brown, the secondaries broadly fringed with the same colour as the back, with a band of white across the four inner primaries. The tail is blackish brown, with the middle feathers

fringed with rufous chestnut, the remainder tipped and bordered with white, the outermost with an entirely white outer web, and much of the inner web save for a dusky terminal patch. Chin and throat are white; breast, sides and rest of the under parts are pale rufous, darker on the flanks. The middle of the belly and under tail-coverts are white. Axillaries, under wing-coverts and coverts bordering the wing are white. The eye is brown; bill black; legs and feet are plumbeous. Measurements are: Bill 13–14 mm.; wing (male) 77–84 mm., (female) 78–84 mm.; tail (male) 60–66 mm., (female) 64–67 mm.; tarsus (male) 23–25 mm., (female) 20–23 mm.

The adult female differs little from the male, the chestnut of the back being browner and the grey head tinged with a brownish wash.

Immature birds have the wing-coverts and inner secondaries barred, and many of the feathers of the crown, back and under parts have indistinct barring and freckles. The outer web of the outer tail-feathers is rust-colour and not white as in the adult.

The very small size of this shrike distinguishes it from most of the other shrikes in West Africa, its total length being about 6 in. from bill to tail. In flight a pure white patch shows on the wing, and there is white on the outer tail-feathers.

The type of country favoured by this shrike is grass-covered woodland, but its presence close to Lake Chad as well as from the Benin Province of Nigeria points either to a very wide distribution over varying country or to migration. This bird is said to be not uncommon in the northern province of Uganda and is mentioned as living in little parties which may be seen flying from tree to tree and occasionally taking insects on the wing. It must, I feel, be more common than specimens collected would imply, for we hear of it as not uncommon in the Gambaga-Salaga district of the Gold Coast and again on the grassy plateaux of northern Cameroon. We know very little concerning its habits, and its nest and eggs have never been described.

Distribution. From the Nile Province of Uganda westwards through Bahr el Ghazal and the northern Belgian Congo and Shari to the Tibati plateau of Cameroon, Lake Chad, Northern Territories of the Gold Coast and the Benin Province of Nigeria.

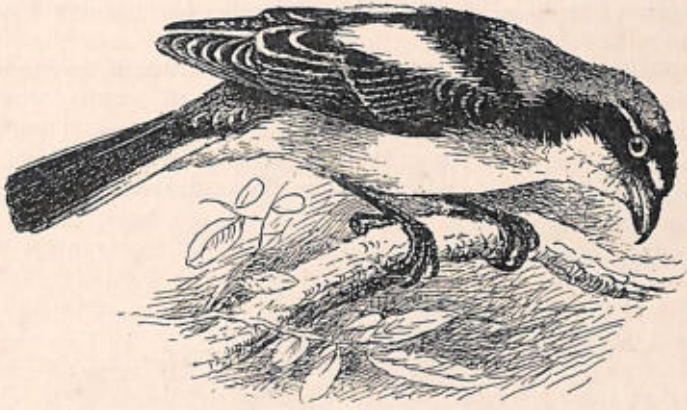
WOODCHAT

Lanius senator Linnæus

Two races occur in winter in our area.

The male is a handsome bird with its chestnut and black back, about 7½ in. long. The forepart of the head is black continued in a band through the eye, with the hind crown and nape rich chestnut.

Wings are black with a large white patch on the quills and a white patch on the sides of the back formed by the scapulars. The wing-patch is not very obvious until the bird flies. In flight the white area in the otherwise black tail also helps to give this shrike a very pied appearance, the black and white setting off the chestnut area behind the crown. The throat is white, the rest of the under parts being washed with isabelline buff.



The female differs from the male in having no black frontal band, a paler chestnut crown, brownish and buff back, cream (instead of white) scapulars and brown and white (instead of black and white) tail.

The wing measures in the typical race 92–101 mm. and the tail 70–82 mm.

The above description applies to both the Common Woodchat and the Corsican Woodchat, but the latter has no white patch at the base of the primaries. In flight, at any rate, the race can be determined in that way.

Both races are winter visitors to West Africa from their breeding range in Europe. *L. senator senator* is the more numerous, as it comes from a much larger area. Woodchats migrate on a wide front and may be expected to occur from September until April in West Africa. They cross the Sahara in large numbers, as is evident from the scattered oases through which they pass, extending from the French Sudan across the whole dry belt to the western basin of Darfur.

Usually the woodchat is encountered alone and may be seen sitting on fences, posts, telegraph wires or bush on cleared land, gardens or farms, awaiting the chance to pounce on some grasshopper or other insect. The Corsican race has been found on a

number of occasions in forest clearings. A bird has been heard to sing quite a pleasant song, but it is usually silent. As it breeds north of the Mediterranean, its nesting habits will not be discussed.

Distribution and Races

L. senator senator Linnæus breeds in Europe from Mediterranean countries north to Germany and extends east to the Caucasus and Russia. Its main winter quarters are in West Africa, chiefly observed in the Northern Territories from the French Sudan to northern Cameroons and northern Nigeria, but ranging east to Darfur.

L. senator badius Hartlaub breeds in certain islands of the Mediterranean and in Italy, passing through Sicily and North Africa on migration to winter in the Ivory and Gold Coasts and parts of Nigeria. It frequents forest clearings and seems to frequent the country south of the forest more than the typical subspecies. It is distinguished by lacking the white area on the basal half of the primaries. The wing is 96–103 mm. and the tail 72–82 mm.

LONG-TAILED SHRIKE

Corvinella corvina (Shaw)

AGAIN two races of this shrike come within our limits.

It is an unmistakable species, owing to its very long graduated tail, the latter being some 7 in. in length of narrow feathers. The outer rectrices are but half the length of the middle pair. The tail is dark brown fringed with rufous and whitish at the tip. The wings are dark brown, but in flight the basal half is bright rufous. In colour the body is ash-brown above and cream below with dark shaft-streaks, the crown rufous brown streaked with sepia. At all seasons the bill of the adult is chrome yellow and the legs jap-green. The wing measures (in typical race) 118–129 mm. and the tail 163–180 mm.

This bird is widely spread over the dry parts of Africa north of the Equator and south of the Sahara, but being an arboreal species it does not occur closer to the desert border than the limit of tree growth permits. Its favourite haunts are perhaps the more open woodlands and cultivation, but it occurs in every type of woodland except the kurimi. The birds fly through the bush in small parties and make a considerable noise as they progress from tree to tree, making a great chirping, buzzing and twittering. Flocks of juveniles often keep together. Several rasping cries are uttered in repetition and can become very irritating to a listener. Thick-leaved trees are favourites.

Pairing begins in April, but so gregarious is the species that pairs join up in the breeding season. Nesting continues for a long time. Eggs or fresh-hatched young have been found from January to July in Nigeria and the Gold Coast. The nest is fairly substantial, being built of twigs and roots and placed in thick bushes or trees 10–15 ft. from the ground. The normal clutch is four. Eggs have a buff or cream ground and are spotted, speckled and scrawled with yellow-brown and undermarkings of grey. They measure 23·4–26 × 18–19·1 mm.

Distribution and Races

C. corvina corvina (Shaw) is found in Senegal, Gambia, Casamance, French Sudan and French Niger Colony. It is very common in Gambia.

C. corvina affinis Hartlaub ranges from Portuguese Guinea through the northern parklands and semi-arid country of Sierra Leone, Gold Coast, Ivory Coast, Dahomey and Nigeria to northern Cameroons, ranging across Africa to Kordofan, Darfur and Upper Nile valley. It is more heavily streaked on the upper parts and has less rufous on the crown and neck.

Another race, *C. c. chapini*, takes its place in northern Uganda.

BARBARY SHRIKE

Laniarius barbarus barbarus (Linnæus)

THE Scarlet-breasted Shrike, as this bird is also termed, is one of the most conspicuous birds in Africa, with its yellow cap, black cheeks and upper parts, black wings and tail, vermilion-red under parts (throat and belly) and brownish-buff thighs. It cannot be confused with any other species, and both male and female are alike. The measurements are: Wing 98–115 mm. and tail 90–108 mm. The eye is dark brown and the bill black; the feet are bluish grey.

It is an inhabitant of semi-arid country, and being a great skulker is not as conspicuous as its colouring would lead one to suspect. I have occasionally seen it in Senegal sitting on a shrub within full view of a passing car, but usually it drops out of sight before a clear view of it can be obtained. In the northern and central provinces of Nigeria the bird frequents dense thickets and may often be seen by streams and rivers and on the edge of marshlands. It is usually to be seen in couples or singly and spends much time searching for food in the undergrowth. Its call is a cheery *whee-u, whee-u* with variations.

The gonolek, as it is sometimes named, is really quite a numerous bird, and in some places, as for instance the banks of the Volta River, it may be observed here and there from its source to its mouth. It is also a familiar species on the Accra plains.

Nests have been found in orange-trees and thick bushes. They are transparent cup-shaped structures of small rootlets with a lining of fine tendrils, although some are unlined. Two eggs are laid, and these are pale blue-green or grey-green sparingly marked with dark brown, orange-brown and lilac spots and blotches and measure 22·8–24·4 × 17·2–18 mm. In Sokoto eggs were found in June and July and in Kano in August.

Distribution and Races

L. barbarus barbarus Linn. is found throughout the thorn-scrub savanna and in much of the tree savanna from Senegal to northern Cameroons, and though fairly common is local, more especially in the south of its range. It is more widely distributed in the interior than in coastal areas, but where the plains (as at Accra) are dry the Barbary Shrike is to be found.

In a small area of Sierra Leone birds have been found having the crown of the head and nape rufous orange instead of yellow. Only two have been obtained at Sherbro Island and in Port Loko Province. This bird has received the name *L. barbarus helenae* Kelsall. It is more likely to be a mutation than a representative subspecies,

but curiously enough normal yellow-crowned birds have not been reported from Sierra Leone to date.

In the vicinity of the M'fumbiro volcanoes a race named *L. barbarus mufumbiri* is found which occurs in Uganda.

ABYSSINIAN GONOLEK

Laniarius erythrogaster Cretzschmar

This bird is entirely black above, including the crown glossed with dark blue, with mostly concealed large white spots on the back and rump, which may show prominently when the rump-feathers are raised or puffed out. The whole under parts are vermilion except for the thighs and under tail-coverts, which are brownish buff. The eye is pale straw-yellow (not brown as in the Babary Shrike, which has also a yellow crown). Bill and legs are blackish. The adult is similar to *L. barbarus* except that the whole crown and nape are black glossed with dark blue like the rest of the upper parts. The measurements are: Wing 95–108 mm.; tail 87–112 mm.

This vermilion-breasted Shrike takes the place of the Barbary Shrike in the Sudan and northern Belgian Congo, and were it not that both birds have been found in the same area in Uganda the one might be considered a race of the other.

It has the same habits as the last species described and is confined to thick bush and to belts of trees bordering lakes and streams. It draws attention to itself by its beautiful bell-like notes, a male and female often answering each other from fifty yards apart, one with the note described, and the other with a sound like the tearing of calico.

Distribution. This bird will be much more familiar to residents in Uganda, Kenya and the southern parts of the Sudan than to those who dwell within the stricter limits dealt with in this book, for its westward range seems to be in the vicinity of Lake Chad, the Shari River and the Bamingui in French Congo. It is found throughout the Anglo-Egyptian Sudan, Eritrea and Abyssinia and ranges south to Tanganyika and the south-eastern Belgian Congo.

YELLOW-BREASTED SHRIKE

Laniarius atroflavus Shelley

In my fifth volume I upheld the race *L. a. craterum* Bates, described from Oku in British Cameroons. Further examples now available prove that the distinction ascribed to this supposed race are not valid.

The coloration of this shrike should enable it to be recognised easily in the limited area which it inhabits. Glossy blue-black above, with white, semi-concealed spots on the long, loose rump-feathers, and the orange-yellow breast with lemon-yellow chin and throat, combine to make up a striking pattern. Wings and tail are black without markings; the middle of the belly is white and the thighs and under tail-coverts are buff. The wing measures 82–90 mm. and the tail 65–79 mm. (including the measurements of examples from Oku).

This fine shrike was discovered on Cameroon Mountain and has a range extending on the mountain from 3,500 to over 7,000 ft. For all its bright colouring it is an elusive bird generally on the move, slipping quietly about the thick-foliaged trees. It has an explosive call—a loud *wheeo*—and a sharp *tuk, tuk* cry of alarm.

Wherever there are trees above 5,000 ft. in the Bamenda Division this is a numerous bird, frequenting the little woods and copses as well as groves of bamboo. It never flies far, only from tree to tree, but is active among the topmost branches of *Ficus* and may be seen low down among brambles, *Erica* and bracken. It is so restless that it is difficult to get a good view of it. It has many notes besides those mentioned above, the most often heard being a ringing *quick quick*, repeated three times.

It nests among undergrowth, bracken and bushes on the edge of woods and forest. The nest is shallow, made of roots and fibre, usually about 2–4 ft. from the ground. Eggs are laid in December and January and are pale light green flecked sparingly with small brown specks forming a zone. They have not been measured.

Distribution. Cameroon Mountain and the highlands of British Cameroons (Bamenda, Oku, Banso Mountains and Manenguba Mountain).

SOOTY BOUBOU

Laniarius leucorhynchus (Hartlaub)

This all-black shrike (even the eyes are nearly black in adults, as well as the legs and powerful bill) is slightly over 8½ in. in total length. Its short wings are very rounded, and the tail is broad and not particularly long. The very long loose feathers which cover the rump are peculiarly disintegrated at the tips. The bill measures 21–25 mm., the wing 88–100 mm. and the tail 77–86 mm. Young birds may be distinguished by the dark brown plumage and pale ivory-coloured bills.

This is a forest and bush-frequenting species which is widely spread in West Africa and the Belgian Congo. It lives in dense

second-growth thickets and forest undergrowth, to which it keeps almost entirely. Rarely is it to be seen in plantations. The usual call of the male is a clear mellow note; that of the female is low and vibrant. The two birds combine in their vocal efforts, and the result is remarkable, both making the strangest variety of gurgling, babbling cries. It is by the notes that this bird must be distinguished from the smaller Mountain-Boubou with its flute-like whistle and chuckling calls.

Neither in its habits nor voice does the Sooty Boubou resemble a shrike. It creeps about the undergrowth, clumsily emerging for a moment from its thicket and then plunging back again. The flight appears to be very weak and is seldom indulged in. Its wings have been heard to make a throbbing noise.

The Sooty Boubou builds a large nest in proportion to its size. It is made of twigs and lined with fine roots, and usually placed in the fork of a tree or sapling some 3–7 ft. from the ground. Two eggs are laid, and these are greenish grey closely covered with obscure ochraceous-brown spots or covered with smears and dots of reddish brown with underlying markings of stone-colour. They measure 24–25 × 17–18 mm.

Distribution. The whole forested area from Sierra Leone to the Congo River. In British Cameroons it ascends to Kumbo. At Ekona (1,400 ft.) in that country it overlaps the range of *Laniarius poensis* which is generally found at higher altitudes. To the east the Sooty Boubou ranges via the Ubangi and Uelle Rivers to the Upper Congo and the Semliki valley, where it again comes within the range of a race of the Black Mountain-Boubou. Care must be taken to learn the notes of these two similarly coloured birds, which are distinguished only by their relative size.

BLACK MOUNTAIN-BOUBOU

Laniarius poensis poensis (Alexander)

THE entire plumage of this boubou is very dark glossy blue, with, in certain lights, reflections of steel-blue and purple. The wings are black, the edges of the secondaries glossed with dark blue. The eye is bluish black; bill, legs and feet are black. The bill measures 17–19 mm., the wing 72–87 mm. and the tail 57–66 mm.

As will be noted from the measurements, it is quite a small bird (not more than 7 in. in total length) and thus very much smaller than the Sooty Boubou, which, here and there in its range, overlaps that of the latter bird.

In Fernando Po, where it was discovered, it haunts the thickest brushwood on the high ground from about 4,000 ft. upwards and

owing to its shy disposition is not easily obtained—or seen, for that matter. It has a wonderful variety of notes, which give away its hiding place, though some are said to be strongly ventriloquial.

On the mainland opposite its island home it has a much wider distribution in the mountainous country of British Cameroons than I suspected when I wrote my fifth volume, at which time I believed it to be restricted to Cameroon Mountain.

Distribution. Fernando Po, Cameroon Mountain, Ekona (1,400 ft.) Manenguba Mountain, Ndu, and Kupé Mountain (3,000–6,000 ft.) in the Banso highlands.

It is replaced in East Africa in the vicinity of the Kivu and Birungo volcanoes by *L. poensis holomelas* Jackson, which is more ashy and greener than the typical West African race.

BELL-SHRIKE

Laniarius ferrugineus major (Hartlaub)

This is a large shrike (about 9 in. in total length), glossy blue-black above, white below, with a strong rosy tinge below the throat. Its most striking feature is the white bar which runs the entire length of the wing and is equally plainly seen when the bird is at rest as in flight. The puff-like feathers of the rump have white patches, which are normally concealed. A rather long all-black tail (young birds have a white tip to the outer feather), dark red eyes, blue-grey feet and a fairly powerful black bill complete the picture of this well-known Bell-Shrike's appearance. The bill measures 22–26 mm., the wing 94–106 mm. and the tail 88–100 mm.

Its black back distinguishes it from the Puff-back Shrikes, and its square black tail without any white in it distinguishes it from the other shrikes with which it may be momentarily confused.

The call of this widely spread bird is very distinctive and has earned for it the name of Bell-Shrike. The notes are soft like a distant flute or bell, accompanied by characteristic head-ducking as each is uttered. Two or three birds utter these duets or trios in unison, while sometimes as many as five birds may be engaged at the same time in this "part song."

As regards its habitat it is a bird of the savanna, in some districts locally scattered; in others, as on the Birwa plateau in Sierra Leone, every ravine seems to hold a pair at least. It lurks in the thickets and is not infrequent in the fringing forest kurimis and elsewhere in Nigeria wherever there is a certain amount of cover. Birds are said to be liable to abandon localities where they have been common and seek new quarters quite suddenly for no apparent reason.

A nest found at Kafanchan on 15th June contained two eggs and was built in the fork of a small leafy tree about 3 ft. from the ground. It was a shallow cup of rootlets and vegetable fibre. The eggs are light blue-green, spotted, speckled and blotched with light brown and underlying markings of lilac. Measurements are: 26·9–27 × 18·6–18·7 mm.

Distribution and Races

L. ferrugineus major (Hartlaub) extends from Sierra Leone through the Gold Coast and northern and southern Nigeria to British and French Cameroons, in the former from the low ground to 7,000 ft. (rare), ranging eastwards across the northern Congo savannas to Uganda, Kenya and Tanganyika.

A race *L. ferrugineus bicolor* (Verreaux), exhibiting minor differences, has been separated from the Lower Congo and Gaboon. Other races have been described from eastern and South Africa.

TURATI'S BUSH-SHRIKE

Laniarius turatii (Verreaux)

THIS is very like the West African Bell-Shrike (*L. ferrugineus major*) and some consider it but a subspecies of that form. I always held the opposite view, and the recent discovery of *major* in the same country as *turatii* seems to bear me out, though whether their ranges overlap is not yet known. The different eggs which these birds lay is another point in my argument. The same size as the other Bell-Shrike, i.e. about 8½ in. in the flesh from bill to tail, this species lacks any white margin or stripe in the wing; the tail is rather long, square and glossy black, but the colour of the breast is the best guide to identification—uniform pinkish buff, never approaching white. The belly and thighs are, however, pure white. The wing measures 88–106 mm. and the tail 83–100 mm.

This is a common bird in Sierra Leone but seldom observed. It lives in the dense creeper-covered tops of thickets and small trees. Its call differs materially from that of the Bell-Shrike and begins with a harsh creaking note like the grating of a rusty hinge and is followed by a clear note similar to one produced by rubbing a wet finger round a finger-bowl.

A nest obtained in Portuguese Guinea at Gunnal was a flimsy structure of grass-stems and fine rootlets and contained two eggs lying on two dried leaves. It was in a bush at the junction of several forking branches 6 ft. from the ground. The eggs were unmarked and hedge-sparrow blue in colour. They each measured 25 × 19 mm.

Distribution. French and Portuguese Guinea and Sierra Leone. In the latter territory it has been found at Freetown, Port Loko, Wilberforce, Wonkofu and in the Karina district. It may or may not overlap the breeding territory of *L. ferrugineus major*.

LÜHDER'S BUSH-SHRIKE

Laniarius lühderi lühderi Reichenow

THIS bird is about 7½ in. in total length and the sides of the face are black bordering a chestnut crown which becomes cinnamon on the forehead. The nape too is chestnut, and a cinnamon line divides the black area around the eye from the chestnut crown. The mantle and wings are black, the coverts broadly tipped with white, as is the border of two of the secondaries. The tail is entirely black and slightly rounded at the tip. The whole under parts are deep cinnamon except the belly, flanks, thighs and under tail-coverts,

which are white. The bill is black; legs and feet are slate-blue. The wing measures 81–94 mm. and the tail 73–87 mm.

Lühder's Shrike is an inhabitant of second-growth forest, where it hides in dense vegetation and in British Cameroon has been observed to keep much to the tree-tops. It utters a sharp *tik tick* and a hollow *coo* (pause), *hohoho* rapidly run together. It also has a soft *coo* uttered in a tremulous manner, which may constantly be heard emanating from the small trees and vines that cover old cleared land in southern Cameroons, especially in the neighbourhood of settlements. This bird is said to be full of curiosity and may be attracted within sight of an observer if the latter remains absolutely still.

Nests are shallow cups of weed-stems invariably lined with rootlets. The two eggs vary from creamy buff to pale greenish blue marked with reddish brown and umber with lavender shell marks, either distributed over the shell or in a wreath round the cap. They measure 22–27 × 16–18 mm. This shrike breeds in southern Cameroon from August to October.

Distribution and Races. The typical race is the only one which occurs north of Angola and is found in many localities in British Cameroons and in French Cameroons, ranging south to the Congo and along the borders of the Congo forest, eastwards to Uganda, Kenya and the forested mountains north-west of Lake Tanganyika.

A very beautiful representative of this shrike with orange-red breast was described by myself from Quicolungo, Angola, and named *L. l. brauni*, and there is yet another, *L. l. amboimensis* Moltoni, with a white breast, described from Amboim in the same country.

BOCAGE'S SHRIKE

Dryophoneus bocagei bocagei (Reichenow)

THE adult is a most handsome species, about 6½ in. in total length, with the black crown and black band behind the eye set off by a white stripe extending the whole length of the head and passing over the brown eye. It has a grey back with black wings and tail, white throat and buff breast. The sexes are practically alike. The legs are slate-colour and the bill is black. The wing measures 76–83 mm. and the tail 63–71 mm.

Bocage's Shrike is now known to live in various mountainous parts of British Cameroon, including Ekona and Kumba. There they are found in the forest belt, and another was secured outside the forest at Bamenda (4,500 ft.). They go about in pairs visiting the trees in the forest clearings, and draw attention to themselves by their calls uttered vigorously and in a high pitch. In southern Cameroons this shrike was seen in the small trees bordering cultivated ground.

Nests are easy to find, placed as they are in little trees. They are cup-shaped and built of dry vine tendrils woven together. Two eggs are laid, and these are greenish white smeared and blotched with olive-brown and grey. Measurements are about 21 × 15·5 mm.

Distribution. British and French Cameroons south to Spanish Guinea and east in the northern Belgian Congo along the course of the Uelle River to Poko.

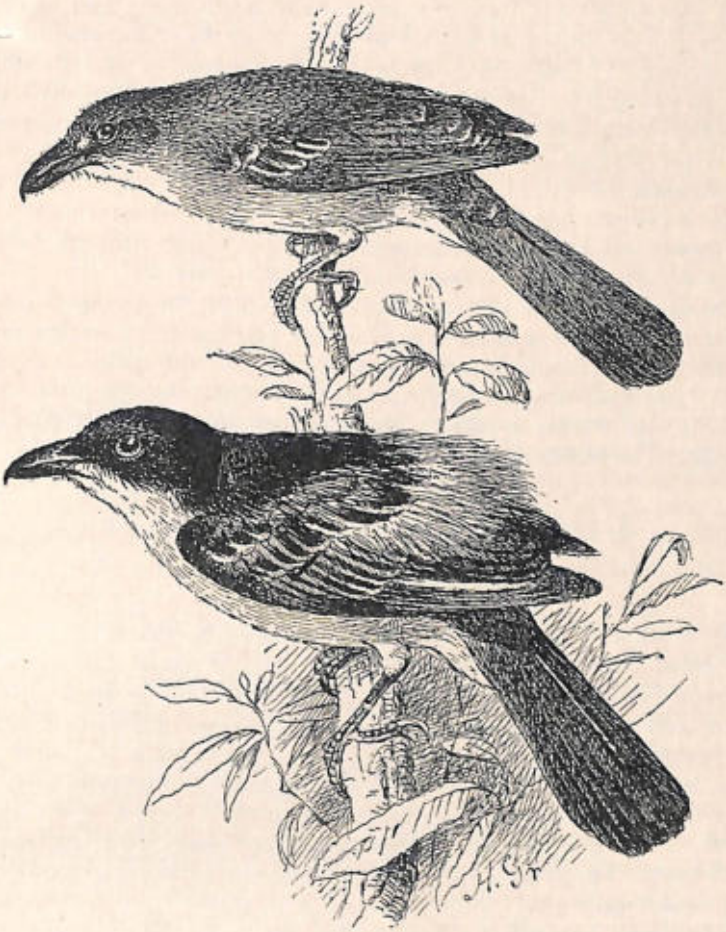
GAMBIAN PUFF-BACK SHRIKE

Dryoscopus gambensis gambensis (Lichtenstein)

ALTHOUGH three races were enumerated from West Africa in my fifth volume, only the above is the race occurring in British Possessions. The other two barely come within our limits.

This familiar, widespread shrike, gaining its name of puff-back from the peculiarly soft, long disintegrated feathers of the rump which can be raised at will in the semblance of a powder puff, is a rather small bird measuring about 7 in. from bill to tail. The males and females are quite different in appearance, the former with glossy black crown and mantle contrasting with the greyish-white puff on the lower back; a black tail, brown wings with white edges to the quills and coverts and greyish-white under parts. The orange or reddish eye is a feature which strikes one in the field. The legs are bluish grey. The female is brown above (with contrasting grey head in the typical form only) and tawny orange below, the eye

being yellow. The very dark brown tail is in contrast to the rest of the rather drab upper parts. The wing measures 83–96 mm. and the tail 71–84 mm. There is practically no difference in the size of the sexes.



The Gambian Puff-back is found in the woodland rather than the dry bush, where it is widely spread both north and south of the forest belt, but not in the forest itself. It is a restless bird and very amorous as the breeding season approaches, the males competing in display and hustling one another about with the utmost jealousy. It may be seen in the tops of acacia-trees, picking off the young shoots with avidity. Insects are its principal diet. The shea-butter tree is also a favourite of this shrike, which is mainly, if not entirely, arboreal.

Seen singly or in pairs, mainly in the tree-tops, its keen red eye is easily detected, as well as the white edges to the wing-feathers as the bird creeps about uttering a noisy *tuk tuk tuk* as it diligently searches for insects.

A nest some 70 ft. from the ground was built firmly between four stems and was made of fine strips of bark plastered outwardly with cobwebs and lined with rootlets. Eggs are white or pinkish white, (1) speckled all over with dark stone-colour or (2) dotted and speckled with sepia with grey shell markings. Egg measurements are 16 × 10 mm.

Distribution and Races

D. gambensis gambensis (Lichtenstein) ranges from Senegal to northern and eastern Cameroons over the whole savanna belt of West Africa and is recorded from all British territory.

Another race, *D. gambensis malzacii* (Heuglin), the female of which has a dark brown instead of grey crown and has paler under parts, inhabits Ubangi-Shari and ranges east to the Nile valley.

D. gambensis congicus Sharpe, with females having slate-grey crowns and darker backs, is restricted to the area of Portuguese Congo. The males of all these races are indistinguishable.

RED-EYED PUFF-BACK SHRIKE

Dryoscopus senegalensis (Hartlaub)

This black and white Puff-back, the male with silky white puff on the rump and the female with a grey puff, is about the size of a sparrow (about 6½ in. from bill to tail-tip). In both sexes the under parts and cheeks are pure white, the crown and back blue-black, the wings and tail black, duller in the female than in the male. The female has a white eye-stripe and small white patch at the base of the upper mandible, but in the male these parts are blue-black. Probably the most noticeable feature is the orange-red eye in both sexes. The bill measures 18–19 mm., the wing 72–82 mm., the tail 60–68 mm.

The name *senegalensis*, given to this species in the mistaken idea that it was an inhabitant of Senegambia, is misleading. The bird is restricted to the forests of Lower Guinea and southern Nigeria and has not been found within many hundreds of miles of Senegal, a country entirely unsuited to its requirements. In southern Cameroon, as well as in British Cameroon, in the Kumba district, it may be met with in the forest clearings, where its varied call-notes may be heard issuing from the tops of small trees.

The bird can puff out the white feathers of its back, when it appears as if carrying a white chrysanthemum on its rump. It is

very shy and difficult to observe, and we know very little about its life-history. It makes a shallow cup of a nest which it places in high trees, binding the materials with cobwebs. The eggs have not been described.

Distribution. Once obtained in Oyo Province, southern Nigeria, but not known from further west. In British Cameroons it was found to be very common in the forest clearings at Kumba and once at Bali (4,000 ft.), but otherwise it is absent from the highlands of that area. It inhabits the lowland forest of Cameroon and ranges to the Moonda River of Gaboon. In the northern Belgian Congo it extends along the Uelle River to the Upper Congo and Semliki valley.

PINK-FOOTED PUFF-BACK SHRIKE

Dryoscopus angolensis boydi Bannerman

THE male of this puff-back is about 8 in. in total length, slate above with paler grey rump, dark blue crown and back of neck and pearly-grey under parts. A white throat contrasts with the greyer breast. The brown eye in this species helps to distinguish *D. angolensis* and its races from the blood-red-eyed *D. gambensis*. The females of *D. angolensis* are very distinct tawny-orange below, with olive-brown back and wings and grey crown; a white belly is an additional feature which may be noted. The wing measures 81 mm. and the tail 61 mm.

This is another species whose range has recently been found to extend westwards into British Cameroons, where it was found singly on the forested slopes between 2,000 and 5,000 ft. It hides in the foliage, usually at a fair height, and the harsh churring call is one's first intimation of its presence. It is not usually a highland species in other parts of its range.

Distribution and Races

D. angolensis boydi Bannerman has now been found on Kupé Mountain in British Cameroon but has a restricted range, as previously it was known only from Cameroon Mountain.

Allied forms occur in northern Angola (*D. a. angolensis*) and in Uganda (*D. a. nandensis*). In the eastern Congo the latter race occurs between 3,000 and 5,000 ft., but in other districts it has been found up to 8,000 ft. in forested areas.

SABINE'S PUFF-BACK SHRIKE

Chaunonotus sabini Gray

Two races come within our limits, the typical subspecies being confined to Upper Guinea.

About 7¼ in. in the flesh in total length, the males with their pure white puff are almost exactly like the male of *Dryoscopus senegalensis*, the only point of real distinction being in the bill, which in Sabine's Shrike is so much longer and heavier, and almost tubular in shape without any raised culmen. The colour pattern of the two—black and white with glossy dark blue crown and mantle—is the same. The female of Sabine's Shrike, with its grey crown, brown upper parts, wings and tail and yellow-ochre under parts, is more like the female of *Dryoscopus angolensis* than of any other bird. If the male and female are both seen their identity will be more easily established, but neither is easy to locate in their forest retreat. The measurements of this bird are: Bill 23–26 mm., wing 78–87 mm., tail 63–70 mm.

Although we can only look upon this shrike as local in its distribution, it is probably not so rare in its chosen habitat as specimens suggest. A forest species, it is usually, if not invariably, to be seen in the thickest undergrowth and is not a bird of clearings so much as the impenetrable parts of the deep forest. No species is more difficult to observe in consequence. It is a bird which was first discovered in Sierra Leone but which has been seen in the forests of Ashanti more often than elsewhere.

Its nest and eggs have not been obtained, which is not surprising.

Distribution and Races

C. sabini sabini Gray occurs in the West African forest country from Sierra Leone to southern Nigeria (Lagos). East of that place it has

not been found, to determine to which race specimens east of the Niger belong.

On Cameroon Mountain and in other localities, Kumba and Mbonge, in British Cameroon, we find the race *C. sabini melanoleucus* (Verreaux), differing in the decidedly darker and browner tail of the female. Males are indistinguishable. This race ranges south to Portuguese Congo and across the Belgian Congo to the Kasai and Ituri districts.

BRUBRU SHRIKE

Nilaus afer Latham

Two races of the Brubru also occur in West Africa, the typical subspecies ranging in Upper Guinea throughout the whole of the semi-arid belt.

This is the smallest member of the shrike family in Africa, measuring only 5½ in. in total length. It is a distinctly marked little bird, mottled black, white and buff above, with a black crown in males (brown in females) bordered with white, a mottled black and white rump and all white below, with chestnut streaks down the sides of the breast and flanks. The wing measures 71–84 mm. and the tail 45–51 mm.

The Brubru is only a visitor to the northern part of its range for the season of the rains. Thus it cannot be seen in Gambia and in places nearer the desert and on the desert borders in the dry season. It is a bird of the small trees of the semi-arid belt, and in the rains may be found almost as far north as there is tree growth, such as at Tillia Grove, but the limit of its distribution is met with before Taberréshat Well (in the French Sudan, just south of lat. 18° N.) is reached. Where the country is dry and suited to its needs, as are the Accra plains, it will be found not far from the coast, but for the most part it is a bird we must seek in the Northern Territories of our colonial possessions in the dry bush country.

Apart from its pied plumage, it attracts attention to itself by its melodious pea-whistle, the female answering the male in a lower

This is a black-crowned bird with chestnut wings and greyish-white under parts. A pale eye-stripe passes over the eye and a black one through it, both being noticeable in a perching bird. As the tchagra takes flight its black tail is expanded and one sees round the perimeter the white tips of the feathers. The danger of confusion with the *Tchagra australis* subspecies has already been pointed out under *T. a. ussheri* where their ranges overlap, the latter having a brown crown bordered with black, not all jet-black as in the *Tchagra senegala* subspecies. The wing of *T. s. senegala* measures 82–89 mm. and the tail 88–104 mm. For measurements of races see final paragraph.

It is a most conspicuous bird, and as it inhabits open country and perches freely in small trees and in bushes it cannot escape notice. Usually it is seen in pairs or singly, but after breeding family parties remain together for a time. Though not given to advertising its presence by sitting on the top of a bush or post or other commanding position as the Puff-back or Woodchat Shrikes, it may often be seen on the outskirts of cultivation or on hillsides and is thickly and widely distributed in the grass-woodlands, showing a preference for well-watered open country and farmlands, eschewing dense bush and forest. In the acacia belt south of the desert races of this bird occur in drier areas. Most of its food is found on the ground, and it searches for insects beneath the bushes and in grass or fallen leaves.

The best known of the races is *T. senegala pallida*, and its cheerful whistle with many variations must be familiar to many in Nigeria and the Gold Coast, for at times the bush rings with the birds' notes. They differ from those of the Brown-crowned Tchagra (*T. australis*), though the birds look so much alike.

During the breeding season the male makes frequent short but spectacular flights, during which it sings vehemently—a pretty love-flight which may often be witnessed in the low bush country.

Nests are placed in shrubs or small trees in the open savanna at 2–4 ft. from the ground, and these are shallow cup-shaped structures of rootlets and fibre and perhaps a few grasses in the external fabric. The normal clutch is two. The usual type of egg is scrawled, streaked and smudged with claret, red-brown markings forming a ring round the large end. In some the blotches and spots are chiefly congregated at the large end. Measurements of *T. s. pallida* eggs are 23–24·9 × 17·1–18·2 mm. and of *T. s. notha* 22–24·4 × 15·9–17·7 mm.

Distribution and Races

T. senegala senegala (Linnæus) occurs in Senegal, Gambia, Portuguese Guinea, Sierra Leone, Foutta Jalon and French Sudan to Upper Niger (Cercle du Mopti). It is very common in Gambia and Sierra Leone.

T. senegala timbuktana Bates occurs in the vicinity of Timbuktu, French Sudan. It is a very pale-coloured race but may eventually have to be united with the next. Its wing is 91–93 mm. and tail 110–112 mm.

T. senegala notha (Reichenow) occurs in the northern area of Sokoto, Kano and Bornu and Chad, ranging westwards along the borders of the desert to Tawa and Tillia Wells. This is another pale desert race, living north of the area inhabited by the following race. Its wing is 87–95 mm. and tail 95–115 mm.

T. senegala pallida (Neumann) ranges from the Ubangi-Shari through Nigeria (except the area inhabited by *T. s. notha*) and the Gold Coast and Ivory Coast north to about lat. 12° N., reaching the maritime plains at Accra. This race is greyer and darker than *T. s. senegala* on the under side and not so pale above as the two races living near the desert. Its wing is 80–91 mm. and tail 84–102 mm.

T. senegala camerunensis (Neumann) inhabits the savanna highlands of the Cameroons and ranges from the French Congo to the Bahr el Ghazal and Ruwenzori. In this race the whole upper parts are considerably darker brown than in *T. s. pallida*, which is itself darker than any of the other races in our area. It is duskier on the under parts, and the chestnut on the wing is of a deeper shade. Its wing is 84–92 mm. and tail 82–95 mm.

LITTLE BLACKCAP TCHAGRA

Antichromus minutus minutus (Hartlaub)

THE entire crown of this shrike is black, and the cheeks and throat are white. In the female a fairly broad white stripe over the eye proclaims the sex. The rest of the plumage is chestnut and black, the wings are chestnut when closed, black bordered with chestnut when opened. A black V-shaped mark on the shoulders, brown back and black tail with pale tips complete the picture. The whole under parts are buff or pale fawn-colour except for the white throat. The wing measures 71–80 mm., the tail 67–82 mm.

A favourite haunt of this rather uncommon bird in Sierra Leone is young re-growth bush that has been farmed the year previously. It has also been seen frequently in a very different environment—low marshy ground overgrown with high grass, among which are taller shrubs upon which it delights to perch as evening approaches. Swamps and long grass are specially beloved of the species in the Gold Coast, where it may be observed on the lower reaches of the Volta from Krachi to its mouth. Swamplands and fadammas are associated with its presence too in Nigeria, but once I heard of it

being flushed from thick undergrowth in a patch of forest in Ashanti.

The call-note is a *tchik* and it has also a cheery whistle and an angry *chuck chuck*. If disturbed it prefers to creep away in the grass rather than take flight, and this habit, together with its smaller size, may prevent confusion with the Black-crowned Tchagra when the two occur in the same locality. Another point of difference is its stumpy tail.

The birds pair (in Nigeria) in the rains and breed in the moister parts of the savanna where the grass grows rank and tall. A nest found in such a situation was attached by gossamer threads to a weed about 2½ ft. from the ground and was made entirely of roots and fibre. The eggs have a white ground and are blotched and spotted with warm brown with a few underlying purplish markings forming a zone. They measure 22·7–23·5 × 17·5 mm. and are smaller than the eggs of *T. senegala pallida*.

Distribution and Races. This bird is found all over Africa and is divided into two races, roughly extending north and south of the Equator respectively.

A. m. minutus is the only race with which we are immediately concerned. It is locally distributed over the whole area from Sierra Leone to the Lower Congo. Gambia lies too far north of its range, which roughly extends to about lat. 11° N. It occurs again in East Africa in Abyssinia, Uganda and Kenya and seems to be subject to some migratory movements during the dry season in West Africa.

South of the Equator its place is taken by *Antichromus minutus anchietae* (Bocage), which ranges from Angola to Southern Rhodesia.

MANY-COLOURED BUSH-SHRIKE

Chlorophoneus multicolor Gray

(see Plate 45, facing page 1197)

Two races come within our West African limits, the typical subspecies (which is dimorphic) ranging throughout Upper Guinea from Sierra Leone to British Cameroon. Their respective ranges will be summarised later.

This most conspicuously coloured bird, scarlet below with grey head and mantle, green wings, back and tail (the latter with orange tips preceded by a blackish area) and a broad black band through the eye and above the bill, will not be difficult to recognise. Old males have white foreheads, but this is not present in females or young birds. The wing in *C. m. multicolor* measures 95–108 mm. and the tail 85–97 mm.

This shrike is subject more than any other to mutation. Three well-known types are described in my fifth volume, and each of these has received a name. The two commonest are figured in colour in the accompanying plate. We have (1) the normally coloured bird, with the under parts and tail-tips scarlet, (2) the phase in which the under parts and tail-tips are golden orange and (3) the rarest phase of all, in which the throat and breast are jet-black. These abnormal colour phases have turned up spasmodically hundreds, if not thousands, of miles apart from Sierra Leone to Cameroons. Sometimes two phases have been collected almost side by side, and recently in British Cameroon all three have turned up.

These mutations are not restricted to the typical *C. m. multicolor* in Upper Guinea but have been found to occur in the Lower Guinea subspecies *C. m. batesi* also. There is not space in this handbook to give more details concerning them, but the subject is dealt with more fully in the literature cited. A mutation of *C. multicolor* which occurs in both Upper and Lower Guinea with orange breast, and exhibits the same variations in the tail as the two races, has been named *C. melamprosopus* and is figured in colour on the plate of shrikes together with the normal species.

Despite its brilliant plumage the Many-coloured Bush-Shrike is not very often seen, for it is a forest species which keeps to the tops of the trees, and unless its harsh *chack chack* is heard it is likely to pass unnoticed. It occasionally leaves its high forest trees and comes down to feed in the second growth and will even venture to feed in heavily foliaged fruit-trees. That it will descend to the ground is evidenced by grasshoppers being found in its stomach in addition to larvae and caterpillars.

These shrikes have a distinctive call, a melodious whistling whoop, rather melancholy in tone, and until this is learned it is often not detected. Europeans in West Africa who have seen it are few and far between. The birds occur singly or two or three together, but manage successfully to keep well hidden. Their nests and eggs have not yet been found.

Distribution and Races

C. multicolor multicolor (Gray) occurs in all the West African forests from Sierra Leone to British Cameroon, south of which its place is taken by *C. multicolor batesi*, distinguished by having a jet-black tail

with the tips scarlet, only the upper tail-coverts being green. The scarlet of the breast extends over the belly on to the under tail-coverts. There is also scarlet on the under wing-coverts in this race instead of uniform bright yellow. The wing measures 91–98 mm. and the tail 80–89 mm. The adult female in *C. m. batesi* has more white on the forehead than the female of *C. m. multicolor* exhibits as a rule.

This Lower Guinea race ranges from southern Cameroon to northern Angola and extends to Lake Albert Edward, the Semliki valley and Toro in western Uganda. This race is subject to mutation, both orange and scarlet-breasted birds having been obtained in Cameroon and the eastern Congo.

ORANGE-BREASTED BUSH-SHRIKE

Chlorophoneus sulfureopectus sulfureopectus (Lesson)

(see Plate 45, facing page 1197)

This brightly coloured shrike is easy to recognise. It is not one of the large species, measuring from bill to tail-tip about $7\frac{1}{2}$–$7\frac{3}{4}$ in. It is grey on the crown and back with green wings and tail, a black or slate band on the sides of the face and a broad yellow forehead and eye-stripe, the last being an arresting feature. The under parts are bright yellow save for the orange-red breast. In flight the wings appear dark with green edges, and the yellow tips to the tail-feathers are then more noticeable. It has a small black bill and blackish legs and feet, and the brown eye is one of the points of distinction between it and the Grey-headed Bush-Shrike (*poliocephalus*), which, besides being a much larger bird (almost double the size), with grey (not yellow) forehead, has a reddish-orange-coloured eye. The wing measures 87–97 mm. and the tail 83–95 mm. in the Orange-breasted Bush-Shrike.

It is divided into two races, but in West Africa we are only concerned with the typical subspecies.

It occurs in all our Colonies but absents itself from Gambia and the dry country of the north during the dry season. Widely distributed as it is in orchard bush and parklands, it is none the less local. In Nigeria, where it is probably sparsely distributed in the grass-woodlands, it is more often heard than seen, sticking as it does to the thickets and seldom coming into the open. Fringing forest and fairly thick bush are favourite haunts, and there the birds may be seen, singly or in couples, searching the leafy foliage.

The call is easily learned and consists of a pleasant trisyllabic whistle. Another interpretation is "pretty little Joey," uttered in a piping tone. Before beginning its song the bird bows forward, then

bends its head backwards and calls with the beak upwards and the brightly coloured breast and throat well displayed. In Nigeria it seems to range as far north as lat. 11° N. but no further.

It is only since 1945 that its eggs and nest have been found and described. These were found near Cape Coast in May and July respectively. The platform of roots, lined with lighter tendrils, of which the nest was made, was placed on a date frond about 5 ft. from the ground. Two eggs complete the clutch, and the ground colour varies from white tinged pink to greenish white, the shell being smeared with pale reddish brown or more heavily blotched with umber, especially at the broad end. The eggs measure 15·5–17 × 8·9–9·5 mm.

Distribution. The typical race extends on the west from Senegal to southern Nigeria and northern Cameroon (Garua and Marua); thence we can trace its range eastwards through the Ubangi-Shari and Belgian Congo savannas to Uganda, where it meets with the East African subspecies, *C. sulfureopectus similis* (Smith). The latter ranges from the Sudan and Abyssinia to Cape Province and in the west to Angola.

KUPÉ MOUNTAIN BUSH-SHRIKE

Chlorophoneus kupeensis Serle

THIS fine new shrike was only discovered in June 1951, actually after this book had commenced printing, and is the latest discovery from Africa of a striking new species.

Its colours are distinctive. The lores are black and are joined by a jet-black band across the forehead which is continued backwards below the eye to join the black cheeks and ear-coverts, the whole forming a conspicuous black band across the sides of the face. The crown, nape and sides of the neck are blue-grey, which colour overspreads the mantle; the frontal feathers adjoining the black frontal band in three female specimens are almost white, continued in a narrow white line over the eye. In the only male collected the white superciliary is less apparent, but this may be individual and not a true sexual distinction.

The wings when closed appear entirely green, but when open the inner webs will be seen to be brown. The back and rump are green and also the upper tail-coverts. The tail, which is square-tipped and is rather more than 3 in. in length, is also green, of the same shade as the wings. The chin and throat are pure white, with a broken necklace of several heavy black spots at the base of the throat, caused by black tips to a few of the white feathers. The breast and sides of the body are blue-grey with a bright yellow area at the base of the belly; the long flank-feathers are green, as also are the thighs; the under tail-coverts, under wing-coverts and axillaries are bright yellow. The iris is violet, the bill black; the legs and feet are grey. The sexes of this shrike are alike in plumage.

The bill, which is heavier than is usual in *Chlorophoneus*, measures (male) 24 mm., (female) 22 mm. It does not approach the size or heaviness of the bill of the Gladiator Shrikes (*Malaconotus*). The wing measures 97–99 mm., tail 79–80 mm., tarsus 28–29 mm.

This Bush-Shrike lives at an altitude of 4,500 ft. and all the specimens were collected on Mount Kupé, above Nyassoso in British Cameroons, on the steep slopes of the mountain, which is covered with primeval deciduous forest. Dr. William Serle, who discovered this shrike within a few miles of the place where he discovered the new babbler, *Kupeornis gilberti*, tells me that the birds were apparently restricted to an area of a few acres. Those which he shot had insect remains in their stomachs.

It was described by Dr. Serle at the October meeting of the British Ornithologists' Club held in London, and a full description of the bird by its discoverer is given in *Bull. B. O. C.*, 1951.

PERRIN'S BUSH-SHRIKE

Telophorus viridis (Vieillot)

This is a most strikingly coloured shrike, impossible to confuse with any other member of the shrike family. Grass-green above, with orange-yellow forehead and black tail, the most conspicuous feature is the crimson throat encircled entirely by a black crescent, which joins a black band under the eye to complete the black surround. Below the crimson throat a broad black band (18 mm. wide) crosses the breast, below which the green belly is divided down the middle by a line of chocolate-maroon feathers, turning to bright maroon on the under tail-coverts. A black bill (rather fine for a shrike and not very prominently hooked), dark brown eyes and slate-blue legs complete the colour picture of this beautiful bird. Measurements are: Bill 17–19 mm., wing 80–86 mm., tail 78–83 mm.

ORIOLE CUCKOO-SHRIKE ♂

BLUE CUCKOO-SHRIKE ♂

PURPLE-THROATED CUCKOO-SHRIKE

♀ left ♂ right

RED-SHOULDERED CUCKOO SHRIKE ♂

WATTLED CUCKOO-SHRIKE ♂

MANY-COLOURED BUSH-SHRIKE
(Golden-breasted phase)

RED-BILLED SHRIKE

FIERY-BREASTED BUSH-SHRIKE

ORANGE-BREASTED BUSH-SHRIKE

MANY-COLOURED BUSH-SHRIKE
(Scarlet-breasted phase)

WEST AFRICAN NICATOR

GREY-HEADED BUSH-SHRIKE

It is a pity that this bird does not occur in any British Colony, so ornamental is its plumage. First discovered at Malimbe in Portuguese Congo, it has since been obtained at various localities near the mouth of the Congo and in Angola and Benguella. It is known to range east in the Lower Congo to Leopoldville. No one appears to have studied this shrike's habits, and nothing is known about its life-history.

GLADIATOR OR GREY-HEADED BUSH-SHRIKE

Malaconotus poliocephalus (Lichtenstein)

(see Plate 45, facing this page)

ALTHOUGH the Grey-headed Bush-Shrike from Cameroon Mountain has been separated as distinct under the name *M. p. gladiator*, it is the bird which Lichtenstein named *poliocephalus* from Senegambia which is found so widely in West Africa and occurs in all four British Colonies.

This is a giant among the shrikes, measuring about 11 in. in total length. The huge, powerful hooked bill is as long as the head and gives the bird a most aggressive appearance. The grey head with the white band in front of the eye contrasts sharply with the bright green back. Prominent yellowish-white spots on the wing-coverts, and broad yellowish-white tips to the green wings and tail-feathers, with the bright yellow under parts combine to make it a most conspicuous bird. It differs from the Orange-breasted Bush-Shrike (*C. s. sulfureopectus*) in its much larger size, in the absence of yellow on the forehead and lores and in having a reddish-orange or yellow eye instead of a brown one. The measurements of *M. p. poliocephalus* are: Bill 25–31 mm., wing 117–132 mm., tail 103–121 mm., tarsus 35–41 mm.

The Gladiator is an inhabitant of thickets and fairly large trees in the savanna country and extends north into the southern part of the semi-arid belt, which accounts for its being found throughout Gambia all the year round. Its range embraces the Northern Territories of our Colonies, and thus it only just comes within the northern boundaries of Sierra Leone.

The birds go about in parties of six or eight in the open woodlands, feeding largely on locusts and coleoptera, but one has been seen with a grass snake 2 ft. long in its bill and another with a lizard. It is not uncommon in the vicinity of Bole in the Gold Coast. In Nigeria we find it generally, though sparingly, in the Northern Provinces, ranging north to at least lat. 12° 15′ N. Fringing forest and the outskirts of kurimis are probably its chief haunts in Nigeria, but it may be met with anywhere in open parkland where the trees are not too

dense. It is entirely arboreal in its habits, and when food is taken on the ground it is usually carried to a tree to be devoured. At Kaduna it has been seen in gardens. Despite its vivid colouring it is not conspicuous and may be more numerous than is generally believed. It has various weird calls—one a melancholy bell-like note, ending in a high staccato note, repeated monotonously.

The nest is rather shallow, built of root-fibres and tendrils on a foundation of twigs. Another nest had small twigs and strong grass as its foundation and was lined with leaves. It may be situated anything from 15 to 25 ft. from the ground and is usually in the fork of a tree. The eggs, which are two in number, have a ground colour varying from pinkish buff to lilac-brown, blotched and heavily spotted with various shades of brown and underlying pale lilac. Egg measurements are 28·8–30·2 × 19·6–21·5 mm. Eggs or young have been found in September, February and March in Nigeria.

Distribution and Races

M. poliocephalus poliocephalus* (Lichtenstein) extends from Senegal, Gambia and Casamance, through the northern savanna of Sierra Leone, Liberia, the Ivory and Gold Coasts to northern Nigeria and the grasslands of eastern Cameroons. It is this same race which has been found in Angola and apparently ranges both north and south of the Congo forest to reach the country west of Lake Tanganyika.

M. poliocephalus gladiator Reichenow appears to be restricted to Cameroon Mountain and the neighbouring heights in British Cameroon, where it has recently been obtained near Bamenda (6,500 ft.). It differs in having the grey of the head and nape darker and especially by having a pure white narrow eyebrow extending to the hinder part of the eye. Wing and tail are both 115 mm. A green-breasted mutant of this bird has been shot on Cameroon Mountain and is in fact the type.

LAGDEN'S BUSH-SHRIKE

Malaconotus lagdeni (Sharpe)

LAGDEN'S Bush-Shrike is still something of a mystery, having so seldom been found, and then at distances of hundreds of miles apart, as at Ashanti and Ruwenzori. In many respects it is like the last species described. The crown and cheeks are slate-grey, the grey

* It has been suggested that *Lanius poliocephalus* Licht. (1823) is invalidated by *Lanius poliocephalus* Stanley (1814), which latter is a helmet-shrike (*Prionops*). As I have already used Lichtenstein's name in the fifth volume of *The Birds of Tropical West Africa*, I have retained the same name in the handbook to avoid confusion in the minds of those who may consult both these books. If the name *poliocephalus* cannot be applied to the West African Gladiator, it seems that a new name will have to be proposed for it.

extending on to the mantle, which, with the rest of the upper parts, is dark olive-green. The upper tail-coverts are similar but fringed with yellow. All the wing-coverts are jet-black broadly tipped with yellow. The tail is olive-green with yellow tips to the feathers. Chin and throat are orange; the rest of the under parts are golden yellow, but the sides are washed with green. The under tail-coverts, axillaries and under wing-coverts are bright yellow. The bill is black, the legs are slate-blue and the iris is pale grey. The bill measures 25 mm., the wing 113–117 mm. and the tail 104–111 mm.

The first example of this Bush-Shrike was obtained in Ashanti and described in 1884. No second example has ever turned up in West Africa, and unless some collector turns his attention to the birds which live in the canopy of the high forest it is not likely to be seen again for many more years. It was in the tops of the tall forest trees that the other specimens known were secured. Of its habits we can only surmise that they resemble those of its near relative, the Grey-headed Bush-Shrike.

Distribution. The Gold Coast (Ashanti), Ruwenzori (Mubuku valley, 9,000 ft.), Kivu (Lulenga). These are the only three examples known.

FIERY-BREASTED BUSH-SHRIKE

Malaconotus cruentus (Lesson)

(see Plate 45, facing page 1197)

Two races come within our limits, the typical subspecies being that which is found in all British territories.

This is a brilliantly coloured shrike with grey head and mantle, bright green back, wings and tail, with black subterminal band on wings and tail and broad yellow tips to all the remiges and rectrices. When in flight the black inner webs to the primaries and secondaries assist to make a prettily patterned wing of black, yellow and green. Bright as are the upper parts, the under parts are more so—a vermilion throat and golden-yellow breast and belly, the former also

washed strongly with vermilion. A heavy black bill, blue legs and a white area in front of the grey eye complete the picture of this gorgeous species. Despite its conspicuous plumage it is seldom seen, as it hides in dense forest undergrowth. Chief measurements of the typical subspecies are: Wing 102–109 mm., tail 99–105 mm. This fine bird is figured in colour in my plate of the shrikes.

Very occasionally, deep in the forest, a glimpse of this bird may be obtained, but it is very shy and only by patient waiting can the observer be rewarded perhaps by a view of a little party of them as they cross a forest path. Its call is strong, clear and flute-like. Harsh notes have also been attributed to it, and it has a soft chattering song. It feeds in leisurely manner among the foliage, occasionally of the higher trees but more often in secondary growth or in tangled vines among the lower trees. Coleoptera, small frogs and many insects form its chief food supply, but it will no doubt tackle anything from an ant to a fair-sized snake when opportunity offers.

This bird builds a bulky nest of fibres, tendrils, weed-stems, grass and maize-silk, and this is securely placed among twigs. Two eggs taken in southern Cameroon are creamy white finely speckled and spotted all over with pale yellowish brown and lilac-grey. They measure 23–23·5 × 17·5–18 mm.

Distribution and Races

Malaconotus cruentus cruentus (Lesson) is found in the forest region from Sierra Leone to (and including) British Cameroon. It has now been found in all our Colonies and Protectorates except Gambia, which lies beyond the forest area.

Malaconotus cruentus gabonensis Shelley takes the place of the above in the forests of French Cameroons and Gaboon, but exactly how far west this race extends cannot be determined until more specimens are obtained between the Ja River and Cameroon Mountain. It differs in having the under parts more vermilion, the throat and breast more inclining to crimson and much less yellow on the whole under parts, especially on the belly, which is washed with vermilion to the vent. Measurements are: Wing 104–110 mm., tail 94–106 mm.

WEST AFRICAN NICATOR

Nicator chloris chloris (Valenciennes)

(see Plate 45, facing page 1197)

THE male of this curious-looking shrike is about 10 in. in total length, the female at most 8¾ in. The whole upper parts are dark olive-green, with a rather long yellowish-olive tail. Below it is ash-grey, with yellow ventral region and yellow under the wings. The most conspicuous feature is the wing, which is covered with large

yellowish spots. The plumage of this bird is ample and rather loose on the rump and back. The wing measures (male) 96–112 mm., (female) 84–93 mm.; tail (male) 90–105 mm., (female) 84–92 mm. It will be noted how much smaller are the dimensions of the female than the male.

The Nicator is an exceedingly common bird of the second-growth forests and gallery forests which reach into savanna country, and it is often seen or heard in dense bush and thickets. It draws attention to itself by its voice but is very difficult to locate among the foliage. Its song is really attractive. One writer observes that the Nicator will often sit in an impenetrable thicket for a long time, making the forest resound every twenty or thirty seconds with a splendid burst of liquid throat notes of a power and richness unsurpassed. It is important to learn its notes in order to distinguish between the songster and its close relation *Nicator vireo*, which so closely resembles it in plumage but has an entirely different note. Its relative abundance may also be assessed by its notes, as it is a shy bird which is not given to taking up prominent positions, and is consequently more often heard than seen.

It makes a slight nest, rudely constructed of tendrils tangled together, and lays clay-coloured eggs which are densely marked.

Distribution. Widely spread from the Senegal River to the Congo, ranging eastwards through the northern Belgian Congo and Bahr el Ghazal to Uganda. Although not yet reported from Gambia, it must certainly be found there, as it is in all other of our West African Colonies wherever dense bush and thickets occur.

YELLOW-THROATED NICATOR

Nicator vireo Cabanis

This bird is very like *Nicator chloris* but is much smaller in size, the male being about 7½ in. in total length as against 10 in., but as there is a considerable difference in size between the sexes in both species, the males of *vireo* and the females of *chloris* approach one another very closely in size. The main points of distinction are as follows. *N. vireo* has a yellow stripe in front of and over the eye, a large yellow patch on the throat, and the forehead and cheeks grey instead of yellowish green. Both species have the conspicuous yellow spots on the wings and yellow tips to the tail-feathers. The wing of *N. vireo* measures (male) 77–87 mm., (female) 71–72 mm.; tail (male) 73–83 mm., (female) 69–72 mm.

The surest way to distinguish between this bird and the last species described is to learn its voice. That of *N. vireo* is likened to a bugle-call of half a dozen notes, mostly in one tone but rising to

a higher pitch before the end and then dropping again. It has, in fact, a remarkable clarion song for so small a bird, and though difficult to describe in words it is quite unmistakable when heard. I stress this point especially as the Yellow-throated Nicator is believed to occur in the high forests of Sierra Leone. Notes like those described and glimpses of a bird resembling it have been reported from the Peninsular reserve at York Pass and from the Kambui reserve, but the identification of the singer has never been actually proved. As its true home is many hundreds of miles to the south, in southern Cameroons, it would be of great interest to find it established also in Upper Guinea.

This is not, like *N. chloris*, a bird of dense bush, but from the little we know of it the Yellow-throated Nicator keeps to the canopy of the highest primeval forest. It may be heard singing at almost any time of day among the foliage of some tree, usually high and out of sight.

Neither its eggs nor its nest have been found.

Distribution. The forests of southern Cameroon, ranging south to northern Angola. We find it in the western Belgian and Portuguese Congo and ranging as far east in the Congo forest as Irumu on the Ituri River.

As mentioned above, a bird resembling this species has been reliably reported on strong evidence (but not yet obtained) from Sierra Leone.

BLACK-COLLARED BULBUL-SHRIKE

Neolestes torquatus Cabanis

A GREY crown and nape, green back, wings and tail with bright yellow edging just below the bend of the wing, white under parts crossed by the broad blue-black band over the chest—such are the main features of this very distinctively coloured bird, whether we term it a shrike or a bulbul, though it has more the manners of the latter. It is a comparatively small bird about the size of a sparrow, about 6 in. from bill to tail, the latter rather short and rounded. The white throat and cheeks bordered by the encircling blue collar must be very distinctive in life. At rest, the yellow edge to the wing below the bend must also be noticeable and the yellow under the wing when it is raised. The wing measures 72–75 mm. and the tail 58–63 mm. A feature of this bird is the markedly curved and highly arched upper mandible of the bill, the latter being 12–13 mm. in length.

Although I have retained this curious bird in the *Laniidae*, as it appeared in that family in the fifth volume of my larger work there

are strong reasons for removing it to the *Pycnonotidae*, for, as my friend Dr. J. P. Chapin has pointed out, it has the habits of a true bulbul and not those of a shrike.

It moves about in small family parties and lives in savanna country, where it perches on the small trees and bushes, feeding on fruits and uttering twittering notes not unlike those of other bulbuls.

It builds a frail nest of slender grass and plant-stems, laying two pinkish-white eggs, indistinctly speckled with darker pinkish and with a faint rufous zone at the large end. The eggs measure 20–20·8 × 14·2–14·4 mm.

Distribution. The savannas immediately south of the Gaboon-Congo forest from the Loango coast, Lower Congo and northern Angola east across the Kasai district to Manyema grasslands, then northward along the eastern border of the forest to Lake Kivu.

FAMILY ORIOLIDAE

Key to the Orioles

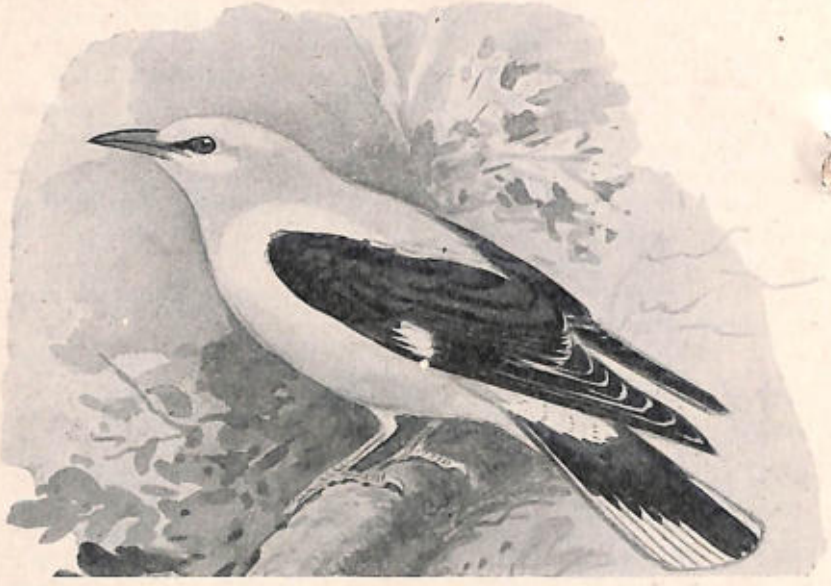
1. Head black 2
   Head not black 4
2. Breast and belly whitish *Oriolus crassirostris* (adult), p. 1210
   Breast and belly yellow 3
3. Middle pair of tail-feathers black
   Oriolus nigripennis ♂ and ♀, p. 1209
   Middle pair of tail-feathers green
   Oriolus brachyrynchus and subsp., p. 1207
4. Under parts white or whitish with dark streaks on breast 5
   Under parts plain yellow or yellow with dark streaks on breast 6
5. Sides of body washed with yellow, upper side bright yellowish olive .. *Oriolus oriolus oriolus* (immature), p. 1204
   Sides of body not washed with yellow, upper side grey-brown with slight olive wash
   Oriolus crassirostris (immature), p. 1210
6. Under parts uniform yellow, no streaks or mottling .. 7
   Under parts with yellow on belly and sides but definitely streaked or mottled 8
7. Black band passing through eye (more dusky in female), secondaries broadly fringed with yellow
   Oriolus auratus (adults), p. 1205
   Black on face confined to black spot in front of eye (more dusky in female), secondaries not bordered with yellow
   Oriolus oriolus oriolus (adults), p. 1204

8. Streaking of under parts very bold and blackish
Oriolus auratus (immature), p. 1205
Streaking of under parts obscure, with dusky shaft-stripes and some mottling on breast
Oriolus oriolus oriolus ♀, p. 1204

EUROPEAN GOLDEN ORIOLE

Oriolus oriolus oriolus (Linnæus)

THIS is a most striking bird, about 10 in. in total length, with the male golden yellow throughout except for black wings (with a pale yellow patch on the primaries most noticeable in flight but visible also when at rest) and a black and yellow patterned tail. It has



rather long, pointed wings and a comparatively short square tail, a fairly long reddish bill and an eye which varies in colour from crimson to deep reddish brown. The wing measures 146–161 mm. and the tail 77–85 mm.

Females are much less brilliantly coloured, greenish yellow above, whitish below with faint breast-stripes, the wings and tail brown washed with olive where in the male they are black. Young birds may always be recognised, as they are like the female, with heavy blackish streaks all over the under parts.

The European Golden Oriole arrives to winter in tropical Africa towards the end of September and leaves again in March on its way north once more. The main line of flight is evidently in East Africa from the Rift valley eastward, but a good number come through the Sudan, where they have been regularly observed in Darfur. There is a concentration of the species during the winter months in eastern tropical Africa. The numbers which winter on the western side of the continent are very much smaller—in fact, unless many pass unnoticed, it is decidedly rare in all British West Africa.

As with a number of other European migrants, the Golden Orioles which first put in appearance are immature birds. The adults arrive a few days after their offspring. During the spring passage north the adult males are believed to precede the females by about ten days. In the autumn passage the reverse is true, as it is the immature and females which reach their winter quarters in advance of the males.

Very large numbers arrive in the latitude of Kenya and Uganda in October, when the birds spread over the bush country as well as the forest and clearings. The clear, far-sounding, flute-like note announces its presence from the shade of some tall tree, but it will need keen ears to distinguish its cry from that of the African Golden Oriole, a bird which is found in the same area and similar environment.

Its breeding habits need not be discussed, as it does not nest in the tropics.

Distribution. Europe generally, except the extreme north, nesting south to the Mediterranean and in northern Africa. In winter to almost every province and country of Africa, reaching the Cape, but mainly in East Africa. Records from West Africa are rare: Gambia, French and Portuguese Guinea, southern Nigeria and middle Cameroon. It has been recognised in the heart of the Benin forest reserve.

AFRICAN GOLDEN ORIOLE

Oriolus auratus auratus Vieillot

This bird is brilliant golden yellow above and below with a broad black band through the eye, including also the lores and ear-coverts and surround of the eye. Wings are black broadly, edged with yellow on secondaries and coverts; the tail is black, broadly tipped with yellow. It has a blood-red eye, Indian-red large bill and dark olive-green legs and feet. The measurements are as follows: Bill 26–29 mm., wing 133–147 mm., tail 79–92 mm. and tarsus 21–24 mm.

The European Golden Oriole (which is very rare in West Africa) is very like it but has only a black spot in front of the eye, not the broad black area as the male African Oriole. In the European bird the wings are all black with a pale yellowish wing-patch about the middle of the wing, whereas in the African Oriole the wing-feathers

have broad yellow margins. Even in the duller females the dusky band passing right through the eye will distinguish the African bird from the European, where the dark patch is (also in the female) confined to the area immediately in front of the eye.

In the accompanying text figure the black band should have been continued on to the lores in the male bird; the specimen figured had not this black area as much developed as in the majority of specimens. It is usually a striking feature.

Within our limits this beautiful bird is spread uninterruptedly through the whole of the wooded parts of the West African region outside the primeval forest. It shuns the denser grass savanna and the dry belt adjoining the desert. It is perhaps most at home in the high orchard bush, preferring open country and shunning the forest,

the canopied kurimis and the fringing forest. In some places it is exceedingly common, as in the Port Loko and Karine districts of Sierra Leone; in parts of the Gold Coast north of the forest and in the Plateau, Niger and Benue Provinces of Nigeria (to name but some areas where it may be regularly encountered) it is sparingly but generally distributed. It is found all the year round in suitable country but is probably subject to local movements in the drier parts of its range. In the grass-woodlands of the southern provinces it occurs to a lesser extent.

Its cheery call, *fee-yu, feé-yu, fee-yu*, greets the dawn and may be heard throughout the day, in addition to a variety of melodious notes which can change to harsh cries in the presence of danger. Caterpillars, beetles, flies and berries and fruits in season constitute its food supply.

Nesting in northern Nigeria takes place just before the rains, March and April being the chief months in that area. The nest is a cup-shaped cradle of tendrils and twigs slung hammock-wise in the fork of a branch, to which it is attached by gossamer and tendrils. Two very beautiful eggs are laid, and these are buffish pink, suffused with deeper rose-colour near the dark red-brown spots and streaks, tending to form a zone at the broad end with ashy shell marks. Egg measurements are 29–33·3 × 19·8–21 mm.

Distribution. The African Golden Oriole is separated into two races, the typical subspecies occurring throughout our area, in the west from Senegal to Angola, and in the east from the Nile Valley to Uganda. South of that latitude in tropical Africa the race *O. auratus notatus* is found.

Within the limits described the northern race is spread uninterruptedly through the whole wooded parts of the country outside the primeval forest but shuns the denser grass savanna and the dry belt next to the desert. It is found in all our British Colonial Possessions and ranges right across the savanna country of Equatorial Africa north of the forest but is subject to local migration, coming into the drier zone about May to breed. Its northern limit is determined by the range of the thickly leaved trees which it frequents.

BLACK-HEADED ORIOLE

Oriolus brachyrynchus Swainson

THERE are two races of the Black-headed Oriole in West Africa, the typical subspecies ranging from the Gold Coast (and probably Dahomey) westwards, while *O. b. laetior*, the Lower Guinea race, has been found as far west as the Benin Province of Nigeria.

The head of this oriole is jet-black in both sexes, sharply defined

from the golden-yellow mantle, which merges into olive on the back and scapulars. Rump and upper tail-coverts are golden. The markings of the wings and tail are important to memorise, for another oriole in West Africa has a black head also. In *O. brachyrynchus* the primaries and outer secondaries are black edged with greyish white, the inner secondaries bordered with olive. The middle pair of tail-feathers are green, the next pair green basally merging into black and the tips yellow, the remaining feathers black with an increasing amount of yellow on the terminal portion. The throat and upper breast are black, the rest of the under parts bright yellow shaded with olive. The under wing-coverts, axillaries and under tail-coverts are all yellow. The eye is red or red-brown, the bill is red-brown, and the legs and feet are blue. The bill measures 20–23 mm., the wing 110–116 mm., the tail 76–89 mm. and tarsus 21–22·5 mm.

Immature birds are entirely olive above, lacking the black head, and there is no golden collar. The throat and breast are green mottled with yellow.

The all-black head of this oriole distinguishes it from all other orioles except *O. nigripennis*. Both have golden collars, green backs and yellow under parts with black throats; both have black wings, but *O. brachyrynchus* has a white patch on the wing and the edges are greyer; in *O. nigripennis* there is no white patch and the tail is entirely black and yellow, the middle tail-feathers being all black, whereas in *O. brachyrynchus* they are all green. The differences therefore lie in the wings and tail. In flight the small white wing-bar will proclaim the identity of *O. brachyrynchus*, while at rest the all-green middle tail-feathers (and also the white in the wing) should save any confusion with *O. nigripennis*. Both birds are the same size—about 9½ in. in length with wing-span of 14 in.—and both have the same range in the forest, but *O. brachyrynchus* is much commoner.

This is a sedentary bird which is widely spread and common in the forests of West Africa. The clear bell-like *or-iole*, with the accent on the first syllable, is a well-known forest call, and the young have a complaining cry *eow, eow*, constantly uttered from the tree-tops.

Comparatively inactive, unlike *O. auratus*, it is not easy to detect until it moves. A favourite haunt is a tall tree left growing in a clearing, and when calling it has a pretty habit of spreading its tail, when the pattern described in a former paragraph can be noted. Usually it is seen singly or two together, and every bird army is sure to contain one or two, always in the van of the army, flitting from branch to branch, while uttering at intervals its mellow call. More often this oriole remains in the tree-tops, but it may also be seen in the undergrowth of the high forest. Both this species and *O. nigripennis* may at times be seen in the same tree.

The Black-headed Oriole builds a typical oriole nest which it slings between two horizontal twigs. One found in Cameroon was composed of *Usnea* and cobwebs. The eggs have not been described to the date of writing.

Distribution and Races

O. brachyrynchus brachyrynchus Swainson inhabits the forests of Sierra Leone, French Guinea, Liberia, the Gold Coast, Ivory Coast and former Togoland. I have not examined specimens from Dahomey to determine to which race that bird belongs, but it is almost certain to belong to the above.

O. brachyrynchus laetior Sharpe extends from southern Nigeria (Burutu, Benin, Owerri), British Cameroons (including Cameroon Mountain), French Cameroons south to the Camma and Munda Rivers in Gaboon, then across the Belgian Congo forest to the Semliki valley. This race differs from the above by having the yellow collar extending further over the mantle, the mantle itself being more yellow than green. The wing measures 107–121 mm. and the tail 77–86 mm.

In East Africa (Uganda, Kenya and Sudan) a different species of Black-headed Oriole is found, *Oriolus monacha*, which takes the place of *O. brachyrynchus* on that side of the continent. It has much less yellow on the collar, among other distinctions.

BLACK-WINGED ORIOLE

Oriolus nigripennis J. and E. Verreaux

This is another black-headed oriole which resembles *O. brachyrynchus* in the plumage of the body, having a black head as in that species, the same shade of yellowish-olive upper parts, yellow collar and under parts. The description given for that species is applicable to *O. nigripennis* except for the wings and tail, which are as follows: Wings are black, the primaries edged narrowly with whitish, the secondaries broadly with olive-yellow, the inner secondaries with much of the outer web olive-yellow and the inner webs black, no grey on the secondaries. Outer greater coverts are olive-yellow (not grey) and the greater primary coverts very narrowly tipped with white, not with broad white ends as in *O. b. brachyrynchus*. The middle tail-feathers in *O. nigripennis* are jet-black (not green) and the remaining rectrices black basally with an increasing amount of yellow terminally, the outermost pair being more yellow than black on both webs. The eye is blood-red or dark red; the bill is reddish horn or dull brownish red; the legs and feet are blue or soiled plumbeous colour. The bill measures 20–23 mm., the wing 110–130 mm., the tail 72–85 mm. and the tarsus 20–23 mm.

Immature birds have the head olive-yellow among which the blackish feathers are gradually assumed, the feathers at first having dark middles and olive fringes, those on the chin and throat having more yellow than olive fringes. The greater coverts and secondaries are broadly margined with yellow and with narrow yellow tips to the greater primary coverts.

The jet-black middle tail-feathers (instead of green) and the blacker wings (without the grey edges to the secondaries and without the conspicuous white patch caused by the broad white tips to the greater primary coverts) distinguish this bird from *O. b. brachyrynchus* and its subspecies *O. b. laetior*, which species it otherwise resembles so very closely. Bearing in mind the differences in the tail (particularly) and in the wings, the notes under *O. b. brachyrynchus* will be equally applicable.

The habits of the Black-winged Oriole appear to be exactly the same as those of the Black-headed Oriole. Both birds have the same range and may even be seen in the same tree. First-rate naturalists have found them difficult to distinguish unless actually handled, and then only with care. The distinctions in the calls when these are known may be the best guide. This species has been heard to utter loud joyful cries *choo-weeer* and *wheep-oop* as well as the more usual *ó-ri-o* which seems to be common, with certain variations, to the whole oriole family.

The eggs and nest have never been found.

Distribution. The West African forest country from Sierra Leone to northern Angola, ranging east to the north-eastern Belgian Congo, also on the island of Fernando Po. Its continental range runs concurrently with the combined ranges of *O. b. brachyrynchus* and *O. b. laetior*, or very closely. It is noteworthy that in Nigeria it occurs near Lagos at sea level and in British Cameroons above 4,000 ft. and up to 7,000 ft. in the primary forest trees and clearings. It is perhaps commoner in the Gold Coast than anywhere else, judging by the records I have received.

SÃO THOMÉ ORIOLE

Oriolus crassirostris Hartlaub

This, the only oriole in São Thomé, cannot be confused with any other species on that island. Thrush-like in form and size, about 9½ in. in total length, it must be an easily identified bird with its all-black head and throat, cream-coloured collar, olive back and white breast and belly. The black and yellow tail with green middle feathers is not very long and the wings are shorter and rather rounded

in comparison with most orioles. Its red eye and pale claret-coloured heavy bill must also be noticeable features in life. The immature bird with its streaked breast must likewise be easily identified among the other island birds. Adults measure: Bill 24–26 mm., wing 123–131 mm., tail 88–96 mm. and tarsus 27–28 mm. The adult female resembles the male on the upper parts, but the throat and cheeks are dark grey mixed with white. In other respects the sexes are alike. Legs and feet are pale grey.

Very little is known about this bird, but it is said to be abundant in its island home in the forests of the higher altitudes. Its note is described as a clear double whistle.

The nests and eggs are unknown.

Distribution. Restricted to the island of São Thomé, with no near relations on the continent.

FAMILY PARIDAE

Key to the Tits (Melaniparus) and Penduline Tits (Anthoscopus)

1. Size medium (wing 70 mm. or over); plumage blue-black and white or slate-colour 2
   Size very small (wing under 60 mm.); plumage not as described above 4
2. Whole plumage uniform, no white on wing or elsewhere *Melaniparus funereus*, p. 1214
   Large amount of white on wing 3
3. Belly white .. .. .. *Melaniparus albiventris*, p. 1213
   No white on belly *Melaniparus niger guineensis* and subsp., p. 1211
4. Under parts buff .. .. *Anthoscopus punctifrons*, p. 1215
   Under parts yellow or washed with yellow 5
5. Under parts bright yellow, yellow forehead with minute black dots *Anthoscopus parvulus senegalensis* and subsp., p. 1215
   Under parts olive washed with yellow, golden forehead without black dots *Anthoscopus flavifrons flavifrons* and subsp., p. 1217

WHITE-SHOULDERED BLACK TIT

Melaniparus niger guineensis Shelley

This little bird measures from bill to tail about 5½ in. and is entirely black glossed with dark blue, relieved by the large white patch on the shoulder which is continued in a white band down the wing.

The pale eye is a conspicuous feature at close quarters, and when the bird takes to flight the contrast in black and white is very striking. It and the next subspecies to be mentioned are the only titmice in Upper Guinea. The wing measures 70–81 mm. and the tail 60–67 mm.

In the field this tit is conspicuous, as its markings are in strong contrast. Moreover it has a bright cream or yellow eye, the bill and legs being black.

For its habitat it chooses the tree savanna country, where it moves about in cheerful little parties through the woodlands, often in company with other birds. The male bird has quite a pretty song and may sometimes be seen shooting up into the air as it utters it. Like all titmice it is a restless species, seeking its prey among the shrubs and trees of the orchard bush, feeding upon caterpillars when these are procurable and upon all manner of insect life. The flight is undulating and indirect, and the birds often call to one another as they fly along.

Curiously enough, the nest and eggs of this fairly common bird have not been described.

Distribution and Races

M. niger guineensis ranges from Senegal to Nigeria throughout the orchard bush and tree savanna, extending eastwards south of the Sahara through the savanna country to the Bahr el Ghazal and the White Nile.

East of the Nile its place is taken by *M. niger leucomelas*, which has mostly black (not white) under wing-coverts.

BLACK MAGPIE (*Ptilostomus afer*) Adult perched, immature in flight
BROWN-NECKED RAVEN (*Corvus ruficollis*) PIED CROW (*Corvus albus*)

BARE-HEADED ROCK-FOWL
Picathartes gymnocephalus

FOREST ROBIN
Stiphrornis erythrothorax

SQUARE-TAILED DRONGO
Dicrurus sharpei

Another race, *M. niger purpurascens* van Someren, ranges from British Cameroon to Uganda; in the latter country it is the most plentiful of all the tits. It is similar in plumage to *M. niger guineensis* but is larger in size, having wing 78–86 mm. and tail 60–70 mm. It is found in the acacia country, in the dry bush and in all the wooded country of the savanna, less often in forest.

WHITE-BELLIED TIT

Melaniparus albiventris Shelley

THIS tit has a blue-black head, mantle, back and breast, a white belly and under tail-coverts, a white patch on the wing (the lesser wing-coverts) and white tips and margins to the blue-black median and greater coverts. The wings are ashy black with white edges to the remiges and the tail is black, with the outer rectrices edged with white. The wing measures 76–86 mm. and the tail 58–67 mm. The bill is black, the legs and feet are blue-grey.

The White-bellied Tit may be recognised from all other *Paridae* in West Africa by the entirely white belly. The wings, too, are a strong contrast in black and white and the white shoulder-patch is very noticeable. If only the back view is visible, the white outer web to the outer tail-feather and the white tips to all the other tail-feathers will distinguish this titmouse from *M. niger guineensis*, which has practically no white in the tail but which resembles *M. albiventris* in the amount of white in the wing.

This bird has not yet been found in Upper Guinea but comes within our limits in British Cameroons, where single birds, pairs or small flocks frequent the edges of woods or the scattered trees in the upland savanna and in the high mountainous country of Manenguba and Bamenda between 4,500 and 6,500 ft. Their habits are typical of the family to which they belong, being restless little birds, active and noisy, ceaselessly searching the cracked bark of trees or searching the foliage for the insects upon which they thrive, spiders being a particular attraction.

The nest has been found in a deep crack in a tree about 25 ft. from the ground. Five eggs are laid, but have not been described.

Distribution. British Cameroons and the highlands of Kenya Colony and Tanganyika Territory, a wide gap in its distribution occurring in the intermediate territory. In British Cameroon it has been found in the Banso Mountains and at Oku, as well as at Bamenda and on Manenguba Mountain. It ascends up to 7,000 ft. from 3,500 ft.

DUSKY TIT

Melaniparus funereus Verreaux

This tit, which is about 5½ in. in total length, has the whole plumage dark slate, relieved with a little greenish gloss when in the hand. The crimson eye is the only arresting feature. The bill in this species is particularly stumpy for a titmouse, the upper mandible being noticeably decurved. The absence of any white in the plumage distinguishes it from the other members of its family in West Africa. The wing measures 83–88·5 mm. and the tail 54–63 mm.

In Uganda, where this tit has more often been collected and seen than in Lower Guinea, it is said to keep to the tree-tops rather than to the lower branches and thus can easily be overlooked. Flocks of ten or more move through the forest together much as do our Great Tits at home. It is not particularly shy when under observation and has a preference for tall leafless trees, among the bark and crannies of which it searches diligently for its insect food.

The nest has not been described.

In the forest country of southern Cameroon it is more rarely encountered.

Distribution. Cameroon (Efulen, Bitye, Barombi) south to Gaboon and also in Uganda and Kenya, probably across the equatorial forest. A single specimen, said to have been obtained at Elmina, Gold Coast, in 1861, is in the Leiden Museum, but the species has never been found since in Upper Guinea.

SUDAN PENDULINE TIT

Anthoscopus punctifrons Sundervall

THIS minute bird reminds one of the European Goldcrest, so dainty is it and so small, measuring from bill to tail about 3 in. Olive-yellow above (with tiny black dots on a yellow forehead which are indiscernible until within a few feet) and buffish white below, the Sudan Penduline Tit has nothing bright or colourful about it. Its very fine pointed straight bill is very un-tit-like and is evidently of assistance in weaving the very remarkable nests for which the Penduline Tits are famous. The nests will be described in detail under another species (*A. parvulus*). So small is this bird that it is said to be scarcely visible a few yards away. The wing measures 48–54 mm. and the tail 27–30 mm.

We find this diminutive bird right across Africa from the Anglo-Egyptian Sudan to the French Niger Colony, but its north-to-south range is very narrow. It is an inhabitant of the little thorny bushes to be found in the vicinity of wells on the edge of the desert where nomads water their flocks. Perhaps the birds are attracted by the insects which accompany or are disturbed by the animals, but it is upon the insect larvae that the tiny birds principally feed, and for these they search the bushes with great pains, taking little notice of the presence of human beings. Apart from the artificial wells, these mites live in waterless country, so that they certainly have need of moist food. So unobtrusive are they in their movements that they may easily be overlooked.

Distribution. A. punctifrons ranges from Sennar to Darfur and westwards to the French Sudan (Timbuktu), French Niger Colony (Tillia, Tawa and Tazza wells), Damergu and the vicinity of Lake Chad. It never seems to be found very far from the desert. It is believed to breed in autumn, but no eggs appear to have been found.

WEST AFRICAN PENDULINE TIT

Anthoscopus parvulus (Heuglin)

THREE races occur in West Africa: in Senegal, the Gold Coast and Cameroon respectively.

This tit has a bright yellow forehead with minute black dots at the tip of each feather. The rest of the crown, nape and back is greenish yellow, becoming brighter and more yellow on the rump and upper tail-coverts. Lesser wing-coverts are ash-brown edged with olive-yellow; greater coverts and secondaries are brown with

broad ashy-white margins; primaries are brown with narrow margins tinged with yellow. The tail is brown, with the feathers edged with white on both webs and the fringes at the base washed with yellow. Throat, cheeks and entire under parts are rather bright sulphur-yellow, also the under tail-coverts, the under wing-coverts white tinged with yellow, axillaries white at the base, yellow terminally. The eye is black; bill, upper mandible horn, lower bluish; feet are dull bluish grey. Measurements are: Bill 8 mm.; wing 47–48 mm.; tail (male) 29 mm., (female) 26 mm.; tarsus (male) 13 mm., (female) 11 mm.

The bright yellow under parts distinguish it from the Sudan Penduline Tit, which is palest buff below. From the tip of the bill to the tip of the tail it measures no more than 3 in. When creeping about in the foliage it is easy to see, despite its small size, owing to its bright yellow colouring. This particularly refers to the Senegal race.

Penduline Tits go about in little parties of three to six when not breeding, constantly flitting with outstretched wings from bough to bough in the manner of warblers. They are found among the acacias and small trees and, as will be noted from the distribution, are to be met with chiefly in the Northern Territories.

A nest found in Sokoto on 17th June contained two eggs. The nest itself is a beautiful structure made of white pappus, so closely woven as to have the texture and toughness of surgical lint. In shape it is ellipsoidal and measures 115 mm. from top to bottom, 60 mm. across and 67 mm. from front to back. The upper border is closely knit to the suspending twig. The interior communicates with the exterior by means of a passage projecting forwards 40 mm. from near the upper pole of the nest and consists of an upper and lower flap each 40 mm. broad requiring to be separated by the bird as it enters or leaves the nest. Eggs are glossless white and measured in this instance 12·9 × 9·2 and 13·3 × 9·6 mm.

Distribution and Races

Anthoscopus parvulus senegalensis Grote ranges from Senegal to Sokoto Province of Nigeria through French Sudan and Upper Volta.

Anthoscopus parvulus aureus Bannerman is duller throughout, lacking the brightness in the yellow forehead and throat. It is known from the vicinity of Bole in the Northern Territories of the Gold Coast.

Anthoscopus parvulus citrinus Reichenow is like *A. p. senegalensis*, but the upper parts are brighter, more waxy olive-yellow and the under parts more golden yellow. It is found in Eastern Cameroon (Bosum) and the adjoining Ubangi-Shari (Bamingui River).

FOREST PENDULINE TIT

Anthoscopus flavifrons (Cassin)

Two races have been described, one from Upper, the other from Lower Guinea.

About 3½ in. in total length, this Penduline Tit with the unspotted golden forehead, dark olive upper parts and rather mottled under parts washed with yellow is a most inconspicuous bird in the field, for bill, eye and feet are all dark and only the yellowish belly relieves the sombre plumage. The wing measures 54–59 mm., the tail 26–29 mm. Their curious hanging nests are likely to be more noticeable than the bird itself, judging from the reports of naturalists who have seen them. The other species of Penduline Tit belonging to the *A. parvulus* group have bright yellow under parts and are birds of the semi-arid belt, whereas the *A. flavifrons* group apparently inhabit the forest. Though forms of each group occur in the Gold Coast, their respective habitats do not overlap, so confusion should be avoided.

The typical race was first discovered in Gaboon and is better known in the forests of southern Cameroon, where its closely felted nests are more often seen than the bird itself. The bird is very rare and is known to the Cameroon native as the *No'o*. It keeps to the tops of the forest trees, in which it may well be almost invisible to European eyes. For many years it was considered to be restricted to the forests of Lower Guinea, but a close relative has now been discovered in Ashanti.

The nest of this forest species is almost like that described for *A. parvulus*, so closely woven and felted that these hanging pockets last for years, though a fresh nest is made every breeding season. No doubt the eggs are white also, but these have not apparently been discovered.

Distribution and Races

Anthoscopus flavifrons flavifrons (Cassin) inhabits the forests of south-eastern Nigeria, Cameroon and Gaboon, ranging east in the Congo forest to the Ituri. Its discovery recently in the Owerri Province of Nigeria extends its range considerably.

In the Gold Coast the species is represented by *A. flavifrons waldroni* Bannerman, which is a brighter-coloured, more yellowish-olive bird with paler and yellower under parts. It was described from Goaso, Ashanti.

FAMILY CORVIDAE

Key to the Crows, Ravens, and Magpies

1. Whole breast and collar white .. .. *Corvus albus*, p. 1219
   No white on collar or breast 2
2. Tail very long and markedly graduated, much longer than wing, central rectrices protruding considerably beyond the next pair .. .. *Ptilostomus afer*, p. 1221
   Tail not very long, either square or rounded, much shorter than wing; central rectrices not protruding considerably beyond next pair 3
3. Tail rounded and fairly long; wings when closed falling short of tail-tip. Head chocolate-brown; nasal bristles forwardly directed .. *Corvus ruficollis ruficollis*, p. 1218
   Tail less rounded and very short; wings when closed extending beyond tail-tip. Head black glossed with steel-blue; nasal bristles fan-shaped *Rhinocorax rhipidurus*, p. 1220

BROWN-NECKED RAVEN

Corvus ruficollis ruficollis Lesson

(see Plate 46, facing page 1212)

This is rather a small raven, measuring in total length about 20 in. It is glossy black in body plumage, wings and tail, with a copper-brown head and a heavy black bill about 2½ in. in length, the basal half of the upper mandible covered with bristle-like feathers. It is an inhabitant of barren islands or desert country on the mainland. In their island home they are fearless and can easily be approached but on the mainland are much more wary. The cry is a harsh croak like that of the European raven but not so deep. Measurements are: Bill 61–72 mm., wing 347–420 mm. and tail 180–202 mm.

All along the edge of the Sahara the Brown-necked Raven is a familiar bird, although it never appears in any numbers. Wherever there are wells in the desert the birds will congregate, and in mountainous areas they ascend to about 8,000 ft. A carrion-eater everywhere, it may be observed searching the rubbish dumps and fighting with the omnivorous Pied Crow in such places as Timbuktu and Taberréshat Well.

This is the Common Raven of the Cape Verde Islands, and there the birds are much more numerous in a small area than they are on the mainland. They have a foul reputation for eating filth of all kinds. Locusts are devoured whenever the opportunity occurs.

The nest of sticks is built in cliffs, among rocks, on old ruined buildings and in palm-trees. Eggs number three to six, are light green thickly or sparingly covered with spots and blotches of brown, and measure 43–46 × 30–31 mm. The bird is single-brooded.

Distribution. The edge of the desert from Senegal and the French Sudan to Lake Chad, across the whole arid belt to Darfur and the Egyptian Sudan north to the Algerian Sahara and Palestine, ranging into Central Asia and North-West India. Resident also in Cape Verde Islands.

PIED CROW

Corvus albus Müller

(see Plate 46, facing page 1212)

THE Pied Crow is quite unmistakable, owing to its distinctive markings. It is a smaller bird than the Brown-necked Raven, measuring some 19 in. in the flesh from bill to tail, with wing expanse of 41 in. Glossy blue-black in plumage, sometimes with a purplish sheen on the feathers, it has a broad white collar completely surrounding the neck, and the whole of the breast is snow-white. Wings and tail are black glossed with dark blue. The bill, legs and feet are black. The bill measures 52–62 mm., the wing 330–378 mm., and the tail 165–192 mm. Although the Pied Crow is so much smaller than our British raven, it has almost as deep a croak and is capable of making other weird noises as well.

Wherever one may disembark for the first time in West Africa the Pied Crow is sure to be seen before very long. It is a bird which prefers the haunts of man to the desert waste, and as it is a welcome scavenger it is never molested. It is very widely spread on the coast and is much more gregarious than the ravens, flocks of 50–70 birds being not uncommon.

That it will vary its diet in all manner of ways has been proved on numerous occasions. Birds' eggs, nestlings, termites, insects, lizards and refuse from the rubbish heap are all welcome to this ubiquitous species, which certainly merits the protection which the natives afford it. It is moreover the subject of various superstitions, as recounted in my larger work.

Like most of the larger *Corvidae*, the Pied Crow is believed to pair for life. As evening approaches the birds congregate in flocks to repair to their chosen roosting places in tree or cliff face. The nest of the Pied Crow is a substantial structure of sticks lined with dead grass, old maize stalks, roots and odd pieces of paper, string and rags. It is loosely built. The eggs pass through the same variation as the raven's. They are four to six in number and some have pale

blue ground, others pale green, blotched, spotted and streaked with various shades of brown, with ashy-violet shell marks. They measure 42·9–50 × 30·1–32·4 mm. and vary much in the intensity of the markings.

The Pied Crow is a favourite host of the Great Spotted Cuckoo, and in Sokoto, where both birds are common, it is rare to find a crow's nest which does not contain one or more eggs of the cuckoo in addition to the normal complement laid by the crow. It nests in May and June in the dry belt.

Distribution. Spread widely over the whole area with which I deal in this book. In the west it ranges from the shore lines to the border of the desert. It avoids the forest but occurs in mountainous areas such as at Bamenda, and at Oku in British Cameroons it ascends to 8,000 ft. This crow has an extensive distribution in east and south as well as in West Africa and is equally well known to residents in Kenya, Uganda and the Sudan as it is to those in our West African possessions.

FAN-TAILED RAVEN

Rhinocorax rhipidurus Hartert

This all-black raven, the plumage glossed with steel-blue and purplish, can easily be distinguished from other ravens in flight, when it will be observed to have a remarkably short tail, which gives it a curious bat-like appearance. In silhouette against the sky this character is at once observed. At rest the closed wings protrude about an inch beyond the tail-tip. In other respects it is very like the Brown-headed Raven in size—some 18 in. from bill to tail—but has a shorter, deeper bill and the nasal bristles are shaped like a fan instead of protruding forward parallel with the upper mandible, characters which can only be noted at very close quarters with the aid of a powerful glass. As the bird is not recorded from within our limits except in the southern Sahara, and then only north of Agadés, there is little likelihood of its being mistaken for its longer-tailed relatives in West Africa.

Measurements are: Bill (culmen) 50–61 mm., (depth) 21–26 mm.; wing 340–402 mm.; tail 150–165 mm.; tarsus 60–64 mm.

This is largely a highland species which descends to the plains to forage and will then join company with the Brown-necked Raven, especially at a kill. It is more often seen near cliffs and ravines than in the open. The short high-pitched croak, which some naturalists have described as rather musical and rolling, is quite different from the croak of *C. umbrinus*. Its habit of soaring in flight is another field character which has been stressed.

This is the raven of the Aïr Massif, and indeed it only comes within the scope of this book in the hill country of the southern Sahara. In Abyssinia this raven has been recorded up to 8,200 ft. altitude. It abounds in Somaliland, but in Western Africa there is little country to its liking.

Its nest is situated in the crags, among ledges of rock in nullahs and in crevices and crevasses. It is a loosely constructed platform of sticks, lined with sheep and camel wool. Three or more eggs are laid, usually four. These have a green-blue ground colour heavily speckled and splashed with olive-brown and violet-grey. They measure 45–48 × 32–34·5 mm.

Distribution. Mainly in north-eastern Africa, Abyssinia, Somaliland, Sudan and Darfur and Red Sea littoral, south to Lake Rudolf and West to Aïr, also in Arabia and Sinai.

BLACK MAGPIE OR PIAPIAC

Ptilostomus afer (Linnæus)

(see Plate 46, facing page 1212)

This is an all-black glossy bird with dark blue sheen on the plumage, having brown wings which appear quite light-coloured when spread, and very long, strongly graduated tail, the central feathers protruding some 2½ in. beyond the next pair and tapering to a point. The bird's slender body is rather smaller than that of the European magpie, but the very long tail, measuring as much as 12 in. from the root, gives it a very distinctive appearance. It has a beautiful violet eye which arrests attention. The rather heavy bill is black in fully adult birds, red in those which have not reached maturity but which otherwise appear full grown. It is not a sexual character, as was generally believed. Measurements are: Bill 32–36 mm., wing (male and female) 160–173 mm., tail 225–300 mm.

The Piapiac is an inhabitant of the semi-arid belt, where it is to be seen in small flocks often associating with herds of sheep and goats. It is extremely fearless and can be approached as closely as starlings when feeding with sheep on the Sussex Downs. When finally alarmed it flies off with shrill squeaks to the nearest Borassus palm, a tree with which it is closely associated, at any rate in Senegal and Gambia. The pericarp of oil-palms has been found in the stomach of birds dissected, as well as remains of hemiptera, coleoptera and spiders. Termites form a great attraction to this bird also.

In the Northern Provinces of the Gold Coast and Nigeria north of lat. 11° N. it is fairly generally distributed over the farmlands, flocks of between ten and thirty individuals being quite common. Areas of fallow land and fields from which the crops have been

freshly cleared are the favourite feeding grounds. In the midday heat the flock retires to some shady tree, where the birds shelter until the cool of the evening. Their favourite roosting places are palms in or near the villages. Only for a brief period do the flocks break up into pairs.

Palms of various species are favoured nesting sites, and nests have also been found in the baobab some 25–35 ft. from the ground. The nest is made of sticks, palm frond strips, fibres and grass stems, with some earth as foundation. Eggs are three to six in number, and are either plain pale blue or sparsely spotted and blotched with mauve-grey with some tawny-brown markings on some of them. They measure 27·5–32·1 × 20·5–23·6 mm. The newly fledged young have a beautiful pink bill tipped with brown.

Distribution. Ranges across the continent from Senegal south to Nigeria, east to the Nile valley and northern Uganda. Details of its local distribution are given in my larger work.

FAMILY STURNIDAE

Key to the sub-family of the Starlings

Tail of sharply pointed stiff feathers similar to that of a woodpecker (see illustrated key, p. 96)
Sub-family *Buphaginae*, p. **1246**

(*a*) Bill deep and blunt, yellow with red tip
Buphagus africanus and subsp., p. **1246**

(*b*) Bill similar in shape but entirely red
Buphagus erythrorhynchus not found in West Africa but common in East Africa, p. **1248**

Tail normal, shafts not stiff as in woodpecker; plumage mostly metallic or highly glossy, at any rate in males; bill black .. Sub-family *Eulabetinae*; see separate key below.

Key to the Starlings of the sub-family Eulabetinae

1. A large amount of chestnut on wings, great proportion of primaries so coloured 2
   No chestnut on wing-feathers 5
2. Size very small (wing under 95 mm. in length; body about size of budgerigar)
   Poeoptera lugubris lugubris (♀), p. **1242**
   Size larger (wing over 95 mm. in length) 3

3. Chestnut on primaries continued almost to wing-tips
Onychognathus morio neumanni and *O. morio modicus*, p. **1240**
Chestnut on primaries falling considerably short of wing-tips 4

4. Bill very long (over 24 mm.) and tail long (over 100 mm.)
Onychognathus fulgidus fulgidus and subsp., p. **1237**
Bill not very long (under 24 mm.) and tail rather short (under 100 mm.) *Onychognathus walleri preussi*, p. **1238**

5. Broad white chest-band across dark blue under parts
Grafisia torquata (♂), p. **1243**
No white band on chest 6

6. Belly and under tail-coverts chestnut, inner webs of primaries mostly white .. .. *Spreo pulcher pulcher*, p. **1245**
Belly not chestnut, no white on primaries 7

7. Under parts white streaked with dark brown
Cinnyricinclus leucogaster leucogaster
(adult ♀ and immature ♂) p. **1224**
Under parts not streaked 8

8. Chest and belly white, upper parts metallic reddish purple
Cinnyricinclus leucogaster leucogaster (♂), p. **1224**
No white on under parts 9

9. Under parts entirely without gloss, breast grey, belly feathers with narrow whitish or buff fringes
Grafisia torquata (♀), p. **1243**
Under parts always with strong metallic gloss 10

10. Whole plumage (except purple belly and ear-coverts) brilliant golden green .. *Coccycolius iris* (♂ and ♀), p. **1236**
Plumage not as described above 11

11. Tail-feathers long, strongly graduated, central rectrices more than twice length of outer pair and protruding beyond all others 12
Tail normal, neither long nor strongly graduated, central rectrices not elongated. Plumage brilliant, highly metallic above and below
Genus *Lamprocolius*; see separate key on p. **1225**

12. Size small (body about that of budgerigar), wing under 4 in. (101 mm.), tail under 5½ in. (140 mm.), head same colour as back *Poeoptera lugubris lugubris* (♂), p. **1242**
Size large (body about that of European starling), wing over 6 in. (152 mm.), tail over 9 in. (228 mm.). Head contrasting with back in colour
Lamprotornis caudatus, p. **1235**

AMETHYST STARLING

Cinnyricinclus leucogaster leucogaster (Gmelin)

This brilliantly coloured starling with dull-coloured female should be easily identified, the males with pure white breast and belly and the whole of the rest of the plumage metallic amethyst-purple, reflecting in some lights purplish-plum colour and golden violet. The wings and tail are mostly blackish, the general effect of the plumage giving the male bird a pronounced scale-like appearance. The female and immature are very dark brown above with rufous-buff edges to the feathers, which again produces a scale-like effect, the under parts white heavily streaked with drop-shaped spots of dark brown, and all white on the under tail-coverts. In size the Amethyst Starling is small, measuring from bill to tail 7 in. in the flesh with wing-spread of 12 in. Detailed measurements are: Bill 12–14 mm.; wing (male) 99–110 mm., (female) 91–104; tail 54–64 mm.; tarsus 19–23 mm.

This beautiful bird is migratory throughout its range, spending the rainy season in the semi-arid belt, when it occurs in Gambia and other dry areas from May till October. Not far south in moister Sierra Leone we find it arriving when the rains have ceased in December, where they remain until May, when they go north again. September seems to be a month of great activity, and bands of these starlings may be seen on the move in the coastal areas from Freetown to Lagos.

In the dry season, when these starlings are to be found throughout woodland country, they may be observed from the high fringing forest through the moist deciduous forest and grass woodland to typical savanna country. It is a bird which keeps much to the tree-tops and seems seldom to come to the ground. A large dead leafless tree is always an attraction, but for roosting purposes the birds may be seen settling in hundreds on the tall trees beside swamps and on the cashew-trees of the drier parts.

Berries are a favourite source of food supply, in search of which the birds will descend to bushy trees in compounds and to such unlikely shrubs as wait-a-bit thorns, which appear to have berries to the starlings' liking. Ants are also appreciated and no doubt insects of many kinds as well as fruit.

Breeding notes on this bird are very scarce. Fledglings have been found in Benin Province on 3rd April. It seems that it breeds at

the end of the dry season, for eggs have been found in Sierra Leone in mid-March. The nest hole is in a sapling, tree or stump. The two or three eggs are pale blue with small reddish-brown specks and spots. Measurements are not available.

Distribution and Race. The typical subspecies occurs in every country from Senegal to the Congo, ranging eastwards to the Anglo-Egyptian Sudan, Abyssinia, Somaliland and southern Arabia, meeting the range of *C. l. verreauxi* in Uganda. This latter bird is the South African race, which differs in the males having white edges to the outer tail-feathers.

Key to the Glossy Starlings (Lamprocolius)

1. Whole under parts purple, also crown, no bronze band across chest .. *Lamprocolius purpureus purpureus*, p. **1231**
   Whole under parts not purple 2
2. Scapulars, back and secondaries dull gold or bronze *Lamprocolius ornatus*, p. **1233**
   Scapulars, back and secondaries metallic green or blue 3
3. Shoulder-patch of lesser wing-coverts golden-bronze, often washed with violet, in strong contrast to rest of wing .. .. .. *Lamprocolius nitens nitens*, p. **1226**
   No bronze shoulder-patch, lesser coverts metallic blue or green 4
4. Velvety-black band across secondaries; basal two-thirds of all tail-feathers velvety-black glossed with violet and tips green .. .. *Lamprocolius splendidus splendidus* and *L. splendidus chrysonotis*, p. **1232**
   No velvety-black band across secondaries; tail-feathers not as described above 5
5. Breast metallic violet or purple 6
   Breast metallic green 7
6. Back and belly bright metallic blue *Lamprocolius cupreocauda*, p. **1234**
   Back and belly metallic green; crown dull velvety-black glossed purple .. .. *Lamprocolius purpureiceps*, p. **1235**
7. Middle tail-feathers strongly glossed with purple *Lamprocolius chalcurus chalcurus*, p. **1229**
   Middle tail-feathers not glossed with purple 8
8. Belly purple; ear-coverts metallic blue not in strong contrast with cheeks; wing usually over 130 mm. *Lamprocolius chalybaeus chalybaeus*, p. **1227**
   Belly blue; ear-coverts deep velvety blue in strong contrast with cheeks; wing under 130 mm. *Lamprocolius chloropterus chloropterus*, p. **1230**

RED-SHOULDERED GLOSSY STARLING

Lamprocolius nitens nitens (Linnæus)

This beautiful starling is slightly smaller than the European species and measures about 8½ in. from bill to tail. The all metallic green plumage with violet and blue reflections probably looks almost black in certain lights, judging from experience with other metallic-coloured birds. Its light orange eye is a conspicuous feature. In

this species the shoulder-patches are golden bronze in contrast to the rest of the plumage, but as these feathers are often glossed with reddish purple they have supplied the rather misleading name of Red-shouldered Glossy Starling to the species. It is said to behave much in the manner of the European Starling. The wing measures 117–126 mm., the tail (male) 79–85 mm., (female) 74–78 mm.

This is a typical Glossy Starling, differing in no way in its habits from other savanna-frequenting species, living on fruit and congregating in large flocks. It nests in the hollows of trees, lining the cavity with feathers and laying blue eggs. It may be dismissed briefly, as it barely comes within our limits.

Distribution. The only race of the three subspecies described which

occurs in West Africa is a native of Angola, whence it ranges to the Loango coast and Gaboon. Other subspecies occur in Damaraland and Cape Province.

BLUE-EARED GLOSSY STARLING

Lamprocolius chalybaeus chalybaeus Hemprich and Ehrenberg

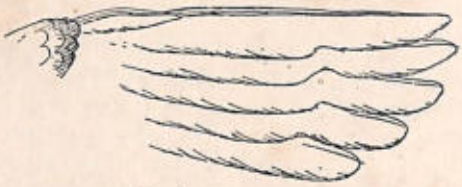
This Glossy Starling is about the size of our European Starling—about 9½ in. from bill to tail. The whole plumage is glossy metallic green with steel-blue reflections on the rump and tail and some velvety-black spots on the wing. The belly is purple and the eye yellow, but this last feature is shared by other glossy starlings in

the genus, so is not much aid to identification. Despite its brilliant plumage the bird will often look black in the tree unless the light falls on the metallic feathers. The wing measures (male) 133–146 mm., (female) 123–133 mm. and the tail (male) 85–92 mm., (female) 80–85 mm.

There is another species of Glossy Starling, *Lamprocolius chloropterus chloropterus*, which exactly resembles it in plumage, and unless the two are seen together, when *L. chloropterus* will be seen to be distinctly the smaller of the two and to have shorter, weaker legs, these two

species can best be distinguished by attention to the following details, characters which are of no avail in the field. When handled:

(*a*) the under side of the wing in *L. chalybaeus* shows indentations or notches on the margin of the inner webs of primaries 2, 3, 4 and 5, as if a piece had been cut out. In *L. chloropterus* there are no such indentations, the edge of the web being straight and even.



Under side of wing

(*b*) The small outer primary is very short and slightly more pointed in *L. chloropterus*.

(*c*) *L. chalybaeus* has a stronger tarsus, which always exceeds 30 mm. in length. *L. chloropterus*, on the other hand, never has the tarsus over 30 mm. in length and is much weaker in appearance.

Fortunately these two species have mostly different habitats, *L. chalybaeus* living in the dry thorn scrub belt from Gambia to Chad, while *L. chloropterus* is found in the more southern belts; but their ranges do overlap, and, as in parts of northern Nigeria, the two may be found side by side.

Still another Glossy Starling, *L. chalcurus chalcurus*, occurs in this tree-savanna belt which has a shorter tail than the other two and the tail is purple rather than green, contrasting much more with the back. This species is the same size as *L. chalybaeus* and has a similar wing formula.

The Blue-eared Glossy Starling is a woodland bird and is exceedingly numerous in the ironstone country of Senegal and Gambia in the bush; so long as there are trees present in the semi-arid belt, there will this starling be found to the borders of the desert and beyond. It lives principally upon grasshoppers and beetles, but in districts where corn is ripening they consume the grain in large quantities. Fruit of various bush-trees is also devoured.

This bird has a noisy cry, a loud *kwee-kwee* followed by a shrill rattling whistle, and is capable of making a pronounced sound with its wings as they beat the air. Like most starlings, it is highly gregarious and subject to local movements. Towards evening in Gambia, and no doubt elsewhere, these starlings collect in flocks and fly to their roosting places, for which they prefer low trees near water. There they make a great commotion, chattering and quarrelling.

COPPER-TAILED GLOSSY STARLING
Lamprocolius cupreocauda

PURPLE GLOSSY STARLING
Lamprocolius purpureus purpureus

VELVET-HEADED GLOSSY STARLING
Lamprocolius purpureiceps

SWAINSON'S GLOSSY STARLING
Lamprocolius chloropterus chloropterus

SHORT-TAILED GLOSSY STARLING
Lamprocolius chalcurus chalcurus

The nest is made in the holes of trees or stumps and is built of dry grass. Some nests are lined with feathers, others with dry leaves. Two or three eggs are laid, and these are pale blue, either immaculate or sparsely spotted with dirty rufous.

Distribution. From Senegal to Lake Chad and northern Cameroons through all the woodland territory, seldom south of lat. 12° N. but ranging further south in East Africa, where it occurs from Dongola to northern Uganda and Kenya. Its range is probably continuous south of the desert from west to east. It is the only Glossy Starling which occurs within the desert at such spots as Taberréshat, Tillia, Taza and Tawa Wells and in the remote region of Aïr, and in such places it has been found breeding.

SHORT-TAILED GLOSSY STARLING

Lamprocolius chalcurus chalcurus (Nordmann)

(see Plate 47, facing this page)

APART from its short tail, this species resembles *L. chalybaeus* in its plumage. The tail when closed appears bright purple instead of green and is distinctly shorter than in the species named. The wing measures (male) 133–147 mm., (female) 128–129 mm., and the tail (male) 71–80 mm., (female) 70–75 mm.

Comparison between this and other species which it closely resembles has been given under the last bird described.

In its mode of life the Short-tailed Glossy Starling resembles the Blue-eared Glossy Starling but it does not range so far north as the latter bird and never penetrates into the desert. It is found in large flocks of a hundred birds or more in the Northern Territories of the Gold Coast in the bush country north of the forest belt and is common in the Upper Volta where trees are growing. In that colony it ranges further south to the Accra plains, but its normal habitat is not far north, and not far south, of lat. 10° N.

The nest is made in the hole of a bole of a tree or some similar aperture. It is constructed of grasses upon which a layer of feathers, when these are procurable, may be laid. Eggs are pale blue and may be either unmarked or finely speckled and spotted with light orange-brown. They measure 26·5–27·7 × 19·4–20·2 mm.

Distribution. From Senegal to the country of northern Cameroons (Garua, etc.), where the birds incline to a larger size, thence to the Ubangi-Shari. Except in the extreme west of its range it does not occur much north of lat. 12° N. It is found north of the forest belt except on the dry Accra plains.

Its place is taken in the valley of the Upper White Nile by *L. c. emini*.

SWAINSON'S GLOSSY STARLING

Lamprocolius chloropterus chloropterus Swainson

(see Plate 47, facing page 1229)

THE small size of this Glossy Starling in comparison with *L. chalybaeus* and *L. chalcurus* is the best way to distinguish this bird, which in other respects is but a miniature of *L. chalybaeus*. In total length in the flesh it is about 8 in., as against 9–9½ in. in the other two birds mentioned. It may be noted also that its tail appears normal in length in comparison with its body, as in *L. chalybaeus*, and is not, as in *L. chalcurus*, abnormally short. In the hand the straight edge

Under side of wing

to the inner web of the primaries and complete absence of indentations on primaries 2, 3, 4 and 5 distinguish this bird at once from *L. chalybaeus*, with which it has for years been confused. See also my remarks under the latter species on page 1228.

In plumage this starling almost exactly resembles *L. c. chalybaeus* except that (1) the tail is glossy green, not washed with blue, (2) the lesser wing-coverts are more purple, (3) the deep velvety blue ear-coverts are more sharply defined. The wing measures (male) 115–127 mm., (female) 110–123 mm. and the tail (male) 67–74 mm., (female) 67–68 mm.

Immature birds may be distinguished from the dark brown immature of *L. chalybaeus* and *L. chalcurus* by their much paler, fawn-brown under parts.

Although Swainson's Glossy Starling inhabits the same belt as the two mentioned above, it does not approach the desert so closely as *L. chalybaeus*, nor does it range so far south as *L. chalcurus* except on the Accra plains.

As this bird resembles *L. chalybaeus* in its habits, there will be no need to discuss these more fully. Swainson's Glossy Starling is often to be seen associated with the Purple Glossy Starling, but the flocks usually keep to themselves, though the birds may be feeding in the same trees.

Owing to the confusion which has taken place in the past between this and the Blue-eared Glossy Starling, no nesting notes will be included, though the two are believed to breed under much the same conditions.

Distribution. On the whole this is a bird of the dry belt and tree savanna, but it does not extend so close to the desert as *L. chalybaeus*. North of lat. 14° N. it is absent. It is to be found over a wide area from Senegal and Gambia, the Gold Coast and Nigeria, north of the forest belt, to northern Cameroons, whence it ranges across the continent to the Upper Nile.

Its place is taken in Sennar and Abyssinia by *L. c. cyanogenys* and from Mombasa to the Zambesi valley by *L. c. elizabeth*.

PURPLE GLOSSY STARLING

Lamprocolius purpureus purpureus (Müller)

(see Plate 47, facing page 1229)

THIS Glossy Starling vies with *L. splendidus* in being the gem of the genus. It is a large bird—9½–10 in. in total length—and its plumage is strikingly beautiful, a glossy purple head and tail, golden-green back and wings and purple or brilliant steel-blue under parts according to the angle at which the light strikes it. The golden-yellow eye is a prominent feature, being very large and arresting set in the dark purple head. The wing of this bird measures (male) 145–162 mm., (female) 140–152 mm. and the tail (male) 74–81 mm., (female) 68–76 mm.

The Purple Glossy Starling is a bird of open parkland as opposed to the closed forest, whence it ranges into the southern part of the semi-arid belt. Burnt areas in the forest attract it, but it is most often seen in woodland on hillsides dotted with bushes and in the trees around villages.

Owing to its beautiful colouring it has suffered much persecution at the hands of plumage-hunters. It is a gregarious species, usually found in flocks which number anything up to a hundred birds or more. As it has a noisy high-pitched call, a large flock can cause a tremendous din. The heat of the day is spent in the shade of a leafy tree, but in the evening flocks may be seen wheeling and circling over the forest.

Food consists of insects, berries, fruit and seeds of many varieties. In the grass woodland and thorn scrub, flocks may be encountered here and there, especially in trees and thickets near water. In flight they have some resemblance to European starlings. In March and September, when the nim fruit is ripe, these starlings assemble in considerable numbers to feed upon it.

The nest hole is in trees usually at a fair height from the ground. The baobab is believed to be one of these selected for the purpose. Eggs vary from pale to darker blue marked with flecks of reddish brown. Measurements are 26–29 × 19–21 mm.

Distribution. From Senegal to northern Cameroon, extending north into French Sudan and French Niger Territory. It is chiefly to be found over the parklands and bush country north of the forest but in the Gold Coast is numerous also on the Accra plains. It ranges across the continent to Darfur via the savannas north of the Congo forest.

Its place is taken by *L. purpureus amethystinus* in the Bahr el Ghazal and in parts of Kenya and Uganda.

SPLENDID GLOSSY STARLING

Lamprocolius splendidus (Vieillot)

Two races occur in our area, the typical race occurring in Lower Guinea and Nigeria, and the other further west.

This magnificent bird, just under 12 in. in total length in the flesh, is considered by many to be the most handsome of all the Glossy Starlings. The upper parts are metallic green and blue shot with purple on the back and are relieved by the broad velvety purplish-black bands across the wings and tail and the two parallel lines of jet-black spots on the median and major wing-coverts. The under side is reddish purple in males with an ill-defined golden-copper band across the chest. Females have the under side metallic blue without the copper band. Despite its brilliant plumage the most noticeable feature about this starling is its large eye, which is conspicuously white. The wing measures (male) 143–168 mm., (female) 132–159 mm.; tail (male) 113–123 mm., (female) 99–119 mm.

This is an arboreal species restricted almost entirely to the high forest, secondary forest and gallery forests. When seen outside that environment it is certain to be where tall trees such as the locust bean or baobab occur. It is mainly in the Southern Provinces that we must look for it, but in the west of its range it occurs in the dry bush country of Senegal and Gambia, though now it is much less common than formerly and is only seen where large trees or tall mangoes afford it shelter and roosting places. Whether it is a migratory species or whether just subject to local movements is not very clear from the notes which I have received.

As it subsists almost entirely on the fruit and seeds of trees and shrubs, it no doubt moves about considerably in search of those which are in season. It is nowhere common and has been much persecuted in the past for its gorgeous plumage. Rather shy, it shuns the villages and habitations of man, but when a number gather together they proclaim their presence by the noise which they make. That it reaches considerable elevations in its range is

apparent from its presence in the oil-palm zone on the lower slopes of the Cameroon mountains, where it occurs up to 4,000 ft. It does not ascend to the real highlands, however.

The Splendid Starling makes its nest in the hole of a tree, sometimes in a marshy area quite near the ground, but usually high up. It is lined (in the Cameroons) with leaf petioles. Eggs, which number two, are pale greenish blue, spotted and blotched with reddish brown and lilac-brown. Measurements of eggs are (*L. s. splendidus*) 29–31·5 × 21·5–24·5 mm.

Distribution and Races

L. splendidus splendidus (Vieillot) lives in the forest and tree savanna from western Nigeria to the Congo and northern Angola, and in Fernando Po. Eastwards its range extends to Uganda, Kenya, the Bahr el Ghazal and Shoa.

Its place is taken in the extreme west by *L. splendidus chrysonotis* Swainson, which differs in having no blue on the nape and in having the throat and upper breast steel-blue with very little reddish purple. Wing measurements are: (male) 140–148 mm., (female) 130–133 mm. I have examined examples of this race from the area between Senegal and Sierra Leone and from the Loss Islands, and it must surely occur also from Liberia and the Gold Coast, as it is reported to have been found at Tapa in the hinterland of Dahomey. It is remarkable that no collection from the Gold Coast has contained a specimen.

CHOUCADOR OR PRINCIPE GLOSSY STARLING

Lamprocolius ornatus (Daudin)

This magnificent starling, which is restricted to Prince's Island, cannot be confused with any other species there. It is the same size as the Splendid Starling, which occurs on Fernando Po and the mainland but not apparently on Principe. *L. ornatus* measures about 11½ in. from bill to tail. Its wonderful colouring is better appreciated in the hand than in life, when the golden-bronze under parts and lower back appear almost black, and the violet and blue reflections on the wings and tail are lost at a distance. It has a metallic-green crown and mantle, golden-bronze back and shining blue rump and tip to the tail. Its whitish eye is probably its most obvious feature. Measurements are: Bill 20–23 mm., wing (male) 153–162 mm., (female) 141–145 mm.; tail (male) 108–111 mm., (female) 99–103 mm.

Like the Splendid Starling, this bird has remarkable notches on the inner web of the four longest primaries, and this probably

accounts for the peculiar loud noise made by the wing-beats of both species.

In its island home it is said to be common in all the wooded parts, or so it was some forty years ago. Like the rest of its genus, it breeds in holes in trees. Some further notes concerning it are given in my larger work (*cf.* volume vi, p. 72).

Distribution. Restricted to the island of Principe in the Gulf of Guinea.

COPPER-TAILED GLOSSY STARLING

Lamprocolius cupreocauda Hartlaub

(see Plate 47, facing page 1229)

THIS is a small Glossy Starling 8¼ in. in total length in the flesh with a wing expanse of 13 in., mainly metallic steel-blue above, including the wings, metallic violet breast, and steel-blue belly. The tail is short and has a wash of gold on the rectrices from which it has gained the name Copper-tailed. In some reflections the whole head appears purple. The bill measures 10–11 mm., the wing (male) 124–126 mm., (female) 110–120 mm., and tail (male) 71–74 mm., (female) 65–70 mm.

Care must be taken not to mistake the male Purple-throated Cuckoo-Shrike (*Campephaga quiscalina*) for this Glossy Starling. Although only reported from forested countries in Upper Guinea between Sierra Leone and the Gold Coast, the Copper-tailed Starling was said in the past to be common in most districts of the Gold Coast, including the Accra plains. It is difficult to credit this, but it may be true, as it has been found in tree savanna as much as in secondary forest and forest clearings. Tall trees attract it, and even there it keeps to the topmost branches. It is said to associate in flocks with the Purple Starling.

Its nest has not been found, but the birds have been noticed exploring holes in trees with a view to selecting a site. Eggs are as yet unknown.

Distribution. Recorded from Sierra Leone (Kenewa), Liberia and especially from the Gold Coast: Cape Coast, Wassaw, Prahsu, Fumsu, Kumasi, Volta River, Akuapim and Accra. It has been seen in gardens at Monrovia as well as in the forest and on the Kru coast. East of the Volta it has never been seen.

VELVET-HEADED GLOSSY STARLING

Lamprocolius purpureiceps Verreaux

(see Plate 47, facing page 1229)

In comparison with many in this group, the Velvet-headed Glossy Starling is a small bird about 8 in. in total length. It has a velvety purplish-black head, sharply defined from the rest of the body colouring, a purple throat and steel-green back and belly. The wings are blue. The bill measures 15–17 mm.; wing (male) 113–126 mm., (female) 106–119 mm.; tail (male) 60–67 mm., (female) 59–65 mm.

We do not know very much about this bird, which is rather a silent species and is generally observed in forest clearings. It does not extend west of Lagos in its range but has a wide distribution south and east of that.

Except when gathered to feed on the wild fruit trees, it is never seen in any numbers. It lives much in the high forest, keeping to the tops of trees. Its local movements are governed by the dates when its food is ripening. Berries as large as acorns have been found in the crop of specimens obtained. In East Africa it frequents the well-wooded areas in the vicinity of Lake Victoria and has been seen in the Botanic Gardens at Entebbe. The eggs are unknown.

Distribution. Southern Nigeria, from the Lagos area, to Cameroon, including Cameroon Mountain, French Cameroons and Gaboon to the Congo, ranging east along the Uelle and northern Belgian Congo to Uganda and the borders of Kenya Colony (Elgon).

LONG-TAILED GLOSSY STARLING

Lamprotornis caudatus (Müller)

This fine Glossy Starling with its normally oil-green plumage, golden-bronze head and breastband, and very long flowing purple and blue tail cannot easily be mistaken for any other when once it has attained maturity. The size of the body is about the same as in the larger species of *Lamprocolius* such as *L. splendidus* or *L. purpureus*, but it can at once be recognised by its enormous tail, which is strongly graduated and in males reaches a length of over 14 in. and in females to nearly 11 in., though the majority of females have tails 9–10 in. long. A conspicuous feature is the very pale eye, which varies from creamy-white to cinnamon-colour. Measurements are: Bill 19–22 mm.; wing (male) 170–201 mm., (female) 160–172 mm.; tail (male) 270–360 mm., (female) 205–275 mm.

The female, apart from being smaller in size, resembles the male. There is a curious variety of this bird which has turned up here and there within the range of the species in which the mantle, breast and wings are bright blue with purple reflections instead of being oily-green as in normally coloured examples.

The Long-tailed Glossy Starling is a bird with a wide but rather narrow range from west to east throughout the tree belt north of the forest, and in the open bush where large trees occur. It is common in Senegal and Gambia and does a good deal of damage to the millet crop at the end of the rains. Although commonly to be found in woodland, grassland and farmland, it is not usual to see it near habitations, and being very alert and wary it is not easy to observe at close quarters.

In the dry season the pairs join up to form flocks, but in the wet season they breed. Many pairs will nest in close proximity, especially where there are groves of baobab trees in the holes of which they are fond of nesting. Its food consists of fruits and berries, and much time is spent on the ground.

The call-notes are many and varied. Favourite haunts in Nigeria are the rocky tree-clad hills surrounded by cultivation. The birds leave the hills at dawn for the fields and later in the day seek the shade of a leafy tree until cool enough to feed once more. This bird is not a strong flier, labouring with rapid beats of its short wings, the long tail looking as if it is anything but easy to carry.

L. caudatus breeds in holes in trees, sometimes choosing one in quite a small tree, at others in giants such as the baobab. The nest consists of leaves or skeleton leaves introduced into the hole by the birds. Eggs, laid in Nigeria in September and October, are pale blue without markings and measure 27·5–28·6 × 19·75–20·23 mm.

Distribution. From the coastal regions of Senegal and Gambia through Casamance, the French Sudan and the Northern Provinces of the Gold Coast, Nigeria and the Cameroons, through French Equatorial Africa to Darfur and Kordofan.

EMERALD STARLING

Coccycolius iris Oustalet

Of all the brilliant starlings in West Africa this is one of the most beautiful. It is quite a small bird for a starling, measuring slightly over 7½ in. from bill to tail in the flesh. The entire crown and upper parts are brilliant metallic green, including the wings and tail. The ear-coverts and a patch on each side of the neck are glossy purple; the chin, throat and breast are metallic green like the back, the

abdomen, sides of the body and thighs glossy purple with a golden-bronze gloss. Bill, legs and feet are black, and the eye is dark brown. The bill measures 15–18 mm., the wing (male) 106–112 mm., (female) 99–107 mm.; the tail (male) 72–77 mm., (female) 68–73 mm.

The Emerald Starling has a restricted range in West Africa, where it is confined to orchard bush and open savanna, never in forest, though seen occasionally at the edge of gallery forests. Though it is very local, even in this circumscribed area, it is none the less common where it is found.* The birds have a preference for dead trees upon which to perch, and whether the tree be dead or alive the Emerald Starlings choose the topmost branches.

Little parties go about together and make squeaky little cries as they fly. Their food consists very largely of small terrestrial ants, and flocks numbering as many as fifty birds may be observed on patches of burnt ground. To what extent it is migratory, if at all, is not known. In the Yana and Kabala district of Sierra Leone it has only been noted in February and March, the same months when it was found at Bandama in the Ivory Coast.

The nest hole has never been discovered, and the eggs are unknown.

Distribution. Fouta Jalon in French Guinea, the north and north-east of the Sierra Leone Protectorate and in the Karine district north of lat. 9° 30′ N., also in the Ivory Coast (Béoumi and Bandama). It does not occur on the Loss Islands, where the type specimen was supposed to have been obtained.

CHESTNUT-WINGED STARLING

Onychognathus fulgidus Hartlaub

THREE races of this bird come within our limits. The typical subspecies is confined to São Thomé, but two other races are found in Upper and Lower Guinea respectively.

This is a fine large starling quite 14 in. in length which in many reflections must appear almost black with a red eye and chestnut and black wings, the latter when spread being very noticeable, as the dark chestnut primaries have broad black tips. At close quarters the plumage will be seen to be highly glossy, the forehead and crown dark blue, the rest of the head, inner half of wings and long graduated tail being steel-green, the back and breast strongly glossed with purple. The bill is long—about 1½ in. from base—and the upper mandible strongly hooked, which always gives a touch of fierceness to the owner. The female may be recognised by the grey streaking on the head. Measurements of *O. f. fulgidus* are: Bill 34–35 mm.;

wing (male) 156–162 mm., (female) 149 mm.; tail (male) 164–165 mm., (female) 145 mm.

The Upper Guinea race, *O. f. hartlaubii*, is considerably smaller than the island bird. The bill measures 25–30 mm., the wing (male) 120–130 mm., (female) 112–123 mm., and tail (male) 118–132 mm., (female) 108–114 mm. Moreover the forehead and crown are steel-green like the nape, with no blue reflections.

In total length Hartlaub's Chestnut-winged Starling measures 12 in. and has a wing-span of about 15 in. In flight the wing-pattern is very noticeable, the chestnut on the webs contrasting with the glossy green secondaries and the black terminal half of the primaries. The tail is about 5 in. long and is fan-shaped, the feathers being very much graduated and narrow in shape.

The habitat of this species is a varied one. It frequents clearings in the high forest and in secondary forest wooded slopes of hillsides, palm plantations, gardens and European reserves. It is not found in the bush. Fruit, seeds, ants, beetles and other insects are devoured by the Chestnut-winged Starling. It is usually seen in small parties and is inclined to be shy. I have heard of it being seen in a garden in the centre of Monrovia, so that it does not entirely shun the habitations of man.

No account of its nesting is available.

Distribution and Races

O. fulgidus fulgidus Hartlaub is found only on the island of São Thomé and the adjoining Rollas Islet in the Gulf of Guinea.

O. fulgidus hartlaubii Gray, whose distinctions are given above, ranges from Sierra Leone to southern Nigeria.

O. fulgidus intermedius Hartert resembles in plumage *O. f. hartlaubii* but in size is considerably larger, with bill 27–31 mm., wing (male) 128–136 mm., (female) 122–129 mm., tail (male) 128–139 mm., (female) 117–123 mm. Its range extends from the Cameroons to northern Angola east to the Upper Congo and Bahr el Ghazal, probably via the Uelle and Aruwimi Rivers.

PREUSS'S MOUNTAIN STARLING

Onychognathus walleri preussi

This is the smallest of the Chestnut-winged Starlings, not more than 9 in. in total length, closely resembling both in size and shape our common European Starling. The birds appear black glossed with dark blue, and in both sexes the expanded wing shows a dark chestnut patch. The males have glossy heads like the back; the females are duller and much greyer, with some streaking on the feathers. The red eye is a noticeable feature if seen at close quarters.

This starling's measurements are: Bill 18–22 mm.; wing (male) 112–121 mm., (female) 105–112 mm.; tail (male) 86–94 mm., (female) 72–83 mm.

The German collector after whom this starling is named obtained the first example at Buea on Cameroon Mountain, and one of our own explorers found it later on Fernando Po. It was not until 1935 that we learned much about it, a fortunate year when the D.O. at Bamenda happened to be an enthusiastic ornithologist. In the vicinity of that station it may be met with on the wooded hills, and from there to 7,000 ft. it was encountered here and there in the Cameroon Mountains but no higher. It is comparatively common in these altitudes and its melodious whistle can be heard almost continuously, though the bird is less often seen. Individual birds like to perch on the highest twig they can find, from which to utter their whistle.

Preuss's Starling is a forest bird and procures most of its food (berries and seeds) in the forest canopy. The berries of junipers and cinnamon are said to be especially sought for.

This starling builds its nest in the holes of trees and has been seen collecting lichen for the purpose, but the eggs have not been found.

Distribution. Cameroon Mountain from Buea upwards, also the Banso Mountains and the Oku district (7,000 ft.). It also occurs on Fernando Po.

In East Africa several races are found, the typical subspecies in the highlands of Tanganyika and *O. walleri elgonensis* on Mount Kenya and Mount Elgon.

NEUMANN'S CHESTNUT-WINGED STARLING

Onychognathus morio neumanni (Alexander)

Two races of this starling come within our limits, the above mentioned being by far the best known.

This large Chestnut-winged Starling measures 12–14 in. in total length, of which the tail in full-grown males accounts for about 7 in. It appears a black bird, the dark purplish-blue gloss on the feathers being lost at a distance. It has a very conspicuously marked wing, bright chestnut with rather narrow black tips. The chestnut is not very noticeable when the bird is at rest, but when expanded, with the light shining through the primaries, the contrasting pattern is arresting. The long black tail, by which this bird may also be recognised, is strongly graduated and is broad when expanded, the central feathers a third as long again as the inner pair. A dark red (crimson) eye is also a feature to note. The bill is black, powerful, and with strongly decurved upper mandible. Measurements are: Bill 25–28 mm., wing 157–171 mm., tail 153–180 mm.

The adult female differs from the male in having the head and throat iron-grey with glossy blue shaft-stripes, giving the crown, cheeks and throat a streaky appearance.

The cracks and crevices of the granite hills that rise sheer and bare of vegetation from thicket-protected bases in northern Nigeria are the retreats of these starlings, which are equally at home among the rocks and cliffs of the Bamenda Montane district in British Cameroons. There, in the months of February and March, the birds are engaged in nesting operations. Later in the year, in November, the starlings congregate in large flocks numbering 20–30 birds and wander further afield. Their food consists largely of the fruit of the wild fig, and when the *Ficus* is not bearing, in July and August, the starlings desert the neighbourhood entirely.

On the cliffs Neumann's Starling is seen to best advantage and may be watched as it dives with closed wings from some vantage

point a hundred feet or more before checking its headling plunge, to rise again on some upward current or glide round a pinnacle of rock. The red in the wing is conspicuous during this display, and so is the long fanned tail. Although the bird is common enough in such places and believed to breed in the rock crevices, its nest has never been found or the eggs described.

Distribution and Races

Onychognathus morio neumanni (Alexander) ranges from northern Nigeria and the mountain area of British Cameroons east to Darfur, Ubangi-Shari and the Bahr el Ghazal.

The only race known from Upper Guinea is *O. morio modicus* Bates, which has a bill not nearly so deep and stout (25–30 mm.) as in *O. m. neumanni*. In addition this race has a very short tail, (male)

136–147 mm., (female) 128–145 mm. The wing measures 147–159 mm., (female) 148–152 mm. *O. m. modicus* inhabits the rocky cliffs near the Upper Niger in French Sudan between lat. 12° and 15° N. in the Kulikoro and Bamako neighbourhood and the far interior of Upper Casamance.

It is represented in Kenya, north-eastern Uganda and Tanganyika by *O. m. shelleyi* and in Abyssinia by *O. m. rüpellii*.

NARROW-TAILED STARLING

Poeoptera lugubris lugubris Bonaparte

As its colloquial name implies, this small starling has a long narrow tail, the feathers of which are strongly graduated; the central pair, which in a full-grown male are about 5 in. in length, protrude quite an inch beyond the next pair, and so on in proportion. In build the bird is slight, and in total length from bill to end of tail it measures 9–9½ in. In colour the male is all glossy bluish purple and

in the field appears almost black, with dark brown wings with pale margins to the secondaries and darker tips making a slight pattern. The yellow eye is conspicuous in both sexes. The female is very different in plumage and has a somewhat shorter tail. In colour it is more grey, the upper parts particularly washed with glossy blue, but the point to remark is the chestnut wing-patch, which, while hidden normally, is very striking in flight. This feature is not shared by the male, and unless seen together the two sexes would easily be mistaken for different species apart from their similar build. Measurements are as follows: Bill 13–15 mm.; wing (male) 87–96 mm., (female) 82–89 mm.; tail (male) 108–117 mm., (female) 94–108 mm.

This is a wide-ranging species in West Africa which none the less seems to be very local in its distribution. It is not a mountain bird but occurs in wooded lowland country. Old dead trees seem to be one of its special requirements in which barbets have drilled holes for the Narrow-tailed Starlings to appropriate. It is a bird which is generally seen in flocks of a score or more individuals. Their quick flight is made in perfect unison with their long tails all pointing the same way, which reminded one celebrated naturalist of a lot of little fishes darting about in a clear stream.

Occasionally the birds have been heard to utter faint little cries. Their food consists of similar fruit to that of other starlings which live in the same countries. When flying near their nest holes the birds have a habit of spreading out their tails widely like a wide-spread hand, each feather being clearly visible.

Wherever it has been observed breeding it has invariably appropriated the nest hole of a barbet, the holes made by *Gymnobucco* being specially favoured. Very decayed trees which are too rotten to be climbed are sometimes selected for the purpose. One such nest hole examined after the tree had been felled contained three pale blue-grey eggs with scattered small spots and dots of brown more numerous at the larger end. The only unbroken egg measured about 22 × 16 mm.

Distribution. From Sierra Leone to northern Angola and thence east to the Ituri and Uelle Rivers is the range of this bird, which has now been found in all our West African colonies except Gambia. It seems to be very local in Sierra Leone and in the Gold Coast, while from Nigeria it is only recorded to date from Ondo Province. It appears to be much more commonly seen in the Cameroons, both around the base of Cameroon Mountain and from the Ja River area. It also occurs in Fernando Po.

Birds from the Ituri and Uelle district of the Belgian Congo have been named *P. lugubris major*, but are doubtfully distinct.

WHITE-COLLARED STARLING

Grafisia torquata (Reichenow)

This bird has more the appearance of a starling in figure than the last species, and is altogether more stoutly built. The black bill is normal in shape but rather short, the nostrils fully exposed, the tail slightly rounded and not particularly long. The colour of the male is unmistakable—very dark glossy blue, appearing black, with pure white breast which extends on to the sides of the neck in a horse-shoe-shaped white band. The female, which is quite different, is less easily recognised unless with her consort, the general colour of

the plumage being smoke-grey throughout, darker on the upper parts, which are glossed with dark blue, and paler grey on the under parts, which entirely lack the white distinguishing breastband of the male. In size this apparently rare starling measures 8½–9 in. in total length. It resembles the common European starling in size of body and wing but has a much shorter bill and a longer tail than that bird. The yellow eye is distinctive in a good light. The wing measures (male) 126–132 mm., (female) 116–117 mm.; the tail (male) 88–91 mm., (female) 79–85 mm.

The area of Bamenda in British Cameroons known as the Ndop plain, with an average height of 3,000 ft., ends as abruptly as the land ends at the sea, in the edges of the vast stretches of the Nun River marshes. On the little islands of firm land among the marshes are villages and farm settlements, and it is in the trees surrounding these villages that the White-collared Starling has its home in British territory. They keep much to the tops of trees and may be seen flying and feeding with the Splendid Glossy Starlings, when they appear noticeably smaller and more slender than those birds and not nearly so noisy. They live on the same berries and are very fond of figs. In their movements these White-collared Starlings are active birds, climbing and hopping among the branches and exploring holes. They utter chirruping notes and have a somewhat weak apology for a song

The nest and eggs are unknown.

Distribution. This species is now known to inhabit three distinct localities, (1) the western part of the grassy plateau of Middle Cameroons near the Banso Mountains, the Ndop plateau and the Bum area. Specimens examined from (*a*) 35 miles north-east of Banyo (3,000–3,500 ft.), (*b*) half-way between Fumban and Banyo (2,500 ft.), (*c*) 20 miles south-west of Fumban (3,000–3,500 ft.), (*d*) Bamessing, Upper Nun valley (3,800 ft.), (*e*) Ba Ngangte—all localities in Cameroons. Sight records from the same area come from Bambalang and Wum, some fifty miles from Ndop. (2) The northern Ituri district of the Belgian Congo. (3) Seventy-five miles north of Ndele on the route to Aouk, which lies north-east of the Province Ubangi-Shari to the east of Fort Archambault in mountainous country. Whether these starlings' colonies are isolated from one another completely remains to be seen, but the distribution is sufficiently curious to be given in detail as I have done.

CHESTNUT-BELLIED STARLING

Spreo pulcher pulcher (Müller)

This starling, in which the sexes are alike in plumage, is rather stumpily built, with short almost square tail and rather heavy black bill. Its total length is about 8½ in. in the flesh, with wing expanse of 16½ in. Its colouring should proclaim its identity, for it is the only starling with the lower half of its body rich unglossed chestnut, contrasting with the glossy green (which in some lights looks almost black) breast, back and wings (when the wings are shut). The tail is decidedly blue and glossy and the head dull greyish brown. Only when the bird flies will the very distinctive wing-pattern be discernible, then the whole of the inside of the wing appears cream-colour, and this very light wing-patch, with dark tips and edges to each quill, gives a striking appearance to the bird in flight. An almost white eye is another prominent feature in life. The wing measures 110–122 mm., the tail 60–68 mm.

The Chestnut-bellied Starling is a bird of the thorn-scrub country, which ranges through the semi-arid belt of West Africa north of approximately lat. 11° N. All along the southern borders of the Sahara it is to be met with commonly and may easily be observed when feeding on bare ground and perching in plain sight. Its food consists of beetles and termites as well as the berries of the *salvadora*, upon which last some birds appear to subsist almost entirely.

In northern Nigeria it seems to prefer the patches of scrub and low bush which are scattered over the cultivated areas, and when the vegetation conforms as described the starling is not uncommon. These starlings live in small flocks which when disturbed at their feeding do not fly far. The wings are rapidly beaten and the flight is direct. The call-note is a pleasant *whirri-whirri* and its song a succession of weak liquid notes. In the opinion of some naturalists this is the most numerous starling in the central and northern parts of Katsena, Kano, Bornu, Dikwa and Sokoto, and very likely the same holds good in other places where it is present.

In Darfur, far to the east of our limits, this bird has two distinct breeding seasons in April and in October, and the same is evidently the case in West Africa, though in different months. In Kano, where the Red-bellied Starlings are very common both inside and outside the walls of the town, nests with eggs have been found in September and October. In Sokoto clutches of eggs have been taken in June.

The nest is loosely constructed, a domed ball-shaped collection of dry grasses with an internal lining of feathers, the entrance hole being near the top. Several nests may be found in a circumscribed

area. The desert date tree is a favourite site in which to place the nest. Eggs number three to five and are deep blue, rather sparingly blotched and spotted with rust-brown and lilac. Eggs measure 24·4–28 × 17·3–19·2 mm.

Distribution. From Senegal to the Province of northern Adamawa in northern Cameroons around Marua, through the whole semi-arid belt north of lat. 11° N., which includes the Northern Provinces of Nigeria, the extreme north of the Gold Coast and the Upper Volta region. Eastwards it ranges to the Nile.

In Abyssinia and Eritrea a race with darker chestnut belly, *Spreo pulcher rufiventris* Rüppell, takes its place.

SUB-FAMILY BUPHAGINAE (OXPECKERS)

YELLOW-BILLED OXPECKER

Buphagus africanus africanus Linnæus

THE habit which this bird has of clinging to the bodies of wild and domestic animals is probably one of the best guides to its identification. Although there are two species of oxpecker in Africa, the

Yellow-billed and the Red-billed, only the former, distinguished by its distinctively shaped and mostly yellow bill as well as a pale rump from the other, has occurred within our limits in West Africa

There is little distinctive in the colouring of this bird, which is grey-brown above with darker brown wings, but the cream-coloured rump is noticeable as the bird climbs about the body of some animal. When fully expanded the rufous inner web of the four outer feathers may be observed. The head and breast are the same grey-brown as the back, and it is seldom that a view of the rest of the under parts, which are buff and appear light coloured, can be obtained. The orange eye and heavy yellow bill with red terminal patch are both conspicuous features to observe when at really close quarters. The bill measures 14–16 mm., the wing 112–131 mm., the tail 88–98 mm. and the tarsus 20–23 mm.

The legs and feet are stout, the tarsus is short and the toes are furnished with needle-pointed and decurved claws which enable the bird to alight and maintain its hold on any part of the skin of an animal upon which it elects to alight. This bird can run over the belly of a galloping beast and maintain its foothold. When thus climbing about, the bird's tail, which is composed of twelve narrow stiff-shafted feathers, assists the oxpecker in keeping its balance.

The range of this bird in West Africa, in the absence of the larger herbivora, especially the rhino, is largely determined by the presence of the domestic humped ox, which is confined to comparatively high country outside the fly belt. Thus the oxpecker has a somewhat restricted range. The birds are usually in small parties of 2–8 in number and do a certain amount of good by ridding the oxen, mules and asses of ticks. They run up and down their sides and bellies like woodpeckers on a tree. Whether it can be considered beneficial or the reverse in game country or where herds are pastured will always be a matter of controversy, but after weighing up the evidence for and against (as I have in my larger work) I came to the conclusion that, taking all the bird's activities into consideration, it appears that the balance is more in the oxpecker's favour than has been admitted.

During one investigation of 812 ticks collected from stomachs of oxpeckers it was found that 95% were potential vectors of diseases such as East Coast fever, redwater anaplasmosis and heartwater. This matter is discussed at length in my larger volume cited. All kinds of domestic stock receive attention from the oxpecker—horses, mules, donkeys, cattle, sheep, goats and pigs—while in the game reserves of East Africa the oxpecker lives in close association with all the big antelopes and larger game such as the buffalo and rhinoceros. Only elephants and hippos are avoided.

The eggs are laid in the natural holes of trees. One such nest investigated near Kano on 19th July in a large baobab about 25 ft. from the ground contained three eggs on the point of hatching. These were pinkish white, fairly heavily spotted and blotched with

rust-brown and lilac. A nest found in Darfur on 3rd June containing three naked young was also in a hole, but contained material which resembled the nest of a starling, while the Kano nest had no extraneous matter whatever.

Distribution. Practically the whole of tropical Africa, but in West Africa confined to the country where livestock are maintained outside the fly belt, i.e. on the high pasturelands in the north of our area and in the dry belt in the extreme west. It is absent from the forest belt and not recorded from the country in French Sudan and Upper Volta south of the desert, but a flock is recorded from Niafounké in the Inundation Zone. In Nigeria it is sparsely distributed in the semi-arid belt but is commoner in the Fulani cattle country. Near Chad it is reported from Fort Lamy. *B. africanus* ranges across the continent to south-western Abyssinia and then south to the Orange River. It is rarely recorded from Kenya, but is more numerous in western Uganda.

A race *B. africanus langi* Chapin has been described from the Lower Congo. It is smaller and darker in colour.

In eastern and southern Africa the Red-billed Oxpecker (*Buphagus erythrorynchus*) takes its place, and these two species overlap in their range in parts of East and South-East Africa. Both occur in Uganda, but there the red-billed bird is local and restricted to the north and east. It is, however, widely found in Kenya. It may be distinguished from *B. africanus* not only by the bill, which is entirely red, but by having the rump dusky brown like the back.

FAMILY PICATHARTIDAE

(*See illustrated key, pages* 96–7)

(*a*) Front half of naked skull bright yellow
Picathartes gymnocephalus, p. **1248**

(*b*) Front half of naked skull black .. *Picathartes oreas*, p. **1249**

BARE-HEADED ROCK-FOWL

Picathartes gymnocephalus (Temminck)

(see Plate 46, facing page 1212)

This and the next species to be described are two of the most remarkable birds in the whole of Africa, as remarkable in appearance as they are in their habits. The bird named above is an inhabitant of Upper Guinea but has a very restricted range. The other lives in Lower Guinea and is equally rare.

P. gymnocephalus has been figured in colour facing page 1212 in this volume, but the drawing fails to bring out the extraordinary gracefulness which the living example exhibits. Its yellow head is quite bare of feathers and is adorned with circular patches of black at the rear of the skull. The neck is long, the skin yellow covered with scanty white feathering. The upper parts of the body are blue-grey, the under parts white. The tail is brownish, and the short rounded wings are brown. The bill is crow-like, black in colour; the legs are grey to blue. The legs are enormously developed. Measurements are: Bill 33–35 mm., wing 152–163 mm., tail 167–179 mm., tarsus 62–68 mm.

To see this bird in its habitat one must first discover country suited to its special needs. It seems to be found only in high mountainous country where the tall forest trees grow among rocky moss-covered boulders. Undergrowth is not essential but rather the reverse. Rocks or cliff faces in the forest are an essential part of its habitat, for on the rocks it makes an extraordinary mud nest which will be described under the next species.

These birds progress by long hops and evidently spend much time on the ground or among the rocks. They feed on crustaceans, snails, beetles and insects and are mostly silent, emitting an occasional *raaa* or low *ow, ow, ow*. They are full of curiosity and can be attracted to anyone sitting quietly in the forest. The natives of Sierra Leone have surrounded this weird bird with superstitious powers. It has seldom been seen by Europeans.

Distribution. First discovered in the Gold Coast, where it was reported as occurring in boulder-strewn forests, probably in Ashanti. It has also been found in Togoland at Leglebi. It was next discovered in Sierra Leone in various localities, including the Sugar-loaf forest of the Peninsula, at York Pass and the Koinadugu Plateau.

CAMEROON BARE-HEADED ROCK-FOWL

Picathartes oreas Reichenow

THE notes given for *Picathartes gymnocephalus* will apply equally to this species, as in form, manners and plumage the two birds are so very alike. The only difference in the plumage which would be remarked in the field is that whereas in *P. gymnocephalus* the flight feathers are brown and contrast but slightly with the back, in *P. oreas* the primaries are jet-black, in striking contrast to the rest of the plumage of the upper parts. The main distinction, of course, is in the colour of the skin on the bald head, as in *P. oreas* the whole of the front of the head in life is leaden blue and the hinder part and

neck carmine-red. Measurements are as follows: Bill 35–39 mm., wing 145–155 mm., tail 130–139 mm., tarsus 58–61 mm.

The blue skin on the anterior part of the head has the appearance of closely matted feathers, and in contrast to most bald-headed birds *P. oreas* is distinctly attractive. Its movements are all graceful—even the enormous hops which it makes are accomplished with ease and grace.

The arrival of a living example in the gardens of the Zoological Society of London has enabled me to write of its appearance at first

hand. It gives the impression of constant alertness and perches with its legs wide apart. Its throat is constantly expanded, an action which is evidently characteristic of the species. The only note it has been heard to utter is a low *ga-a-a*.

In the dripping rain forest of Cameroon, where only a little light penetrates through the dense canopy, this strange bird has its home, feeding largely on the ground upon crickets, praying mantids, spiders, ants, beetle larvae and such-like, all of which, including locusts, were given to the captive bird and devoured with relish. Tiny snail shells, bones of a small frog and remains of crustacea have also been found in the stomach of birds collected at Kribi.

A requirement of this bird in its forest retreat appears to be overhanging rocks or cliff faces to which its remarkable nest of mud can be attached. Two or three nests may be found close together plastered on the cliff face, preferably below an overhanging rock to protect it from rain. The nest is lined with fibre. One such nest was found to be 12 in. wide at the top and 8 in. deep; the inside measured 6 in. against the rock, 5 in. out from the rock and about 4 in. deep. An exceptional site was in a big log about 3 ft. in diameter which had been burnt out hollow at one end and the nest was built under the overhang. Feathers are sometimes found in

the lining as well as fine fibres. The only egg which I have examined was taken at Efulen, French Cameroons, and resembles that of a large nightjar. It is creamy white, mottled all over with brown and has dark grey underlying spots. It measures 40 × 27 mm.

Distribution. The Kumba district of British Cameroons, and Kribi, and Efulen in French Cameroons. There is nothing to prevent its ranging through the primeval rain forest from British Cameroons to Gaboon, but it has not yet been found in the latter country, which is probably the least investigated country in West Africa so far as birds are concerned.

FAMILY ZOSTEROPIDAE

Key to the White-Eyes (Zosteropidae) in the genera Zosterops and Speirops

1. With plumage bright yellow and/or green 2
   With plumage not bright yellow and/or green 4
2. Under parts mostly green (not bright yellow) *Zosterops phyllicus*, p. 1254
   Under parts mostly or entirely bright yellow 3
3. Under parts brightest golden yellow, upper parts more yellow than olive; ranging in Upper Guinea (which includes all British Colonies) and in British Cameroons north of lat. 7° N. *Zosterops senegalensis* and subsp., p. 1252
   Under parts duller yellow and upper parts more olive than yellow; ranging in Lower Guinea and British Mandate Cameroons south of lat. 7° N. and islands in Gulf of Guinea but not in Upper Guinea *Zosterops virens* and subsp., p. 1253
4. Crown white (like rest of head); restricted to Principe Island .. .. *Speirops leucophaeus*, p. 1258
   Crown not white 5
5. Crown blackish or dark brown, contrasting with mantle 6
   Crown not blackish or dark brown, not contrasting with mantle 7
6. White band across forehead and passing back over eye; throat pure white. Restricted to Cameroon Mountain *Speirops lugubris melanocephalus*, p. 1257
   No white band across forehead or stripe over eye; throat greyish. Restricted to São Thomé Island *Speirops lugubris lugubris*,* p. 1256

* *Speirops brunneus* from Fernando Po is intentionally omitted from the key. For distinctions between it and *S. l. melanocephalus* see page 1258.

7. Lores black. Restricted to Annobon Islands
Zosterops griseovirescens, p. 1256
Lores white. Restricted to Principe and São Thomé Islands respectively .. *Zosterops ficedulinus ficedulinus* and *Z. ficedulinus feae*, p. 1255

YELLOW WHITE-EYE

Zosterops senegalensis Bonaparte

Two races are found in West Africa.

This very small bird, bright yellow below and greenish yellow above, with light brown wings and tail, measures only 4 in. in total length. Its most prominent feature is the ring of white feathers round the eye; the black spot in front of the eye would not be visible in the field. The black bill, about 10 mm. in length, is straight and fine, and the legs are grey. The wing measures 50–59 mm. and the tail 33–41 mm.

The bright yellow plumage and lively movements of this little bird are almost certain to attract a traveller's attention in the semi-arid belt of West Africa where the bird is by no means uncommon in the trees and, being gregarious by nature, is not likely to be overlooked, small though it is. In Gambia the thick belts along the swamps are frequented by it as well as the bush-fruit trees, where it is not so easily seen among the thick foliage.

Their silvery cries are pleasing to the ear and are sometimes joined into a song. Usually pairs keep together as they search the foliage of gardens, fields and bush for the insect life upon which, with fruit in season, they largely subsist. Often three or four birds join company, and they frequently attach themselves to bird armies or mixed bird parties. Most observers agree that thick-foliaged trees seem essential to the habitat of this white-eye.

In northern Nigeria nests have been found in May and June. The nest is a compact tiny open cup suspended by fine fibres or cobwebs to twigs, 5–12 ft. from the ground, and made of fine dry grass, rootlets and cotton, or of grass alone. Two pure white eggs form the clutch, and these measure 14–16·75 × 10·6–12 mm.

Distribution and Races

Zosterops senegalensis senegalensis Bonaparte ranges through the whole of the thorn-scrub savanna and northern part of the grass-woodland which stretches across Africa from west to east. Its range dies out before the borders of the desert are reached where thick-foliaged trees disappear. Only here and there will it be seen in arid, sandy country supporting only light scrub. The accepted range of the typical race is Senegal south to northern Cameroon, east to

western Uganda, central and southern Sudan to Northern Eritrea and Abyssinia.

Along the moister Guinea coast south of lat. 8° N., from Sierra Leone to southern Nigeria, its place is taken by *Zosterops senegalensis leoninus* Sclater, distinguished by having the plumage of the upper parts distinctly darker, more olive and less yellow, and being slightly less bright yellow on the under parts. The wing is 51–55 mm.

In Kenya Colony and northern Tanganyika we have *Z. senegalensis flavilateralis*, which is rather less yellow and paler below. From Tanganyika southwards the race *Z. s. anderssoni* occurs.

GREEN WHITE-EYE

Zosterops virens stenocricota Reichenow

In my larger work I recognised three races of the Green White-eye within our area. The only one which occurs in British territory—the Cameroon Mountain race—is that named in the above heading.

Just a shade over 4 in. in total length, this white-eye is bright golden green above and bright yellow below, with a broad yellow band on the forehead continued over the eye, which last is surrounded with a ring of white feathers. The very black bill is straight and medium in length (about 11 mm. from the gape). The legs are slaty in colour. In flight the wings and tail appear very dark, particularly the wing-tips. The wing measures 53–59 mm. and the tail 31–39 mm.

These pretty little birds are common at the edges of the forest on the mountains above Bamenda, where they may be seen flitting quietly among the glossy green leaves of the figs and the paler leaves of *Agauria salificolia*. On the neighbouring mountains they do not seem to come lower than 5,000 ft. and they ascend as high as Oku, above 7,000 ft. Usually two or three are seen together, but occasionally a little flock has been observed. They are most voluble and keep up a musical twittering which has a clear, bell-like quality.

A nest found on 23rd January at 5,500 ft. was a fragile little cup attached to twigs by the grey lichen which formed its outer wall, being woven over with twigs and scantily lined with dry grass. The three eggs were pale blue and unmarked.

In the French Middle Congo and in southern Cameroon examples of the race named *pusillus* were found to have been feeding partly on the berries of the haronga tree. The borders of the forest and the forest clearings are the habitat of this white-eye, which does not appear to enter the closed forest.

Distribution and Races

Zosterops virens poensis Bannerman, with crown, nape and upper parts bright yellowish green, having a broad yellow forehead continued in a band over the eye and bright yellow under parts, is restricted to the Island of Fernando Po in the Gulf of Guinea.

On the mainland opposite there lives *Zosterops virens stenocricota* Reichenow. It has a narrower yellow forehead, more olive-yellow upper parts and blacker loral spot. The wing is 53–59 mm. and the tail 31–39 mm. Its range includes Cameroon Mountain and other mountain ranges in British Cameroon.

The third race in our area is *Zosterops virens pusillus* Reichenow, which is simply a small edition of the last named, with wing 49–53 mm. and tail 29–32 mm. It is known only from the savanna belt of West Central Africa, the north Middle Congo and southern Cameroons.

In Kenya, Uganda and Tanganyika other races occur. The species is found all over Africa south of the Sahara.

The Uganda race is *Z. virens stuhlmanni*. The best-known races in Kenya are *S. v. jacksoni* in the highlands to the west of the Rift valley, and *S. v. kikuyuensis* in the highlands from the Aberdares and Mount Kenya to Nairobi and Kikuyu.

HIGHLAND WHITE-EYE

Zosterops phyllicus Reichenow

This little bird is found in the same area as *Zosterops virens stenocricota*, from which it may be distinguished by its darker olive-green colour and the fact that it almost lacks the white ring round the eye and

the black lores. I treated it as a full species in my larger work for the above reasons, though otherwise one would be inclined to ally it with the *Z. virens* group. So that no confusion can arise I include its full technical description.

The adult male and female have the forehead yellowish olive; lores are blackish, a ring of tiny feathers (almost obsolete) surrounding the eye. The crown and whole upper surface is rather dark olive-green, yellower olive on the rump and upper tail-coverts. Lesser wing-coverts are green, major and medium coverts brown edged with olive-green. Primaries and secondaries and tail-feathers are blackish edged outwardly with olive-green. The chin, breast, middle of belly and under tail-coverts are dark yellow, the sides and flanks olive-green. Axillaries are yellow, under wing-coverts yellow along the edge, basal part whitish. The eye is light pinkish brown, bill black, and basal half of lower mandible whitish; legs and feet are slate-colour. Bill measures 10–10·5 mm.; wing (male) 58–59 mm., (female) 55 mm.; tail (male) 38–41 mm., (female) 39 mm.; tarsus (male) 17 mm., (female) 16 mm.

Its habits, so far as we know them, resemble those of *Z. virens*.

Distribution. Northern British Cameroons: Kufum, Bamenda and Oku west of Kumbo (*circa* 6,000 ft.).

PRINCE'S ISLAND WHITE-EYE

Zosterops ficedulinus ficedulinus Hartlaub

Both Principe and São Thomé have their own representative of this bird. It might easily be mistaken for a European warbler, with its upper surface dark olive, almost brownish, and lower surface almost white tinged with sulphur. A very distinct ring of tiny feathers surrounding the eye proclaims its family should a very close view be obtained, otherwise the white eye-ring is not noticeable. In size it is slightly larger than the *Z. senegalensis* or *Z. virens* groups of white-eyes and measures about 4½ in. in total length. The Principe Island race has a wing of 58–64 mm. and tail 45–49 mm.

Distribution and Races

Z. f. ficedulinus Hartlaub is confined to the island of Principe.

Its place is taken by *Z. f. feae* on the neighbouring island of São Thomé. This race differs in having the purer and brighter olive upper parts without the brownish tinge of the typical bird. The under parts are more greyish white, tinged sulphur-yellow and duller. The size is slightly smaller, with wing 53–55 mm. and tail 33–37 mm.

ANNOBON WHITE-EYE

Zosterops griseovirescens Bocage

THIS is the largest white-eye of the genus *Zosterops*, about 4¾ in. in length. It is very common on the island and draws attention to itself by its melodious song. The upper parts are olive, the grey bases to the feathers when disarranged giving a greyish general appearance to the upper parts; the under parts are yellowish white, with the sides and abdomen strongly washed with vinaceous brown. This bird has conspicuous black lores, and the white feathers surrounding the eye are bordered with black below so that the usual white eye-ring of this genus is more noticeable than usual, though never a conspicuous feature in life. Measurements are: Bill 11–11·5 mm., wing 60–63 mm., tail 45–49 mm.

This is an abundant bird in all the forest region which covers most of its island home. There it is noted for its pretty song.

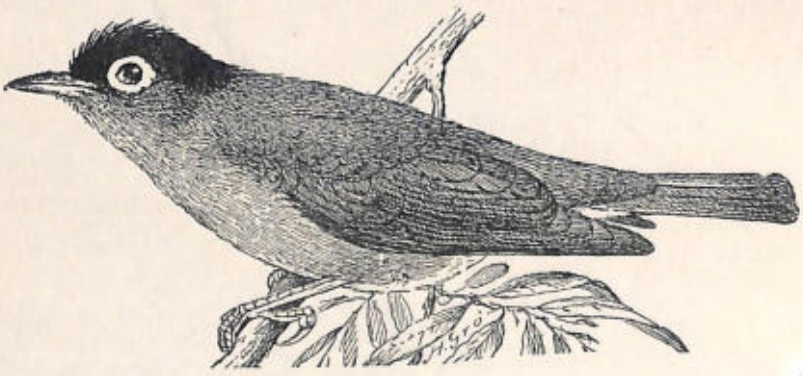
A bird was found nesting on 18th December, but its eggs are unknown.

Distribution. Confined to the island of Annobon in the Gulf of Guinea.

BLACK-CAPPED SPEIROPS

Speirops lugubris (Hartlaub)

Two races come within our limits. The typical race is an insular form restricted to São Thomé. In my larger work I included a race



from Fernando Po, but since additional specimens of the latter have come to hand, it has been decided to treat *S. brunneus* as a species. The only other representative of *S. lugubris* is found on Cameroon

Mountain. It is this race, known as *S. lugubris melanocephalus*, to which the following description refers.

The adult male and female have a narrow frontal band and lores white. Tiny feathers round the eye are white. Crown and cheeks, including ear-coverts, are blackish, passing into greyish brown on the neck. The rest of the upper parts from mantle to upper tail-coverts are brown, as are the wing-coverts, entirely lacking the olive-green wash of *S. l. lugubris*. Wings and tail are blackish brown, with the faintest wash of olive on the fringe of the inner secondaries. Chin and throat are white, the rest of the under parts grey faintly washed on the breast, flanks and belly with pale fulvous. The thighs are white; the ventral region is greyish. Under tail-coverts are pale fulvous, axillaries and under wing-coverts white. The eye, bill, legs and feet are brownish-flesh colour. Measurements are: Bill (male) 12–13 mm., (female) 12 mm.; wing (male) 62–65 mm., (female) 58–64 mm.; tail (male) 41–43 mm., (female) 39–43 mm.; tarsus (male, female) 21–22 mm.

In total length the Cameroon Mountain Black-capped Speirops is about 4½ in. and is noticeable by reason of its white throat and the white band on the forehead. Like the white-eyes, it has a ring of white feathers round the eye, which feature is much more developed in the São Thomé bird than in the one on Cameroon Mountain.

It is certainly restricted to the highest altitudes, where it lives in the high forest. In Fernando Po it occurs in the valleys, where its song is a noticeable feature, but on Cameroon Mountain it does not descend below 6,000 ft. and ranges to 9,000 ft., inhabiting the clearings and the tall forest, as well as frequenting the little trees and shrubs of the windswept heights of the grasslands. Little parties are to be seen on the mountain at all times of year, and the birds are not as rare as I formerly believed to be the case.

No one appears to have found the nest and eggs, but this omission will soon be made good, I suspect.

Distribution and Races

Speirops lugubris lugubris (Hartlaub) differs from *S. l. melanocephalus* (of which a description has been given above) by having the whole forehead and crown black, the back and mantle olive-brown, the rump olive and the throat grey. The wing measures 70–77 mm. and the tail 46–50 mm. It is found in the island of São Thomé and nowhere else.

Speirops lugubris melanocephalus Gray is restricted to Cameroon Mountain between 6,000 and 9,000 ft.

FERNANDO PO SPEIROPS

Speirops brunneus Salvadori

THE adult male and female are brown, tending towards rusty brown, the under parts being somewhat paler than the upper parts. The crown is blackish brown; at the nape is a patch of chestnut brown; sides of head and middle of anterior throat are greyish. Quills and rectrices are blackish brown, lined with rusty brown, the quills with whitish inner margin. The total length is 125 mm.; bill 11–12 mm.; wing 65 mm.; tarsus 20 mm.

From *Speirops l. melanocephalus* it differs by being browner, by lacking the white loral stripe, by having the throat less decidedly white and by having the under tail-coverts brown like the belly.

This bird is known only from Fernando Po, where it has been collected only at high altitudes. In my larger work I treated it as a race of *S. lugubris*, but there is no doubt I was incorrect in so doing.

PRINCIPE ISLAND SPEIROPS

Speirops leucophaeus (Hartlaub)

THIS bird is about 5¼ in. in total length and may be recognised by its whitish head and ashy-white under parts, the back, wings and tail being brown. The white feathers round the eye are very small, and as the rest of the face is almost white this feature is probably not noticeable until the bird is handled. It might easily be considered a warbler from its general appearance. Sexes are exactly alike.

The technical description is as follows. Forehead, a stripe over the eye, cheeks and ear-coverts are white; the lores are dusky, the rest of the crown and nape ash-grey, becoming greyish brown on the mantle, back and rump. Wing-coverts, primaries and secondaries are uniform brown. Upper tail-coverts are brown faintly tinged with olive, and the tail is brown. Chin, throat and middle of belly are white, the breast and sides ash-grey, as are also the under tail-coverts. Axillaries and under wing-coverts are white. The eye is dark brown, the bill dark grey; legs and feet are greyish brown. Measurements are: Bill (male, female) 11 mm.; wing (male) 67–70 mm., (female) 67–69 mm.; tail (male) 44–48 mm., (female) 45–46 mm.; tarsus (male) 20 mm., (female) 20–21 mm.

Like other members of this genus, it lives in little flocks which wander about the island. We know very little concerning it.

It is believed to lay two white eggs in a nest made of fine grasses and to hatch its young in June and July.

It is known only from the island of Principe in the Gulf of Guinea.

FAMILY NECTARINIIDAE

Key to the male Sunbirds in the family Nectariniidae

A separate key to the females is given on p. 1262.

1. Size very large (wing over 86 mm. and bill over 36 mm. in length); tail fan-shaped with white tips; species restricted to the island of São Thomé
Dreptes thomensis, p. **1297**

Size smaller (wing under 86 mm. and bill under 36 mm. in length) 2

2. Middle pair of tail-feathers narrow and ribbon-like, protruding half the length or more beyond the next pair 3

Middle pair of tail-feathers not protruding far, if at all, beyond the others; tail square or fan-shaped when spread 5

3. Lower half of breast, belly and under tail-coverts yellow
Hedydipna platura, p. **1268**

Lower half of breast, belly and under tail-coverts not yellow 4

4. Sides of body below scarlet area brilliant metallic green
Nectarinia pulchella pulchella, p. **1266**

Sides of body below scarlet area black, only the longest flank feathers with metallic-green tips
Nectarinia congensis, p. **1268**

5. Lower portion of breast and belly black or very dark chocolate-brown 6

Lower portion of breast and belly not black or very dark chocolate-brown 13

6. Entire upper surface of body and crown covered with metallic feathers 7

Only the forepart of crown metallic, remainder of crown mantle and back not metallic 11

7. Mantle and back metallic copper with golden or purple reflections .. .. .. *Cinnyris cupreus cupreus*, p. **1273**

Mantle and back metallic green 8

8. Size larger (bill over 22 mm. and wing over 65 mm.); pectoral tufts very pale yellow, head metallic purple
Cinnyris coccinigaster, p. **1274**

Size smaller (bill under 22 mm. and wing under 65 mm.); pectoral tufts when present not uniform pale yellow 9

9. Belly chocolate-brown .. .. *Cinnyris bouvieri*, p. **1277**

Belly black 10

10. Chin and throat metallic green, no pectoral tufts present *Cinnyris bifasciatus bifasciatus*, p. 1276
Chin black, throat metallic purple, sides of throat bordered with metallic green; pectoral tufts orange-red and lemon-yellow .. .. *Cinnyris oseus decorsei*, p. 1278
11. Breast vermilion red with metallic-blue subterminal bar to each feather *Chalcomitra senegalensis senegalensis* and subsp., p. 1288
Breast not vermilion red with blue subterminal barring 12
12. Throat and chin metallic green *Chalcomitra rubescens rubescens* (formerly known as *Chalcomitra angolensis*), p. 1286
Throat and chin metallic violet *Chalcomitra fuliginosa*, p. 1285
13. With brilliant metallic feathers on some part of plumage; if not on back, then on throat or breast 14
No area of brilliant metallic feathers on any part of plumage, but in one species faint metallic wash is perceptible on forehead 31
14. Upper parts entirely of brilliant metallic feathers from crown to rump 15
Metallic feathers either entirely absent on upper surface or if present restricted to crown and never extending on to mantle 25
15. Upper surface metallic violet, under parts pure white *Anthreptes longuemarei longuemarei* and subsp., p. 1302
Upper parts metallic green or metallic blue and green, under parts not white 16
16. Mantle metallic purplish blue or violet, contrasting with metallic green back and crown; breast and belly buff *Anthreptes aurantium*, p. 1304
Mantle metallic green like rest of upper surface, which shows no contrast 17
17. Upper part of throat not metallic; either grey or yellow 18
Entire throat metallic 19
18. Throat yellow .. *Anthreptes rectirostris rectirostris*, p. 1301
Throat grey .. .. *Anthreptes rectirostris tephrolaema*, p. 1301
19. Breast and belly either bright yellow or olive-yellow *Anthreptes collaris subcollaris* and subsp., p. 1299
Breast and belly not as described above 20
20. Bill very long (over 25 mm.); under parts below metallic breast dark red and not metallic; ventral region black 21
Bill not very long (under 21 mm.); under parts below metallic breast not dark red; ventral region olive-brown or pale yellow 22

21. Upper part of throat metallic purple or blue
Cinnyris superbus superbus and subsp., p. **1270**
Upper part of throat metallic green
Cinnyris johannae johannae and subsp., p. **1272**

22. Belly palest yellow, no scarlet on breast
Cinnyris venustus venustus, p. **1279**
Belly olive or olive-brown; band of scarlet across breast 23

23. Scarlet feathers of breast with narrow subterminal metallic blue bars .. *Cinnyris minullus minullus*, p. **1283**
Scarlet feathers of breast without subterminal metallic blue bars 24

24. Broad scarlet area on breast separated from metallic-green throat by narrow metallic purple band
Cinnyris reichenowi preussi and subsp., p. **1280**
Scarlet band on breast narrower and not separated from metallic-green throat by metallic-purple bar
Cinnyris chloropygius chloropygius and subsp., p. **1282**

25. Crown of the head covered with metallic feathers .. 26
No metallic feathers on head or upper surface 30

26. Lower portion of throat straw-coloured, buff or cream-colour (when faded); under parts mostly chestnut
Chalcomitra adelberti adelberti and subsp., p. **1287**
No straw-coloured patch on throat, under parts not chestnut 27

27. Plumage of upper parts (excepting crown) darkish brown
Cyanomitra cyanolaema cyanolaema and subsp., p. **1293**
Plumage of upper parts (excepting crown) olive or golden-olive 28

28. Under parts of body (excluding metallic breast) leaden grey .. *Cyanomitra verticalis verticalis* and subsp., p. **1291**
Under parts of body not dark leaden grey 29

29. Breast grey .. .. .. *Anabathmis reichenbachii*, p. **1298**
Breast and rest of under parts olive-green or olive washed with yellow .. *Cyanomitra oritis oritis* and subsp., p. **1292**

30. Breast below metallic throat lemon-yellow
Anabathmis newtonii, p. **1299**
Breast below metallic throat dusky olive
Anabathmis hartlaubii, p. **1298**

31. Back and mantle mouse-grey; under parts light grey, throat almost white .. .. *Anthreptes gabonica*, p. **1307**
Back and mantle olive or green; under parts not as described above 32

32. Bill short and warbler-like (not exceeding 12 mm. in length); prominent pale yellowish eye-stripe passes over eye .. .. *Hylia prasina*, p. 1308
Bill long and fine as in typical sunbirds (14 mm. or over); no prominent eye-stripe present 33

33. Forehead and forepart of the crown smoke-grey, faintly washed with metallic blue, differing from colour of back *Chalcomitra ursulae*, p. 1290
Forehead and crown olive or green, not differing from colour of back 34

34. Bill fine but only slightly decurved, plumage of upper parts rather light greenish or greenish olive 35
Bill fine and decurved as in typical sunbirds; plumage of upper parts rather dark olive 36

35. Pectoral tufts on either side of breast orange-red; size rather large (wing over 60 mm.) *Anthreptes fraseri fraseri* and subsp., p. 1305
Pectoral tufts absent; size smaller (wing under 60 mm.) *Anthreptes seimundi seimundi* and subsp., p. 1305

36. Size larger (wings over 55 mm. and bill over 20 mm.) *Cyanomitra olivacea guineensis* and subsp., p. 1295
Size smaller (wing under 55 mm. and bill under 16 mm.) *Cyanomitra batesi*, p. 1296

Key to the female Sunbirds in the family Nectariniidae

A separate key to the males is given on page 1259.

Note. I am fully aware that this is not a satisfactory key—the distinctions between the females of various species are often so slight, depending, for instance, on the shade of brown or of olive in the plumage or in the amount of curvature present in the bill, that in many instances it is almost impossible to bring out the differences clearly in a key. The surest way to identify a female sunbird is to observe the male bird in company with it, whose distinctions are much more clearly marked.

1. With some metallic feathers on plumage.. 2
No metallic feathers on plumage 9

2. Upper parts blackish, feathers of crown and back tipped with metallic blue or steel-green; size large (wing over 80 mm.) .. .. *Dreptes thomensis*, p. 1297
Upper parts not as described above, size considerably smaller (wing under 75 mm.) 3

3. Entire upper parts of body metallic 4

Upper parts not entirely metallic or without any metallic feathers 5

4. Upper parts metallic green, throat and breast yellow; tail-feathers dull olive
Anthreptes collaris subcollaris and subsp., p. 1299

Upper parts metallic peacock-blue or green, throat white, tail glossed with violet .. *Anthreptes aurantium*, p. 1304

5. With metallic feathers on crown or upper tail-coverts 6

No metallic feathers anywhere on upper surface of body 9

6. Upper tail-coverts metallic violet, back and mantle grey-brown or brown
Anthreptes longuemarei longuemarei and subsp., p. 1302

Upper tail-coverts olive or olive-yellow like back .. 7

7. Throat covered with metallic feathers 8

No metallic feathers on throat or under parts
Cyanomitra verticalis verticalis and subsp., p. 1291

8. Breast grey .. .. .. *Anabathmis reichenbachii*,* p. 1298

Breast olive or olive washed with yellow
Cyanomitra oritis oritis and subsp., p. 1292

9. Under parts white or greyish, no mottling or streaking visible; tail broadly tipped with white
Anthreptes gabonica, p. 1307

Under parts not as described above and no broad white tips to tail-feathers 10

10. Whole under side either heavily striped with black on a light ground or profusely mottled with dark brown on a yellowish-ochre ground 11

Under surface not as described above 12

11. Throat white, narrowly striped with black, and breast heavily streaked; greater wing-coverts brown
Cinnyris johannae johannae and subsp., p. 1272

Throat dark brown with pale tips and breast mottled with dark brown and yellow ochre, greater wing-coverts edged with white
Chalcomitra senegalensis senegalensis and subsp., p. 1288

12. Upper parts brown or grey-brown, having no trace of olive on head, mantle or back, even as a faint wash .. 13

Upper parts either very decided olive-green, or brown with an olive wash when examined in a good light .. 19

* I have not been able to examine a female *Anabathmis newtonii* restricted to the island of São Thomé or of *Anabathmis hartlaubii* restricted to Principe, so have omitted them from this key. Fortunately both are island forms with restricted distribution. *Nectarinia congensis* is omitted for the same reason. The female of *Chalcomitra ursulae* is unknown.

13. Throat greyish white or pale yellowish grey streaked with olive-brown; rest of under parts creamy olive° indistinctly streaked with olive-brown
Chalcomitra adelberti adelberti and subsp., p. 1287
Throat and under parts not as described above 14

14. Throat blackish or brown, under surface of body very distinctly mottled 15
Throat light-coloured, under surface of body uniform with throat and not mottled or streaked 17

15. Whole plumage pale; under parts creamy white with dark middles to feathers, giving mottled appearance
Chalcomitra fuliginosa, p. 1285
Plumage of body not pale; uniform darkish brown above, mottled or streaky below and tinged with yellow, especially on abdomen 16

16. Tail brown with narrow white tips and uniform with wings in colour .. ..*Chalcomitra rubescens rubescens* (formerly *C. angolensis angolensis*), p. 1286
Tail blackish, much darker than wings *Cinnyris bouvieri*, p. 1277

17. Bill very short (under 12 mm. in length); under parts heavily washed with yellow .. *Hedydipna platura*, p. 1268
Bill longer (over 13 mm. in length); under parts not heavily washed with yellow 18

18. Axillaries entirely pale yellow; chin and throat very pale brown; size small (bill 14–16 mm., wing 47–52 mm.). Tail black glossed with green *Cinnyris oseus decorsei*, p. 1278
Axillaries white, tipped with yellow; chin and throat whitish; size rather larger (bill 16–19 mm., wing 51–58 mm.). Tail black but gloss rather more blue
Cinnyris bifasciatus bifasciatus, p. 1276

19. Olive-green the predominant shade of upper parts .. 20
Brown or grey-brown the dominant shade of upper parts but with distinct olive wash 30

20. Bill very short (under 12 mm.), quite unlike that of a sunbird and resembling more the bill of a warbler. Prominent yellow stripe above eye and dark brown band through it .. .. .. *Hylia prasina*, p. 1308
Bill much finer (over 12 mm.), markings not as described above 21

21. Plumage uniform light green above, yellowish green below; bill light-coloured and almost straight
Anthreptes fraseri fraseri and subsp., p. 1309

Plumage not uniform light green above; bill dark horn colour 22

22. Upper parts rather bright olive-green, crown uniform with back; bill dark-coloured and almost straight, not prominently decurved 23
Upper parts darker olive, bill not straight but distinctly decurved at tip 24

23. Lesser wing-coverts narrowly bordered with metallic green, no prominent yellowish circle of feathers round eye.. .. .. *Anthreptes rectirostris rectirostris* and *A. r. tephrolaema*, p. **1301**
Lesser wing-coverts not narrowly bordered with metallic green, prominent yellow eye-stripe above and below eye.. .. *Anthreptes seimundi seimundi* and subsp., p. **1305**

24. Size very small (wing under 49 mm.) 25
Size larger (wing over 49 mm.) 27

25. Throat smoke-grey .. .. *Cinnyris minullus minullus*, p. **1283**
Throat not smoke-grey but either whitish or olive .. 26

26. Whole under parts greyish olive, no bright yellow on breast or abdomen .. .. *Cyanomitra batesi*, p. **1296**
Whole under parts from lower throat to ventral region strongly washed with yellow, chin almost white *Cinnyris chloropygius chloropygius* and subsp., p. **1282**

27. Whole under parts uniform olive-green, slightly yellower on belly; primaries and secondaries margined with rusty olive-yellow (bill under 18 mm.) *Cinnyris reichenowi preussi* and subsp., p. **1280**
Under parts not uniform olive-green, wings not edged with rusty-olive, size larger (bill over 19 mm.).. .. 28

28. Size large (bill over 25 mm.), under tail-covert reddish orange and belly occasionally washed with same colour; broad yellowish white stripe over eye *Cinnyris superbus superbus* and subsp., p. **1270**
Size smaller (bill under 23 mm.), no orange on belly or under tail-coverts, the latter washed with pale yellow; no broad eye-stripe present 29

29. Crown and sides of head brown, contrasting with mantle and back *Cyanomitra cyanolaema cyanolaema* and subsp., p. **1293**
Crown and sides of the head olive, not contrasting with mantle and back *Cyanomitra olivacea guineensis* and subsp., p. **1295**

30. Size larger (bill over 20 mm., wing over 60 mm.). Forehead greyish, lacking olive tinge *Cinnyris coccinigaster*, p. 1274
Size smaller (bill under 20 mm., wing under 60 mm.). Forehead tinged with olive 31

31. Lores almost jet-black; prominent yellow stripe over eye; 1st primary long, tip extending more than half-way down wing; bill 16–19 mm.; no prominent white tips to outer tail-feathers .. *Cinnyris cupreus cupreus*, p. 1273
Lores brown, eye-stripe when present very narrow and not prominent; 1st primary short, extending barely half-way down wing; bill 14–16 mm., outer tail-feathers prominently tipped with white 32

32. Chin and middle of throat white, belly very strongly washed with bright yellow; an occasional metallic green tip visible on lesser wing-coverts; under tail-coverts white and outer tail-feathers with very broad white tips .. .. *Nectarinia pulchella pulchella*, p. 1266
Chin whitish, not pure white, throat fading into dull pale yellow, never so bright yellow as in *N. p. pulchella* on under parts. No metallic tips to any of lesser wing-coverts; under tail-coverts dull yellow. Outer tail-feathers narrowly tipped with white and margined with white.. .. .. *Cinnyris venustus venustus*, p. 1279

BEAUTIFUL LONG-TAILED SUNBIRD

Nectarinia pulchella pulchella (Linnæus)

THERE should be no difficulty in recognising the adult male of this sunbird with its greatly elongated central rectrices evenly narrow to the extreme tip. From the only other long-tailed species in West Africa (*Hedydipna platura*) the present bird is distinguished by the large scarlet patch bordered with yellow on the breast, the rest of the under parts being metallic green like the whole upper parts. In *H. platura* the entire under parts below the middle of the chest are bright buttercup-yellow, and in that species the elongated middle tail-feathers broaden out at the tip.

N. pulchella pulchella is rather larger in size, has a considerably longer bill (which is noticeably short in *Hedydipna platura*) and lacks the purple upper tail-coverts of the latter bird. It may also be borne in mind that although there are other West African sunbirds with scarlet and yellow on the breast, none of the other species but *N. pulchella* has a long tail.

The females of these two long-tailed sunbirds never acquire elongated central tail-feathers like the males. The adult female of

N. pulchella has the under parts merely washed with dull yellow, whereas in the adult female of *H. platura* the whole under surface is bright lemon-yellow. Even so, the best character for distinguishing the two females will be length and shape of the bill, which is 9–10 mm. in *Hedydipna*, considerably longer (14–16 mm.) in *Nectarinia*. Other measurements are: Wing (male) 56–61 mm., (female) 47–56 mm.; tail middle feather 91–131 mm., next pair 39–44 mm., (female) 34–37 mm.

The adult male in the off-season winter plumage resembles the plumage of the adult female but appears to retain the metallic green wing-coverts and long middle tail-feathers. The adult female differs in every way from the male in full plumage, the entire upper parts being dull earth-brown, chin and throat whitish and the rest of the under side washed with yellow.

The Long-tailed Sunbird is normally a bird of the dry thorn scrub and semi-arid bush and in the west of its range from Senegal to Sierra Leone may be found in the mangrove scrubs, in gardens of coastal villages and on raised sandy beaches where the vegetation consists of small bushes and creepers. Wherever these conditions are present there will the Long-tailed Sunbird be found. Further east we associate it with the northernmost provinces of our Colonies, and there it may be observed in breeding plumage from April to October, after which it becomes less conspicuous. It is remarkable how it has pushed its way almost into the Sahara; indeed, the bird is one of those which has penetrated as far as Aïr. In Damergu we hear of it living in the thickets of acacias in the depressions which form swamps during the rains.

In Gambia and northern Nigeria, and no doubt throughout that latitude, the breeding season coincides with the rains. Eggs may be found from June to August. The nest is purse-shaped, the outer envelope made of strands of plants, bark, gossamer, plant heads and vegetable down. The gossamer is abundant about the opening and in the attachment to the suspending twig. The external surface may be decorated with bark and snake skin. The eggs are beautiful, with ground of brown, grey or green, streaked or blotched with subdued shades of brown and grey. So great is the variation that space will not permit a fuller description. Measurements are 15·7–17·4 × 9·9–11·6 mm.

Distribution. All countries in West Africa from Senegal to northern Cameroons (except possibly Liberia), then across the semi-arid belt from the Chad Territory to Darfur and Kordofan, where in the vicinity of the Nile valley it fuses with *Nectarinia pulchella lucidipectus*. In the Gold Coast it occurs within six miles of the sea, but lat. 8° N. may be taken as its usual southern boundary, with exceptions here and there. The Sahara forms its northern limit.

CONGO BLACK-BELLIED SUNBIRD

Nectarinia congensis van Oort

This sunbird, which barely touches our area, will be described very briefly. A full description appears in my larger work, volume vi, p. 152.

The adult male has the entire head and throat, mantle, back, rump and wing-coverts metallic green. The wings and tail are black, the two middle pairs of tail-feathers elongated nearly 70 mm. beyond the next pair, and fringed with metallic green. The breast is scarlet and the belly black.

The adult female is grey-brown above, the throat greyish brown, the breast grey and the centre of the abdomen and under tail-coverts yellowish white. The tail is greyish brown with whitish tips.

Measurements are: Bill 18–20 mm., wing 56–66 mm.; tail (male) middle feathers 110–125·5 mm., (female) 44–45 mm.

Distribution. The Lower Congo and Upper Congo, characteristic of the forested course of the river, keeping to the banks of the larger streams and not penetrating beyond the limits of the equatorial forest belt. What little is known about this local species has been published in the work cited.

PYGMY LONG-TAILED SUNBIRD

Hedydipna platura (Vieillot)

This sunbird—at any rate the adult male in breeding dress—should be recognised from October to March on account of its very long middle pair of tail-feathers, which protrude about 70 mm. beyond the rest of the square tail (sometimes nearly 3 in. beyond) and end in a racket-shaped tip, and also by the very short bill, not exceeding 11 mm. in length. Coupled with the buttercup-yellow under parts and metallic green breast, head and upper parts, its identification is unmistakable if these features can be observed. Confusion with *Nectarinia pulchella* is only too easy, unfortunately, in the field. A flash of purple may be discerned just about the tail in *H. platura* if the bird is at rest. The body is small (about 4 in.), excepting the elongated middle tail-feathers, and has an expanse of wing of about 7 in.

The dull female, grey-brown above with dark tail, sulphur-yellow below, is less easy to distinguish and identify unless seen with her consort. In the non-breeding season (April to September) the adult male assumes an eclipse plumage which resembles the female

in body plumage, at which season the long tail is lost as well as most of the metallic feathers and the bright yellow feathers below.

Measurements are: Bill 9–11 mm.; wing (male) 55–60 mm., (female) 53–56 mm.; tail (male), middle feathers 90–110 mm., next pair 34–36 mm., (female) 31–34 mm.

This sunbird is widely distributed in our area, frequenting open woodland, orchard bush and parkland, as well as gardens where there are suitable flowering trees. The red-flowered silk-cotton tree in bloom is a very favourite haunt, but the bird visits fig-trees, acacias and many other trees and shrubs. Of all the sunbirds this one is perhaps the most attractive. It is seldom long at any tree, and while there is constantly on the move from flower to flower, now hanging upside down the better to insert its beak, now hovering with rapid wing-beats to inspect a blossom. It is to be met singly and with others. The call is a *twee* or *twee-weet*. The song is weak and has been likened to that of a very faint skylark's.

This Long-tailed Sunbird is especially attracted by the blossoms of the acacia, and where these are not present the sunbird is less numerous. Perhaps that is the reason for its comparative scarcity in Gambia, though it is said to be common at MacCarthy Island in December, when many of the males have acquired their metallic breeding dress but not their long tails. *H. platura* moults twice a year, the males only having their metallic plumage and long tails during the breeding season, which is in the winter and spring months, the driest part of the year. It has been suggested that this bird breeds in the dry season (which is the opposite to what most species do) because the small trees and shrubs blossom in this latitude just before the rains begin and in the northern part of the dry belt not until summer is advanced.

That it is subject to local seasonal movements is apparent from observations I have received from many parts of its range.

The nest is closely attached to the twig or branch of a bush and is not loosely pendant. It is the usual shape of a sunbird's nest, and owing to the material used in its construction is scarcely visible. Dr. Serle has published an account of the nesting of this sunbird (*Ibis*, 1940, pp. 31–3) in which he describes the eggs as being remarkable in that they are immaculate white with a slightly glossy surface. They measure 14·7–15·4 × 10·4–11 mm.

Distribution. Widely spread from Senegal to northern Cameroon throughout the whole of the thorn-scrub semi-arid belt and in the southern savanna country from the West African hinterland to the Turkana country of Kenya Colony. It ranges in the south to the Bagirmi country in Central Africa and to the Ubangi-Shari savannas as well as (in winter) to the Uelle district of the northern Belgian Congo. Eastward it ranges to western Darfur and Kordofan. It is

recorded from all British Colonies in West Africa, ranging, in fact, as far south as lat. 8° N. in Sierra Leone, but is everywhere more frequent north of lat. 10° N. to the borders of the desert. Like *N. pulchella*, it has found its way to the Aïr Massif in the southern Sahara.

SUPERB SUNBIRD

Cinnyris superbus (Shaw)

Two races of this sunbird are found in West Africa, the typical race (*C. superbus superbus*) in Lower Guinea, and *C. s. ashantiensis* in Upper Guinea. It is the latter which mostly concerns us in British territory.

This magnificent sunbird, the male with the blue-green crown, golden-green upper parts and coverts, purple or blue metallic throat, deep crimson non-metallic under parts and black wings and tail, is one of the most gorgeously plumaged of its family and moreover is fairly large for a sunbird, measuring from bill to tail about 6½ in., of which the bill is over an inch in itself. Measurements of *C. s. ashantiensis* are: Bill 26–29 mm.; wing (male) 67–74 mm., (female) 62–67 mm.; tail (male) 42–45 mm., (female) 38–41 mm.

In the Lower Guinea race of this bird (*C. superbus superbus*) the measurements run rather larger: Wing (male) 72–78 mm., (female) 69–72 mm.; tail 45–51 mm. and bill 28–33 mm., the latter strikingly longer in most specimens.

This is much more of a true forest sunbird than *Cinnyris coccinigaster*, which species occurs on the outskirts of forest country and in Upper Guinea. The two species often occur in the same localities, and then care must be taken not to confuse them—by no means an easy feat in these metallic-plumaged birds, where the colours are so variable and change rapidly in different reflections of light. A close view will reveal that *C. superbus* has a very long bill in comparison with *C. coccinigaster* and that the under parts are, below the breast, almost wholly dark red. The crown in *C. superbus* would appear metallic green or blue; in *C. coccinigaster* the whole head is violet. In size the Superb Sunbird is distinctly the larger bird.

To make identification more difficult there is still another similar-sized sunbird—a rarer bird—*Cinnyris johannae*, which also inhabits the forest and which also has red under parts but of a much brighter, more crimson hue. Johanna's Sunbird, remember, has an all metallic-green head and back including the throat, the crown and back being the same shade throughout. In the Superb Sunbird the steel-blue crown is in contrast to the golden-green back, and the throat appears purple or blue. Both these sunbirds have very long

is ills. The Splendid Sunbird (*coccinigaster*) with its purple head and shorter bill should be distinguishable more easily from Johanna's sunbird (*johannae*), and in this case the bright red non-metallic under parts of *C. johannae* are entirely different from *C. coccinigaster*.

The females of *C. johannae* are conspicuously streaked below, whereas those of the other two species are plain. The females of *C. superbus* are much more yellow on the whole under parts than are the females of *C. coccinigaster*, and moreover the former have orange under tail-coverts (if these can ever be seen) and, like the males, a much longer bill.

In the open spots in the forest, where the sun can penetrate and flower vegetation is luxuriant, the Superb Sunbird is to be commonly seen. It is very partial to the young fruit buds of the paw-paw tree. It feeds on a variety of flowers, from small garden shrubs to the tops of the big forest trees. When the erythrinia trees are in flower it may be attracted further afield, but usually it spends much of its life in the tallest tree-tops and only ventures from the forest on rare occasions. Insects form the greater part of its food supply, for which it probes the flowers, as well as snapping them up in the air. It is rather a timid bird and does not submit to close observation. It flies fast and powerfully with a jerky undulating motion and zigzags as it flies—a possible protection from predatory birds.

The nest is a ragged structure, entirely exposed and suspended from a twig of shrub or tree 7–35 ft. above the ground. It is composed of a soft fibrous lining of bark with a few dead leaves and moss. An untidy canopy covers the entrance and ragged streamers extend beneath, but the interior is the perfection of cosiness. This sunbird is believed to lay only one egg, in colour bluish white, slightly freckled with specks and blotches of purplish black. Measurements are 20–21·5 × 14–15 mm.

Distribution and Races

Cinnyris superbus superbus (Shaw) ranges from the Owerri Province of southern Nigeria, through Calabar and over Lower Guinea from the environs of Cameroon Mountain through Gaboon and Portuguese Congo to northern Angola. It extends across the northern Belgian Congo to the Semliki valley and into Uganda.

Its place is taken by *Cinnyris superbus ashantiensis* Bannerman in the Lagos district of western Nigeria, and this race ranges westwards through the forest country of Upper Guinea to Sierra Leone.

JOHANNA'S SUNBIRD

Cinnyris johannae Verreaux

Two races of Johanna's Sunbird are found in West Africa. That which ranges throughout Upper Guinea is *C. johannae fasciata* Jardine and Fraser.

This fine sunbird is one of the larger species which occur in West Africa with total length 5 in. and wing expanse 8 in. It is about the same size as the Superb Sunbird, but has a longer bill (about 30–33 mm. from the forehead feathers) than any West African species living on the mainland. It is probably often mistaken for *C. superbus* and resembles that bird on the upper parts except that the crown of the head is the same brilliant metallic green as the rest. (In *C. superbus* the crown is steel blue-green in strong contrast.) The under parts of Johanna's Sunbird are brighter red and the whole head and throat are brilliant metallic green, passing on the lower throat into purple. In the Superb Sunbird the throat and breast are both of the same electric blue. For other comparisons see page 1270.

The measurements of *C. j. fasciata* are: Bill 27–29 mm., wing 60–67 mm., tail 30–36 mm.

The adult female is very distinct, the whole under parts being heavily streaked, the upper parts brownish olive. Chin and throat are white, finely streaked with blackish brown, the rest of the under parts strongly washed with pale yellow and heavily streaked with dull black. The axillaries are pale yellow.

We still have much to learn about this species, which in comparison with *C. superbus* must be considered distinctly rare in the forests which it frequents. When observed it has usually been haunting the highest flowering trees in preference to the bushes and small trees beloved of many other sunbirds. It is never safe to generalise, but in its mode of life it may be assumed to resemble the Superb Sunbird as regards its habitat.

Its nest has never been found by a European and its eggs remain undescribed.

Distribution and Races

Cinnyris johannae johannae Verreaux may be distinguished from *C. j. fasciata* by having the red of the under parts deep crimson rather than inclining to scarlet, and much darker. The females are doubtless alike in both races. The bill is 31–32 mm., wing 71–72 mm., tail 40–41 mm. This, the typical race, ranges from British Cameroon, where it has been found in the Kumba division, to the Loango Coast, ranging eastwards from the Cameroon and Gaboon forests to the Central Congo and Ituri forest.

Cinnyris johannae fasciata takes its place in Upper Guinea, where it

is known to range from Sierra Leone to Dahomey. No sunbird of this species has yet been recorded from Nigeria. It would not surprise me to find that the typical subspecies rather than the Upper Guinea race is the one which inhabits the forest reserves of southern Nigeria. So far as I am aware, Johanna's Sunbird has not been found in Uganda.

COPPER SUNBIRD

Cinnyris cupreus cupreus (Shaw)

This beautiful sunbird has very distinctive plumage, which enables it to be readily recognised at close quarters, but at a distance it often appears black. Its head and breast are burnished copper turning into golden purple on the back and wing-coverts; the under parts below the metallic breast are unglossed black, as are also the wings. The tail is deepest blue, which appears black in the field. It is a small bird, measuring barely 5 in. in total length. It may be encountered anywhere in the whole tree-savanna belt of West, Central and East Africa and is usually one of the commonest species to be observed. The purple metallic feathers on the upper parts are most likely to catch the reflections of light and consequently the human eye. Measurements of West African examples are: Bill 16–20 mm.; wing (male) 54–60 mm., (female) 52–56 mm.; tail 40–45 mm.

The adult female entirely lacks metallic colouring. The crown and entire upper parts are brownish olive, the lores jet-black, ear-coverts brown, and above the eye is a very narrow pale yellow stripe. Primaries and secondaries are dark brown narrowly edged with olive and with pale tips when freshly moulted. The tail is black glossed with dark blue, the outer feathers browner with pale terminal portion and outer web. The entire under parts from chin to under tail-coverts are dull olive washed with yellow, particularly on the belly, the whole appearance of the under parts being very dingy. Axillaries are pale yellow; under wing-coverts dingy white, yellowish along the margin. The eye is dark brown; bill, legs and feet are black.

Immature birds of both sexes are dull-coloured like the female. Males in eclipse plumage (i.e. non-breeding dress) retain the metallic lesser wing-coverts but otherwise resemble the female dress.

In the moister savanna and orchard bush this is one of the commonest sunbirds to be found in West Africa. It is a bird of open country rather than closed forest, but is frequently to be seen on the forest fringe frequenting the flowering trees and shrubs. In the dry country north of the forest it seems to be migratory. From March till October the males are in full metallic plumage, after which they assume the duller eclipse plumage described above. In January

and February birds are moulting back into metallic dress. This plumage change may vary slightly according to the latitude but generally holds good for Upper Guinea south of lat. 8° N.

The Copper Sunbird is particularly numerous in low bush country, where it frequents for preference land which has been farmed a year or more previously and which is returning to the wild. It is also a frequent visitor to gardens and compounds where flowering shrubs abound and may often be seen in the heart of a town. It is a gregarious species, and a number of males will gather together at some favourite tree. The flowers of *Hibiscus*, *Caesalpina*, *Antirrhinum* and those of the tall *Eriodendron* are much sought after. It is, on the whole, a noisy little bird, keeping up a sharp *chip-chip-chip* for long periods. Its diet includes spiders and caterpillars, and it has been seen to take termites on the wing. It has a habit of thrusting its bill through the base of flowers.

Nesting takes place in the wettest months from mid-June to the end of September or early October in the higher altitudes. It prefers the warmer levels but in British Cameroons ascends in the Bamenda highlands to 4,000 ft. and upwards. In Abyssinia it fades out at 7,000 ft., so that it may occur at higher altitudes in West Africa than the area specified. It is known to range to the oil-palm belt.

The nest is of the usual sunbird type, suspended from a leaf at various heights between 4 and 14 ft. from the ground. It is neatly and compactly made of grass and fibre, lined with some kind of floss. Two eggs are the full complement. These are pale yellowish, suffused, blotched and streaked with sepia and with ashy blotches in addition. Measurements of eggs are 15–17·5 × 10·7–12 mm.

Distribution and Races. From Senegal south to the Portuguese Congo, ranging eastward to the Sudan and the savannas and clearings of the northern Belgian Congo. Common and widely spread in all our Colonies in the type of habitat already described. No races are recognised in our restricted area.

In Angola its place is taken by the greener *Cinnyris cupreus chalceus* (Hartlaub) and in southern Uganda, Kenya and Abyssinia by *C. cupreus septentrionalis* Vincent, which is larger in size with wing average 63 mm.

SPLENDID SUNBIRD

Cinnyris coccinigaster (Latham)

The adult male of this species is one of the most brilliantly coloured of all the sunbirds. It has a purple head, green back and wing-coverts and steel-blue reflections on the mantle and rump set off by black wings and tail, the feathers of the latter fringed with

metallic green. Cheeks and throat are metallic purple passing into metallic steel blue on the breast, each feather of which is fringed with scarlet, resulting in a barred appearance—scarlet bars on a blue ground. On each side of the breast, often concealed by the wing, is a pectoral tuft of long pale yellow feathers. Below the scarlet-barred breast a band of steel blue overspreads the dull black lower breast and belly. Under tail-coverts are black broadly tipped with metallic blue. This dress is retained throughout the year, the males of this sunbird not going into eclipse.

The adult female is very dull in comparison with her gorgeous mate. The upper parts are brownish grey tinged with olive. Chin and throat are whitish and the rest of the under parts pale yellow faintly mottled with grey.

Measurements are: Bill (male) 23–24 mm., (female) 22–23 mm.; wing (male) 66–72 mm., (female) 62–66 mm.; tail (male) 40–43 mm., (female) 35–38 mm.

Under the heading of the Superb Sunbird on page 1270 I have given a comparison between that bird, Johanna's Sunbird and the Splendid Sunbird, to which I refer the reader. Unlike the Superb Sunbird and Johanna's Sunbird, the present species is not a forest one, although it may be seen in clearings on the outskirts of forest. It is a bird of the tree savannas, of gardens and open spaces, where it has a special liking for the tulip-shaped scarlet flowers of the *Bombax* when these are in blossom. It has a song which is easily recognised—a series of languishing notes begun with some vigour and growing feebler and slower as if the singer was growing sleepy.

In mountainous country as in British Cameroons the Splendid Sunbird ascends to high altitudes and has been seen in the mountain ravines around Bamenda, living in a very different environment at 5,000 ft. from the dry Accra plains about sea level, where it is apparently not uncommonly seen. Much of its time is spent searching for insects or spiders. The trunks of oil-palms are happy hunting grounds in this connection; or again it may be observed sitting on flowering shrubs and succulent plants, soon to dart up to the blossoms of the highest trees. When disturbed by the bang of a gun it will descend to the bushes until reassured.

Nest and eggs are distinctive. Streamers are lacking from the former, and the under side is compactly and neatly finished. There is a substantial porch, and the nest is usually well concealed. It is composed of fine grass and bits of dried leaves and bark bound together with cotton-seed down. The lining is also of down and is copious. Eggs are very dark mottled brown, the full clutch being two.

Distribution. The savanna belt from Senegal, Gambia and Sierra Leone to British Cameroons and Gaboon. Eastwards we find it in Ubangi-Shari and along the Uelle River to the Bahr el Ghazal.

It occurs widely in all our West African possessions from the coast to about lat. 10° N., but not in the forest. In the west of its range it may be partially subject to migration.

LITTLE PURPLE-BANDED SUNBIRD

Cinnyris bifasciatus bifasciatus (Shaw)

(see Plate 48, facing page 1280)

THIS sunbird is barely 4½ in. in length and like many others has the whole head and upper parts metallic green. Across the breast is a broad metallic blue band which passes into purplish red beneath, but in the field this reddish band is not discernible, although the blue band usually is. The rest of the under parts are dead black, like wings and tail, and when its black belly can be seen it helps to narrow down its identification, as many of the sunbirds have bright-coloured under parts.

The adult female lacks any metallic colours. The entire upper parts are brown, including the crown. Above the eye is a narrow white stripe. Lores and ear-coverts are darker brown than the forehead. The wings are dark brown, the median and greater coverts inclining to blackish and the margin of the primaries narrowly edged with yellowish white. Chin and throat are whitish, passing on the breast and belly into dull pale yellow. Under tail-coverts are similar. Axillaries are white tipped with pale yellow; under wing-coverts are white washed with yellow. The eye is dull brown; bill, legs and feet are black.

Measurements are: Bill 16–19 mm.; wing (male) 55–59 mm., (female) 51–58 mm.; tail 34–38 mm.

This is a species which is always to be seen on the small trees such as grow in savanna country and has a special preference for acacias and pomegranate flowers. The song is a little high-pitched falling trill and the call-note sounds like *b-r-r-r-zi*, to which the female replies *b-r-r-r*.

The nests are of the usual drop or pocket-shaped constructions which are suspended from twigs. The bird lays two eggs.

This little sunbird is an inhabitant in West Africa of an area where there are no field observers at the present day, so that what little we know of its habits has been acquired from the East African representatives, of which *C. b. microrhynchus*, from the coastal regions of Kenya, is the best known.

Distribution. Barely comes within our limits. Originally discovered in Portuguese Congo, it ranges into Gaboon and the western Congo and in the south extends to Benguella. I should be inclined to unite birds from western Uganda with the typical subspecies, but there opinions differ.

BOUVIER'S ORANGE-TUFTED SUNBIRD

Cinnyris bouvieri Shelley

(see Plate 48, facing page 1280)

THIS is a larger bird than the last species discussed and measures about 5 in. in total length. It is a handsome bird, all but the brown belly and black forethroat being metallic. The upper parts are green, the forehead is purple and throat metallic green. Across the chest are two bands—a metallic one of purple and a lower, broader one of dark red which is not metallic. A dark blue-black tail and dark brown wings complete its colour scheme. It is the only sunbird in our area which has chocolate-brown under parts below the chest, but unfortunately in the field this is easily mistaken for sooty black.

The female has the entire crown and upper parts brown, tinged on the rump with olive. The under parts are cream washed with pale yellow, the throat is slightly mottled, under tail-coverts and under wing-coverts are pale yellow, the latter mixed with white. The tail itself is blackish, the outer rectrices with white tips and margin.

Measurements are: Bill (male) 18·5–19 mm., (female) 16–17 mm.; wing (male) 56–60 mm., (female) 51–53 mm.; tail (male) 35–38 mm., (female) 29–34 mm.

It appears that this sunbird is usually found above altitudes of 4,000 ft., and in British Cameroon it ranges at least to 6,600 ft. in the Bamenda-Banso highlands. In that area it was found frequenting the more open parts of woods in savanna and hill country, second-growth shrubberies and orchard bush, but it differs from other sunbirds of that area in that it may be found far from trees and shrubs out on the open hillsides in a terrain of short grass, bracken, thistles and wild flowers. A pair were seen at their nest just completed on 9th October. It was a typical domed sunbird structure of fine grasses and gossamer with lining of plant down, and attached to the stem of a thistle 2 ft. from the ground. The eggs of this sunbird are as yet unknown.

It is fairly numerous in parts of its range, which extends across Africa to Uganda, where it may be seen in the Botanical Gardens at Entebbe from July to September in considerable numbers, attracted by the scarlet flowers of the erythrinia trees. South of Ruwenzori this same species has been collected in the acacia belt.

Distribution. British Cameroons, French Cameroons and Uganda, probably by way of the Ubangi-Shari and northern borders of the Congo forest.

CHAD ORANGE-TUFTED SUNBIRD.

Cinnyris oseus decorsei Oustalet

(see Plate 48, facing page 1280)

THIS sunbird is little more than 4 in. in length and is not easy to recognise in the field. It is a dry belt species, and the fact that it comes within our limits only in the Lake Chad districts narrows its liability of confusion with others. Metallic green above like so many sunbirds, the Orange-tufted Sunbird has a blue forehead and a broad purplish-blue band across the breast. The throat is metallic green and the belly unglossed black. In display or when handled a conspicuous feature is the tuft of orange and lemon yellow on either side of the breast, but normally these tufts are hidden under the wing when the bird is at rest. The female is earth-brown, yellowish olive below and entirely inconspicuous, the only feature which might arrest attention being the dark wings and almost black tail, the latter in rather strong contrast to the sombre body plumage. The bill measures 14–16 mm.; wing (male) 48–56 mm., (female) 47–52 mm.; tail (male) 34–38 mm., (female) 29–33 mm.

Extremely little is known about the life and migrations of this bird. It is a scarce and shy species which few naturalists have been able to observe. In the eastern part of its range, in Darfur, it was found to come to breed in the neighbourhood of Jebel Marra (6,500–9,500 ft.) in autumn and early winter, leaving those heights, apparently for the south, before the spring. It remained in the high zone and the mid-zone during its nesting time but did not descend lower. In that area it was a bush-frequenting species, not one which sought the trees. It seems to breed from October to December, by which latter month the young are mostly abroad.

The nest is of common sunbird type made chiefly of dry leaves, lined with thistledown and suspended from the frond of a low bush or plant only just above the ground. Eggs number two, and these are dull white, blurred and clouded with fine spots of pale grey and grey-brown, chiefly in a zone round the large end. They measure 15 × 11 mm.

Distribution. Originally described from the Lake Chad region, this species extends eastwards to the Lado district of the Anglo-Egyptian Sudan and to the Bahr el Ghazal. It is a visitor apparently to Darfur, breeding in winter on Jebel Marra.

Another quite distinct race of this sunbird—the typical subspecies—is found in Palestine and the Aden Protectorate.

YELLOW-BELLIED SUNBIRD

Cinnyris venustus venustus Shaw and Nodder

(see Plate 48, facing page 1280)

THE adult male is about 4 in. in total length in the flesh and has a wing expanse of 6 in.—a very small bird. The peacock blue upper tail-coverts contrast with the metallic green back. The forehead is purple like the breast, and so are the chin and surrounding feathers, but the latter usually appear black even in the hand. The rest of the throat is metallic green. A band of dull black separates the purple metallic breast patch from the pale yellow belly. Brown wings and an almost black tail complete the colour scheme, save that on each side of the breast is an orange-scarlet and yellow tuft which is usually concealed beneath the wing. The female is so like many other female sunbirds as to be quite impossible to identify unless seen with the male. It, too, has a blackish tail but with whitish tips to the rectrices. These are not found in the male and are far from noticeable in the female until the tail is spread. It is a small bird, less by about ¼ in. than the male, and has the whole crown and upper parts ash-brown, the chin and throat white and the rest of the under side dull pale yellowish.

Measurements are: Bill (male) 16–17 mm., (female) 14–15 mm.; wing (male) 48–51 mm., (female) 46–52 mm.; tail (male) 32–35 mm., (female) 27–30 mm.

This common species of the savanna belt is found in all our West African Colonies. Its presence in the dry Gambian bush, in the damper environment of Sierra Leone outside the forest country, in the high grasslands of northern Cameroons and in semi-arid country at Lake Chad proves how variable is the environment in which it may be found. That it is migratory to some extent is indicated by its presence in Ubangi-Shari from early June to the end of July and its apparent absence from that country at other times of the year.

Around Freetown it is one of the commonest sunbirds, preferring open country and living much in the tree-tops. It is found everywhere from sea level to 1,500 ft., but does not enter the forest. Many field notes have reached me from Nigeria, where correspondents write that it is commonly distributed over a wide area including fringing forest, wooded ravines, little copses of trees and shrubs on the banks of small savanna streams and even on open farmland almost devoid of trees.

The birds hunt in little parties, flitting along among the foliage, clinging to the blossoms and sometimes hovering before them with vibrating wings. Insects, especially little spiders, and nectar

constitute the food supply. Amazingly restless, the Yellow-bellied Sunbird seldom remains quiescent except, no doubt, when it goes to roost for the night. It is difficult to imagine it still. For its diminutive size it has a surprisingly loud voice. The male sings chiefly in November and December a short, cheerful, musical song.

Nesting takes place in January. The nest of fine grass tops, fibre, small dry leaves and occasional flower heads is cosily lined with vegetable down and may be attached to a weed or slender twig a few feet from the ground. The entrance is at the side near the top. Eggs are two in number and are greyish in colour, either finely speckled and with a cap at the larger end of brownish ash, or grey-green with spots of grey-brown with purplish-grey undermarkings. Eggs measure 13·5–14·6 × 10·5–10·8 mm.

Distribution and Races

C. venustus venustus occupies the whole tree savanna belt, ranging into the thorn scrub, extending from the Senegal River to Ubangi-Shari, the Cameroon and Gaboon, eastward to Chad territory.

Its place is taken in Kenya by *Cinnyris venustus falkensteini* and in western Uganda by *C. venustus igneiventris*. Still another race, *C. v. kuanzae*, has been separated from northern Angola.

PREUSS'S DOUBLE-COLLARED SUNBIRD

Cinnyris reichenowi preussi Reichenow

(see Plate 48, facing this page)

THERE now appears to be some doubt as to whether the race *C. r. genderuensis* Reichenow, from the highlands of Genderu, which I upheld in my sixth volume, can be maintained in the face of large material from the surrounding highlands obtained since that volume was published.

The Double-collared Sunbird named *preussi* was discovered at Buea, on Cameroon Mountain, and is metallic peacock green above and on the throat. The breast is scarlet with bright yellow pectoral tufts at each side and the wings and belly brown. Only when seen at very close quarters can the purple band separating the green throat from the scarlet breast be noted, and the purple upper tail coverts. About 4½ in. in total length, the bird has a curved black bill which is long and fine. Essentially a highland form, the Double-collared Sunbird is unlikely to be met with side by side with *C. chloropygius*, the Olive-bellied Sunbird, which is considerably smaller in size, has a much paler, more yellowish-olive (not brown) belly, green, not purple, upper tail-coverts; a much narrower band

OLIVE-BELLIED SUNBIRD ♂ OLIVE-BELLIED SUNBIRD ♀
LITTLE PURPLE-BANDED SUNBIRD ORANGE-TUFTED SUNBIRD
PREUSS'S DOUBLE-COLLARED SUNBIRD
BOUVIER'S SUNBIRD
TINY SUNBIRD YELLOW-BELLIED SUNBIRD

COLLARED SUNBIRD ♂ & ♀ REICHENBACH'S SUNBIRD
VIOLET-TAILED SUNBIRD YELLOW-CHINNED SUNBIRD BROWN SUNBIRD
GREY-CHINNED SUNBIRD SCARLET-TUFTED SUNBIRD
HAUSA VIOLET-BACKED SUNBIRD HAUSA VIOLET-BACKED SUNBIRD

scarlet on the breast and no distinct purple breast-bar separating the green from the scarlet.

The measurements of *C. r. preussi* are: Bill 15–18 mm.; wing (male) 55–60 mm., (female) 50–54 mm.; tail (male) 35–43 mm., (female) 30–34 mm.

The adult female has the whole upper parts dark olive-green, the under parts greyish olive washed on the belly with yellow, the chin greyish. The tail is blackish brown, wings are brown margined with olive-yellow, under wing-coverts white and axillaries pale yellow.

The high ranges of West and East Africa are the home of Reichenow's Double-collared Sunbird, the West African race (or races) being found in the Cameroons, where it breeds from 6,000 to 8,000 ft., ranging higher on Fernando Po to nearly 11,000 ft. In the non-breeding season parties invade the lower levels and may then be encountered during the rains as low as 1,000 ft. Naturalists familiar with this bird have remarked that it is exceedingly pugnacious. One of the flock will suddenly, and for no apparent reason, leave off its nectar sucking and chivvy one of its own or some other species of sunbird for the sheer pleasure of doing so. Such incidents occur throughout the year and are not connected with normal display which takes place in the breeding season. The male then displays before the female, hopping round with quivering wings and with the two beautiful pectoral plumes raised and spread like fans.

In the Bamenda highlands birds begin to pair off in September, and nests have been found at Oku nearly completed in October. The breeding season extends from the end of the rains through the dry season to the beginning of February.

Nests are usually perfectly concealed in the moss-draped branches of forest trees 8–40 ft. from the ground. The nest is the usual sunbird domed structure, the opening overhung by a short porch. The interior is lined with felted plant down, the exterior built of dry moss, lichen and fibre with a layer of fine grass. The two eggs have a claret-brown ground spotted, speckled and streaked with dark red and purplish brown. They measure 15·5–18·3 × 11·9–12 mm. Another type has a mauvish-cream ground clouded with pinkish grey with scattered specks of blackish brown.

The song of this bird is described as a jingle of notes vehemently repeated.

Distribution and Races

Cinnyris reichenowi preussi Reichenow is recorded from all the mountains of British Cameroon and also in Fernando Po up to 10,800 ft.

A race *C. r. genderuensis* Reichenow, said to have narrower olive-yellow fringes to the wings, has been described from the Genderu mountains and from Chang and the Tibati plateau, French Cameroon. It is doubtfully distinct.

In East Africa the typical subspecies is found on Mount Elgon and Mount Kivu, while on Mount Ruwenzori two races occur, the typical subspecies to 7,000 ft., above which the large *C. reichenowi stuhlmanni* ranges from 10,000 to 11,200 ft.

OLIVE-BELLIED SUNBIRD

Cinnyris chloropygius (Jardine)

(see Plate 48, facing page 1280)

FOUR races are recognised in West Africa and were dealt with separately in my major work, volume vi, pp. 186–91 It is a most abundant species found in all open situations in the savanna belt and in forest clearings.

Metallic green on the head, throat and upper surface, the bird has a narrow scarlet band on the breast, while the belly is olive, varying in shade in the four races. The wings are brown and the tail is bluish black. The upper tail-coverts are the same metallic green as the back.

The adult female has the upper parts olive, the wings brown, and all the feathers (primaries, secondaries and coverts) margined with greenish olive. The tail is dark, glossed with dark blue. Under parts are olive strongly washed with yellow, the throat is paler and the chin almost white. A pale eyebrow-streak is rather faintly indicated.

Measurements of the typical race are: Bill 15–17 mm.; wing 43–47 mm.; tail (male) 27–31 mm., (female) 22–25 mm.

This is one of the smaller sunbirds in our area which has a patch of scarlet on the breast and, indeed, at first sight is very like the Double-collared Sunbird (*C. reichenowi preussi*), but the latter is a highland form restricted to a small area in British Cameroons, living at a much higher level than that which the Olive-bellied Sunbird frequents.

House gardens with their wide variety of flowering shrubs and trees are a special attraction to this, one of the tamest members of the sunbird family, which will even venture within the dwellings to visit cut flowers in the bungalows of Europeans. Preferring open spaces, it is a familiar species on cultivated land and is commonly met with in open situations in the forest where the sun can penetrate and where there is an abundance of undergrowth. It prefers to feed at the lower levels and has no particular aversion to the blazing noonday sun, flitting about among the flowering shrubs without any concern. It has a special liking for the red blossoms of *Hibiscus* and the greenish inconspicuous flowers of the manioc. Although associated much with the forested area of West Africa, it is never found

in the depths of the forest where the light does not penetrate. More than most sunbirds, this species is gregarious, and a single bush may be full of them, buzzing about like insects. Both sexes utter a harsh alarm note, and the male at any rate has a pleasing twittering song.

The nest is constructed of stringy fibres, mixed with dry leaves and lichens and lined with pappus-down or other soft material. Two eggs are laid and these vary much in colouring, but there is usually a strongly marked ring of spots at the larger end of grey or brown, tinged green or buff or red. Measurements of eggs of *C. c. lühderi* are 14–15 × 10·5–11 mm.

Distribution and Races

C. chloropygius chloropygius (Jardine) ranges from the coastal area of the Gold Coast and Ashanti to the Niger delta (Owerri Province). Examples from Calabar have not been examined.

C. chloropygius insularis Reichenow takes the place of the above in the lower elevations of western Cameroon (including Cameroon Mountain area) and on Fernando Po. It differs mainly in its larger size and very pale belly. The wing measures (male) 46–53 mm., (female) 43–47 mm.

C. chloropygius lühderi Reichenow inhabits southern Cameroon. It has a much darker belly than either of the above and is large in size, with wing (male) 46–54 mm., (female) 45–48 mm.

C. chloropygius kempi Ogilvie-Grant ranges from Sierra Leone to the Ivory Coast. It has a lighter and brighter olive belly than the neighbouring race in the Gold Coast. The wing measures (male) 45–49 mm., (female) 43–46 mm.

In addition to these at least two recognisable races have been described from eastern Africa, *C. chloropygius orphogaster*, ranging from Uganda to Elgon and west to eastern Belgian Congo, recognised by its dark brown belly from the races in western Africa, and another race from south-western Abyssinia.

TINY SUNBIRD

Cinnyris minullus minullus Reichenow

(see Plate 48, facing page 1280)

FOR many years this minute sunbird was not distinguished from the Olive-bellied Sunbird (*C. chloropygius*), for both occur side by side over part of the range of the latter.

C. minullus has a shorter, less curved bill, and in the hand can be distinguished at once by the metallic blue bars on the scarlet breast. These bars are so narrow, however, that they cannot be noted in the field, and as both birds are otherwise the same in

colour, it is impossible to distinguish one from the other in life. Both occur in the same area. One important point of difference is that although so very much alike, they build different types of nests and lay differently coloured eggs. The females are really indistinguishable in colour except for the greyer throat of *C. minullus*.

The technical description of the male *C. minullus* in my sixth volume reads as follows. Entire upper parts, head and throat metallic green (as in *C. chloropygius*), the feathers of the lower throat merging into steel-blue, but the transition is gradual and no definite breast-band is obvious. Breast scarlet (rather darker in shade than in *C. chloropygius*) and with narrow metallic blue concentric bars, the bases of the feathers blue and the fringes scarlet. At each side of the breast are lemon-yellow pectoral tufts. Wings blackish brown, tail black with a metallic wash of bluish purple. Belly and under tail-coverts dark olive. Axillaries yellow; under wing-coverts white.* Eye dark brown, bill and feet black. Measurements: Bill (male) 14–15 mm., (female) 13–16 mm.; wing (male) 45–48 mm., (female) 43–46 mm.; tail (male) 25–27 mm., (female) 22–28 mm.; tarsus (male, female) 13–14 mm.

In its habits, so far as they are known, the Tiny Sunbird resembles the Olive-bellied Sunbird, but as already noted, their nests may be distinguished by having no "beard" or streamers, which are a feature of the nest of *C. chloropygius*. Open country is its habitat; it is not found in the forest depths but only in the more open places in forest country.

The eggs of *C. minullus* are also characteristic. They are not streaky but have a white ground tinged with green and spotted with dark ash-brown and blotched with dark lilac-grey, the markings being arranged chiefly around the blunt end. Two eggs have measurements of 15·5 × 10 mm. and 14·5 × 10 mm.

Distribution. From southern Cameroon the typical bird ranges to the Gold Coast, where it has been taken at Aburi. It has recently been found also in British Cameroon at Kumba and in clearings of the forest on Mount Kupé between 2,500 and 3,500 ft.

In the Upper Congo another race, *C. minullus marginatus* Ogilvie-Grant, ranges to the Semliki and Ituri districts of the Belgian Congo. It is distinguished by having the metallic bars on the breast and upper tail-coverts bluish purple.

* Bates in his *Birds of West Africa*, page 458, gives the white under wing-coverts as a feature which distinguishes *C. minullus* from *C. chloropygius*; but it is a poor distinction, as the under wing-coverts in *C. chloropygius* might also be described as white but not so uniformly dead white as in *C. minullus* and faintly tinged with grey.

CARMELITE SUNBIRD

Chalcomitra fuliginosa (Shaw)

This is a fairly large sunbird, 6 in. in length with a wing expanse of 8 in. The adult male is so unlike all the other sunbirds as to be fairly easily recognised either in fresh or worn dress, but there is so much difference between these two plumages that the uninitiated would believe two species to be involved. When fresh moulted the Carmelite Sunbird is a handsome species: deep chocolate throughout, with wings, tail and belly appearing almost black, but relieved by the splashes of metallic colour on crown, throat, above the tail and at the bend of the wing (bluish on crown, violet elsewhere) and by the lemon-coloured tufts at each side of the breast. It is depicted on Plate 12 in this fresh plumage in volume vi of my larger work.

As no sunbird is so given to bleaching, it is much more often seen in the garb from which its English name is derived. The mantle fades to a light brown and the head and neck, except for the metallic forehead and throat, fade to greyish white, thus contrasting strikingly with the dark chocolate-brown of the wings, tail and under parts. Measurements are: Bill 20–23 mm.; wing (male) 69–71·5 mm., (female) 64–66 mm.; tail (male) 42–45 mm., (female) 35–38 mm.

The Carmelite Sunbird is familiar to those who spend their lives in coastal districts, for although its range extends from Liberia to the Congo River, it does not appreciate arid country and has been recorded much oftener from such localities as the Kru coast, the Volta River and Lagos Island than from interior localities. It regularly visits the garden of Government House, Lagos, between July and October, feeding on the canna flowers and living mostly in the flamboyant trees, and we hear of it similarly coming into gardens in Monrovia and to the rubber plantations of the Cameroons. It cannot be common everywhere, for not one specimen has yet been collected in Sierra Leone.

It is absent from primeval forest but occurs in clearings and especially along waterways. It seems to be subject to considerable local movements, which may coincide with the flowering of its favourite trees—silk-cotton, hibiscus, *Moringa*, flamboyant, and so forth.

A nest found in British Cameroon in October in a rubber plantation was suspended by strands of gossamer and fibre to a drooping rubber-tree bough 10 ft. from the ground. It was built in the form of a little domed pouch with a circular opening in one side surmounted by a porch with a short "beard" hanging from the lower pole. It was a well-knit structure of fibre, skeleton rubber leaves and

a little moss bound by gossamer and decorated with bits of bark. It was lined with plant down. Two eggs complete the clutch, and these are long ovate in shape with brownish-white ground, covered with streaks, spots and blotches of various shades of brown with grey shell marks. One such clutch measured 19 × 13·1 mm. and 19·6 × 13·3 mm.

Distribution. Recorded from various localities between Liberia and the Congo, including the Gold Coast, Nigeria and British Cameroons. In the French and Belgian Congo it has been collected at Brazzaville and Leopoldville. It seems to be confined mainly to coastal areas or to the course of the larger rivers.

GREEN-THROATED SUNBIRD

Chalcomitra rubescens rubescens (Vieillot)
Chalcomitra angolensis (Lesson) auctorum

Both male and female of this sunbird are rather distinctive. The male appears almost black (golden nigger brown in the sunlight). The metallic green on throat and crown is followed in each case by a band of metallic violet, otherwise the whole plumage is so dark that few sunbirds can be confused with it. The quills and tail-feathers are even darker brown than the back. There are no pectoral tufts, but on each side of the cheeks a malar streak of metallic bluish green (or peacock blue in some reflections) contrasts with the greener throat. A single row of metallic reddish-purple feathers separates the green throat from the dark brown breast and belly.

Measurements are: Bill 18–20 mm.; wing (male) 63–71 mm., (female) 58–63 mm.; tail (male) 39–46 mm., (female) 35–37 mm.

The female of this sunbird is so markedly streaked with olive-brown on the yellowish-white breast and has such a prominent white stripe over the eye that it should be possible to recognise it from other female sunbirds in the same area. Its upper parts are earth-brown, the crown rather darker than the back.

This sunbird is found both in the open places in forested districts and in the savanna. It is met with in the forest itself but is not uncommon in cocoa and rubber plantations, in gardens of compounds and in the trees lining the banks of streams and rivers. On Cameroon Mountain it does not ascend beyond 4,500–5,000 ft. but has been seen at Kumba, Ekona and Bamenda. No doubt, like others of its genus, it moves about as its favourite trees come into flower, and at Kumba it is reported to be the most frequent sunbird visitor to the compounds.

On the whole it must be classed as a forest bird, for wherever it occurs forest is never far away. Visitors to the Botanical Gardens

at Entebbe in Uganda must be familiar with it when the *Erythrinia* trees are a blaze of golden-orange flowers. Insects, spiders and nectar furnish its food supply.

It builds the usual sunbird type of nest with overhanging canopy. The eggs have a glossy surface of creamy-white ground almost obscured by longitudinal streaks of lavender-grey and dark brown. Measurements are: 17–17·5 × 11·5–12·5 mm.

Distribution and Races

C. r. rubescens (Vieillot) inhabits Fernando Po and on the continent extends from British Cameroon to northern Angola, ranging east to the Upper Congo and Avakubi, probably along the Aruwimi and Ubangi Rivers. It is found in Uganda and western Kenya Colony.

A subspecies, *C. r. kakamegae* van Someren, has been described from Kavirondo on account of its darker colouring.

BUFF-THROATED SUNBIRD

Chalcomitra adelberti Gervais

Two races occur of this typical West African Sunbird, which species is not found elsewhere in Africa.

The male is very distinctive in colour and should be easily recognised. Its pale, sharply defined buff throat is in strong contrast to the black head and face ornamented with the metallic-green crown and moustachial stripes, and the bright chestnut under parts. Above, the adult bird appears blackish brown relieved by the light chestnut on the wing-coverts. In the forest the male of this sunbird looks almost black, but with care the chestnut under parts and metallic crown and throat can be observed.

The adult female has the entire upper parts earth-brown (not olive), darker on the wings and tail. The throat is greyish white streaked with olive-brown; the rest of the under parts are cream washed with olive and indistinctly streaked with olive-brown. Under wing-coverts and axillaries are tinged with yellow.

Measurements are: Bill (male) 17–19 mm., (female) 16–17 mm.; wing (male) 60–65 mm., (female) 55–57 mm.; tail (male) 34–38 mm., (female) 30–33 mm.

The Buff-throated Sunbird, which has an extensive range in West Africa, is for all that a not very common bird, and its distribution is distinctly local. It is mainly a forest species but not entirely, for wherever high flowering trees occur, there may this sunbird be present. It seems also to be to some extent migratory, for it has been remarked in the Kumasi clearing from January to March but not at other times of the year. Such movements may well be governed by the flowering of its favourite trees such as *Bombax* and *Malacanthia*,

but of that I have no definite evidence. In southern Nigeria the fondness of this sunbird for trees in which there are hanging ants' nests has been noted.

Unfortunately no one appears to have discovered the nest and eggs of this sunbird.

When seen in primeval forest the bird has usually been in the company of a bird army hunting through the lower branches of the trees, spiders and small insects appearing to be its chief prey.

Distribution and Race

Chalcomitra adelberti adelberti (Gervais) is supposed to have been discovered in Senegambia, but there is some doubt in my mind as to whether this is correct. Since 1834 it has never turned up west of Sierra Leone.

The typical race ranges from that protectorate to the Gold Coast, east of which it is replaced by *Chalcomitra adelberti eboensis* (Jardine), specimens of which have been recorded from Misahöe in Togoland and from numerous localities in southern Nigeria between Iju near Lagos and the mouths of the Niger. This race has a darker chestnut breast and belly than the typical race.

SCARLET-BREASTED SUNBIRD

Chalcomitra senegalensis (Linnæus)

THREE races come within our limits in West Africa, but only the typical subspecies concerns us between Senegal and Nigeria.

The male Senegal Sunbird is a creature of extravagant beauty with its vermilion-red breast, barred narrowly with peacock blue, the bars, of course, being indistinguishable unless the bird is at rest within a few yards. The rest of the plumage appears velvety black with brilliant emerald-green cap and similar patches bordering the throat. Wings and the square broad tail are dark cinnamon-brown when new, but soon fade.

The adult female has the upper parts, including the crown, cheeks and ear-coverts, earth-brown, wings and coverts brown, the outer major coverts with narrow white edges. The tail is brown, darker towards the tip, which is narrowly edged with white. Chin and throat are dark brown, narrowly and obscurely barred with lighter brown and with yellowish-white tips which give a somewhat mottled appearance. Breast and belly are pale dull yellow or yellowish white with dark brown middles to the feathers, resulting in a streaked appearance, especially on the belly. Under tail-coverts are yellowish white terminally with dark bases. Under wing-coverts are mottled brown and white, axillaries light brown.

Measurements of *C. s. senegalensis* are: Bill 19–23 mm.; wing

(male) 63–69 mm., (female) 59–63 mm.; tail (male) 43–46 mm., (female) 38–42 mm.

The immature male resembles the adult female on the upper parts but has the throat uniform dusky black, the breast and belly yellow, heavily mottled and barred with black. The adult dress is assumed by gradual moult, the metallic feathers appearing among the juvenile feathers. Thus birds in every intermediate stage may be met with. The identification of female and immature sunbirds in the field is a hopeless task and difficult enough in the museum. Often the surest guide is in the shape and length of the bill.

This is one of the commonest sunbirds in West Africa, equally plentiful in the dry bush country of Senegal and Gambia as in the northern and central provinces of the Gold Coast and Nigeria, which are situated north of the forest belt. It ranges widely over most types of parkland and farmland, gallery forests, kurimis and grass woodland. It visits flowering trees and shrubs in towns and villages but avoids the forest. In the open country it frequents a great many species of flowering trees, the red flowers of the silk-cotton always attracting it, but it will visit trees which are not in flower to search the bark for spiders and other insect prey. Often seen alone or in couples, the bird may also be encountered in little bands of ten or more, at least two of which will be males in full plumage. Though it sometimes hovers in front of a flower as if to inspect it, the Scarlet-breasted Sunbird does most of its feeding on foot, moving from twig to twig to search the flowers.

Nesting takes place during the rains. In March and April rival males may be seen chasing one another or may be in amorous pursuit of a female. From the accounts of many nests which I have received, it is remarkable how close to the dwellings of man this little sunbird chooses to breed. Not uncommonly a nest will be built in the compound within a few yards of the door. Rest-house gardens are also favourite places in which to find this sunbird's nest. There are instances, too, of *C. senegalensis* breeding in close proximity to a colony of sociable spiders and to a tree in which Wahlberg's Eagle was nesting, but whether there is any significance in such associations has still to be proved.

The nests of *C. senegalensis* are all very much alike, usually suspended from trees, 5–25 ft. from the ground, by gossamer and bark fibre. The outer envelope is made of interwoven fragments of bark and other vegetable matter, grass, leaves, etc., with an internal lining of felted white vegetable down. The opening is in one side, sheltered by a porch. A small beard of grasses and leaves hangs down from the lower pole of the nest. The two eggs vary tremendously and the ground colour may be grey, purplish, bluish green or pinkish cream, with spots, smears, lines and streaks of

darker shades of the colours mentioned, others being more heavily marked with streaks and speckles of brown. A much fuller description appears in my larger work. Measurements of eggs are 18·1–21 × 11·7–12·5 mm.

Distribution and Races

C. s. senegalensis (Linnæus) ranges north of the forest from Senegal to Nigeria through the whole grass woodland and thorn scrub, extending in Sokoto and Kano Provinces of Nigeria to 12° 40′ N., and is apparently absent from Sierra Leone and Liberia, its range lying mainly north of lat. 10° N., and so missing these countries and the coastal area of countries lying to the east.

In northern Cameroons its place is taken by *C. s. adamauae* Reichenow, which is intermediate between the typical race and the one following.

C. s. acik (Hartmann), in which the metallic malar patch is considerably smaller and the red breast more scarlet-matt, is entirely without gloss. In fresh-moulted birds the wings and tail are darker than in *C. s. senegalensis*. *C. s. acik* ranges from the upper White Nile to northern Uganda and westwards to the Shari River and Ubangi-Shari.

Numerous other races of this sunbird have been described from tropical Africa, of which *C. s. aequatorialis*, ranging east from Uganda to Elgon and south to Tanganyika, is the best known.

URSULA'S SUNBIRD

Chalcomitra ursulae Alexander

This bird is yellowish olive-green above, with a grey-blue forehead very slightly metallic, light greyish-brown breast and pale olive-yellow ventral region and under tail-coverts. There is little distinction about this sunbird unless the orange-red pectoral tufts of the male can be seen. Its total length is about 3½ in. The adult female resembles the male, but the under parts are somewhat paler. Measurements of the only males examined are: Bill 16–17 mm., wing 49 mm., tail 25–26 mm.

The first examples to be obtained of this insignificant little sunbird were found on Fernando Po, frequenting the low bushes on the steep slopes of Mount St. Isabel. Later it was secured on Cameroon Mountain and more recently on Mount Kupé in British Cameroons at 4,000 and 6,500 ft. respectively. There they were secured while visiting the undershrubs of the primary forest. We know nothing about this sunbird's life-history.

Distribution. Fernando Po, Cameroon Mountain, and Kupé Mountain, British Cameroons.

OLIVE-BACKED SUNBIRD

Cyanomitra verticalis (Latham)

THREE races are recognised in West Africa, the typical race in Upper Guinea and two others in Lower Guinea.

The adult male has the entire head, nape, throat and forepart of the breast dark metallic peacock green, which in some reflections, especially on the crown, appear metallic peacock blue. The lores are black. The remainder of the upper parts from the base of the neck to the upper tail-coverts are golden olive, the metallic feathers of the head sharply defined from the olive feathers without intermingling. Wings are brown; the lesser wing-coverts and broad margins to the major coverts, and narrower margins to the primaries and secondaries, are golden-olive. The tail is brown, fringed on the outer webs with golden olive. The under parts, below the metallic blue-green throat, are leaden grey, the long flank-feathers being tipped with greenish yellow. At each side of the breast a large pectoral tuft of cream-coloured feathers is faintly washed with pale yellow. Under wing-coverts and axillaries are grey. The eye is dark brown; bill, legs and feet are greenish black.

Measurements are: Bill (male) 21–25 mm., (female) 21–22 mm.; wing (male) 60–65 mm., (female) 58–63 mm.; tail (male) 44–48 mm., (female) 39–43 mm.

The adult female has the forehead, crown, nape, ear-coverts and a line of feathers passing below the eye metallic peacock green, with blue reflections. The lores are black and the rest of the upper parts, wings and tail like the male. Chin, throat and entire under parts are very pale ash-grey, almost white on the throat. Under wing-coverts and axillaries are white. The female has no pectoral tufts. The above description refers to the typical race in Upper Guinea; the Lower Guinea races are much the same, but have darker olive upper parts.

The Olive-backed Sunbird is an inhabitant of forest clearings and gallery forests as well as tree savanna. It is therefore distributed over a very wide area of country, though in some parts it appears to be very local. In north-western Sierra Leone it is to be seen in the Little Skarsies River district, both on the coastal plain and inland, and is a common visitor to village gardens and banana plantations. In southern Nigeria we hear of it especially in the forest clearings and in tree savanna, being often seen along wooded streams.

Insects form its staple food, but small caterpillars and spiders are also devoured, and the birds visit flowers for the nectar. Its note has some resemblance to *cheerick*.

Nests have been found in Sierra Leone in August and September

and in Nigeria in March. The nest is an untidy globular structure of bark and fibre woven together and lined with fine grass, being suspended from branches of shrubs, occasionally overhanging water. One nest was hung from a telephone wire and another from a beam inside a deserted hut. Only the eggs of the Lower Guinea race (*böhndorffi*) have been described, in which the ground varies from almost white to pinkish brown, the shell being covered with dark brown mottling or with the markings more pronounced in the form of dots, spots and dashes of chocolate-brown and grey underlying markings. Eggs measure about 18 × 13·5 mm.

Distribution and Races

C. verticalis verticalis (Latham) ranges from Senegal to Nigeria in the type of country already indicated.

In Lower Guinea its place is taken by *C. verticalis böhndorffi* (Reichenow), which differs in its darker olive upper parts and rather darker grey under parts. It is also slightly larger, with wing (male) 64–70 mm., (female) 60–65 mm. This race ranges from the highlands of British and French Cameroon south to northern Angola (excepting the coastal strip from Rio Muni to Landana) and east to Ubangi Shari and the Kasai.

The third race in our area, *C. v. cyanocephala* (Shaw), which has a deep purplish-blue throat and breast, has been found in Portuguese Congo, Gaboon and Rio Muni.

Two other races of this sunbird are found in East Africa, the Uganda race (*C. v. viridisplendens*) and the Katanga race (*C. v. bannermani*).

BLUE-HEADED SUNBIRD

Cyanomitra oritis (Reichenow)

THREE races of the Blue-headed Sunbird were recognised in my larger work. All three are highland forms, two occurring close together on the mainland, the other an island race. Their range and distinctions will be given in the last paragraph.

This is an olive-green bird with long fine curved bill and a metallic head and throat varying from steel-green to steel-blue according to the race. The typical subspecies, *C. oritis oritis*, has the entire head, throat and upper part of the breast metallic steel-blue, the throat and breast in particular with violet reflections. The rest of the body plumage is olive-green, the under parts being brighter than the back and strongly washed with yellow. On each side of the breast is a prominent pectoral tuft of pale lemon-yellow. Primaries, secondaries and tail-feathers are dark brown, bordered with the same colour as the back, broadly on the secondaries. The eye is dark brown; bill, legs and feet are black.

Measurements are: Bill (male) 28–31 mm., (female) 28 mm.; wing (male) 62–65 mm., (female) 57 mm.; tail (male) 38–40 mm., (female) 34 mm.; tarsus 18–19 mm.

The adult female, which otherwise resembles the male, lacks the pectoral tufts.

Immature birds lack the metallic feathers of the adults and are mainly dull olive in colour.

The Blue-headed Sunbird is a true forest species which is found only in the montane regions. Although discovered first at Buea on Cameroon Mountain, it probably descends to that comparatively low altitude in the non-breeding season, for it nests at a much higher altitude, the race *bansoensis* occurring from 5,000 to 7,500 ft. in the forests of Kupé, Manenguba and the Bamenda and Oku highlands. In that area it was generally seen singly, seeking the shade of the forest rather than the sunlit edges and clearings. Occasionally a tree in blossom will attract great numbers. The song is an unpretentious jingle of metallic notes.

The nest of this sunbird has not been found.

Distribution and Races

Cyanomitra oritis oritis (Reichenow) is restricted to Cameroon Mountain.

Cyanomitra oritis bansoensis Bannerman has a shorter bill (25–26 mm.) and slightly shorter wing (58–62 mm.) than *C. o. oritis*. The metallic feathers of the crown and neck are bright steel-green instead of steel-blue, and those of the throat steel-blue instead of purplish blue. The under parts are brighter and the belly is yellower. This race is found in the Bamenda highlands of British Cameroon and on Mounts Kupé and Manenguba.

C. oritis poensis (Alexander) differs from *C. o. oritis* in having the metallic feathers of the head dull steel-green instead of blue and in the darker olive body plumage. The bill is 25–27 mm. and wing 59–63 mm. This race is restricted to Fernando Po.

BLUE-THROATED BROWN SUNBIRD

Cyanomitra cyanolaema (Jardine)

Two races come within our limits, both occurring in Upper Guinea, though not overlapping, and one in Lower Guinea.

This is not one of the very brilliant sunbirds, even the males being dull-coloured in contrast to many others in this family. The adult male has the forepart of the crown dark metallic steely blue-green*

* In some examples steel-blue predominates, in others steel-green; the variation is individual and cannot be correlated with distribution. The same applies to the cream or lemon-yellow pectoral tufts.

shaded with violet, the purple reflections being sometimes dominant. The hind part of the crown and the entire upper surface, including the wings and tail, are brown, some of the tail-feathers pale or almost white at the tips. Chin and throat are metallic coloured, like the crown. The breast is brown shading into paler greyish brown on the belly and under tail-coverts, the flanks are greyer and with a faint cinnamon wash. On each side of the breast is a pectoral tuft of lemon-yellow or cream. Under wing-coverts and axillaries are smoky white. The eye is brown and bill black; legs and feet are black.

Measurements are: Bill (male) 20–23 mm., (female) 20–22 mm.; wing (male) 64–73 mm., (female) 62–70 mm.; tail (male) 50–55 mm., (female) 42–50 mm.

The females are pale coloured, a mixture of olive-yellow and brown above, whitish below, and with brown wings and tail. At close quarters the white eyebrow of the female may be discerned. From many female sunbirds it is to be recognised by its much paler under parts with, in many examples, a quite white throat. Bill and legs are black in the adults of both sexes.

The rich second-growth jungles are the home of this sunbird, which may be seen about the vines and the flowering shrubs. In such surroundings it is not a rare bird. In the forests of the Gold Coast it is said to keep much to the high flowering trees, where it is, of course, difficult to observe, and the few specimens collected in Sierra Leone give little indication of the habitat it prefers. The few field notes available have been made on the Lower Guinea race in the second-growth forests of southern Cameroon.

This sunbird, in addition to feeding on spiders—a very favourite item in the diet of many sunbirds—is evidently a fruit-eater, for the small seeds of fruits have been found in its stomach as well as bits of flowers.

The Blue-throated Sunbird makes a most remarkable nest which looks like the exaggerated form of a sunbird's hanging nest. It has been likened to a rope three feet long with an enlargement for the nest proper two-thirds of the way down. The materials used were pieces of light twigs, weed-stems and dry leaves held together by a tangle of black hair-like fibres. The inside of the nest was lined with fine soft fibres and the whole structure was hung on a thorny shrub. Two eggs in the nest described were buff-colour, the ground almost obscured by dense mottlings of various shades of dark brown. Another clutch had a cream ground covered by dark purplish-grey and heavy dark brown speckles and freckling. Eggs measure 18–20 × 13–14 mm.

Distribution and Races

C. cyanolaema cyanolaema (Jardine) was discovered first in Fernando

Po and is found on the mainland to range from the Gold Coast to northern Angola and across the Belgian Congo to Uganda.

In the western part of Upper Guinea a large-billed race, *C. cyanolaema magnirostrata* (Bates), is found. In addition to the bill, which measures 23–25 mm., it is slightly more dusky in colour. This race has been recorded from Sierra Leone and French Guinea. To which race Liberian examples belong is yet unsolved—probably to the longer-billed subspecies.

OLIVE SUNBIRD

Cyanomitra olivacea (Smith)

THREE races and an intermediate form were recognised in my larger work as occurring within our limits.

This is one of the plainest-coloured sunbirds, olive above, greyish olive below, the male being relieved by the lemon-yellow pectoral tufts but the female lacking even this small splash of colour on its otherwise drab plumage. It is not one of the very small sunbirds, and by reason of its dull colouring the male is apt to be confused with females of more brilliant species. Its little song is, however, distinctive, and once learned may lead to identification.

Measurements of the most westerly race, *C. olivacea guineensis*, are: Bill 20·5–23 mm.; wing (male) 57–62 mm., (female) 51–55 mm.; tail 45–52 mm. Apart from the bright pectoral tufts of the male, the sexes are alike.

This is one of the commonest sunbirds, inhabiting low bushy growth as well as the high flowering trees. It visits flowers for nectar but more often seeks its insect food in the foliage, examining with meticulous care the twigs and leaves in the manner of a warbler. It seems to lack the fairy grace and spontaneity of a sunbird as one naturalist has described it, and its song is also very different from the usual sunbird jumble of notes. Its well-separated notes are sweet and clear as it slowly descends the scale. Both sexes indulge in this song.

The bird is usually encountered alone or in pairs and does not associate with the other sunbirds as a rule. At most four birds may be seen together. This species has a particular preference in its diet for small spiders, and in its search for these more than one bird has paid the penalty by being itself entangled in a spider's web, where it has met with an unpleasant end.

The race *ragazzii* which lives in Cameroon breeds all the year round, but whether the more westerly representative has a more restricted nesting season remains to be proved. The nest is an exquisite little pocket hung from a twig composed of fine fibres

mixed with dry leaves or grass, with little or no down inside. These pendant nests have long ends left hanging from the mouth of the entrance. The clutch consists of two eggs, the ground colour varying from greyish white to greenish-stone colour, mottled, spotted or clouded with various shades of brown and lilac-grey. Three distinct types can be defined (see volume vi, *The Birds of Tropical West Africa*, p. 225). Egg measurements are: 16·4 × 12·6 mm. and 16·9 × 12·6 mm. (*ragazzii*); others 16–18 × 12–12·5 mm. of the same race.

Distribution and Races

Cyanomitra olivacea guineensis Bannerman has an almost entirely black bill except the basal third of the cutting edge of the mandible, which is paler. This race extends from Portuguese Guinea through Sierra Leone to the Ivory Coast.

Cyanomitra olivacea ragazzii (Salvadori) differs from the above by having the basal half of the entire lower mandible of the bill light buffish-flesh colour, fading to white—a very unusual racial distinction. It ranges from Nigeria (Lagos) and British Cameroons (below 4,000 ft.) to the Congo basin and northern Angola.

Cyanomitra olivacea guineensis ≷ *ragazzii* is intermediate between the two races described above. None have all-black bills, nor have they the same amount of yellow on the lower mandible as *C. o. ragazzii*. This form occurs in the Gold Coast. Examples from Dahomey have not been examined.

Cyanomitra olivacea obscura (Jardine) differs from *C. o. ragazzii* by having the under parts paler and less greenish. The bill resembles that race. In size it is the largest of the West African Olive Sunbirds with wing (male) 62–69, (female) 57–64 mm. It is found on the islands of Fernando Po and Principe.

BATES' SUNBIRD

Cyanomitra batesi (Ogilvie-Grant)

The adult male and female have the entire upper parts dark olive; under parts are dull greyish olive, only the middle of the belly being pale whitish yellow. Pectoral tufts of very fine, rather long, pale yellow feathers are present in the male but are absent in the female. Wings are dark brown margined with palish yellow. The tail is black with broad olive-green margins. The eye is dark brown; the bill is black, base of lower mandible light horn; legs and feet are black. Measurements are: Bill (male, female) 14–15 mm.; wing (male) 49–53 mm., (female) 45–48 mm.; tail (male) 26–30 mm., (female) 24–27 mm.; tarsus (male, female) 13–15 mm.

There is really no possibility of distinguishing this plain-coloured little sunbird from the Little Green Sunbird (*Anthreptes seimundi*

minor), which, though so similar in appearance, is placed in a different genus on account of the shape of its bill—a distinction which is hard enough to see when both birds are in one's hand. It is very small and the whole plumage is olive-green. It seems to be restricted to the forests of southern Cameroon, where it was for long overlooked owing to its close resemblance to the other sunbird mentioned.

This is a forest species which until recently had been found only in southern Cameroon and Gaboon. Its range has now been found to extend into British territory.

It builds a hanging pocket-like nest but without long fibres or loose ends hanging down. It is made of moss and lined with fine down. The two eggs are pale pink mottled with greyish pink with scattered small spots of dark brown and yellowish brown. One egg measures 15 × 11 mm.

Distribution. British Cameroons (Kumba, Nyassoso (3,000 ft.) and Batibo), southern Cameroon (Assobam, Bitye, Ja River) and Gaboon (Camma River).

SÃO THOMÉ GIANT SUNBIRD

Dreptes thomensis (Bocage)

THERE can be no mistaking this Giant Sunbird—the males are some 8½ in. from bill-tip to tail-tip, appearing almost black in plumage with a splash of greenish olive-yellow round the ventral region. The dark steely-blue metallic tips to the feathers of the upper parts would only be noticeable at very close quarters. The bill is very prominent, 1½ in. in length, strongly curved and correspondingly powerful for such a large sunbird. When spread the long graduated tail shows white tips to the outer rectrices, which are conspicuous when the under side of the tail can be seen, but viewed from above the closed tail appears completely black.

Measurements are: Bill (male) 38–39 mm., (female) 32 mm.; wing (male) 91–94 mm., (female) 82–83 mm.; tail (male) 84–93 mm., (female) 73–76 mm.; tarsus (male) 28–30 mm., (female) 26 mm.

This is the largest sunbird known and was discovered in São Thomé, to which island it is restricted, on the forest western slopes at a locality named San Miguel. It seems to be a bird which is found only in thick woods and is said to possess a very curious song of three strident notes.

Its nest and eggs have never been found, and we have everything to learn about its life-history.

REICHENBACH'S SUNBIRD

Anabathmis reichenbachii (Hartlaub)

(see Plate 48, facing page 1280)

THE adult bird is distinctly coloured with its metallic steel-blue head and throat, olive back and smoke-grey below, with yellow ventral region and ornamental yellow tufts on each side of the breast in both sexes. It has brown wings and tail, the latter with white tips to all but the central pair of rectrices. The only sunbird which it closely resembles is *Cyanomitra oritis*, but as all the races of that sunbird occur at very high elevations in the Cameroon highlands or in Fernando Po, where *A. reichenbachii* is not found, there need be no confusion between them. The sexes of this sunbird are alike, the female assuming a metallic head as does the male, and having pectoral tufts also. The bill measures 17–17·5 mm.; wing (male) 59–63 mm., (female) 54–57 mm.; tail (male) 44–49 mm., (female) 40–46 mm.

West of the Cameroons this is a very rare bird, but in that country it has been reported as abundant, frequenting flowering shrubs and roosting among tall weeds. Its graduated tail is a marked characteristic which is not shared by any others on the mainland.

In southern Cameroon nests have been found in June with the female sitting. The nest is the usual sunbird pocket-like nest made of fine strips of plantain leaves or grass and fibres, without any downy lining. Eggs vary to some extent. In one clutch the surface is light chocolate with a fine dusting of a deeper colour, mostly at the larger end, which is deep chocolate. In the other clutch the surface is greyish buff with a fine dusting of deeper colour at the broad end. Eggs measure 17·5 × 12·5–13 mm.

Distribution. From the Gold Coast to the Congo, British and French Cameroons in the lowland country. Specimens have been secured as far south as Landana in Portuguese Congo and as far west as the Volta in the Gold Coast. There are two records from Nigeria, both from near Lagos.

PRINCIPE ISLAND SUNBIRD

Anabathmis hartlaubii (Verreaux)

IN its island home this sunbird will not be confused with any other. Rather a large sunbird, about 5½ in. in total length, it is dark olive in plumage, with the entire throat metallic steel-blue reflecting violet in certain lights. The metallic feathers are likely to appear black unless a close view in sunlight is obtained. The tail is fairly

long and graduated, with white tips to all but the middle feathers, which only become apparent when spread. Should the wings be lifted, the whitish area on the sides of the body may be observed. The bill measures (male) 19–20 mm., wing 61–65 mm., tail 51–55 mm. Only males are available for measurement.

This bird is said to be tolerably common in its island home except in the dense woods, males being much more in evidence than females. It is to be seen especially on the plains among the bushes and banana groves. The male has a pretty little song which has been likened to the notes of a British hedge-sparrow.

Hartlaub's Sunbird suspends its oval-shaped nest from twigs. It is constructed of the hairy appendages on the bark of palm-trees, loosely woven together, the lining being of soft filaments, cotton or other vegetable substance. No authentic egg has been described.

Distribution. Confined to Principe Island in the Gulf of Guinea.

SÃO THOMÉ YELLOW-BREASTED SUNBIRD

Anabathmis newtonii (Bocage)

Newton's Sunbird is a small bird about 4 in. from bill tip to the end of the tail. The upper parts are olive, the crown rather bri[illegible]; chin and throat are metallic steel-green with violet reflecti[illegible]e breast sulphur yellow, the belly paler yellow. Wings are dark brown and the tail is black, all but the central feathers with broad white tips. Bill, legs and feet are black. Measurements are: Bill 14–15 mm., wing 52–55 mm., tail 38–41 mm.

The tail-feathers are strongly graduated and when spread show a large amount of white.

Apart from the giant *Dreptes thomensis* this is the only other indigenous sunbird on the island and consequently should easily be recognised. We know very little concerning its habits.

The nest and eggs are described in my larger work.

Distribution. Restricted to the island of São Thomé.

COLLARED SUNBIRD

Anthreptes collaris (Vieillot)

(see Plate 48, facing page 1280)

Two well-defined races of the Collared Sunbird occur in West Africa. That which inhabits Upper Guinea is *A. collaris subcollaris*.

This very small sunbird measures little more than 3½ in. from bill to tail when laid on its back in the flesh. The head and whole upper surface are metallic golden-green with bronze reflections in some

lights; the wings are olive and the breast is bright yellow, with a narrow purple band separating the yellow breast from the green throat. The Yellow-bellied Sunbird (*venustus*) has the upper part of the breast purple and dull black passing into yellow, whereas in the Collared Sunbird (*collaris*) the whole of the breast and belly is yellow. Moreover the Collared Sunbird has a noticeably shorter and heavier bill and no purple on the forehead. These two species, which are far removed from each other in systematic order, are very liable to be confused with each other in the field.

Measurements of *A. c. subcollaris* are: Bill 13–15 mm.; wing 46–53 mm.; tail (male) 30–34 mm., (female) 25–27 mm.

The Collared Sunbird is a common species in all aspects of the forest country—plantations, farms, bush, swamp and virgin forest. More rarely it visits house gardens. It keeps much to the lower levels among the shrubs and creepers and is less addicted to visiting the high flowering trees in the forest. It may often be seen visiting mango trees but is not found in open country. Frequently it will take part with other species in a forest drive for insects.

Its little song is weak but is one of the common bird songs to be heard during the heat of the day when most other birds are silent. It has been remarked by naturalists that the Collared Sunbird has a much pleasanter disposition than most of its family; it seems to lack entirely the pugnacious trait so common among sunbirds and has a peculiarly confiding manner, resulting in many being captured by native boys. It lives almost entirely upon insects, its comparatively short bill being ill adapted to probing for nectar.

The Upper Guinea race has been found breeding in Nigeria in July. A hanging nest found at Kafanchan with two fresh eggs was attached to a pendant twig of a forest tree a few inches from an inhabited wasps' nest. It was made of small blades of grass and fibres, externally decorated with lichen and lined with plant down. Eggs may be pale blue with specks and fine lines forming a wreath round the broad end, or the ground may be white or pale green, spotted and blotched. A great variety of colour and markings is exhibited in a series.

Distribution and Races

Anthreptes collaris subcollaris (Hartlaub) ranges from Portuguese Guinea to Nigeria throughout the forested area of those and intermediate countries.

In Lower Guinea its place is taken by *Anthreptes collaris hypodilus* (Jardine). This is a very "good" race, distinguished by having the metallic parts less brilliantly green and in lacking the bright yellow breast of *subcollaris*, which is olive-yellow. Its range extends from the Cameroons to northern Angola, ranging then to the Upper Congo. It is also found on Fernando Po. Southern Nigerian

examples from east of the mouths of the Niger show some tendency to intergrade with the Lower Guinea race.

Anthreptes collaris is widely spread in Africa where second-growth forest occurs.

The Uganda race is *A. c. ugandae*, ranging to Central Kenya, the coastal districts of Kenya being inhabited by *A. c. elachior*, while other local races are recognised by those who accept very fine distinctions.

YELLOW-CHINNED AND GREY-CHINNED SUNBIRDS

Anthreptes rectirostris (Shaw)

(see Plate 48, facing page 1280 (both races))

THESE two sunbirds were formerly considered distinct species, but one obviously replaces the other in distribution. From French Guinea to Dahomey the typical yellow-chinned bird holds sway.

This little bird measures in the flesh just over 4 in. from bill to tail, with a wing expanse of 6¼ in. The metallic green head and upper parts are like many others of its family, but the yellow throat and metallic green band with splash of orange below is more distinctive. Its black bill is shorter, straighter and decidedly thicker than in all Nectariniidae other than those in the genus *Anthreptes*. It is so different from a sunbird's normal bill that the little bird may easily be mistaken for a warbler; indeed, the dull-coloured all-green female is really impossible to identify in the field unless seen with her consort. In behaviour, too, the Yellow-chinned Sunbird is more like a warbler than a sunbird as it busily inspects every leaf and twig for insects, uttering rather faint little sibilant cries as it does so. It inhabits secondary forest and may very easily be mistaken for the Collared Sunbird (*A. c. subcollaris*) in its habits and when in immature dress. When adult the yellow non-metallic throat of *A. r. rectirostris* is the best distinction.

Measurements of *A. r. rectirostris* are: Bill 11·5–13 mm., wing 55–59 mm., tail 28–32 mm.

From Ibadan in south-western Nigeria, eastwards, we find the grey-chinned race *A. r. tephrolaema*; details of their distribution will be given hereafter.

As already remarked of the yellow-chinned race, this sunbird has more resemblance to a warbler in its manner of feeding than to the family of sunbirds, flitting about in the branches of trees and searching the leaves for insects and larvae. It goes about in little parties of three to six and spends much time in the bushes and trees of open cleared land, avoiding the forest except for the clearings and preferring the second-growth thickets. Its food seems to be more varied

than is usual for sunbirds, and it often eats small fruits as well as insects and termites, spiders and moth larvae.

It builds a globular nest of many small bits of stems held together by spiders' webs and lined with soft white vegetable down. The nest is suspended from overhanging boughs, often over water. The two eggs are described as ashy-grey washed with violet and with dark lines and spots.

Distribution and Races

Anthreptes rectirostris rectirostris (Shaw) ranges from Sierra Leone to Dahomey, meeting the range of *A. rectirostris tephrolaema* in the vicinity of Ibadan, examples from which area have grey throats, whereas those from the Lagos area are believed to have yellow throats and so belong to the typical race.

A. r. tephrolaema (Jardine) has the throat smoke-grey instead of lemon-yellow and the belly more ashy-olive than yellow. The wing measures 54–62 mm. It is common in the Niger delta area and ranges west to Ibadan and south to northern Angola. Thence we find it ranging across the continent to Uganda, and it is found in Fernando Po, where it was first discovered.

In Kenya a race, *A. r. elgonensis*, with darker grey throat and slightly larger in size has been described from the Elgon district, while *A. r. rubritorques* is confined to the mountain forests of Usambara in northern Tanganyika.

VIOLET-BACKED SUNBIRD

Anthreptes longuemarei (Lesson)

(see Plate 48, facing page 1280)

Two races come within our limits.

The male of this sunbird is very distinctive with its metallic violet upper parts and throat, and the white under parts with a splash of yellow on each side of the breast. The wings and tail are dark brown, the latter strongly washed with violet. This sunbird has an almost straight, rather heavy bill. The female is unlike the male and is mouse-brown above, but may be recognised by the metallic violet upper tail-coverts. Moreover it has a distinctive white eyebrow, white throat and breast and sulphur-coloured abdomen. The violet back of the male and violet at the base of the tail in the female should enable either sex to be recognised, as this colouring is unique in West African sunbirds.

Measurements are: Bill (male) 15–17 mm., (female) 14–15 mm.; wing (male) 72–76 mm., (female) 65–68 mm.; tail (male) 46–50 mm., (female) 40–44 mm.

There is a very small but constant distinction between the two

races of this bird, to be noted later, but the distribution is unusual in that the typical race does not extend east of Sierra Leone, if indeed it ranges so far south, another race occurring from Liberia eastwards.

The majority of field notes which have reached me relate to the southern representative which is generally known as the Hausa Violet-backed Sunbird, though it inhabits a much wider area than Hausaland. The species as a whole ranges extensively in the savanna country of Africa and has been divided into at least five recognisable races.

In our two largest colonies in West Africa *A. l. haussarum* is confined to the hinterland, and despite its bright colouring we have learned very little concerning it. It seems everywhere to be a scarce and local bird. In the Niger and Benue Provinces of Nigeria, south of lat. 9° 30′ N. it may be met with in the kurimis and fringing forest and occasionally in the surrounding bush, generally in restless little parties of three to five birds. In Gambia, and again in Kenya, this sunbird is to be seen frequenting table-topped acacias, often in the vicinity of water. It works its way through the foliage much as do the Eremómelas, carefully exploring the boughs and assuming all manner of postures. The flight is airy and floating on quickly beaten wings.

The nest and eggs have not been discovered.

Distribution and Races

A. longuemarei longuemarei (Lesson) occurs in Senegal, Gambia and Portuguese Guinea, probably ranging to French Guinea and Sierra Leone, though no specimen has been seen from the Protectorate. From Liberia eastwards its place is taken by *A. longuemarei haussarum* Neumann, the male of which has the tips of the lesser wing-coverts at the bend of the wing metallic green, not metallic violet as in the typical subspecies. It ranges from the country mentioned, through the Ivory and Gold Coasts, Dahomey and Nigeria to northern Cameroon in the hinterland north of the forest. Eastward its range extends across Africa to the Bahr el Ghazal and Uganda south of the Lado District.

In the Nile valley we find *A. l. orientalis*, which inhabits most of Kenya and northern Uganda. Another race, *A. l. angolensis*, is found in Angola, and there are others still in East Africa which need not be specified.

VIOLET-TAILED SUNBIRD

Anthreptes aurantium Verreaux

(see Plate 48, facing page 1280)

This brilliantly coloured sunbird with dark violet tail and upper tail-coverts has the whole upper parts and throat metallic blue or green, and whitish-buff under parts relieved by orange-coloured patches on each side of the breast. The female is like the male on the upper side but has no metallic-green throat, which is whitish, and the belly is pale yellow. In total length this sunbird measures about 5 in. from bill to tail. Its bill is fairly long and very slightly decurved.

It may happen that the range of this species overlaps slightly with that of *Anthreptes longuemarei haussarum*, which at a glance somewhat resembles it, but the latter has an entire violet-coloured head and back, which is metallic green and blue in *Anthreptes aurantium*. Another distinction in the males is to be found in the colour of the pectoral tufts, which in *A. l. haussarum* are bright pure yellow but in *A. aurantium* are reddish orange. The Violet-backed Sunbird has a much more extended range than the Violet-tailed Sunbird, and it is unlikely that they will occur together, as they prefer different country. *A. aurantium* is especially fond of forest rivers, it appears.

Measurements of six specimens in the British Museum are as follows: Bill 15–17 mm.; wing (male) 63–68·5 mm., (female) 61–61·5 mm.; tail (male) 41–46 mm., (female) 38–40 mm.

The Violet-tailed Sunbird is one of the rarest members of the family to which it belongs, and consequently we know very little about it. Its range is the main forest, and it is not known to occur west of the Province of Ondo in southern Nigeria. As forest does not occur much above 3,000 ft. on Cameroon Mountain, it must be sought below that altitude in that area; but it is not entirely restricted to this type of country, for in Ubangi-Shari specimens have been obtained outside the closed forest area in savanna country. Usually it is met with in the vicinity of forest or savanna streams. Its food consists of small caterpillars and insects.

The only note relating to its breeding refers to a nest found towards the end of March in British Cameroon, which was suspended from a twig about 5 ft. above the surface of a channel through a mangrove swamp. It was oval in shape with a side entrance and contained two eggs.

Distribution. Extends from southern Nigeria (Ondo Province) to the Cameroon Mountain area, the southern Cameroon forests, Gaboon and the Lower Congo, ranging eastwards to the Aruwimi River, the Uelle River and the Ituri forest.

SCARLET-TUFTED SUNBIRD

Anthreptes fraseri Jardine

(see Plate 48, facing page 1280)

THREE races come within our limits.

This is rather a large sunbird, quite 5½ in. in total length. The bill is straighter than in most members of this genus and barely decurved except at the tip. Its pale, rather long, horn bill and the olive-green plumage should enable it to be recognised, particularly as the orange-red pectoral tufts on each side of the breast are strikingly bright against the olive under parts and stand out prominently in the male. The female lacks these bright orange-red adornments. Measurements of the typical race are: Bill 16–18 mm.; wing (male) 72–80 mm., (female) 63–70 mm.; tail (male) 47–55 mm., (female) 42–44 mm.

This sunbird is an inhabitant of the forest, spending much of its time in the tree-tops, and in the Cameroon forests is a frequent member of the bird associations which rove through the jungle. It is believed to be entirely insectivorous and has not been observed to visit flowers. When not in a bird party it is usually to be found in flocks of its own species, not associating with other sunbirds. It is usually noted at a great or moderate height in unspoilt or partly cut-out primary forest.

Its nest and eggs have not been found.

Distribution and Races

Anthreptes fraseri fraseri Jardine, of which a description is given above, is restricted to the island of Fernando Po.

Anthreptes fraseri cameroonensis Bannerman has the under parts duller, more olive and less yellow, and is smaller in size, with wing (male) 64–73 mm., (female) 59–62 mm. It ranges from British Cameroons (Kumba, Ekona and Massaka) to southern Cameroon and Gaboon.

Anthreptes fraseri idia Oberholser is a very small bird measuring 4·3 in. in length as against 5·9 in. in the typical race. It is also noticeably darker. The wing measures 57–58 mm. It ranges from Sierra Leone to the Gold Coast. No specimen of *A. fraseri* has yet been recorded from Nigeria.

LITTLE GREEN SUNBIRD

Anthreptes seimundi Ogilvie-Grant

THERE are three races of this sunbird in West Africa. The typical subspecies is restricted to Fernando Po, the continental races *A. s. minor* from Nigeria southwards, and *A. s. kruensis* from the Gold Coast westwards.

This minute all-green sunbird measures little over 3½ in. in total length and is one of the smallest sunbirds known. Though in Upper Guinea *Cinnyris batesi*, with which it could so easily be confused, does not occur, there are other female sunbirds which it closely resembles, and there can be no sure way of identifying them in the field from one another. It resembles very closely females and young of *Cinnyris chloropygius kempi*, but the finer, all-black bill of the latter species (accompanied as they may be by the bright metallic-plumaged males), added to their having a dark blue (not olive-green) tail, should save confusion between them. The first point, then, to observe is the short, thicker bill (about 15 mm. measured from the gape) of the Little Green Sunbird, with its light-coloured under mandible, and secondly its olive-green tail, but it is such a minute, dull-coloured little bird that identification in the field is bound to be a matter of the greatest difficulty, and for the same reason many must escape observation altogether in the dense thickets which they love to frequent.

The Lower Guinea race, *A. s. minor*, may easily be confused with *Cinnyris batesi* where their ranges overlap. The latter species is darker throughout than *A. s. minor* and has greyish-olive (not yellowish) under parts. In *C. batesi* the tail is brown and in *C. seimundi* it is green. On Fernando Po, where Seimund's Sunbird is found, it is less liable to confusion with other species than are its races on the mainland.

The Little Green Sunbird is an inhabitant of dense second growth in old clearings in forest country. It loves to visit the tall flowering forest trees, and most of those which have reached European museums were secured when so doing. Usually it is passed over, even by good naturalists, and is so easily mistaken for *Cinnyris chloropygius* that specimens have been incorporated with that species even in the British Museum ! The short bill (almost 15 mm. from the gape) of the Little Green Sunbird, the light-coloured under mandible and the olive-green tail are points upon which to concentrate when in the hand, but it can be realised how difficult it is to recognise in the field from some other sunbirds.

A specimen of *A. s. kruensis* shot in February was in breeding condition, and nests of *A. s. minor* have been taken with eggs in December, April and May.

The nest is very small but is a hanging pocket like other sunbirds' nests, and though lined with thistledown it lacks the loose end and streamers which occur so often in nests of other sunbirds. Eggs are cream-colour closely freckled with brown and measure 14·5–15 × 11–11·5 mm.

Distribution and Races

Anthreptes seimundi seimundi (Ogilvie-Grant) has the entire upper

parts bright olive-green, the tail dark brown washed olive on outer webs, throat dull pale olive-yellow, with more pure yellow on the belly. The bill is 13–15 mm., wing (male) 54–57 mm., (female) 49–52 mm. This race is restricted to Fernando Po.

Anthreptes seimundi minor Bates is greener on the breast and less yellow on the under parts and has a noticeable yellow eyebrow. The bill measures 14–15·5 mm., wing (male) 52–57 mm., (female) 51–55 mm. It ranges from eastern Nigeria south to northern Angola, east to the Semliki valley and Uganda.

Anthreptes seimundi kruensis (Bannerman) closely resembles *A. s. minor* but is smaller in size, the under parts are more grey-green and the belly is paler yellow. The bill measures 13–15 mm., wing (male) 49–51 mm., (female) 45 mm. It ranges from Sierra Leone to the Gold Coast.

MOUSE-BROWN SUNBIRD

Anthreptes gabonica (Hartlaub)

(see Plate 48, facing page 1280)

In its general appearance this species looks much more like a warbler than a sunbird, and its colouring is unique, far removed from that of any Nectariniidae in Africa. There is not a metallic feather anywhere; it is mouse-brown above and greyish white below, with the following conspicuous features: (1) a narrow white band across the forehead, (2) a very conspicuous white stripe over the eye, (3) a white mark on the border of the wing below the bend on the level of the bastard wing, and (4) white spots at the tip of the tail-feathers but not on the middle ones, so that the white spots are covered over when the tail is closed and can only be seen when the tail is spread or when observed from below. The Mouse-brown Sunbird has a total length of about 4 in. in the flesh. The bill and legs are both black and the former is (for a sunbird) extremely broad at the base and very little curved.

Measurements are: Bill 12–13 mm.; wing (male) 58–59·5 mm., (female) 54–55 mm.; tail (male) 35–38 mm., (female) 33–34 mm.

From accounts of the status of this sunbird in Sierra Leone it appears that it is quite a common bird, though evidently local in its distribution. The same no doubt applies to it in all the countries which it inhabits, but it seems to be restricted everywhere to the mangrove belt. It is an unobtrusive species, easily overlooked, which may account for its not having been recorded as yet from the mangrove growth between Lagos and Calabar, for it is said to be abundant along the bushy banks of streams in the Cameroons.

It will leave the mangroves occasionally to frequent the compounds in Freetown, and its presence at Krachi denotes that it will follow the great rivers far into the interior. The Mouse-brown Sunbird lives on a variety of small insects and spiders, in search of which it flits about among the shrubs much as a warbler does. Indeed, it has a very much closer resemblance to a warbler than to a sunbird.

It builds its nest in the mangroves fringing the rivers and creeks, suspending it above water not more than 2 ft. above the high water mark. Eggs are described as ashy grey slightly washed with violet and marked irregularly with dark lines and spots.

Distribution. From Gambia (doubtless Senegal also where mangroves occur but not yet recorded north of Gambia) this bird ranges to Portuguese Congo and is locally distributed mainly in the coastal mangrove belt.

GREEN HYLIA

Hylia prasina (Cassin)

Since the sixth volume of my larger work appeared it has been suggested that the Green Hylias from Upper Guinea should be separated from those from Lower Guinea on account of their slightly darker plumage. The name *superciliaris* Hartlaub is available for the former, with type locality Gold Coast.

This little bird has a total length of about 4½ in. and is totally unlike a sunbird in appearance, seeming much more like a warbler. It has a dull plumage, the upper parts being dark olive-green, the under parts greyish. The one distinctive feature is the prominent yellowish-white stripe which extends from the base of the upper mandible over the eye. The bill is short, the upper mandible slightly arched and curling downwards rather sharply at the tip. The bill is blackish in the breeding season and the legs are olive. The wings are brown when expanded but when closed appear olive like the rest of the upper parts. *Hylia* is a bird of the tree-tops or of dense bush, shunning the habitations of man. Its distinctive cry is described as being of two clear, rather piercing notes which betray its presence when the bird remains hidden, but as no two naturalists put the same interpretation on the sound it must be learned by experience.

Measurements of Upper and Lower Guinea specimens which do not vary *inter se* are: Bill 10–11 mm.; wing (male) 64–69 mm., (female) 56–62 mm.; tail (male) 42–47 mm., (female) 37–41 mm.

The adult female, besides being much smaller than the male, tends to have the crown darker and less olive and the upper parts

browner. Adults have the bill black, with the legs and feet olive-green.

Immature birds have a yellow bill and yellow legs and feet, and these colours are retained until after the first moult. The colour changes of the young bird are discussed fully in my larger work. Space does not allow it to be entered into here. It may be mentioned, however, that birds may be found with yellow bill and legs which in other respects have attained adult dress, though often the eye-stripe is bright yellow.

The Green Hylia is a bird of varied environment over a huge range in Africa so long as the country is closely wooded. It is found in primitive forest and in second growth, in dense bush and in large trees. It is not averse to plantations, but it avoids villages and compounds. It is, in fact, extremely common, and its voice, when once learned, will be recognised in many places. In the dense forest growth of Cameroon it is said to avoid the depths. In all forest reserves of our Colonial possessions it is a well-known bird. In British Cameroons it ascends to Kumba and Bamenda. Usually it occurs singly or in pairs and it does not associate with other species unless attached to a bird army, when several may be encountered flitting through the undergrowth of the forest.

The nest has seldom been found, which is curious, as it builds a large globular or oval-shaped structure, domed with a circular side-top opening only 20 mm. across. The bulk of the nest is made of plant down tufts enclosed in a layer of fine fibres and leaf skeletons. It is placed, not suspended, in vertical forks in raphia palms and such-like situations. The egg is white and unmarked and measures about 19 × 14·5 mm.

Distribution and Races

Hylia prasina prasina (Cassin), described from the Moonda River, Gaboon, ranges from British Cameroon over the whole of Lower Guinea south to northern Angola. It is also found in Fernando Po. The species extends across the Congo to Uganda, the Elgon forest and Nandi, but East African birds may be separable on larger size.

In Upper Guinea from Portuguese Guinea to the Gold Coast the slightly darker *H. prasina superciliaris* Hartlaub may be recognised, while examples from southern Nigeria are intermediate.

FAMILY CERTHIIDAE

NILE SPOTTED CREEPER

Salpornis spilonota emini Hartlaub

THE sexes of this bird are alike. In total length it measures 5¾ in. The ground colour of the entire upper parts is black or blackish brown, the feathers of the crown with white shaft-streaks, those of the rest of the upper surface with large round white terminal spots. Wings are dark brown, with white marginal spots. The tail is black, with large white spots and oblong bars. The throat is white; the rest of the under parts are white washed with cinnamon-buff, each feather with a narrow crescentic subterminal black bar or spot, including the under tail-coverts. The under wing-coverts and axillaries are barred black and white. The bill measures 18·5–23 mm., wing 87–95 mm., tail 46–54 mm. and tarsus 15–16 mm.

This is one of the most easily identified birds in Africa, both by reason of its spotted appearance and narrow curved bill, and its characteristic habit of climbing up the stem of a tree to the summit, when it flies to the base of another trunk, creeping up the bark like a little mouse. Its actions are like those of the familiar creeper in Europe (*Certhia*), but in its behaviour it differs in many minor respects and particularly (apparently) in nidification.

Although the Spotted Creeper's range in Africa is almost universal north of the Tropic of Capricorn and south of about lat. 15° N. and extends to India, it is nowhere anything but a rare bird. It is an inhabitant of the orchard bush or grass-woodland belt and not of the forest. Small trees are everywhere preferred to large ones, even in the open savanna, and it has a liking for plantations where the ground has recently been burned. Almost always it is seen alone, searching the tree trunks in the manner of our European tree creepers, beginning near the base and working upwards. It is

entirely insectivorous in its diet, coleoptera, hymenoptera, caterpillars and cicadas forming the bulk of the food supply.

This bird has two calls, one a *keck-keck* repeated five or six times, and a small wisping whistle of *sweepy swip-swip-swip-swip*, quickly uttered. Its flight is undulating. In nine cases out of ten it will be observed creeping up the trunk of rough-barked trees. It is never seen perched and is seldom observed quiescent. In climbing it does not use its tail in the manner of woodpeckers.

It is a very remarkable thing that no one has ever claimed to find the eggs of the Spotted Creeper in Africa. It has been said erroneously to lay its eggs in the holes of trees, but this is evidently a mistake, as the Indian representative, *S. spilonota spilonota*, builds a shallow cup-shaped nest of matted leaf-stalks, bark and lichen, bound with spiders' webs and decorated externally with lichen. The nests are placed in the forks of leafless trees and are practically invisible. A nest of this description was seen in Uganda under construction. Eggs of the Indian representative are described in *The Fauna of India* as having a grey or greenish-white ground with markings of very dark brown and tiny spots and specks sparsely scattered over the shell but sometimes more numerous in an ill-defined cap. Measurements are given as 16·9–17·3 × 13–13·4 mm. Two eggs form the clutch, rarely three.

Distribution and Races

S. spilonota emini Hartlaub was described from Uganda and ranges from the White Nile westwards to Portuguese Guinea. Specimens have been found in Sierra Leone, French Guinea, the Gold Coast, Nigeria, northern Cameroons and the Shari.

South of the equatorial forest its place is taken by *S. spilonota salvadori* (Bocage), which ranges across the continent.

In Abyssinia a short-billed race with strong rufous wash has been named *S. spilonota erlangeri* Neumann.

FAMILY FRINGILLIDAE

Key to the sub-families of the Fringillidae

1. Bill conical, edges of upper and lower mandible not in contact throughout their length but with gap midway *Emberizinae*, p. 1323
   Bill not as described above, but having cutting edges of mandibles fitting close together throughout their length 2
2. Outermost remex minute, entirely hidden under outermost upper major covert .. .. *Fringillinae*, p. 1312
   Outermost remex not so small, with its tip projecting from under outermost upper major covert *Passerinae*, p. 1331

SUB-FAMILY FRINGILLINAE

Key to the Finches, Canaries and Seed-eaters in the sub-family Fringillinae

1. Under parts yellow or greenish yellow 2
   Under parts not yellow or greenish yellow 6
2. Cheeks, chin and ear-coverts black 3
   Cheeks, chin and ear-coverts not black 4
3. Entire head black, no yellow frontal band
   Linurgus olivaceus ♂, p. **1321**
   Head not black, broad yellow frontal band extending over eye .. .. *Serinus capistratus* ♂, p. **1316**
4. Crown of head grey, broad yellow frontal band extending over eye .. .. *Serinus mozambicus* and subsp. ♂, p. **1314**
   Crown of head not grey, no yellow frontal band .. 5
5. Crown and mantle streaked, uniform in colour
   Serinus capistratus ♀, p. **1316**
   Crown and mantle not streaked, crown contrasting with mantle in colour .. .. .. *Linurgus olivaceus* ♀, p. **1321**
6. Plumage uniform pale sand-colour or greyish, unstreaked, with rosy wash in male but rose tint very faint in female .. .. *Bucanetes githaginea zedlitzi*, p. **1312**
   Plumage brown or rufous brown on upper parts, no rose tint present, crown sometimes streaked 7
7. Size large (total length about 7 in., wing 85–92 mm.); general colour dark olive-brown with heavy streaking on flanks; frontal band white *Poliospiza burtoni burtoni*, p. **1319**
   Size smaller (total length under 6 in., wing not exceeding 85 mm.) 8
8. Plumage of upper parts uniform rufous brown or earth-brown with rufous tinge
   Poliospiza r. rufobrunnea and subsp., p. **1321**
   Plumage not as described above 9
9. Rump white .. *Poliospiza leucopygia riggenbachi*, p. **1318**
   No white on rump, crown heavily streaked
   Poliospiza gularis canicapilla and races, p. **1316**

SAHARAN TRUMPETER BULLFINCH

Bucanetes githaginea zedlitzi (Neumann)

This bird is rather squat and bullfinch-like in appearance, with a stumpy orange-brown bill which turns bright coral red in the breeding season. The sandy grey-brown plumage is conspicuously

washed with rosy pink, especially in breeding dress. In the breeding season the coral bill of the male is very noticeable, but at other times it is duller and less conspicuous. The plumage too is amazingly like the ground the birds inhabit, especially when among pinkish-brown stones or soil, and as long as they remain motionless they are very difficult to detect, particularly on rocks. The call-note, from which it has derived its English name, is very distinctive—a faint trumpet-like note, constantly uttered. It is usually met with in little parties in hilly barren country, but water in the vicinity would seem to be more essential to its environment than to many desert birds. When alarmed the flight is swift and finch-like. The stumpy bill measures 9–10 mm., the wing 81–91 mm. and the tail 44–51 mm.

Although typically a desert bird, the Trumpeter Bullfinch has not been seen as yet in that part of the Sahara which comes within the limits of this book except in the mountainous area of Aïr. The account which I have given of its habits and habitat in my larger work has been from observations in the heart of the desert or in the northern Sahara. It subsists mainly on various seeds of grasses and desert plants, and it is, for a desert bird, very fond of water.

It makes its nest in the holes of rocks and crevices or in the walls of some building, laying four to six eggs of a delicate sea-green, sparingly marked with purplish-black or reddish-brown spots and dots.

Distribution. The mountains of Aïr in the southern Sahara appear to be the southernmost place from which it has been reported, but it extends north into the Tunisian and Algerian Sahara and is not uncommon on the desolate hills of Egypt near Cairo and Helwân. I recently met with it in the western Sahara, and as a race *B. g. amantum* occurs commonly in the Canary Islands it must surely range further west than the Ahaggar and occur in Mauretania.

YELLOW-FRONTED CANARY

Serinus mozambicus (P. L. S. Müller)

THERE are four races of this canary in our area alone, all of which show well-marked characters. The bird which is found in all our Colonies from Gambia to Nigeria is *Serinus mozambicus caniceps* (d'Orbigny), and it is that race in particular to which the following description applies.

This bird has bright yellow under parts, olive-green upper parts and grey crown, with the head divided longitudinally by yellow and dark stripes and with dark moustache lines down the sides of the yellow throat, and a frontal band of bright yellow. As the bird flies up from the ground the pale yellow rump is generally noticeable. There is a yellow stripe over the eye, a black one through it, and yellow ear-coverts. The bill measures 8–9 mm., wing 60–70 mm. and tail 37–43 mm.

Everyone in West Africa must be familiar with this widely spread species, as it is also a favourite cage-bird among the Africans. Primarily it is a bird of the parklands, and is to be encountered in the bush, in the fields, in gardens, about villages and in roadside trees. It may be met with singly or in little parties of up to a dozen or more. Its food is mostly obtained on the ground, and it is a most persistent robber of the native millet crop.

The race which occurs in the mountainous country of the Cameroons ascends to nearly 6,000 ft. altitude and is a well-known

species in the high grassy plateaux interspersed with small trees. Not restricted entirely to the savanna country, we find it in the clearings of the lowland forest. As a songster it has earned a high reputation, for it sings persistently and well, both when wild and in captivity.

The breeding season is a long one, varying to some extent with latitude. That of *S. m. caniceps* lasts from June or July to December, in all of which months eggs may be found. The nest is a compact structure in the form of a neat cup of fibrous materials lined with fine grasses, snugly finished interiorly and placed in the fork of a branch, usually far from the main stem. A favourite site is in the bushy crown of pollarded trees. The eggs number two or three and are either pure white or tinged with grey with fine orange-brown spots and lilac shell markings. Measurements are 15–16·6 × 11·8–12·3 mm.

Distribution and Races

S. mozambicus caniceps (d'Orbigny) has already been described. Its main characteristic is its grey crown and nape and olive-green upper parts. It ranges from Senegal to the Genderu Mountains in northern Cameroon, occurring throughout the tree savanna but rarely extending into the thorn scrub.

S. mozambicus punctigula Reichenow differs from the above in having the crown and whole upper parts bright olive-green, the upper parts being darker than in *caniceps* and more distinctly streaked on the mantle. This race extends from the Manenguba Mountains and Bamenda area of British Cameroons to southern Cameroon (River Ja).

S. mozambicus santhomé Bannerman has a grey-brown head with dark shaft-streaks and only a tinge of olive and no contrast between head and mantle. It has not the bright green upper parts of *S. m. punctigula*. This race is restricted to the island of São Thomé.

S. mozambicus barbatus (Heuglin) has the yellow frontal band, eyebrow, etc., and entire under parts of a brighter shade than in the races described and differs from *S. m. caniceps* in having a green instead of a grey crown. This is the Uganda and Upper Nile race, which ranges west to the Ubangi-Shari.

Four other races are recognised. *S. m. mozambicus* occurs on the coast of Kenya to Mozambique, *S. m. pseudobarbatus* in the western highlands of Kenya, *S. m. aurifrons* in Abyssinia and the Sudan, and *S. m. tando* in Angola.

BLACK-FACED CANARY

Serinus capistratus Finsch

THIS little yellow serin is about 4½ in. in total length, yellowish green above, yellow below, the male with a black face which is not present in the female. The band of bright yellow across the forehead of the male next to the narrow black frontal band is a conspicuous feature. In the female the facial area is dull green, the eye streak duller; the chin and breast are greener yellow than in the male and streaked with blackish. The crown lacks the black frontal band and the broad band of yellow which is so conspicuous in the male above its black cheeks. The crown of the female is uniform with the back. Measurements are: Bill 9–10 mm., wing 59–65 mm., tail 39–42 mm.

This is evidently a very scarce little bird, about which practically nothing is known. It does not occur in any of our West African Colonies and barely touches the fringe of our area in Portuguese Congo.

Distribution. From Portuguese Congo and northern Angola, extending across Africa south of the equatorial forest to northern Rhodesia and the Kivu district of Uganda. It is everywhere a very rare bird.

STREAKY-HEADED SEED-EATER

Poliospiza gularis Smith

Two races are found in West Africa and a third from just within our limits. The race which ranges from Senegal to Nigeria is the Senegal Seed-eater, *P. gularis canicapilla* Du Bus.

The general colour of this seed-eater is brown, with white throat and eyebrows contrasting with the dark brown cheeks and a streaky brown and white head. The wings are rather long and pointed, and the tail when closed is slightly forked. As this is such an inconspicuously coloured bird it may be advisable to reproduce the fuller description from my larger work. The sexes are alike. The forehead is speckled brown and white. Crown brownish-black, the feathers with white edges giving a striped appearance. Cheeks, lores and ear-coverts and feathers surrounding the eye dark brown; above the eye a prominent white eye-stripe. Mantle, back, scapulars, wing-coverts, rump and upper tail-coverts greyish earth-brown. Greater coverts with pale margins. Wings and tail dark brown very narrowly edged with white, the secondaries with whitish tips. Chin and throat white; the rest of the under parts pale greyish brown becoming white on the middle of the belly and on the thighs. Under

tail-coverts pure white. Axillaries white mixed with pale brown. Under wing-coverts pale brown, whitish at the base. Eye greyish brown, bill, legs and feet brownish flesh-colour. Bill short and heavy, 9–11 mm., wing 74–81 mm., tail 48–56 mm.

From the localities where this bird has been found in West Africa it seems to be mainly confined to the Northern Territories in bush and savanna and grass-covered prairies which lie north of the remaining forests. It may, of course, occur in clearings, but its preference seems to be small trees in the parklands. It is evidently uncommon in our area, though a species which has a very wide African range, extending as it does to Cape Province.

It has been encountered in little flocks and gains its livelihood on the ground picking up seeds. It is the possessor of a sweet little song. No one appears to have found its nest in West Africa.

In the highlands of western Cameroon it ascends to at least 6,000 ft., and these mountain-frequenting birds have been separated under the name *montanorum* on account of their warmer brown plumage.

Distribution and Races

Poliospiza gularis canicapilla Du Bus, described in detail already, is said to have been found in Senegal, but I doubt the locality. Its range as known today extends from the Gold Coast to northern Nigeria and northern Cameroons (Garua).

In the Bamenda-Kumbo highlands of British Cameroon (4,000–6,000 ft.) its place is taken by *P. gularis montanorum* Bannerman, distinguished by having the entire plumage darker.

Another race, *P. gularis uamensis* Grote, has been described from the Uam River in western Ubangi-Shari on account of its larger size and browner plumage.

The East African representative in north-western Kenya and northern Uganda is *P. gularis striatipectus*, and other races are found both north and south of the Equator which need not be specified.

WHITE-RUMPED SERIN OR GREY CANARY

Poliospiza leucopygia riggenbachi (Neumann)

This is a small canary-like bird, about 4 in. in total length, which will be described in detail. The sexes are alike in plumage. The general colour of the upper parts is ash-grey, with dark brown middles to the feathers, rather browner on the back and greyer on the crown, nape and mantle. Lores and sides of the face are greyish brown. Wings are dark brown with narrow white edges to the primaries, broader on the secondaries, which are fringed and tipped with white, the median and greater coverts also tipped with white.

The rump is white; upper tail-coverts and tail are dark brown with paler margins. Chin and throat are white, and the breast is mottled with light brown, which in some specimens is continued on to the throat. The middle of the breast and whole of the belly and under tail-coverts are white. Axillaries are white tinged with ash-colour; under wing-coverts are white, merging into ash-brown on the border of the wing. The eye is brown; the bill is brown, whitish at base; legs and feet are whitish flesh-colour. The bill measures 7–8 mm., wing 62–70 mm. and tail 37–45 mm.

The dry plains and bush of the Northern Territories and the open woodlands which lie south of the semi-arid belt are the home of this canary, whose ranges stretch across Africa south of the desert and north of the equatorial forest from east to west. Along th

borders of the Sahara we find it ranging into the dry country, but it does not extend far into the true desert. Its usual haunts are the bushes surrounding towns where millet is grown and threshed. In the extreme north of Nigeria it seems to be generally distributed, and the birds have followed the valleys which lead from Kano to Asben.

Its song is not so much esteemed as that of the Yellow Canary, but for all that it is a sweet songster and sings fairly constantly.

It breeds in the latitude of Kano in July and August, making a cup-shaped nest of dry leaf-spines and fibres, lining it with down. The nest is often slung between two twigs and placed near the extremity of a branch. The clutch numbers three or four eggs, which have a white ground faintly tinged with blue and are sparingly spotted with various shades of brown. The eggs measure 14·9–16 × 11·5–12 mm.

Distribution and Races

P. leucopygia riggenbachi (Neumann) extends from Senegal to northern Adamawa through the Northern Territories of all our colonies (except Sierra Leone), through the French Sudan and Niger Territory east through Chad Territory and the northern Shari to Darfur and North Nuba.

The typical race, *P. leucopygia leucopygia* (Sund.), takes its place in the valleys of the Blue and White Nile from about Khartoum to Lake Albert.

GROSBEAK SEED-EATER

Poliospiza burtoni burtoni (Gray)

BURTON'S Grosbeak, named in honour of the great pro-consul Sir Richard Burton, has a superficial resemblance to a very large Corn Bunting. It is, in fact, almost a third as large again as that familiar British bird, and has various features which should easily proclaim its identity. First and foremost is the very heavy short and arched beak, the lower mandible of which is white. The general colour of the plumage is brown, with a white band across the forehead and two very noticeable parallel wing-bars, caused by the white tips to the median and the greater coverts. Should the under surface be seen it will be noted that the belly is cream-coloured, more or less heavily streaked with dark brown. The bill measures 15·5–17 mm., the wing 85–97 mm. and the tail 62–74 mm. A dark brown eye and brown legs complete the colour scheme. Essentially a bird of high wind-swept altitudes, it has a very restricted range.

In eastern Africa all the high mountains—Elgon, Ruwenzori, the Aberdares, Kivu, Kilimanjaro—can claim to possess races of this

bird, then for thousands of miles its range is interrupted by the great equatorial forest until it turns up again on Cameroon Mountain. Its zonal range is above 5,500 ft. to something approaching 9,000 ft., and there it lives amidst desolate, wind- and cloud-swept surroundings. In places where the forest is broken by patches of grassland scattered with flowering shrubs and bushes around 7,000 ft. it is sure to be found.

Its song may attract the attention of the traveller in these desolate surroundings—a tinkling little chain of notes, uttered rather softly. Higher up the mountain, where all other bird life has died out, it may be encountered again where the cold wind blows unceasingly and only a few tufts of grass, ferns and heath can live in the more sheltered places among streams of lava and volcanic ash.

In East Africa this bird seems to be restricted to the forests at high elevations and it may be so on Cameroon Mountain also, the birds moving from the forest to feed in the open. Such is the chosen habitat of Burton's Grosbeak, whose habits defy study for any length of time and whose nest and eggs have never been discovered on Cameroon Mountain.

Distribution and Races. *P. b. burtoni* Gray is restricted to Cameroon Mountain (5,500–9,000 ft.). Races have been described from the

central highlands of Kenya Colony (*P. b. albifrons*), Mount Elgon (*P. b. gurneti*), Mount Kilimanjaro (*P. b. kilimensis*), and Mount Ruwenzori (*P. b. tanganjicae*). In no single instance has the bird been found breeding.

PRINCIPE AND SÃO THOMÉ SEED-EATERS

Poliospiza rufobrunnea (Gray)

EACH of the above-mentioned islands in the Gulf of Guinea is the possessor of an indigenous seed-eater of this species. The typical race inhabits Principe.

It is about the size of a European greenfinch, with rather long wings which when closed reach more than half the length of the tail, the latter being distinctly short. The bill is powerful, with the upper mandible slightly arched and swollen, tapering to a fine point with which the bird evidently extracts and cracks hard seeds. Its general body colour is rufous brown with dark mottling on the upper parts and a conspicuous pale patch on the throat. Wings and tail are dark brown. The bill measures 12–13 mm., wings 77–82 mm., tail 42–48 mm., tarsus 18–19 mm.

We know very little about either of these island races, which are said to be found in bush-covered uncultivated places and are apparently restricted to the higher levels of the islands though not to the peaks. The nesting habits are unknown.

Distribution and Races

P. rufobrunnea rufobrunnea (Gray), whose general colouring is rufous brown, is restricted to Principe.

P. rufobrunnea thomensis (Bocage) has the plumage dark earth-brown, lacking the rufous tinge. The bill measures 12–13 mm., wing 78–85 mm., tail 48–53 mm. and tarsus 20–22 mm. This race is confined to the island of São Thomé.

ORIOLE-FINCH

Linurgus olivaceus olivaceus (Fraser)

THE male Oriole-Finch is distinctively coloured, bright yellowish green on the upper parts, buttercup-yellow below and an entirely black head and throat. The wings are black fringed with yellow, the tail is green and yellow like the back. The bill is rather heavy, yellow in colour, and very noticeable against the black of the head. In the sunshine it appears to be orange; legs and feet are also yellow. It is a shy bird and very restless, its plumage blending with the

foliage. Care must be taken not to confuse it with the Brown-capped Weaver (*Phormoplectes insignis insignis*), especially the female, which has a black head and yellow collar, but the Brown-capped Weaver has a black bill (not yellow) and a black tail and a great deal more black on the wings, which are jet-black without any yellow or green fringes. The female Oriole-Finch is very like a

British Greenfinch, with olive-green plumage and rather a dusky head. Measurements are: Bill 13–14 mm.; wing (male) 72–81 mm., (female) 70–76 mm.; tail 48–53 mm.

This is a very interesting, brightly coloured finch and is only to be encountered by those who visit the high mountainous area of Fernando Po and the Cameroons. Even in the latter extensive area its habitat is a restricted one. It is an inhabitant of the tree and grass country and may be observed at the edge of forest and in the tops of high trees. Above the forest level the birds ascend to 9,000 ft. or more, their vertical range extending on Cameroon Mountain from about 5,000 ft. to the highest line of stunted trees and bamboos. On rare occasions an individual bird may be seen as low as Buea (3,500 ft.), but that is evidently an exceptionally low altitude at which to find it.

The site of abandoned farms attracts it where there is an impenetrable tangle of small trees, bushes, grass and thorns. A more attractive sight of it may be gained as a little party flits unobtrusively through a tangle of bushes and bamboo, where its plumage shows to advantage among smooth shining leaves.

The Oriole-Finch is not an easy bird to observe, being very shy and restless. The call-note is a rather wheezy *tzit, tzit*, but the male has a song, a sort of churring noise ending in a more melodious whistle.

The nesting season extends from November till January. Nests have invariably been found in the same species of bush which grows in the narrow tongues of grass which penetrate the forest above Bamenda. Placed 3–4 ft. from the ground, the nest is a shallow structure of moss and lichen with a few flexible roots, lined with grey lichen and the white down of some flower like a coltsfoot. Eggs number two or three and are white very sparsely speckled with reddish brown, chiefly at the larger end. In size they are likened to the eggs of the British Chaffinch, but measurements are not available. The female incubates and the male remains in the vicinity of the nest.

Distribution and Races. Discovered first on Fernando Po, the Oriole-Finch was later found to inhabit not only Cameroon Mountain from 3,500 to 9,000 ft. but also other localities in the British Cameroon montane district, including Manenguba, the mountains above Bamenda, Oku and the Banso Mountains.

Races known from the mountains of East Africa are *L. olivaceus elgonensis* from Mount Elgon and northern Kavirondo; *L. o. keniensis* from Meru and the northern slopes of Mount Kenya; *L. o. kilimensis* from Kilimanjaro, and possibly an undescribed race from West Kivu. The Kilimanjaro bird has the back and tail a rich dark green. It is worthy of note that the race on Mount Elgon ascends to the bamboo zone at 20,000 ft.

SUB-FAMILY EMBERIZINAE

Key to the Buntings

1. Breast and/or belly yellow 2
   Breast and belly cinnamon-chestnut or sandy rufous .. 4

2. Flanks and belly white
   Emberiza flaviventris flavigaster ♂ ♀, p. 1325
   Flanks and belly yellow 3

3. Mantle and back dark grey-brown, no white or pale stripe down middle of crown *Emberiza cabanisi* ♂ ♀, p. 1324
Mantle and back chestnut, broad white or pale stripe down middle of crown
Emberiza forbesi nigeriae and subsp., p. 1327

4. Chin and throat black or dusky
Fringillaria tahapisi tahapisi ♂ ♀, p. 1329
Chin and throat not black or dusky 5

5. Primaries bright chestnut except terminally
Fringillaria tahapisi goslingi, p. 1328
Primaries blackish bordered with pale chestnut
Fringillaria striolata sahari, p. 1330

CABANIS'S BUNTING

Emberiza cabanisi (Reichenow)

This is a striking bird with its golden-yellow under parts and white throat, dark mottled grey and black upper parts and the conspicuous white markings on the head and wings (white eyebrow and white tips to the median and greater coverts), which latter form two distinct parallel wing-bars. The tail is long and when spread is seen to have a great amount of white in it. Seen from below the white pattern gives the tail the appearance of being forked. The female, though lacking the strong contrasts of the male, as for instance the buff instead of pure white eye-stripe, less pure white throat, etc., is nevertheless a conspicuous bird by reason of its bright under parts. The tail of the female is, however, noticeably shorter, though equally strikingly patterned, as may be seen in flight. Measurements are: Bill 11–13 mm., wing (male) 77–86 mm., (female) 70–81 mm.; tail (male) 65–75 mm., (female) 61–67 mm.; tarsus 19–21 mm.

The habitat of this species in West Africa is evidently a varied one. Widely spread from Sierra Leone to southern Cameroon and across the whole continent, there is certainly a wide variety of country in which it may occur outside the forest which it does not frequent. Usually it is in the hinterland of our colonies that it is found, through the whole savanna area. It has been noted in Sierra Leone in the little trees scattered over the wind-swept hillsides in the mountainous Tembikunda district, again in cultivated land in southern Cameroons, on old farms and clearings in southern Nigeria and in

the British Cameroon highlands at 4,000 ft. The banks of streams in the Gold Coast and the bush country of northern Nigeria interspersed with little trees are among other localities where Cabanis's Bunting is to be met with.

It has quite a sweet song of low and varied notes which can never be mistaken once the singer has been identified. It cannot be said to be really common anywhere.

The breeding season in Nigeria lasts from June to September. One pair built in a bunch of plantains in full view of G. L. Bates's house in southern Cameroon in the days when that eminent ornithologist was "planting" in that country. He found the birds so shy that they were seldom seen, and it was a matter of surprise that they had chosen such an exposed site. In southern Nigeria a nest was found in a yam-vine, also in an open situation. The female did most of the building, but the male occasionally assisted and accompanied the female when collecting material. The nest is shallow and loosely made of dried leaves and small stems, lined with finer fibres. Two eggs are laid, and these are dull white with irregular fine scrawled lines and blotches of pale umber and pale grey, the shell markings mainly indistinct. Eggs measure 21–22 × 15·5 mm.

Distribution. From Sierra Leone and French Guinea through the whole savanna country to southern Cameroon, mainly observed in the Northern Territories and widely though not generally distributed. Eastwards it ranges through Ubangi-Shari and the savannas of the northern Belgian Congo to the Bahr el Ghazal and western Uganda.

YELLOW-BELLIED BUNTING

Emberiza flaviventris flavigastra Cretzschmar

This is another attractive bunting which inhabits the semi-arid country north of the range of the last species discussed. It has been figured in colour on plate 14 of the sixth volume of my larger work. The male of the Yellow-bellied Bunting is a more conspicuous bird than the female with its jet-black crown and cheeks, white ear-coverts and three white stripes, one over each eye and one down the middle of the crown. The chestnut back passes into a grey rump and a conspicuous white patch adorns the shoulders with a second white bar on the wing. The throat and middle of the belly are bright yellow, the breast is more orange-brown and the under tail-coverts are white. When in flight the tail is seen to have a considerable portion white, while the remainder is blackish. The bill measures 11–12 mm.; wing (male) 74–81 mm.; (female) 72–76 mm.; tail 64–73 mm.

The chestnut back and yellow throat of *E. flaviventris flavigastra* distinguish it at a glance from *E. cabanisi* with its mottled, almost sooty back and its white throat, apart from the different pattern of white on the head of each species. There is a much closer resemblance between *E. flaviventris flavigastra* and *E. forbesi nigeriae*, for a comparison of which see under the latter species.

The Yellow-bellied Bunting is an inhabitant of the Combretaceae country which lies just south of the borders of the Sahara. It lives, in fact, in quite a narrow strip which will be defined more exactly hereafter. In West Africa it does not penetrate the desert, though it goes very near to the fringe at Timbuktu and Tawa. Acacia bush and open woodland are said to be the environment it prefers in Darfur far to the east, for it is a bird which has a distribution extending to Abyssinia and Eritrea and is widely spread in the Sudan.

It breeds in this belt in June and July, building a nest which is not at all like the usual nest of the buntings we have in England. It is a small, very neat, semi-transparent, rather deep cup of fine grass lined with hair, placed, with no attempt at concealment, in rather bare acacias 4–7 ft. from the ground. Nests have also been found in Sokoto in small shrubs. Eggs are two in number and are palest green, with wreath-like markings of dark brown and black scrawls and lines at the large end and lilac-grey undermarkings. Eggs measure 18·2–19 × 12·9–13·6 mm.

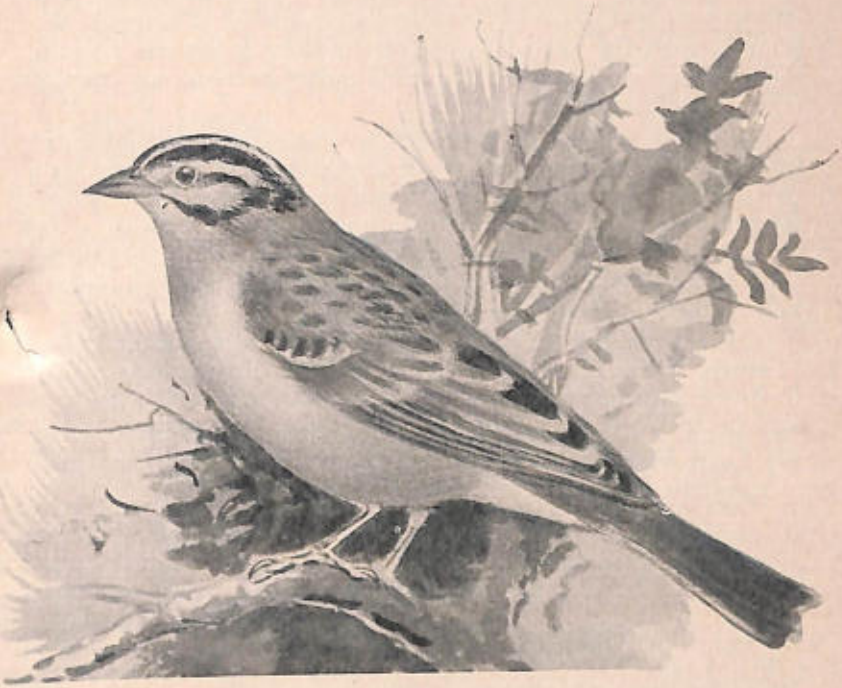
Distribution and Race. The semi-arid bush sparsely covered with shrubs which lies short of the desert border along the southern fringe of the Sahara—such has been described as its range in West Africa. Lat. 12° N. seems to be the extent of its southern limits. The French Sudan from somewhere around Mopti, eastwards through the Upper Volta and French Niger to Lake Chad and the northern districts of the northern provinces of Nigeria. Thence we find it ranging to Darfur, Kordofan, northern Nuba, the Blue Nile, Abyssinia and Eritrea.

South of that area another (the typical) race, *E. flaviventris flaviventris* Stephens, takes its place from the uplands of Uganda east to the Nairobi district of Kenya, whence it ranges south to Cape Province. It is this race which we find also in Angola. The environment in which this southern representative lives is in striking contrast to that of the bird which lives further north.

NIGERIAN LITTLE BUNTING

Emberiza forbesi nigeriae Bannerman

THE Nigerian Little Bunting has a very close resemblance to the Yellow-bellied Bunting (*Emberiza flaviventris flavigastra*). Both have black heads, very similarly striped with white, both have chestnut upper parts and a considerable amount of yellow on the under parts, both have white in the tail and white under tail-coverts.



E. forbesi nigeriae is a distinctly smaller bird with correspondingly shorter tail, *E. fl. flavigastra* being about the size of our British Yellow Bunting with a noticeably long tail. The best distinction, and one which should at once proclaim their identity, is the large white patch on the wing-coverts of *E. flaviventris flavigastra*, which is entirely absent in *E. forbesi nigeriae*. A lesser distinction is the blacker face of *E. fl. flavigastra*, the black band below the ear-coverts and bordering the throat being very broad in *E. fl. flavigastra* and only a stripe in *E. forbesi nigeriae*. Both species are found in the French Sudan.

The measurements of *E. f. nigeriae* are: Bill 6–7 mm.; wing (male)

69–74 mm., (female) 67–68 mm.; tail (male) 57–62 mm., (female) 53–55 mm.

The Little Bunting named above is that which occurs in Upper Guinea in the area specified hereafter. It seems, like the Yellow-bellied Bunting which it so closely resembles in coloration but not in size, to be found commonly in the semi-arid belt between Bamako and Maidugari, other races occurring on the high plateaux of Cameroon and in the western Ubangi-Shari.

It is a bird which has been generally overlooked or confused with the larger species, and we know very little about its habits. It is said to have a vigorous and well-modulated song. It breeds in the summer time, the males singing from perches in the innumerable little trees which clothe the semi-arid country specified. Its nest and eggs remain undiscovered.

Distribution. Emberiza forbesi nigeriae Bannerman was described from 15 miles north-east of Yola in the Province of Adamawa, and its range is believed to stretch through the semi-arid belt to reach the sea in Gambia and perhaps Senegal. Lat. 12° N. seems to be the limit of its range towards the south. It has been found in the Gold Coast hinterland and in the French Sudan, northern Nigeria and northern French Cameroon (Marua).

In the high plateaux of the Cameroons (Ngaundere, Tibati, Fumban, Ribao (2,500–3,500 ft.)) a number of dark examples of *E. forbesi* have been collected which I hesitated to ally with *E. f. nigeriae*. There is yet another area in western Ubangi-Shari where the Little Bunting occurs in the Uam district, and these have received the name *E. forbesi vulpecula* Grote.

ROCK-BUNTING

Fringillaria tahapisi goslingi Alexander

Although the typical (South and East African) race of the Rock-Bunting also comes within our limits in Gaboon, it is Gosling's Rock-Bunting which occurs in Upper Guinea and which chiefly concerns us here.

This is a slender brown bird of linnet size with head striped black and white and cinnamon-chestnut under parts. The crown is dark, with a white stripe over the eye, a dark one through it and white again below; the throat is dark grey with white lines down it; the back is rufous brown striped with black; the wings are chestnut when expanded and streaked; the under parts are more reddish in some birds and more sandy in others, according to the amount of wear of the plumage. Lynes has remarked how curiously alike in

flight are *Fringillaria t. goslingi* and *F. striolata saharae*, by reason of their chestnut wings. There is no white in the tail of this bird.

The wing of *F. t. goslingi* measures 70–79 mm. and the tail 52–63 mm.

This is a typical rock-bunting, its natural habitat having a combination of rock, bush and moist-growing grasses. It is fond of water, and though a bird which spends much of the year among arid surroundings, assembles in large numbers to drink at wells and open water spots when these are available. Stony boulder-strewn hills and laterite outcrops are the haunts of this bunting, which wanders on to roads and to rest-house compounds and occasionally on to fields. It is a bird of the northern provinces which requires a specialised habitat, and this is absent from vast areas where it might otherwise be expected to occur.

It breeds in semi-arid country and early in March appears to undertake a southward dry season migration, for at that time of year old and young together have been met with in strange country, as on the Bintumane Peak (4,000 ft.) in north-eastern Sierra Leone, on bare rocky ground in the Bamenda district of British Cameroon and, even more remarkable, at Port Harcourt in southern Nigeria—a curious locality in which to find a bunting which we associate more readily with the hills of Sokoto and the rocky palisades near Mopti in the French Sudan.

In northern Nigeria Gosling's Bunting breeds in December and January, making a circular shallow cup of rootlets and grass heads, which it places on a granite slope or among a pile of stones, more rarely in featureless orchard bush. Two eggs complete the clutch, and these are pale grey-green, spotted, speckled and blotched with chocolate-brown and greyish-purple shell marks. Egg measurements are 17·4–23·2 × 12·8–13·4 mm.

Distribution and Races

F. tahapisi goslingi Alexander inhabits the semi-arid belt of Upper Guinea south of lat. 15° N., occasionally to lat. 17° N., but is locally distributed and subject to periodic migration. It ranges from the French Sudan through the Northern Territories of our colonies in West Africa through Damergu and French Niger territory to Darfur and the Bahr el Ghazal. Its distribution is given in detail in my larger work.

Its place is taken in Gaboon and Angola by the Cinnamon-breasted Rock-Bunting (*F. tahapisi tahapisi* (Smith)), which race extends to Uganda and Kenya and ranges over much of South Africa. The male of this race may be distinguished by its black chin and throat and the darker cinnamon-chestnut of both upper and under side. The females of the two races are barely distinguishable, both being greyish on the throat. The wing measures 74–84 mm.

SAHARAN HOUSE-BUNTING

Fringillaria striolata sahari (Levaillant)

In the adult male the forehead, crown and nape are ash-grey, faintly tinged with brown with narrow black shaft-streaks to all the feathers. A white superciliary stripe passes towards the nape from above the eye. Ear-coverts are dusky with white shaft-lines. The mantle, back, rump and scapulars are sandy rufous; wings and tail are brown, margined with pale rufous. Wing-coverts are sandy rufous. The chin is whitish; the throat, sides of neck and crop are hoary-grey with blackish centres to the feathers, the markings being heaviest on the chest. The rest of the under parts, including the under tail-coverts, are uniform sandy rufous, of a paler shade than the back. Under wing-coverts and axillaries are like the breast. The eye is brownish black; bill, upper mandible blackish, lower mandible pale brown; legs and feet are light brown.

The adult female differs from the male only on the head and breast, the crown being pale sandy rufous with black shaft-streaks, the cheeks and ear-coverts rather browner. Chin, crop and throat are isabelline-brown with grey bases to the feathers, and some dark streaking is present in some individuals on the crop. The head of the female is certainly not grey in any sense.

The bill measures 10–11 mm., wing 70–80 mm., tail 54–64 mm.

All travellers in the oases of northern Africa must be familiar with this attractive bunting, so remarkably confiding in its ways and generally beloved of human beings. It may usually be seen sitting on the mud walls of the town or on houses, uttering its charming little song. Its common name of house-bunting suits it admirably. Its tameness is proverbial.

Though so familiar an object near man's dwellings, it will turn up far from civilisation in open desolate country, and sometimes occurs at considerable altitudes, as in the Ahaggar mountains. Its discovery at Timbuktu within our limits was a surprise, for it had only once been reported from so far west—a pair in a compound at Albreda, Gambia. In the granite rocks north of Nigeria near Zinder, and again in the hills north of Agadés, it is plentiful and was found nesting in September.

The nest, which is placed in the crevice of a wall or hole in some building, is made of grasses and the stems of plants placed on an outer framework of twigs and lined with fine plant material. Four eggs are laid, of a dirty whitish colour, spotted all over with rufous brown and some mauve patches. They measure 17·5–18·5 × 14·2–14·5 mm.

Distribution. The whole of the Saharan sub-region from Morocc

to Tripoli, ranging south to the Aïr Massif and Zinder and west to the French Sudan near the borders of the desert; once reported from Gambia. It is an inhabitant of villages and towns in arid country and does not extend much beyond the boundaries of the Sahara, but ranges east to the low plains of Darfur.

A race of this bunting, darker in plumage than the Saharan bird, has been named *F. striolata jebelmarrae* Lynes, and inhabits the Jebel Marra Massif, Darfur (above 7,000 ft.). The typical subspecies inhabits the Red Sea provinces of the Sudan and Arabia, and another race, *F. s. saturatior*, occurs in Abyssinia and Somaliland.

SUB-FAMILY PASSERINAE

Key to the Sparrows

1. Yellow patch either strongly or faintly indicated at base of throat 2
   No yellow patch at base of throat 3
2. Crown and back uniform pale brown, no dark streaks on mantle .. .. *Gymnoris pyrgita pallida* ♂ ♀, p. 1338
   Crown and back not uniform; crown in male grey, contrasting with brown back, crown in female brown like mantle, but latter streaked slightly with black *Gymnoris dentata dentata* and subsp., p. 1340
3. Chin and throat jet-black 4
   Chin and throat not jet-black 6
4. Entire upper parts pale grey and upper tail-coverts white .. .. .. *Passer simplex simplex* ♂, p. 1333
   Upper parts not pale grey, upper tail-coverts not white .. 5
5. Only middle line of throat black; forehead and crown of head black .. .. .. *Passer iagoensis* ♂, p. 1332
   Whole throat and breast black, breast-feathers fringed with white, flanks heavily streaked black; crown of head chestnut .. .. *Passer h. hispaniolensis* ♂, p. 1332
6. Entire under parts yellow .. .. *Auripasser luteus* ♂, p. 1337
   Under parts not yellow 7
7. Crown of head uniform grey, contrasting with mantle; wing-coverts and rump chestnut *Passer griseus griseus* and subsp. ♂ ♀, p. 1335
   Crown of head uniform with mantle, brown or sandy coloured; rump not bright chestnut 8
8. Upper parts uniform pale isabelline-sand colour *Passer simplex simplex* ♀, p. 1333
   Upper parts brown or pale brown 9

9. Mantle heavily streaked with dark brown; under wing-coverts whitish (wing over 70 mm.)
Passer hispaniolensis hispaniolensis ♀, p. 1332
Mantle faintly streaked with brown; under wing-coverts tinged with yellow; size smaller (wing under 70 mm.)
Auripasser luteus ♀, p. 1337

CAPE VERDE ISLANDS SPARROW

Passer iagoensis (Gould)

This is a typical sparrow, but rather a small one in comparison with the Spanish Sparrow. The male is quite brightly coloured, with its black and white cheeks, black crown bordered with cinnamon, and the cinnamon back streaked with black. The white patch on the wing-coverts and the narrow black throat are very conspicuous. The female closely resembles the female of our common English sparrow. The bill measures 12–13 mm.; wing (male) 62–67 mm., (female) 55–61 mm.; tail (male) 48–58 mm., (female) 43–49 mm.

This is a very common bird on most of the Cape Verde Islands, living out of the breeding season in immense flocks but never venturing far from the thick acacia-trees or boulder-strewn ravines, where they take refuge from the Black Kites.

It breeds everywhere—in the acacias, in holes in cliffs and under boulders, making a domed nest with side entrance in trees but an open compact structure when placed in other situations. Eggs are three or four in number, white, with rufous-brown markings.

Distribution. Confined to the Cape Verde Archipelago. I do not consider that it has any representatives on the continent.

SPANISH SPARROW

Passer hispaniolensis hispaniolensis Temminck

The male Spanish Sparrow in breeding dress is an exceedingly handsome creature with chestnut crown, black throat and breast and large white cheek patches. The back of black, brown and buff (or white) appears streaky if the bird is seen from above, but if from below the white belly and sides, the latter handsomely streaked with black, are very noticeable. Its partiality to palm-trees (in the Cape Verde islands to coconuts, in the Canaries to date-palms) is well known, and in the islands of the Cape Verdes it is known to the natives as the coconut bird. Extremely pugnacious and noisy,

especially in the breeding season, its presence cannot long be overlooked wherever it occurs. The female is almost exactly like the female of the common sparrow (*Passer domesticus*).

The bill measures 13–14 mm.; wing (male) 75–79 mm., (female) 72–76 mm.; tail 49–55 mm.

We do not find this sparrow on the mainland of western Africa, but it has been introduced into the Cape Verde archipelago and has successfully colonised five of the islands. It is, of course, the common sparrow of the Canary islands. In Maio it is especially numerous and may eventually oust the endemic *Passer iagoensis*, for it is a larger and probably more pugnacious bird. So numerous is it in some localities that small clumps of acacia bushes are literally crammed with their bulky untidy domed nests.

The Spanish Sparrow is a species which flourishes around man's dwellings, and being a prolific breeder is sure to prosper wherever it gains a footing. In the Canaries this sparrow breeds particularly in the crowns of the palm-trees. It lays three to five eggs with a pale blue ground, the shell heavily marked with spots and blotches of dark brown and underlying lavender-grey. Egg measurements are 19·5–24·5 × 14–16 mm.

Distribution. Within our limits restricted to certain islands of the Cape Verde archipelago: São Nicolão, Boa Vista, São Thiágo, Fogo and Brava, but no census has been made for very many years. Elsewhere the Spanish Sparrow is a Palaearctic species locally distributed from southern Spain to Asia Minor and from Tangier to Cyrenaica south to the Canary Islands and in winter to Egypt, Sinai and Morocco as far south as the Great Atlas. This year (1951) I met with it at Amerzgan in the desert south of the Atlas mountains.

DESERT SPARROW

Passer simplex simplex Lichtenstein

THE male of the Desert or "White" Sparrow, in its silvery-grey plumage with black throat and bill and dark patch at the bend of the wings, should not be easily confused with any desert bird. The white under parts are often stained the sandy colour of the ground, and as long as the birds remain motionless they are very difficult to detect, for black markings on desert birds are seldom conspicuous in the field, merely serving to break up the outline. In flight the male in particular (and to a lesser degree the female) has a pretty wing-pattern, the dark band across the wing-coverts and dark tips to the flight feathers contrasting with the silvery grey of the rest of the wing.

The female Desert Sparrow is remarkably unlike her consort, even on the upper parts, in which the males and females of desert birds usually agree. In the hen Desert Sparrow the whole colouring is isabelline, only the tips of the wings and tail-feathers inclining to dusky. There is no black on the throat as in the male, and even the

bill is a different colour, being white on the lower mandible and brownish on the upper at all seasons, never becoming black as does the male in the breeding season.

The bill measures 9–11 mm.; wing (male) 76–81 mm., (female) 74–77 mm.; tail (male) 54–56 mm., (female) 50–53 mm.

The discovery of the Desert Sparrow within recent years in the western French Sudan has brought this truly Saharan species well within the area dealt with in this handbook. It is a bird which we

associate only with the most inaccessible parts of the desert, finding a livelihood on the small seeds of desert plants varied with an insect diet of beetles and so forth. The localities where it has been found point to its being partial to sandy spots; sand dunes or sandy plains with typical sand-dune vegetation, always provided that there is a suitable nesting site in the vicinity. For that purpose it has catholic tastes, for its nest has been found in the crowns of palm-trees, in the hollow of a tree, in the crevices in the sides of wells, and in the curious stone pyramids erected by man to mark the routes in shifting desert. It will build in stone walls or under the rafters of a *bordj*; more rarely it utilises bushes in which to place its very bulky nest, though all the nests found in the western Sudan near Taberréshat Well had been built in thorny *Acacia tortilis*.

The nest is a mass of dried grass with side entrance and lined with feathers, the downy feathers of the bustard having been largely used in the instance cited. The eggs vary in number considerably: sometimes only one nestling is found, at others two; but the normal set appears to be three to five. The eggs may have a ground colour of white, pale chocolate or cream heavily blotched with dark brown or with spots of brown and underlying paler ones. They measure 19·2–20 × 13·5–14·1 mm.

Distribution. The sandy wastes of southern Algeria, Tunisia and Tripoli and formerly the country known as the Bajuda desert in the great loop of the Nile from Dongola southwards, but now apparently extinct in that area. It is widely spread in the Sahara from the Ahaggar to Aïr and west to Taberréshat Well (70 miles N.N.E. of Burem) and at Tabankort in the same area of the Niger. Reported also from In Alahy north of Timbuktu. The range is given in greater detail in my larger work, volume vi, page 329.

Another race of the Desert Sparrow occurs in Transcaspia.

GREY-HEADED SPARROW

Passer griseus (Vieillot)

In my larger work, volume vi, pp. 333-40, I have given a detailed account of the Grey-headed Sparrow which has afforded me a most interesting study but which can only be dealt with very briefly in this handbook. I recognise two races in our area, whose range will be defined hereafter.

This very dull coloured little bird cannot be taken for anything but a sparrow. Usually but not invariably found among man's dwellings, it can only be described as ubiquitous. Its plumage is unstreaked; a grey head shades into brown on the back and cinnamon on the rump. A rusty-brown shoulder-patch may be noted,

caused by the chestnut lesser coverts; some of the median coverts have white tips which are not very noticeable. Otherwise both wings and tail are brown. The under side is light grey except for the throat and belly, which are white or creamy white. Like most sparrows, the bill becomes quite black in the breeding season, but in the off-season it is greyish brown with some yellow at the base of the lower mandible. The legs are greyish brown. In size the Grey-headed Sparrow is like our British sparrow, and many of its actions will strike the observer as similar. The typical race has a wing measurement of 75–86 mm. and tail 53–65 mm.

This most adaptable species is found all over Africa, and though it is naturally connected in most people's minds mainly with human habitations that is only half the picture, for we find it ranging to the fringe of the desert, where it lives under very different conditions. Towns, villages, cultivation, lonely bush, light woodland, forest clearings, dry acacia country and bush-clad banks of stream or pool all come within the accepted habitat of *Passer griseus*. It shows the same combination of familiarity, impudence and wariness as our British house-sparrow, in the habits and behaviour of which there is much resemblance. It is, of course, most in evidence near native villages, in most of which it has established itself for breeding purposes, and there its loud chirp may be constantly heard.

In addition to seeds, grain and insect food, the Grey-headed Sparrow is a regular street scavenger, and is so unparticular in its diet that native boys refuse to eat its flesh.

Its nest is an untidy accumulation of grasses and various débris plentifully lined with feathers and is placed in all manner of situations about villages such as on the ridge-pole of houses, under projecting roofs and verandas, in bunches of plantains, holes in trees or in the thatch of native huts. The eggs show great variation. A familiar type has a greyish-white ground streaked and marbled with grey-brown and ash-colour. In some eggs the ground is completely hidden by streaks, spots, blotches and suffusions of different shades of brown and grey. Often there is an odd egg in a clutch markedly different from the rest of the set. Egg measurements are 17·8–21 × 14–15·7 mm.

Distribution and Races. P. griseus griseus (Vieillott) ranges over the whole of Upper Guinea lying north of lat. 10° N., extending from Senegal and French Guinea across arid Central Africa to the Nile. Its normal northern range is bounded by the southern borders of the desert, but it is not found in the desert itself. As one approaches the coast, or when it colonises the forest clearings, the birds become darker in plumage and are best allied with the Lower Guinea race *P. griseus ugandae* Reichenow. The range of this bird extends from the Elgon region and Uganda west to Cameroon and Gaboon.

extending from the Cameroon highlands along a strip of Upper Guinea to include the Gold Coast south of the forest.

Many other races have been described from beyond our limits, but few can be accepted as valid.

GOLDEN SPARROW

Auripasser luteus (Lichtenstein)

THE adult male Golden Sparrow in full breeding plumage is a gay little bird, with its bright yellow under parts and yellowish head and neck in strong contrast to its chestnut back. The wings are brown, and the white tips to the blackish coverts, before the former become worn, form two very noticeable wing-bars. At that season the bill

of the male is blackish but in the off-season is like that of the female, brownish horn in colour. Females and birds of the year are brown above and cream-colour below, with but little yellow on the throat and both have pale-coloured bills. It is small in size, as we generally visualise a sparrow, more resembling a European redpoll in this respect. The wing measures 60–67 mm. and the tail 45–50 mm.

Not so many years ago the Golden Sparrow was considered to be a Nubian species, restricted to a circumscribed area. Now we know

that it ranges right across the arid belt to within some 800 miles of the Atlantic. Whether it is as numerous in the west as it is in the east remains to be seen, for in the Anglo-Egyptian Sudan it must be considered one of the commonest birds. In the region of the Nile it may be encountered in the non-breeding season in little parties, which join up to form enormous flocks. These roam over the plains far and wide and may be seen rising in clouds from the bushes and trees in the more open country. As they are grain eaters, they do considerable local damage.

The Golden Sparrow nests in low thorn-trees in large scattered colonies, two or three nests in a bush, seldom more. The nest is loosely constructed of twigs and is completely enclosed, with a small entrance in the side. Three or four eggs are laid, and these vary remarkably. The commonest type has a white ground and is handsomely marked with various shades of sepia and blackish; others have a pale blue ground and are smeared with olive-brown and dotted with sepia; another clutch is palest clay-colour with faint darker speckles and a brown cap or wreath over the broad end. Eggs which I have measured personally vary, e.g. 16–17 × 12·5–13 mm.

The breeding season in Central Darfur is in September and may begin in June.

Distribution. From the east of its range in the Sudan this sparrow extends across the country roughly on the line El Fasher, El Obeid, Khartoum, Kassala, while in the French Sudan it has been recorded from Timbuktu, whence it extends south through French Niger territory to Damergu and Agadés in the southern Sahara.

SUDAN ROCK-SPARROW

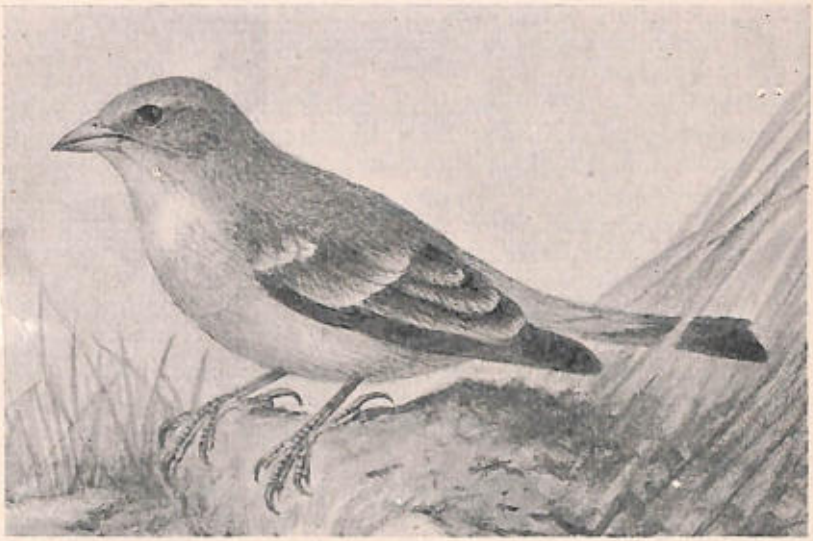
Gymnoris pyrgita pallida Neumann

This rock sparrow, which is entirely light brown above and buffish white below, with rather darker brown wings and tail, has only one distinctive feature: the bright yellow patch on the throat of adults of both sexes but lacking in young birds. In size it is rather large and resembles the common British sparrow, but the back is perfectly uniform in its dull brown colour, without any mottling or streaking to relieve it. Unlike the *Petronia* group of rock sparrows, which have conspicuous white spots at the tip of the tail, there are no white markings on the plain-backed *Gymnoris* group, either on the tail or anywhere else. From the Lesser Rock-Sparrow (*Gymnoris dentata*) this bird is distinguished by its larger size, lack of pale eyebrow-streak, and by the larger and darker yellow throat-patch. *Gymnoris p. pallida*, moreover has an apparently very restricted distribution:

whereas the smaller *Gymnoris dentata* (of which there are two races in our area) is much more widely spread throughout the semi-arid belt.

The measurements of *G. p. pallida* are as follows: Bill 11–12 mm.; wing (male) 85–90 mm., (female) 80–84 mm.; tail (male) 60–64 mm., (female) 57–60 mm.

This is a bird which occurs within our limits only in the desolate country covered with acacia bush west of Zinder and in the Damergu country to the north. Its distribution, even where it is found, is extremely local, and there are wide gaps in the countries in which it is found. As it seems to have some preference for the baobab-tree



belt it is curious that it has not been reported from the Senegambia area, where those gigantic trees are such a feature of the landscape, but no recent collections from that area have contained this sparrow. It is reputed to be a shy bird which quickly takes refuge in an acacia when alarmed.

In Kenya Colony, where a race of this sparrow is found in the drier parts, its behaviour is said to resemble that of other sparrows, and there it is often seen frequenting gardens and cultivated lands. It is evidently more bold in the neighbourhood of farmsteads than it is in the wilds of Damergu and Agadés, and perches in full view of an observer on boulders in rocky districts. No account of its nesting is available.

Distribution and Races. The Anglo-Egyptian Sudan west of Omdurman, Kordofan and Darfur, turning up again in the Damergu country and the Tessawa district west of Zinder; between

the eastern part of its range and the western area there is a huge expanse of country from which it has not yet been reported. Watch should be kept for this bird in the baobab belt of Senegal and Gambia and the French Sudan, where it may be expected to range but has not been collected.

The typical subspecies is a native of Abyssinia, Eritrea and British Somaliland. In Kenya and Uganda we find *G. pyrgita massaica* Neumann, and two other races have been named, with less claim to recognition, from elsewhere.

BUSH SPARROW

Gymnoris dentata (Sundevall)

Two races of the Bush Sparrow are found in western Africa. It is the typical subspecies which has such a vast range, extending as it does from Arabia to Gambia. It is one of the smaller sparrows with, in the male, uniform brown upper parts and whitish to grey under parts. A pale yellow patch on the throat is its one distinctive feature. A greyish crown and a rufous-brown eye which extends backwards towards the nape is a conspicuous mark. The wings and wing-coverts are blackish brown edged with cinnamon-rufous. The tail is dark brown edged and tipped with whitish or buffish white. The chin and throat are ashy, with the aforementioned lemon-yellow throat-patch. The whole of the rest of the under side is ashy or creamy white. The bill is blackish and the legs and feet are brownish-black.

The female differs from the male in having the eyebrow-streak palest sandy buff and the collar blends more with the mantle and back, the latter being striped with dark brown. In the female the yellow throat-patch is reduced in size but is only lost in the immature bird of both sexes.

Measurements are: Bill 10–11 mm.; wing (male) 76–80 mm., (female) 72–77 mm.; tail 42–46 mm.

Naturalists who are thoroughly familiar with this bird assure me that it is a bush sparrow, and to name it a rock sparrow would be entirely misleading. In its habits too it shows differences from the true rock sparrows, which are much more given to flocking than *G. dentata* and are in every way more gregarious. When not breeding the Bush Sparrows certainly go about in little parties to rove over the plains but never to the same extent as the sparrows in the *Petronia* genus. It is a familiar species on the little trees in the vicinity of cultivated or pastured land, and its rather sweet notes may be constantly heard in the form of a prolonged twitter. It has also the usual sparrow's chirp and chirrup.

Its habitat is a varied one, including cultivated clearings in the vicinity of towns and arid orchard bush. Most of its feeding is done on the ground, where it picks up grain and seeds; but it will also search diligently for insects in the branches and crevices of trees.

November to March seem to be the months when breeding is at its height. The nests are large shapeless masses of grass placed in the smaller trees, but it will build in holes in tree trunks on occasions in just such a situation as might be selected by a tit. The eggs are unknown.

Distribution and Races

G. dentata dentata (Sundevall) extends across the whole continent from coast to coast. We find it in Abyssinia and western Kordofan, then with a discontinuous range to the Northern Territories of Nigeria and the Gold Coast, following the Combretaceae country westwards to the Inundation Zone of the Niger around Mopti, whence it continues an uninterrupted distribution to Portuguese Guinea, north-western Sierra Leone and Gambia, reaching the sea again in Senegal.

A pale local race, not very well defined, has been named *G. dentata buchanani* Hartert, and has been reported from Zinder, the western shores of Lake Chad and the Yo river, from Fort Lamy and from some other localities in the Bagirmi country.

FAMILY PLOCEIDAE

WEAVER BIRDS

THE classification of the weaver birds is a matter upon which few systematists appear to agree. In my larger work, volume vii of *The Birds of Tropical West Africa*, I based my arrangement on Sclater's *Systema Avium Aethiopicarum*, which in turn had been based largely on the classification proposed by Dr. J. P. Chapin in 1917.

Dr. Chapin's views have been modified to some extent since that date, and the classification which I adopted in my seventh volume does not necessarily represent his opinion at the present day, especially as regards genera.

As this handbook is a synopsis of my larger work—*The Birds of Tropical West Africa*, in eight volumes—I do not intend to depart from the classification I used therein except in a few minor instances. To do so at this stage, even though I have had undoubted faults in my treatment of the weaver birds pointed out to me, would only confuse those who work with it. I have therefore retained the illustrated key and the generic divisions very much as set out in my seventh

volume. In one important instance I have departed from the arrangement adopted there by reducing the buffalo-weavers (*Bubalornis*) to sub-family rank, thus coming into line with modern ideas. Dr. Chapin, who was responsible in the first instance for giving full family status to these birds, agrees with this course and has himself adopted it in his own great work on the birds of the Belgian Congo.

In my handbook the *Ploceidae* will therefore be subdivided into six sub-families:

Bubalornithinae (see p. 1353) *Ploceinae* (see p. 1357)
Plocepasserinae (see p. 1355) *Estrildinae* (see p. 1431)
Sporopipinae (see p. 1356) *Viduinae* (see p. 1494)

To give a succinct description of each sub-family is not possible in the handbook for want of space. In my larger work the *Bubalornithidae* (as I then considered the buffalo weavers) will be found discussed on page 3, and a diagnosis of the other five sub-families enumerated above is given on pages 12–14 of the volume cited.

The seventh volume of *The Birds of Tropical West Africa* is entirely devoted to the weaver birds, and it was there possible to discuss them in much greater detail than is practical in this much condensed account of the *Ploceidae*. The volume (which is still available from the Crown Agents) is very fully illustrated and contains fourteen plates in colour depicting 81 different weaver birds, a number of which have been reproduced in this handbook by courtesy of the West African Governments.

Key to the Weaver Birds in Breeding Plumage in the Family Ploceidae

(Excluding the Estrildine Weavers in the sub-family Estrildinae, for which a separate key is given on page 1431*)*

For the purpose of this key I have divided the Ploceine Weavers into three groups, not on their generic characters, which are often difficult to see, but on colour, a purely superficial character into which species far removed from one another structurally may easily fall. It is points of colour and not of structure which are most easily noted in the field, and while it is possible to give a guide as to the plumage of the male (and often of the female also) in breeding dress, it is quite impossible to give an intelligent guide to the same birds which entirely lose their bright plumage during the non breeding season, and then assume a sparrow-like dress in which so many species look exactly alike. Some females are happily brightly coloured like the males, having discernible colour distinctions by which they can easily be recognised from their consorts, but when

the identity of a bird is in question it is always wise to take note of the plumage of the bird in its company. In the breeding season, at any rate, weavers are usually present in pairs, and as the males are more easily identified than the females, particular attention should be given to them, and the points of difference between the sexes noted in the field.

The following keys are not an infallible guide to identification; there is sure to be difficulty over the females, some of which, as for instance the various females of the bishop birds, are so alike that they can only be identified in the museum by close comparison, the points of difference being too minute to be expressed succinctly in a key. The males, however, seldom present much difficulty.

The sections into which I have divided the Ploceine Weavers are as follows:

I. Ploceine Weavers, in which the males, and usually the females also, have the under parts entirely or mostly bright yellow (in one species orange), with or without black on the throat but without any black elsewhere on the under surface (see p. 1344).

II. Ploceine Weavers which in the males, and sometimes in the females, have the under parts either entirely black, or at any rate the lower half of the under surface below the breast black. Red or yellow is often present on the throat or breast in the male. Many females have black on the under parts like the males, but others have a "sparrowy" plumage (see p. 1348).

III. Ploceine Weavers which do not belong to either of the two groups defined above but which in neither male nor female has bright yellow under parts or any black on the belly (see p. 1352).

In addition I have given on page 1397 a separate key to the *Malimbus* group of weavers, but I have also included all the *Malimbus* weavers in the key on page 1349, as there is difficulty in separating some of the females from the black weavers which are not included in the genus *Malimbus*.

Additional keys are also given to the bishop birds (*Euplectes*) (p. 1414) and the whydah birds (*Coliuspasser*) (p. 1422). The species therein are also included in the main key which follows.

The Buffalo Weaver is not included in any of the three keys which follow. It is a characteristic bird, entirely black when adult with white bases to the feathers of the back and white on the flanks and a heavy white bill. The figure on page 1353 should enable it to be identified without difficulty. All other species of weavers fall into one of the three sections following.

KEY I

Key to the Ploceine Weavers which in the males, and often in the females also, have the under parts mostly bright yellow or orange, with or without a black throat.

1. Size very large (about 8 in. in total length) with wing about 110 mm. Head black in male with chestnut collar and throat and yellow belly; female with white belly and olive-brown "sparrowy" upper parts. One species only, restricted to São Thomé
   Hyphantornis grandis, p. 1387
   Size smaller (not exceeding 7 in. in total length) .. 2
2. Upper parts of body slate-grey and crown blackish, breast and belly bright yellow; colour of sexes alike and no seasonal change of plumage
   Symplectes amaurocephalus tephronotus, p. 1359
   Upper parts of body not slate-grey 3
3. Tail and wings jet-black, mantles spangled black and yellow, no light or coloured edges to wing-coverts; breast and belly bright yellow 4
   Tail and wings not jet-black 8
4. With black on some part of crown 5
   No black on crown, which is either entirely chestnut or entirely yellow, or orange-chestnut passing into yellow on nape 7
5. Throat entirely black, including malar region 6
   Throat yellow in centre, malar region black
   Phormoplectes dorsomaculatus ♀, p. 1362
6. Entire crown black like head
   Phormoplectes insignis insignis ♀ and subsp. ♀, p. 1360
   Forepart of crown only black, remainder, including nape, yellow *Phormoplectes preussi preussi* ♀ and subsp. ♀, p. 1361
7. Whole crown uniform bright yellow
   Phormoplectes dorsomaculatus ♂, p. 1362
   Whole crown chestnut
   Phormoplectes insignis insignis ♂ and subsp. ♂, p. 1360
   Forepart of crown orange-chestnut, passing into yellow on nape *Phormoplectes preussi preussi* ♂ and subsp. ♂, p. 1361
8. Centre of crown blackish with broad yellow stripe (occasionally tinged chestnut) over eye
   Pachyphantes pachyrhynchus pachyrhynchus ♀ (breeding dress), p. 1385
   Crown not as described above 9

9. Mantle and wings uniform very dark brown, not streaky; crown chestnut-orange in male, black in female
Hyphanturgus brachypterus nigricollis ♂ ♀, p. 1390
Mantle and wings not uniform very dark brown; if brown, then streaky 10

10. Mantle and scapulars black and yellow; entire head black 11
No black on mantle or scapulars 12

11. Mantle bright yellow with heavy black V-shaped marking on scapulars. Chestnut collar not tipped with black, chestnut on lower throat barely extending on to breast .. .. *Plesiositagra cucullatus cucullatus* ♂, p. 1382
Mantle and scapulars black with broad yellow fringes, narrow black collar tipped with rufous-chestnut, broad band of chestnut on breast *Plesiositagra collaris* ♂, p. 1381

12. Crown of head either entirely black or with black restricted to forehead 13
No black on crown or forehead 18

13. Throat yellow like rest of under surface
Othyphantes batesi ♀, p. 1363
Throat black, contrasting with under surface 14

14. Nape of head strongly tinged with chestnut; bill abnormally long and narrow (about 17 mm.); under parts strongly washed with chestnut
Icteropsis subpersonata ♂, p. 1384
Nape of head not tinged with chestnut; bill not abnormally long (not exceeding 16 mm.) 15

15. Entire crown of head black, including nape 16
Forehead only black, hind crown bright yellow, including nape 17

16. Yellow breast strongly washed with chestnut, black of throat not extending on to chest *Sitagra capitalis* ♂, p. 1376
Yellow breast not washed with chestnut; black of throat extending in point on to breast
Sitagra melanocephala melanocephala ♂, p. 1375

17. Black of throat extending on to breast; bill short (11–12 mm.), outermost remex short, not extending half length of next remex; female has upper parts streaked
Sitagra luteola luteola ♂, p. 1372
Black of throat not extending on to breast; bill longer and finer (13–14 mm.), outermost remex longer, extending to half length of next remex. Female has upper parts olive-green and not streaked .. *Sitagra monacha* ♂, p. 1374

18. Throat black 19
Throat not black 25

19. Whole of crown, nape and cheeks orange-chestnut, no black patch through or below eye
Othyphantes batesi ♂, p. 1363
Whole of crown and nape not orange-chestnut; black patch through or below eye 20

20. Forehead strongly washed with chestnut 21
No trace of chestnut on forehead, which is bright yellow 23

21. Mantle and back olive with dark centres to feathers giving streaky appearance; grey-brown patch on nape; females with no yellow in plumage
Pachyphantes pachyrhynchus pachyrhynchus ♂, in breeding dress, p. 1385
Mantle and back uniform olive or yellowish, unstreaked; no grey-brown patch on nape 22

22. Ear-coverts black; females with streaky upper parts and pure white belly .. *Plesiositagra vitellinus vitellinus* ♂, p. 1379
Ear-coverts chestnut, black patch through eye; females entirely yellow below and olive above
Hyphanturgus brachypterus brachypterus ♂ p. 1388

23. Ear-coverts black; bill distinctly heavy, not exceeding 17 mm. in length and broad at base 24
Ear-coverts yellow, bill long and narrow (17–19 mm. in length) .. .. *Hyphanturgus ocularius crocatus* ♂, p. 1392

24. Black of throat extending in a point on to breast, which is washed with chestnut; female olive above and with streaked mantle and whitish belly
Plesiositagra heuglini neglectus ♂, p. 1378
Black of throat restricted to upper part of throat, not extending on to crop or breast; females much like males in plumage .. *Othyphantes bannermani* ♂ ♀, p. 1364

25. Entire head and under parts and also rump deep golden yellow .. .. *Xanthophilus aurantius aurantius* ♂, p. 1395
Head, rump and under parts not deep golden yellow .. 26

26. Entire under parts from throat to under tail-coverts yellow 27
Under parts not entirely yellow, belly either white or buff 32

27. Size very small (total length from bill to tail about 4½ in.); wing measurement under 65 mm. 28
Size considerably larger (total length from bill to tail over 5½ in); wing measurement 70 mm. or over .. 29

28. Mantle and back uniform olive-green
Sitagra monacha ♀, p. **1374**
Mantle and back streaky .. *Sitagra luteola luteola* ♀, p. **1372**

29. Crown of head and sides of neck rufous-orange in contrast to lemon-yellow cheeks .. *Xanthophilus princeps* ♂, p. **1394**
Crown of head and sides of neck not rufous-orange .. 30

30. Black stripe through eye 31
No black stripe through eye
Xanthophilus xanthops xanthops ♂ ♀, p. **1394**

31. Forepart of crown golden yellow, passing into yellowish olive on nape .. *Hyphanturgus ocularius crocatus* ♀, p. **1392**
Forepart of crown olive-green like rest of crown and upper parts; yellow stripe passing from base of bill over and beyond eye
Hyphanturgus brachypterus brachypterus ♀ p. **1388**

32. Mantle and back bright olive-green, sometimes with dark shaft lines 33
Mantle and back brown or dull olive; if the latter, then prominently streaked 36

33. Ear-coverts and feathers surrounding eye jet-black
Othyphantes baglafecht neumanni ♂, p. **1362**
Ear-coverts and feathers surrounding eye not jet-black .. 34

34. Ear-coverts dark (olive-brown or olive-green) in strong contrast to yellow malar region, eyelids often blackish; no eye-stripe present
Othyphantes baglafecht neumanni ♀, p. **1362**
Ear-coverts not dark and not in strong contrast to malar region; eyelids and stripe over eye yellow 35

35. Bill very heavy and pale horn in colour, 20–22 mm. in length; entire throat and breast very bright yellow, yellow extending far down breast
Xanthophilus princeps ♀, p. **1394**
Bill not heavy but rather fine, brown in colour, 14–15 mm. in length; throat and breast white mixed with pale yellow, yellow not extending far down breast
Xanthophilus aurantius aurantius ♀, p. **1395**

36. Broad buff stripe over eye contrasting with dark crown; under surface of body mainly chestnut-buff
Pachyphantes pachyrhynchus pachyrhynchus ♂ ♀ in non-breeding dress, p. **1385**
No broad buff stripe over eye, crown not dark but olive or grey 37

37. Under tail-coverts white or whitish without any tinge or wash of yellow 38
Under tail-coverts washed or tinged with yellow .. 39

38. Throat and under parts almost uniformly white tinged with pale buff except on throat and middle of belly
Sitagra melanocephala melanocephala ♀, p. 1375
Throat and under parts not as described above but breast and sides of body pale brown in contrast to white belly; throat often tinged yellow .. *Sitagra capitalis* ♀, p. 1376

39. Mantle earth-brown in strong contrast to olive head .. 40
Mantle not brown and not contrasting with head .. 41

40. Yellow of throat usually (but not invariably) spreads over breast and sometimes extends on to belly
Plesiositagra cucullatus cucullatus ♀, p. 1382
Yellow of throat does not extend so far down breast; belly generally white .. *Plesiositagra collaris* ♀, p. 1381

41. Upper parts from crown to upper tail-coverts dull olive-green with dark middles to feathers of mantle
Plesiositagra heuglini neglectus ♀, p. 1378
Upper parts olive, mantle browner with pale fringes to feathers; upper tail-coverts bright olive-yellow
Plesiositagra vitellinus vitellinus ♀, p. 1379

KEY II

Key to the Ploceine Weavers which in the males, and sometimes in the females, have the under parts entirely black or the lower half of the under surface (below the breast) black. Red or yellow often present on the throat or breast in the male. Some females have black on the under parts, but others have a "sparrowy" plumage. An attempt has been made, contrary to the usual plan, to include the females in this key.

1. A broad patch of yellow or orange present on wing-coverts (females always have streaky brown "sparrowy" plumage without any colours) 2
No patch of yellow or orange present on wing-coverts .. 6

2. Lesser wing-coverts entirely orange 3
Lesser wing-coverts entirely lemon-yellow 4

3. Greater wing-coverts chestnut; size smaller (wing about 85 mm. and tail about 70 mm. in length)
Coliuspasser axillaris bocagei ♂, p. 1424
Greater wing-coverts black; size larger (wing and tail each about 100 mm. in length)
Coliuspasser hartlaubi humeralis ♂, p. 1427

4. Mantle lemon-yellow *Coliuspasser macrourus macrourus* ♂, p. **1422**
Mantle black 5

5. Rump black like rest of upper parts; tail very long, white patch in wing *Coliuspasser albonotatus asymmetrurus* ♂, p. **1426**
Rump lemon-yellow; tail short, no white patch in wing *Euplectes capensis phoenicomera* ♂, p. **1418**

6. Crown of head yellow or golden 7
Crown not yellow or golden 8

7. Rump and upper tail-coverts bright yellow *Euplectes afra* ♂, p. **1420**
Rump and upper tail-coverts black (throat entirely yellow in female, black bordered with yellow in male) *Heteryphantes melanogaster melanogaster* ♂ ♀, p. **1365**

8. Mantle, back and upper tail-coverts entirely black .. 9
Mantle, back and upper tail-coverts not black; birds either brightly coloured on mantle and back or with streaked brown plumage (commonly referred to as "sparrow-like") 22

9. Belly red .. *Malimbus erythrogaster erythrogaster*, p. **1406**
Belly black or blackish 10

10. Under tail-coverts coloured, contrasting with black under parts 11
Under tail-coverts not brightly coloured, but black or brown 12

11. Under tail-coverts yellow .. *Malimbus racheliae* ♂ ♀, p. **1406**
Under tail-coverts scarlet *Malimbus scutatus scutatus* ♂ ♀ and subsp. ♂ ♀, p. **1404**

12. Some part of crown red or orange 13
Crown entirely black, like rest of upper parts 16

13. Upper part of breast red 14
Upper part of breast black like throat 15

14. Throat black .. .. .. *Malimbus cassini* ♂, p. **1401**
Throat red like crop *Malimbus malimbicus malimbicus* ♂ ♀ and subsp. ♂ ♀, p. **1397**

15. Scarlet on head restricted to large patch on crown surrounded with black .. *Malimbus coronatus* ♂, p. **1403**
Scarlet, orange-scarlet or crimson of head not restricted to crown-patch but extending on to sides and back of neck *Malimbus rubricollis rubricollis* ♂ ♀ and subsp., p. **1399**

16. With red on breast .. .. *Malimbus nitens nitens* ♂ ♀, p. **1400**
Without any red on breast 17

17. Tail-feathers long and broad in breeding dress, far beyond normal length .. *Coliuspasser ardens concolor* ♂, p. 1429
Tail not elongated in breeding dress but normal in length at all seasons 18

18. Eye pearly white or cream-colour 19
Eye not pearly white or cream-colour 20

19. Visible nuchal patch of grey feathers immediately below nape; legs and feet brownish-flesh colour
Melanopteryx albinucha albinucha ♂ ♀, p. 1368
Grey bases to feathers below nape usually concealed; legs and feet brownish black
Melanopteryx albinucha maxwelli ♂ ♀, p. 1368

20. Eye bright yellow; bill broad and rounded, never less than 18 mm. in length .. *Melanopteryx nigerrimus* ♂, p. 1366
Eye brown; bill slender and short, culmen ridged and narrow, not exceeding 16 mm. in length 21

21. Legs and feet black; short outermost (1st) primary broad at tip, not tapering to point and about 26 mm. in length .. .. .. *Malimbus coronatus* ♀, p. 1403
Legs and feet dark grey or darkish brown; short outermost (1st) primary attenuated, very short and narrow, tapering to tip and not more than 22 mm. in length
Malimbus cassini ♀, p. 1401

22. With bright colours (red or yellow) on upper parts .. 23
Without any colours in plumage, which is brown on upper parts streaked with darker brown or black, i.e. "sparrow-like" 25

23. Whole mantle and back yellow, under tail-coverts white (female has "sparrowy" plumage, as does male in off-season) .. *Euplectes aurea* ♂ in breeding dress, p. 1419
Mantle and back not yellow; under tail-coverts not white 24

24. Crown of head black; under tail-coverts bright scarlet (female has "sparrowy" plumage, as does male in off-season) *Euplectes orix franciscana* ♂ in breeding dress, p. 1416
Crown of head orange-scarlet; under tail-coverts fawn-colour (female has "sparrowy" plumage, as does male in off-season)
Euplectes hordacea hordacea ♂ in breeding dress, p. 1414

25. Whole under parts olive, especially belly; upper parts olive-brown with dark middles to feathers, eye yellow
Melanopteryx nigerrimus ♀, p. 1366
Plumage not as described above, upper parts light brown profusely streaked dark brown or blackish, eye brown or black 26

26. Under wing-coverts and axillaries chestnut; lesser wing-coverts margined with chrome yellow
Coliuspasser axillaris bocagei ♀, p. 1424
Under wing-coverts and axillaries not chestnut 27

27. Size rather large (wing over 75 mm., bill over 17 mm. in length); breast and flanks profusely streaked on buffish-brown ground .. *Coliuspasser hartlaubi humeralis* ♀, p. 1427
Size smaller (wing well under 75 mm., bill under 17 mm. in length) 28

28. Whole under surface, including belly, deep buff-colour or palest brown, breast streaked. Margin of wing below carpal joint yellow
Euplectes capensis phoenicomera ♀, p. 1418
Under side not pale brown, belly whitish or always paler than breast 29

29. Breast prominently streaked, either uniformly or at sides 30
Streaks on breast very faint and indistinct 32

30. Centre of breast unmarked, rufous-buff patch on each side of breast marked with black shaft-streaks, narrow but very prominent .. .. *Euplectes aurea* ♀, p. 1419
Centre of breast streaked 31

31. Size larger (wing 65–70 mm.), margins of feathers of mantle and back rufous-buff, eye-stripe yellow
Euplectes hordacea hordacea ♀, p. 1414
Size smaller (wing 52–57 mm.), margins of feathers of mantle and back brown and less tawny; eye-stripe white or buff .. .. .. *Euplectes afra* ♀, p. 1420

32. Margins of lesser wing-coverts yellow 33
Lesser wing-coverts not margined with yellow 34

33. Margin of wing below carpal joint yellow
Coliuspasser albonotatus asymmetrurus ♀, p. 1426
Margin of wing below carpal joint buff or brown
Coliuspasser macrourus macrourus ♀, p. 1422

34. Upper parts heavily marked with black; under tail-coverts with black middles to feathers
Coliuspasser ardens concolor ♀, p. 1429
Upper parts less heavily marked and with dark brown; under tail-coverts white or whitish
Euplectes orix franciscana ♀, p. 1416

Key III

Key to the Ploceine Weavers which do not fall under the headings used for the keys to Groups I and II. It includes a miscellaneous collection of weavers.

1. Edges of wings red .. .. *Anaplectes melanotis* ♂ ♀, p. 1410.
   Edges of wings not red 2

2. Entire head black 3
   Head not black 4

3. Mantle yellow .. *Melanoploceus tricolor tricolor* ♂ ♀, p. 1371
   Mantle chestnut .. *Cinnamopteryx castaneofuscus* ♂, p. 1369

4. Bill extremely broad and heavy, with swollen lower mandible 15 mm. or more across base and upper mandible strongly decurved 5
   Bill not as described above 6

5. Entire plumage uniform chestnut-brown
   Neospiza concolor, p. 1407
   Plumage not uniform chestnut-brown, male black, white, grey and chestnut with conspicuous white wing-bar; female brown above, white striped with brown below
   Amblyospiza albifrons capitalba ♂ ♀ and subsp., p. 1408

6. Back and mantle heavily streaked "sparrowy" with blackish middles to feathers 7
   Back and mantle more or less uniform without blackish middles to feathers 12

7. Head red .. .. *Quelea erythrops* ♂, p. 1413
   Head not red 8

8. Border of wing and quills edged with yellow (rather bright yellow when quills are fresh moulted, paler with wear); bill red in both sexes *Quelea quelea quelea* ♂ ♀, p. 1412
   Border of wing and quills not yellow; bill black or horn-brown 9

9. Forehead yellow and face black *Brachycope anomala* ♂, p. 1411
   Forehead not yellow and face not black 10

10. Size large (about that of sparrow) (wing over 70 mm.); quills mostly black *Cinnamopteryx castaneofuscus* ♀, p. 1369
    Size small (wing about 60 mm. or less); quills mostly brown 11

11. Middle of belly white, orange eye-stripe present
    Quelea erythrops ♀, p. 1413
    Middle of belly not white, no orange eye-stripe present
    Brachycope anomala ♀, p. 1411

12. Crown of head black, bordered with rusty yellow
Thomasophantes st-thomae ♂ ♀, p. **1386**
Crown of head not black, bordered witn yellow 13

13. Forehead black, covered with minute white dots and similar moustachial stripe
Sporopipes frontalis frontalis ♂ ♀ and subsp., p. **1356**
Forehead chestnut like rest of crown; malar streak black
Plocepasser superciliosus superciliosus ♂ ♀ and subsp., p. **1355**

SUB-FAMILY BUBALORNITHINAE

WHITE-BILLED BUFFALO-WEAVER

Bubalornis albirostris albirostris (Vieillot)

The Buffalo-Weaver is a bird which is easily identified in the field. In size it is fairly large, about that of an English blackbird—about 9½ in. from bill to tail. The plumage of the male is almost entirely black but the base of the feathers is white, which shows when the feathers are ruffled, especially on the rump, and there is a lot of white on the sides of the body which only becomes apparent when the bird raises its wings, as has been shown in the accompanying illustration. During the breeding season the large bill undergoes a remarkable change, and instead of being black as it is in the off-season it becomes greatly swollen at the base and changes colour. It is then either white or pinkish yellow and a very conspicuous feature.

The female resembles the male but is smaller, and the bill remains dusky and changes only slightly in the breeding season. The immature bird is dusky brown with white mottlings on the breast and flanks. Measurements are: Bill (male) 23–24 mm., (female) 21–22 mm.; wing (male) 119–129 mm., (female) 113–124 mm.; tail (male) 96–110 mm., (female) 90–96 mm.; tarsus 29–32 mm. At all seasons these birds are highly gregarious and may be found hanging about their everlasting great nest-clusters, which will be described hereafter.

The Buffalo-Weaver is a bird of the dry belt both in West and East Africa. It may be found on open farmland with patches of

scrub, in thorn forests and along the borders of streams. It seeks its food mainly on the ground, devouring the larger insects, locusts, termites, beetles and their larvae, varying this diet with millet grains and seeds and berries. It has been seen to chase newly awakened tiny frogs, but whether it actually ate them was not determined. Sometimes flocks of very large numbers may be seen together, as many as five hundred having been surprised on a space the size of a billiard table, probably feeding on a hatch of termites.

Their nests are the most extraordinary affairs and are a remarkable feature of the landscape where they occur. The birds build in colonies and make massive communal nests of sticks which contain several compartments, each one of which is an individual nest lined with grass and leaves. As many as twenty such nests may be found in a single tree. The weavers are very noisy and demonstrative at the nest. Clutches vary from a single egg to three, the ground colour being white, tinged grey or greenish, heavily blotched and spotted with shades of grey and greyish brown, with obscure ashy secondary markings. Eggs measure 23·4–30 × 18·7–20·6 mm. Nests are often near villages in baobab or gum trees or far from habitations in the thorn bush.

In some parts of its range this weaver has a close association with the Red-billed Starling (*Spreo pulcher*), often feeding with it on the ground and roosting in the same tree.

The call of the Buffalo-Weaver is distinctive—a falsetto of several notes which has been likened to *ee-stiguwi, stiguwi*. It may be observed that the hen will sometimes breed when still in immature plumage, which has led some to believe that the plumage of the sexes differs; that is not the case, however. Apart from relative size, there is no distinction other than in the bill.

Distribution and Races

B. albirostris albirostris ranges throughout the semi-arid belt on the west from Senegal to Nigeria, in the east from Abyssinia to Uganda. Several other races occur, the species ranging to Damaraland.

The Kenya race is named *B. albirostris intermedius* (Cabanis), which has a red bill and dusky tip and never becomes swollen at the base.

The South African race, *B. albirostris niger* Smith, extends as far north as Angola.

SUB-FAMILY PLOCEPASSERINAE

SPARROW-WEAVER

Plocepasser superciliosus superciliosus (Cretschmar)

THE Sparrow-Weaver is a fairly common bird in orchard bush and here and there in the thorn-scrub belt, which though classified with the weavers is in appearance more like a sparrow, and forms a link between the two groups, as its Latin name implies. It is a dull-coloured bird, inconspicuous considering that it is at least as large as a common sparrow, and likely to blend with the landscape. In plumage it is earth-brown above, dirty greyish white below, but with a very white throat bordered on each side with two black stripes. The crown is chestnut (or rusty red) and a long broad white eyebrow is a conspicuous mark, as are also two white bands on the dark brown wing-coverts, the lower one being less white and less conspicuous than the top one. It has a reddish-brown eye, light brown legs and feet and a brown bill, the lower half being paler. Its measurements are: Bill 15–17 mm.; wing (male) 86–95 mm., (female) 78–94 mm.; tail 60–67 mm.; tarsus 20–22 mm.

This is a woodland bird and a lover of high bush which may be seen in small parties in the non-breeding season but seldom more than four or five together. It is somewhat local in its distribution, dependent as it is upon a particular environment. Thus it may be absent from some areas though not uncommon in a neighbouring zone. It is the possessor of a peculiar voice and utters a skirling note not unlike a Common Bunting. Another sound attributed to the Sparrow-Weaver is a sibilant trill. The stomachs of birds examined have been found crammed to capacity with various kinds of small seeds.

In northern Nigeria the Sparrow-Weaver breeds from March to July; sometimes it builds in small colonies, at other times singly. The nest is an untidy covered structure, sometimes apparently tubular in shape, clumsily built of coarse dry grass and strong spines of leaves, placed at the extremity of branches of trees but not hanging from them. It is more like a sparrow's nest than a weaver's. The height varies between 9 and 20 ft. from the ground. Eggs have a cream or pinkish-white ground and are profusely and regularly blotched and spotted with mauve-brown and brownish pink and have underlying marks of pale lilac. They measure 21·5–23·5 × 14·5–16 mm.

Distribution and Races

P. s. superciliosus (Cretschmar) inhabits the whole of the grass woodland from Senegal and Gambia to Abyssinia and Eritrea,

ranging south to Ubangi-Shari, northern Cameroons (Garua), northern Uganda and Kenya Colony. It is recorded from a number of places in all our Colonies but is especially to be found in the Bauchi and Niger Provinces of Nigeria. It is known (in Nigeria) to range as far south as Ibadan.

In the Ubangi-Shari grasslands from the region of Bosum, a race, *P. superciliosus brunnescens* Grote, has been separated on account of its darker brown "more saturated" upper parts and slightly less white under parts. No other races have been recognised.

SUB-FAMILY SPOROPIPINAE

SCALY-FRONTED WEAVER

Sporopipes frontalis frontalis (Daudin)

The general colour of this bird is greyish fawn, the forehead being jet-black covered with tiny white spots, the anterior crown-feathers with dark brown centres and not tipped with white. Nape and broad collar are cinnamon-rufous merging into the pale earth-brown mantle, back and rump. Wings and wing-coverts are dark brown, the coverts and secondaries with greyish-white or whitish-buff edges. Upper tail-coverts are rather paler brown than the mantle. The tail is dark brown, with paler edges and tips to the rectrices when freshly moulted. Cheeks, narrow surround of eye and lores are pale ash-colour. A moustachial band of black with minute white dots occurs at the tip of each feather; chin and throat are white. The breast is pale ash-colour fading into white on the abdomen; flanks are tinged with cinnamon. Under tail-coverts are white; under wing-coverts are white, streaked with pale brown; axillaries are white. The eye is brown, the bill pale yellowish horn; legs and feet are brownish-flesh colour. It is a small bird about 4½ in. in total length, with bill 10–11 mm., wing 63–70 mm. and tail 41–46 mm.

Usually the Scaly-fronted Weaver will be found in the thorn scrub, where it frequents the little trees and may often be seen around villages. Much of its life is spent on the ground, where it moves with a hopping gait as it searches carefully for the seeds upon which it thrives. In the summer months it assembles in flocks. Even in the non-breeding season these little birds will roost together in old nests.

From the various observations which naturalists have made it seems that it breeds in autumn and winter, laying eggs from October to February. A grass nest found in a thorn bush bore some resemblance to a sparrow's, and the interior was lined with feathers.

Three or four eggs are laid and these are dull white, so heavily clouded with sepia as to appear earth-brown in colour. They measure 17–18 × 12–13 mm. The bird breeds singly, not in colonies, as one might suspect from its gregarious nature in the off-season.

Distribution and Races. Two races have been described from within our limits.

S. frontalis frontalis (Daudin) occurs in Senegal, Casamance and Portuguese Guinea and French Sudan (near Timbuktu); thence there is an apparent gap in its distribution until the Northern Provinces of Nigeria, though more likely it occurs in the intervening country but has not been obtained. We can trace its range through Chad territory to Darfur, Kordofan and northern Nuba. In West Africa it does not range south of lat. 11° N. and is especially common in Sokoto and Kano Provinces of Nigeria.

A paler subspecies, found north of Zinder and in Damergu, has been named *S. frontalis pallidior* Hartert, but how far west this pale race occurs is uncertain.

In East Africa we have *S. frontalis abyssinicus* Mearns, described from Abyssinia, which is distinctly darker, and in Kenya and Uganda *S. f. cinerascens* Mad. takes its place.

SUB-FAMILY PLOCEINAE

When W. L. Sclater published the *Systema Avium Aethiopicarum* he placed no fewer than 59 African weaver birds in the genus *Ploceus*, being content to split up this unwieldy group into a number of sub-genera. This arrangement did not appeal to me, and in *The Birds of Tropical West Africa* I have entirely dispensed with sub-genera, but having adopted from the start the classification which Sclater (following Gadow) had proposed in the *Systema Avium*, I compromised by employing all Sclater's sub-genera as genera, an arrangement which he has since adopted himself when editing Jackson's *The Birds of Kenya Colony and the Uganda Protectorate*. Indeed, Sclater had already suggested this course in the *Systema Avium*, where on page 729 he wrote: "The genus *Ploceus* in its wider sense is here retained. It contains 59 African species apart from races. For those who consider so large a genus cumbrous, its sub-genera may be used in a generic sense. The characters which define these are quite as definite as the generic characters in many other families." That is exactly what I did in *The Birds of Tropical West Africa*, and it cannot be too clearly stated that in adopting that arrangement I was not expounding a new classification.

Much of Sclater's work in the *Systema* was based on Chapin's

classification of the weaver birds published in the *Bulletin of the American Museum Nat. Hist.*, 37, 1917, a work to which I have constantly referred in my seventh volume. Dr. Chapin has certainly revised some of the views which he then held, and to this I shall make reference later. On the other hand, most of his opinions there expressed have stood the test of time.

In a brief notice of my seventh volume in the *Ibis* the reviewer observes when referring to my work that "in the difficult matter of classification the most recent revisions have not been followed." That is a perfectly correct statement, though it should have been qualified. The latest revision of the weavers which the reviewer probably had in mind necessitated discarding a number of established names and the acceptance of new ones in their place, and as I disagree fundamentally with the author's conception of a genus I did not follow him. The last word is not necessarily the correct one. Some of the great ornithologists of the past had equally good opportunities of assessing the value of generic characters as our latest revisionist. Generic divisions are, whether we like it or not, a matter very largely of personal opinion. Two schools of thought are represented at the present day—those who prefer to lump a number of genera together with the consequential changes involved in nomenclature, amounting sometimes to chaos, and the more conservative workers who dislike unnecessary changes of long-established names and prefer smaller generic divisions to large ones. The unfortunate field ornithologist who cares nothing for classification finds himself completely bewildered, not knowing whom to follow or which line of thought is the correct one. What matters to him is that a bird should have a name by which it can be recognised in his writings the world over.

It was for that reason that when planning *The Birds of Tropical West Africa* I chose to follow the recognised standard list of the birds of Africa—Sclater's *Systema Avium Aethiopicarum*—departing from it as little as possible and adopting for the grouping of the weavers the system suggested by Sclater for those who dislike combining together a number of genera. Those who wish to consult modern schools of thought in the matter of classification should read Chapin's *The Birds of the Belgian Congo* (in the press) and Grant and Mackworth-Praed's *African Handbook of Birds* (in the press), as well as the published opinions of these authors in the ornithological journals, and finally the writings of my esteemed friend Jean Delacour, who takes a much more extreme view.

CAMEROON GREY-BACKED WEAVER

Symplectes amaurocephalus tephronotus Reichenow

This weaver may be recognised by its brownish-black head and nape, which is rather sharply defined from the slate-grey mantle and back. The wings are blackish brown, the wing-coverts slate-grey. Chin and throat are like the head but flecked with grey, and the rest of the under parts are bright yellow. A partly concealed blackish patch is in the middle of the upper breast. The bill is bluish grey and the legs and feet are greyish-flesh colour. Measurements are: Wing (male) 81–87 mm., (female) 79·5–83 mm.; tail 49–55 mm. In total length this weaver is about 6 in.

The Grey-backed Weaver is a bird of thick forest trees, and wherever it occurs it is very local in its distribution. On Cameroon Mountain, where it was originally discovered in the lowland forest, it does not ascend above 5,000 ft. so far as we know. It is not usual to find Cameroon Mountain birds inhabiting the country in southern Cameroon, but such is the case with this bird. There around the Ja River it is a common inhabitant of second-growth jungle. It does not apparently occur in the primeval forest. It seeks its food both in the tree-tops and under bushes or brush on the ground. A little song in a high pitch ending in a long-drawn-out *chee-e-e* is attributed to it, and this refrain it may continually be heard singing.

The nest is the usual weaver-shape globe with downward-pointing entrance or vestibule on one side. Woven of small weed-stems and tendrils, the nest is usually placed in a small thorn-tree and is

solitary, not in colonies. Eggs are two or three in number and are either pure white or bluish white, sparingly but evenly spotted and blotched with various shades of brown and lilac. They measure 20–22·5 × 14–16·5 mm.

Distribution and Races. Cameroon Mountain forests and the forests of the French Cameroon Lowlands as far as the Ja River. Also on the island of Fernandõ Po.

Another race, the typical *Symplectes amaurocephalus amaurocephalus*, takes its place on the Quanza River in Angola and ranges to the Nyasa-Tanganyika plateau.

BROWN-CAPPED WEAVER

Phormoplectes insignis (Sharpe)

THREE races of this weaver were included in my seventh volume from this area.

Both sexes of this mountain weaver are handsome birds, the male with his chestnut crown and black face and throat, the rest of the body plumage of the very brightest pure yellow, against which the jet-black wings and tail are in striking contrast. At close quarters the yellow back will be seen to be somewhat mottled with black. The female is just like the male but with an all-black head and nape. This bird has a black bill and black tail, which should distinguish it at once from the Oriole Finch, which it superficially resembles. Measurements are: Wing (male) 85–90 mm., (female) 81–83 mm.; tail 45–49 mm.

In the mountainous region of British Cameroons these weavers are not uncommon between 3,000 and 8,000 ft., another race inhabiting the still higher altitudes in the Oku district. It is an entirely arboreal species, seen in pairs or small parties climbing about the boles or larger limbs of the moss-covered trees. It also frequents the stunted *Agauria salificolia*. It is a shy bird which quickly vanishes in the tree-tops when alarmed. Its rasping note is not pleasing to the ear.

A nest, almost completed, on 28th June was examined in the forest at Ndu. It was in an open place in the forest attached to the end of a long lateral branch 20 ft. from the ground—a typical ploceine, woven, retort-shaped nest. The eggs are unknown.

Distribution and Races

P. insignis insignis (Sharpe) was first described from Mount Elgon and has since been discovered on Cameroon Mountain, Manenguba Mountain, Kupé Mountain, and other heights in British Cameroons.

Another race, *P. insignis okuensis* Bannerman, with darker, more olive-yellow under parts, lives in the curious Oku district above Kumbo, *circa* 8,000–9,000 ft. in the same montane area.

Recently this weaver has been found on the Pico St. Isabel, Fernando Po, the male having a darker chestnut crown. This insular race has been named *P. insignis unicus* Stresemann.

GOLDEN-BACKED WEAVER

Phormoplectes preussi preussi (Reichenow)

This weaver, the male with a golden-brown crown, mottled black and yellow back, yellow under parts and black throat, wings and tail, very closely resembles at first sight the male of *P. insignis*. The under parts of both species are exactly the same, and the only striking difference between the males is in *P. insignis* having a dark chestnut crown sharply defined from the yellow neck, while in *P. preussi* the golden brown is on the forehead only and blends gradually into the yellow nape and neck.

There is more difference between the two females, *P. insignis* having the whole head black, while *P. preussi* has the crown golden yellow with only the forehead, eyebrow and ear-coverts black, forming a border to the yellow crown. The under parts of both females are alike. A structural feature, more apparent in life than in the skin, is that *P. preussi* has a shorter tail than *P. insignis*; moreover it does not ascend into the very high altitudes as does *P. insignis*. The two birds come very near to overlapping in their distribution, and on the lower slopes of the Cameroon mountains it is important to distinguish carefully which species comes under observation. Measurements of *P. preussi* are: Wing (male) 80–87 mm., (female) 78–81 mm.; tail (male) 36–43 mm., (female) 37–38 mm.

Not very much is known about this weaver, which inhabits localities as far apart as Sierra Leone and Cameroon. It is found in second-growth forests in the southern Cameroons and was noted along the banks of streams in Sierra Leone as well as on the Birwa plateau. Its habitat seems to be a varied one. It is believed to live largely on insects, for which it searches the bark of trees, exploring every crevice in creeper-like fashion.

Its nest has not been described and the eggs are unknown.

Distribution and Races

P. preussi preussi (Reichenow) is found in Sierra Leone, where it has been obtained both in the Tembikunda district and on the Birwa plateau (4,500 ft.). That is a great extension of its range, for

it was previously (to 1930) known only from Lower Guinea, where it lives in the lowland second growth from the base of Cameroon Mountain and Meme River to the Ja River in southern Cameroon. It has spread along the northern Belgian Congo along the Uelle River.

Another race, *P. preussi congoensis* Neunzig, has been described from the Lower Congo (Makoia) and has crown and breast somewhat darker, a shorter wing and thicker bill, but I have seen no specimens myself.

YELLOW-CAPPED WEAVER

Phormoplectes dorsomaculatus (Reichenow)

VERY like *P. preussi*, but the male has a crown entirely yellow, not golden brown as in *P. preussi preussi*, and a black, not yellow, rump. The female *P. dorsomaculatus* also has a black rump, the female of *P. p. preussi* a yellow rump; in the latter species all but the forehead is yellow, whereas in *P. dorsomaculatus* only the nape is yellow, the crown being black. The tail in *P. dorsomaculatus* is longer than in the very short-tailed *P. preussi*. Such distinctions in plumage are quickly noticeable in the hand, but in life it must be very difficult to distinguish *P. dorsomaculatus* from *P. preussi*. I have no field notes which will assist to identify one from the other. The measurements of the Yellow-capped Weaver are: Wing 78–79 mm., tail 44–48 mm. Only two specimens, male and female, were available for the purpose.

This is a rare weaver which has seldom been seen by Europeans, and was formerly confused with *P. preussi*. It was discovered at Yaunde in French Cameroon and was not seen again until a breeding pair were obtained at Bitye in the southern Cameroon forest. Nothing whatever is known about its life-history.

Distribution. The forests of French Cameroon, but known only from two localities mentioned above.

NEUMANN'S BAGLAFECHT WEAVER

Othyphantes baglafecht neumanni Bannerman

IN breeding dress this fine weaver should be recognised without difficulty, the very distinct large black patch on the cheeks and surround of the eye together with the jet-black bill contrasting with the bright yellow forehead, throat and under parts and the green back, which in the sunlight must appear more vivid than it does in

the skin. The whitish belly and yellow thighs and under tail-coverts are also characters to observe in the male as well as the female, but it must be remembered the female has no black on the sides of the face and no yellow on the forehead, which is green like the back. This weaver has particularly powerful legs of a pinkish colour.

In the off-season it undergoes a remarkable change of dress, both sexes assuming a sparrow-like plumage, in which garb it will not be easily identified. It is then almost uniform grey-brown above, with dark middles to the feathers, buff and white under surface and a greenish tail. The bill is then slate-colour and the legs are more brownish-flesh colour. The egg, which is creamy white, undergoes no change. Measurements are: Bill 17–19 mm., wing 76–84 mm., tail 50–59 mm.

This weaver has a very circumscribed range in British Cameroon, but there it is common and easy to observe and collect. Its habitat is a varied one and includes the trees on the outskirts of native villages, patches of farmland, especially where maize is cultivated, clearings in mountain forest, and grass-covered mountainsides dotted with shrubs. It is the possessor of an extremely shrill voice, which draws attention to its presence, and has a wheezy, vigorous song.

The Baglafecht Weaver breeds towards the end of the rains, the male doing the work. Three nests found in September and October in the Bamenda district were oval-shaped with the opening near the upper pole and were unspouted. The nests were built of grass strips lined with large flowering grass-heads and tufts of plant down. Two were built in shrubs 6 ft. from the ground; one was attached to three stout grass stalks 8 ft. from the ground. Not more than two eggs are laid, sometimes only one. They are boldly blotched with chestnut-brown and olive-brown and have lilac secondary markings. The ground colour varies from blue-green to pale pinkish cream. Measurements are: 20·9–22·5 × 14·4–15·4 mm.

Distribution. Banso, Oku and Bamenda (3,000–7,500 ft.) in British Cameroon. The typical race, *O. b. baglafecht* (Vieillot), inhabits the mountains of Abyssinia, more than 1,700 miles to the east, while *O. b. eremobius* (Hartlaub) lives on the borderlands of the Lado district and the Belgian Congo.

BATES' WEAVER

Othyphantes batesi Sharpe

The adult male of this weaver has the entire crown, nape and cheeks orange-chestnut and the concealed bases of the feathers yellow. At the base of the neck (apparently) is a narrow collar of yellow

feathers.* The rest of the entire upper surface, including the wings and tail, is bright olive-green, and the quills are blackish bordered with olive-green on the outer webs. The tail is olive-green of a slightly darker shade than the back. Chin and throat, lores and eyelids are black. The lower part of the neck is bright yellow, like the rest of the under parts, and sharply defined from the black throat. Axillaries are yellow; under wing-coverts are white at the base, terminally yellow. The eye is dark brown, the bill black; legs and feet are bluish grey. Measurements are: Bill (male) 16 mm., (female) 14·5–16 mm.; wing (male) 74 mm., (female) 74–75 mm.; tail (male) 49 mm., (female) 48–49 mm.; tarsus 17–18 mm.

The adult female differs from the male in having the crown, nape, lores and cheeks black, the throat yellow and the under parts from the breast to the under tail-coverts yellow, strongly washed with olive-green, only the middle of the belly being pure yellow. At the base of the neck, separating the black nape from the olive-green mantle and back, the feathers are more yellow than green. In other respects male and female are alike in plumage, sharing the green wings and tail.

No European has seen this weaver alive, the few specimens which are known having been collected in the Cameroon forest country by native boys with bows and arrows. The crop of those examined contained insects, but nothing is known about the life-history of the species.

Distribution. The southern Cameroon forests.

BANNERMAN'S WEAVER

Othyphantse bannermani Chapin

A DETAILED description of this weaver, which appeared in my larger work, reads as follows. Lores, feathers surrounding the eye, cheeks, ear-coverts, chin and upper throat deep black; top of the head, sides of the neck, and rest of the under parts bright golden yellow, inclining to orange on the forehead, the black upper throat meeting the yellow lower throat in a concave line; rest of the upper parts from the nape to the upper tail-coverts yellowish olive; tail similar, but rather darker; primaries and secondaries dark brown, yellowish olive on the outer webs; wing-coverts very similar, most of the outer webs being yellowish olive; the wings when closed appear nearly uniform in colour with the back; under wing-coverts pale yellow, marginal coverts bright yellow. Bill black in dry skin;

* In the only male specimen in the British Museum a number of feathers at the base of the neck have been lost in skinning. There are enough present to suggest that a narrow yellow collar is present in the species in life.

feet brownish. The wing measures 75–77 mm., the tail 54–56 mm. The sexes are believed to be alike.

The most striking feature is the pure black facial patch, black malar region and black throat in contrast to the yellow forehead, and sides of the head and the yellow under parts. The green tail is also a character to note.

This rather scarce weaver is an inhabitant of British and French Cameroons and has an altitudinal range of 5,000–7,500 ft. It lives in small parties, frequenting the trees and vines on the edge of the mountain forest and in dense shrubberies in the open part of the forest. The call-note is a sharp *prit*.

Distribution. Discovered in the Djang and Nkongsamba districts of Cameroon. It has recently been found at Bamenda and at Lake Oku as well as on Mount Manenguba in British Cameroons.

BLACK MOUNTAIN-WEAVER

Heteryphantes melanogaster melanogaster (Shelley)

This is a small weaver (under 5½ in. in length) with a rather fine-pointed black bill. The head is yellow and the rest of the plumage jet black, including wings and tail. The male has a yellow band surrounding the black throat, but in the female the entire throat is yellow. It is an unmistakable bird in the field—very conspicuous with its black body and yellow head. The wing measures 65–75 mm. and the tail 43–57 mm.

The lowest altitude at which this weaver has been seen is in the vicinity of Buea on Cameroon Mountain, where the birds were

creeping about in secondary scrub in trees and bushes close to the ground. At the other extreme we find it living at 7,000–8,000 ft. in British Cameroons, and it occurs also in the mountainous parts of Fernando Po. The Black Weaver is not an inhabitant of the tree-tops but spends most of its life in the forest undergrowth, building its nest on the outermost branches of little bushes hidden away in the forest.

The nests are built singly, not in colonies, and two eggs appear to be the usual clutch.

This is the weaver, though of another subspecies, which in Jackson's *The Birds of Kenya Colony and the Uganda Protectorate* is named the Uganda Black-billed Weaver from the fact that it has a bill of that—for weaver birds—unusual colour.

Distribution and Races

H. melanogaster melanogaster was discovered on Cameroon Mountain at 8,000 ft. and has since been found in the neighbouring montane district of British Cameroon in the Banso Mountains north of Kumbo, near Bamenda, and on Manenguba and Kupé Mountains. It is the typical race too which occurs on Fernando Po in similar highland country.

In the mountains of East Africa a closely allied race, *H. melanogaster stephanophorus* Sharpe, is found in the forest districts of Uganda and Kenya Colony west of the Rift Valley.

VIEILLOT'S BLACK WEAVER

Melanopteryx nigerrimus Vieillot

The male of this weaver has entirely black plumage and a lemon-yellow eye. The female has the whole upper parts brownish olive with blackish middles to the feathers, dark brown wings and tail and olive breast becoming yellowish on the belly. The wing measures (male) 84–90 mm., (female) 77–86 mm.; tail 48–56 mm.

The jet-black plumage of the male is not as distinctive a dress as anyone unfamiliar with the birds of the surrounding country might think. Within the area lying between the Senegal River and the Congo are five weaver birds which either in the male or the female (or both) have almost, if not entirely, black plumage, and are very similar in size and general appearance. In fact, for many years there was endless confusion between them, more especially in the forests of Cameroon, where no fewer than four of the five species meet.

To simplify the identification of these black weavers it may be assumed that if the bird is observed anywhere in:

(*a*) Sierra Leone, Liberia, the Ivory Coast or Gold Coast, it is likely to be *Melanopteryx albinucha albinucha*;

(*b*) Nigeria, either *Melanopteryx albinucha maxwelli* or *M. nigerrimus*, a male of which has occurred at Oban;
(*c*) Fernando Po, *Melanopteryx albinucha maxwelli*;
(*d*) Cameroon, either *Melanopteryx nigerrimus* (male), *Melanopteryx albinucha maxwelli*, *Malimbus cassini* (female), or *Malimbus coronatus* (female).

From all the above-mentioned weavers the adult black male of *M. nigerrimus* may be distinguished in the field by its bright yellow eye. *M. a. maxwelli* in Cameroons has a creamy-white eye, though specimens collected by two different collectors (Alexander and Seimund) in Fernando Po describe the eye as lemon-colour. *M. nigerrimus* has a "sparrowy" plumaged female (and young) inclining to pale yellow on the belly, utterly unlike her consort. In *M. a. maxwelli* both sexes are black in the adult bird, the young generally having grey under parts. Females of *Melanopteryx nigerrimus* and of *Cinnamopteryx castaneofuscus* are indistinguishable unless seen with their consorts.

The female of *Malimbus cassini* and *Malimbus coronatus* have both been confused with males of *Melanopteryx nigerrimus*. They are more easily identified in the field than in the museum, for both *Malimbus* have brown eyes in life (not bright yellow as *M. nigerrimus*), and both have males with some scarlet about the head. *M. nigerrimus*, in addition to having a heavy blunt bill with rounded culmen and the lower mandible somewhat swollen at the base, has strikingly large feet, and, compared with *M. a. maxwelli*, brownish-flesh coloured legs and feet and not blackish.

This very social weaver is nearly always to be seen in flocks and in its nesting habits closely resembles the village weaver. Some colonies may consist entirely of *M. nigerrimus*, but often the two birds mingle their nests together.

In British Cameroon Vieillot's Weaver is common, especially in the lower zone and environs of Cameroon Mountain. Nesting colonies may be found in close proximity to dwelling places, the nests built in palms or banana plants, but they may equally well be placed in wild places far from habitations.

The nest is woven of grass-blades, the inner walls of finer grass and seed-heads. The entrance from below has no sign of a porch but may be distinguished by its large size and semicircular shape. It seems to have no fixed breeding season in Cameroon. In the Bamenda district of British Cameroon nests were discovered attached near the top of a tall grass-stem, whereas in East Africa they are usually built in trees. Eggs are usually two in number, rarely three. They are blue in colour, immaculate, but occasionally with purplish spots and blotches about the large end. Measurements are: 21·1–25·4 × 15–17·4 mm.

Distribution. From eastern Nigeria (Oban) this bird ranges to northern Angola, extending across the Belgian Congo to north-western Tanganyika and Uganda, where it is widely distributed and conspicuous on account of its numbers and distinctive plumage.

WHITE-NAPED BLACK WEAVER

Melanopteryx albinucha Bocage

I CONSIDER that Maxwell's Weaver, which is an inhabitant of Fernando Po and the Lower Guinea forests, is nothing but a race of *M. albinucha*, the White-naped Weaver, which occurs in Upper Guinea, and I treated it accordingly in my larger work.

Under the last species (*M. nigerrimus*) I have given some hints which may help to prevent confusion between the black-plumaged weavers, and when attempting to identify these birds in Sierra Leone, Liberia, the Ivory Coast and the Gold Coast the matter is simple enough, because so far as we know the only black weaver in the area is *Melanopteryx albinucha albinucha.* It is when we come into the territory inhabited by *M. albinucha maxwelli* that great care is needed in identifying black-plumaged weaver birds. For instance, although the all-black plumage of *Melanopteryx albinucha maxwelli* may be sufficiently distinctive in Fernando Po to enable adult birds to be readily recognised, yet on the mainland it is impossible to distinguish it from *Melanopteryx nigerrimus* where the two occur together unless the females are seen in company with their consorts. The males of both species are indistinguishable in the field, but whereas the female of *M. a. maxwelli* is entirely black, the female of

M. nigerrimus is olive, streaked with brown above and yellowish olive below. Relative size is always an unsatisfactory character in the field, but *M. nigerrimus* is appreciably larger than *M. a. maxwelli* and is a much commoner bird.

The wing of *M. a. albinucha* measures 75–85 mm., tail 43–48 mm. The wing of *M. a. maxwelli* measures 78–85 mm., tail 42–47 mm. The eye is white, cream or pale yellow.

Maxwell's Weaver, by which name this bird is known in Lower Guinea, lives in the lowland woods of Fernando Po and in the forest around the Ja River in southern Cameroon. It is evidently very numerous at certain times of the year in the neighbourhood of Bitye, coming to roost in flocks in the tall grass in large numbers. It seems to be an exceptionally restless species whose movements are erratic. As with the northern representative, it will have favourite trees in which both to roost and to breed.

It builds hanging nests in large colonies, sometimes in close proximity to a colony of Village Weavers (*P. cucullatus*), which systematically rob the smaller birds of their nesting material. They have been observed flying after insects from high perches in the trees much in the manner of flycatchers, returning to the same spot again and again.

Distribution and Races

M. a. albinucha ranges in the forest country from Sierra Leone to the Gold Coast, and all specimens from the area stated have the feathers at the base of the neck white, forming a nuchal patch from which the bird gains its Latin name.

In Fernando Po and Cameroon, ranging east to the Ituri forest in the eastern Belgian Congo, we have the very closely allied *M. albinucha maxwelli* Alexander, in which the plumage is almost exactly as in the typical subspecies, but the nuchal patch is grey and less exposed to view.

CHESTNUT-AND-BLACK WEAVER

Cinnamopteryx castaneofuscus (Lesson)

THE male of this weaver is garbed in a striking pattern of black and chestnut and has a bright yellow eye. The entire head, throat, breast, wings and tail are jet-black; the mantle, back, rump, upper tail-coverts and belly are bright chestnut. The bill is black; legs and feet are a dirty flesh colour. In life and at a distance the chestnut in the plumage does not show up, and the whole bird appears black. The lack of any yellow on the mantle and the all-black throat and breast distinguish it easily from the male Yellow-mantled Weaver with its chestnut breast and belly.

The sparrowy-looking female of the Chestnut-and-Black Weaver with buffish-yellow under parts and streaked brown upper parts lacks any distinctive markings and may easily be mistaken for a hen Vieillot's Black Weaver (*Melanopteryx nigerrimus*). The measurements of *C. castaneofuscus* are: Wing (male) 79–86 mm., (female) 70–79 mm.; tail (male, female) 45–50 mm.

This is an Upper Guinea resident of which there are no reliable records from east of the Cross River in Nigeria. West of that it is generally but locally distributed, and as it nests very often in company with the Village Weaver as well as with the Black Weaver, it is fairly well known to the European community. It usually avoids house-gardens in which to build, but is found commonly on abandoned cultivated ground or weed-grown bushy areas and may be seen feeding among the foliage of secondary trees of the forest and in heavy bush.

Several accounts of its nesting were published in my larger work and from all it is plain that the Chestnut-and-Black Weaver enjoys the company of other species when breeding, though living a more or less isolated existence among those weavers with which it associates. In Sierra Leone it has been found nesting in the tall grass in association with the Fire-crowned Bishop, attaching its domed nest of grass to the same stem as that of *Euplectes hordacea*. Generally it builds in trees such as the silk-cotton but not uncommonly in bamboos, sugar or maize.

Completed nests are often left empty for weeks before the clutch is laid. When the nests are in the same trees as those of *P. cucullatus* they may be distinguished in most cases by lacking the short entrance tube which is characteristic of the nest of the Village Weaver.

Attention has recently been drawn to the varied breeding sites and to the different breeding times of neighbouring colonies in south-western Nigeria. Around Abeokuta colonies were variously located in oil and coconut palms, in dry reed-beds and over water in marshy backwaters of the Ogun River. Nests in palms are suspended from the lateral leaves of one of the fronds, those in the marshes or reed-beds are built around one or more stems of reeds or aquatic plants, while others hang from the drooping branches of shrubs and trees overhanging water, being firmly bound to the terminal twigs. Eggs and young were found at different colonies

between May and August, and males were building as early as February. The usual complement is two eggs, but sometimes three are laid. They are uniform blue in colour, sometimes with a belt of deeper blue near the large end and varying in shade considerably. They measure 22·3–24·5 × 15–16·5 mm.

Distribution. Sierra Leone, Liberia, Ivory Coast, Gold Coast and Nigeria, not known east of the Cross River and mostly in the coastal Provinces. There are no records from Cameroon.

YELLOW-MANTLED WEAVER

Melanoploceus tricolor tricolor (Hartlaub)*

Both male and female have the head and throat jet-black; the mantle is golden yellow, and the whole of the rest of the upper parts, scapulars, back, rump, upper tail-coverts, wings and tail, are black. Breast and belly are bright chestnut. The under tail-coverts are black mixed with chestnut; axillaries and under wing-coverts are black, the latter being tinged with chestnut. The eye is dark brown, the bill black; legs and feet are horn-colour. Measurements are: Bill (male) 19–20 mm., (female) 18 mm.; wing (male) 85–90 mm., (female) 83–85 mm.; tail (male) 45–50 mm., (female) 44–47 mm.; tarsus 19–20 mm.

Immature birds have the whole crown, neck and mantle chestnut, the ear-coverts brown, the throat brown tinged with chestnut. The breast and belly are pale chestnut; the back, wings and tail are black, but not jet-black as in the male. The yellow feathers of the mantle are assumed gradually, those nearest the back first.

There should be no fear of confusing this weaver if a view of the upper parts is obtained, when the bright yellow mantle will proclaim its identity, in strong contrast to the black plumage elsewhere. Seen from below it is less easily recognised, as the chestnut under parts, though contrasting with the black throat and the blackish under side of the wings and tail, are less easily discerned. The eye of the Yellow-mantled Weaver is brown, whereas in the Chestnut-and-Black Weaver it is yellow, at any rate in the male bird. In the latter species the female has a sparrow-like plumage, but in *M. tricolor* both male and female are indistinguishable.

The Yellow-mantled Weaver keeps very much to the top of the highest trees, and its nesting colonies may easily be overlooked in consequence. Naturalists familiar with the forests have sometimes had their attention drawn to this weaver for the first time when one of the giant trees of the forest falls to the ground, when the spouted

* For description of this new genus see Mackworth-Praed and Grant, *Ibis*, 1946, p. 228; genotype *Hyphantornis tricolor* Hartlaub.

nests can be examined. The majority of specimens obtained by collectors have been shot in the tree-tops, and little has been learned of the social life of this weaver. Examination of the stomach contents has shown that birds have been feeding on smooth caterpillars, larvae, insects, seeds and palm fruit.

It nests at times in huge colonies; in the lower branches of one enormous tree it was estimated that 500 nests were present. Nests are seldom if ever less than 90 ft. from the ground, composed externally of woven vine tendrils, with a canopied or slightly tubular entrance. A soft bed of fine tendrils provides the lining. Eggs are either white or uniform pale blue without markings, but only one nest colony has been examined and few of the nests contained eggs. It breeds from May to September.

Distribution and Race. This bird is more widely distributed than the last species discussed, for it is found in the forest country from Sierra Leone to Portuguese Congo. In Sierra Leone it has been found mainly in the north and east of the Protectorate. In the Gold Coast it is recorded from many localities, and the same applies to Cameroon; but in Nigeria it has been reported only from Ibadan, Ilesha, Ilaro, and from localities in the lower Niger district. Owing to its spending most of its life in the canopy, it may be much commoner than appears from the records I have received. How far to the east this, the typical race, ranges in the Congo forest I am uncertain.

Its place is taken in Uganda and the adjoining districts of the Belgian Congo by *Melanoploceus tricolor interscapularis* Reichenow, in which the black of the head is continued on to the nape.

SLENDER-BILLED WEAVER

Sitagra luteola luteola (Lichtenstein)

This is one of the smallest of the true weavers, measuring about 4 in. from bill to tail. The male in bright breeding dress with its black mask (forehead, cheeks, throat and bill), yellow hind crown and yellow under parts is easily recognised, but in non-breeding (or immature) dress it is a very drab little bird, somewhat sparrowy on the back and pale yellow below with whitish belly. Both from its small size and quick movements it might be confused with some yellow warbler as it explores the twigs of little trees for its insect food. The nests, too, which are typical weaver constructions, are smaller than most pendant spouted nests of the *Ploceinae*. It is a woodland, not grassland species, of the drier country, and is not gregarious. The only species with which confusion may take place is *Sitagra monacha*, the males of which are indistinguishable in the

field and even when handled need very careful comparison, *S. luteola* having a slightly streaky instead of uniform back, more buff edges to the wing-coverts and purer yellow under parts, not darker yellow on the chest than on the belly as in *S. monacha*. The females show more differences, *S. luteola* being duller and paler, with the upper parts more olive-brown with dark streaks on the mantle, not uniform olive-yellow. There is no conspicuous yellow eye-stripe as in *S. monacha* and the under parts are paler, being whiter on the belly and washed with buffish on the throat. I do not consider *monacha* to be a race of *S. luteola*.

The measurements of *S. luteola* are: Bill 11–12 mm., wing 59–65 mm., tail (male) 36–39 mm., (female) 30–37 mm.

Travelling through the bush country of Africa north of the Equator, the Slender-billed Weaver will be found from west to east. It has recently been discovered to range as far north as Timbuktu in French Sudan and to Tawa and Tillia in French Niger and is equally widely spread in the northern provinces of Nigeria and the Northern Territories of the Gold Coast.

Its breeding season lasts the whole of the summer to late autumn. Young, in fact, have been observed being fed in November. In the semi-arid belt it prefers to nest in the little trees, and, unlike so many weavers, it builds singly, not in colonies. Though it ranges so close to the desert, it is more at home in the better-wooded country which lies north of the remaining patches of forest. It shows some preference for building in the vicinity of native villages, and in the Inundation Zone of the Niger the first intimation of its presence is usually the sight of one or more of its beautiful little nests suspended from the naked branches of an *Acacia albida*.

As many as ten nests may be found in close proximity, always at a good height from the ground, but as remarked already, single nests are by no means uncommon and the species is not really a colonial builder. The nests are a delicate latticework of fine strips of grass and bast, shaped like a spherical bowled pipe hung bowl up, the stem pointing vertically down, making a spout entrance to the nest. It is either unlined or with a scanty lining of grass-heads. In many cases it is built in close proximity to a wasp's nest, hanging within a foot or two of it (or the wasp's nest may be built near the weaver's). The occupiers live in complete harmony. Eggs number two or three and are white, pinkish white or blue-grey. They measure 16·4–20·6 × 11·9–13·9 mm.

Distribution and Race. From Senegal, Gambia and Portuguese Guinea east through the semi-arid belt to Lake Chad and the Shari, thence across Africa to the Nile valley, Eritrea and southern Abyssinia.

Another subspecies, *S. luteola kavirondensis*, occurs in Uganda and Western Kenya Colony.

WEST AFRICAN LITTLE WEAVER

Sitagra monacha Sharpe

This small black-faced weaver—a character restricted to the male—is so like *Sitagra luteola* in breeding dress that the two species have constantly been confused. The total length is not more than 4½ in.—slightly smaller than *S. luteola*. In the male of *S. monacha* the mantle and back are uniform and the nape is golden yellow. In *S. luteola* the back is slightly streaky and the olive of the mantle is continued on to the nape. On the under side *S. monacha* is distinctly brighter and deeper yellow than in *S. luteola*, and the latter has broader buff edges to the wing-coverts. In both sexes the bill of *S. monacha* is finer and straighter and slightly longer than in *S. luteola*. The female, which has no black on the head, is much brighter than the female of *S. luteola*, has the whole upper parts including the crown bright olive-yellow unstreaked, and has a very distinct bright yellow eye-stripe. The under parts, too, in *S. monacha* are very bright yellow, including the belly, whereas in *S. luteola* the belly of the female inclines to whitish and the rest of the under parts are pale yellow. Its small size usually enables it to be recognised among the larger Golden Weavers in the same area and it inhabits a different type of environment from *S. luteola*, which prefers much drier and more arid surroundings.

The measurements of *S. monacha* are: Bill 13–14 mm., wing (male) 57–60 mm., (female) 51–56 mm., tail (male) 34–36 mm., (female) 33–35 mm.

The Little Weaver is much more local in its distribution than the last species discussed, and even in the Gold Coast, where it has been secured in a number of localities, it cannot be considered other than rare save in a few favoured localities. Its status is not well defined anywhere, and information regarding it is scrappy. Probably it is much better known in the Congo, for the Gold Coast appears to be the western limit of its range on the coast.

It appears from localities in which it has been observed or collected to be partial to waterways, for we hear of it on the Volta and from the Niger, Bomokandi, Congo and Camma Rivers. At Wurri its nests were found suspended from twigs overhanging the water, and those seen in the Congo are described as being woven partly

of seed-bearing grass-heads, as well as of strips from leaves. The rounded nests are without long spouts and some have no spouts whatever. They are nearly always suspended over water. Two white eggs form the normal complement and measure 16·5–19 × 12·5–13 mm.

The nest sent to the British Museum from which the drawing was made which appeared in my larger work (vol. vii, fig. 8) was most unfortunately wrongly identified as that of *Sitagra monacha*, so I have since been informed by the sender. It is in fact that of a closely allied black-headed weaver.

Distribution. Tolerably common along the Volta and recorded from Cape Coast and Ashanti, but does not occur west of the Gold Coast apparently. In Nigeria it has been found at Egga, Bonny and Old Calabar and on the lower Niger. It occurs in the lowlands from Cameroon Mountain to the Loango coast and across the Belgian Congo, where it must be widely spread, as it is recorded from the Luapula River in south-eastern Congo and the Bomokandi River in the north-eastern Congo. It is a mistake to consider this Little Weaver a race of *S. luteola*, as some authorities affirm. It is a perfectly distinct species and has no known races. (See footnote in my *The Birds of Tropical West Africa*, volume vii, p. 71.)

GAMBIAN BLACK-HEADED WEAVER

Sitagra melanocephala melanocephala (Linnaeus)

The male in breeding plumage is a handsome bird with black head, bright yellow under parts and olive-yellow back, the collar of bright yellow which surrounds the head being more conspicuous in this weaver than in the very similarly coloured Yellow-collared Weaver (*capitalis*) from northern Nigeria. The dark wings have broad yellow borders to the feathers, and the bird has an olive tail which does not contrast with the colour of the back. It has a black bill and brownish-flesh coloured legs and feet. Measurements are: Bill (male) 15–17 mm., (female) 13–15 mm.; wing 76–77 mm., (female) (one only) 66 mm.; tail (male) 47–49 mm., (female) 43–47 mm.

The adult female has the crown brownish washed with olive, including the nape, the cheeks with a buffish or pale-yellow wash. The mantle, back and scapulars are brown with dark middles to the feathers, becoming uniform brown on the rump. The upper tail-coverts are light brown with olive fringes; the wings are brown, the coverts with broad white or yellowish-white tips and the quills outwardly margined with bright yellow. The tail is light brown with narrow olive border. The under parts are white, washed on the breast and flanks with buff, and faintly (on one specimen) with

yellow. The under tail-coverts are white or whitish; the under wing-coverts are pale buff washed with yellow; the quill lining is yellow and the axillaries are pale buff.

Owing to the similarity of this bird with the Niger Black-headed Weaver (*Sitagra capitalis*) and with the Vitelline Masked Weaver (*Plesiositagra vitellinus*) there has been a good deal of confusion, not only as regards its range but also its status in the countries which it inhabits. It was described in the first instance from the vague locality "Guinea," by which was probably intended "Senegambia." It is said to be not uncommon in Gambia today, building its nest in the thorn-trees on the Cape road, Bathurst, and in similar situations elsewhere, usually two nests in a tree. I quoted some varied opinions about this bird in my larger work, but until we have more definite information concerning it, it is best to deal with it very briefly.

Distribution. I have, in my larger work, restricted the habitat of this weaver to Senegal, Gambia and Portuguese Guinea, from which countries I have seen specimens. It has been reported from the French Sudan, but just how far east its range extends I am not prepared to say.

A race of this weaver occurs on the western shores of Lake Tanganyika named *Sitagra melanocephala duboisi* (Hartlaub) which ranges west to the Ubangi River.

NIGER BLACK-HEADED WEAVER

Sitagra capitalis (Latham)

This is another black-headed weaver, the rest of the upper parts being golden yellow with a brighter yellow collar, the breast orange-chestnut and rest of the under side bright yellow. It is slightly smaller in size than the Gambian Black-headed Weaver. The bill measures 14–15 mm; wing (male) 66–76 mm., (female) 59–70 mm.; tail (male) 42–48 mm., (female) 35–45 mm.

The adult female differs entirely from the male. The crown and cheeks are pale brown, more or less uniform and tinged with olive. A narrow stripe is present in front of the eye and is pale sulphur-yellow, as is the eyebrow stripe. The mantle and scapulars are light brown with prominent dark brown middles to the feathers. The rump and upper tail-coverts are uniform brown, with slight rufescent tinge. The lesser wing-coverts are brown with paler fringes; the median and greater coverts are darker brown, edged and tipped with yellowish buff, as are the inner secondaries. The primaries and outer secondaries are dark brown, margined with olive-yellow. The tail is light brown, prominently margined with

olive-yellow. The chin and throat are almost white, sometimes tinged yellow; the sides of the neck and breast are very pale brown, slightly tinged with saffron, as are the sides of the body. The middle of the belly and under tail-coverts are white, the latter tinged with saffron at the base, Axillaries and under wing-coverts are saffron; the edge of the wing and quill-lining are sulphur-yellow. The eye is dark brown; the bill is black, white at the base; legs and feet are flesh-colour.

The adult male when not in breeding dress assumes a dull streaked sparrowy plumage, the head being strongly washed with olive, the mantle and back light brown with dark brown middles, the breast saffron-buff and the belly white.

This black-headed weaver is very closely connected with the Niger River throughout its length. It has in fact a very distinct habitat, for it is always found near river or lake margins overgrown with high grass. In the off-season large restless flocks, mostly in non-breeding dress, wander about, but by the end of July the birds are paired and males have assumed the black and yellow plumage and begun nesting operations.

Very little is known about the seasonal movements of *Sitagra capitalis*, for when in dull plumage they are indistinguishable from *Plesiositagra vitellinus* and *Sitagra melanocephalus*. It seems that it is a common bird in the Inundation Zone of the Niger and may be found breeding all along the waterways where zizyphus and acacia bushes overhang the water.

The nest differs from that of the Common Village Weaver (*P. cucullatus*) in having no funnel-shaped entrance and in having two distinct linings, the outer one of short broad pieces of grass, the inner of fine panicum grass and feathers. The colonies seldom exceed twenty nests, though as many as fifty have been found, and are more scattered, never giving the impression of intense activity which we associate with a colony of *P. cucullatus*. The two species mix amicably when their territories overlap.

In Nigeria this black-headed weaver is common on the river banks about Lokoja and young have been found in mid-August, though further north nesting begins later. The eggs show such remarkable variation that it is impossible to describe them succinctly, and I refer the reader to my larger work (vol. vii, p. 78). The ground may be brightish green, pinkish grey, French green, pale blue, lavender or bluish white, with every imaginable variety of markings, spots and caps, usually copiously and finely spotted with purplish brown or clouded at the obtuse end. Measurements are 17·5–20·3 × 12–14·2 mm. The clutch consists of two or three eggs.

Distribution. The environs of the Niger River from Shonga and Loko to the Inundation Zone in the French Sudan and the Upper

Niger. It also occurs near Lake Chad, but how far east its range extends beyond Chad territory is uncertain. It has been recorded from Ubangi-Shari, but I have examined no specimens from east of Chad.

HEUGLIN'S MASKED WEAVER

Plesiositagra heuglini neglectus (Neumann)

THE male of this weaver has no black on the crown, which is entirely golden, the cheeks and throat being, however, black. The rest of the upper parts are more or less uniform olive-green, the breast inclining to chestnut and the black of the throat descending on to the crop. The rest of the under parts are bright yellow. The female is very unlike the male, being dull olive above, rather greyer on the mantle, which has dark shaft-stripes, not very obvious unless handled. The wings of both male and female are dark when spread, with yellow margins. and the tail in both sexes is greenish. The bill measures 15–17 mm.; wing (male) 71–75 mm., (female) 66–71 mm.; tail (male) 35–40 mm., (female) 35–37 mm.

The masked weaver, which was described first from Senegal and is well known in Gambia, is sparingly distributed in the dry belt of West Africa. Here and there, as for instance at Wenchi in the Gold Coast and Zaria in Nigeria, fairly large colonies have been found, but one may travel widely within its range and never come across it. In East Africa, where a race of this bird is found, it has been remarked what a strong preference it has for nesting in close proximity to some other creature which may afford it a certain amount of protection. It has a close association with wasps and flying ants on the one hand and with large birds of prey—eagles, buzzards and vultures—on the other. So far this trait in its character has not been reported to me from West Africa, but it is unlikely that the West African bird differs in this respect from the typical subspecies.

The actual nest is like that of *P. cucullatus*, the well-known Village Weaver, but is somewhat smaller. It will build in trees near villages, but for all that is said to be rather more shy than many species and will fly off in alarm if closely observed. The eggs may be plain turquoise blue or light grey-green or with ground of those colours, lightly spotted with various shades of brown. Measurements are 20·5–21·5 × 13·5–15 mm.

Distribution and Races

P. heuglini neglectus (Neumann) ranges from Senegal to northern Nigeria through the semi-arid belt, south in Nigeria to the confluence of the Niger and Benue. It has been found nesting in the

east of the Benue Province at Takum and is recorded from Fort Lamy in French Chad and from the Gribingui River. It is recorded from all British Colonies except Sierra Leone, ranging to the southern borders of the semi-arid belt and occasionally beyond, as in Nigeria.

The typical race, *P. heuglini heuglini* (Reichenow), takes its place in the Bahr el Ghazal and on the Upper White Nile, ranging to the Nile Province of Uganda and to the Elgon district of Kenya Colony.

VITELLINE MASKED WEAVER

Plesiositagra vitellinus vitellinus (Lichtenstein)

As this is one of the commonest weavers in the semi-arid belt mostly north of lat. 12° N. and moreover is liable to be confused with at least two other species, I have described it with closer attention to detail than many others. The male of the Vitelline Masked Weaver in breeding plumage has the lores, ear-coverts and cheeks jet-black, the forehead chestnut, fading into golden chestnut on the crown and into bright yellow on the nape. Mantle and back are olive-yellow more or less uniform, the wing-coverts blackish margined with bright yellow and the wings very similar. The rump is bright yellow, the upper tail-coverts are olive-yellow and the tail brownish olive. Chin and throat are black; the whole of the rest of the under parts are bright yellow; the throat is washed with orange-chestnut. Axillaries and quill-lining are yellow; the bill is black, the legs are flesh colour and the eye is yellow. Measurements are: Bill 14–16 mm.; wing 64–74 mm.; tail 38–46 mm.

The adult male in the off-season moults into a sparrowy olive-and-brown streaky dress which resembles that of the adult female. It is very difficult in the field to distinguish the Vitelline Weaver, even when in breeding dress, from *P. heuglini neglectus*. Both are dry-country birds and both are recorded from Senegal; but whether they occur, much less breed, in the same area I have no definite proof. In general, *P. vitellinus* ranges further north in the semi-arid belt than *P. h. neglectus*, but while the former is one of the commonest weavers in the belt specified, the latter species is distinctly local.

The males in breeding dress are much alike, but whereas the crown of the Vitelline Weaver shades to a golden chestnut on the forehead* the whole crown and forehead of Heuglin's Weaver are uniform bright yellow. The black area of the throat in the Vitelline

* Unfortunately this golden chestnut is liable to fading when exposed to very hot sun, as around Timbuktu, and the distinction then almost disappears.

Weaver terminates abruptly and is restricted to the upper part of the throat, whereas in Heuglin's Weaver the black extends down the centre of the throat on to the crop and consequently looks much blacker.

The Vitelline Weaver has, of the two, a distinctly longer tail, and the black on the sides of the head entirely surrounds the eye, which it does not in Heuglin's Weaver. Such small points are very difficult to note unless a colony is under close observation. Both have sparrowy-plumaged females, and *P. vitellinus* has a sparrowy non-breeding dress. The Vitelline Weaver builds a blunt pear-shaped nest, as Lynes remarks, or in the shape of an inverted heart. Heuglin's Weaver, on the other hand, builds a nest very like that of the Village Weaver but rather smaller, with a similar short entrance passage hanging down.

The Niger Black-headed Weaver (*Sitagra capitalis*) is another dry-country weaver whose only certain distinction in the field is the all-black head and crown of the breeding male.

In immature plumages or in off-season dress the only sure way is to procure a specimen, and even then the difficulty of identification is not ended.

The home of this common weaver lies in the wild, almost uninhabited country, sparsely covered with scrubby trees and bushes, which lies north of any British territory in West Africa. It belongs to that group of weavers which in the non-breeding season lose their individuality and give the naturalist so much difficulty in naming them correctly. The brightly coloured males then revert to a plumage which is not possible to distinguish from the female unless closely handled, and moreover it is then not possible to recognise it in the field from Heuglin's Weaver.

It breeds during the summer months, in wild spots far removed from habitations, building blunt pear-shaped nests which hang lifeless and forlorn all through the winter. The male does the building, and the female seems to make herself scarce until the time comes for her to take possession of the home. About 50% of the nests built never get completed, and it is believed that these false nests are begun by males in their first season, when they are, as it were, learning the job of nest-building. In winter the birds form into flocks and roam the cultivated ground.

In the latitude of Timbuktu nesting begins in July and continues to the end of September. Three, or sometimes four, eggs are laid, either white or blue, spotted and blotched with red of various shades and with shell markings of violet. They measure 18·5–21·6 × 13·2–14 mm.

Distribution and Races

P. vitellinus vitellinus ranges from Senegal and Gambia eastwards

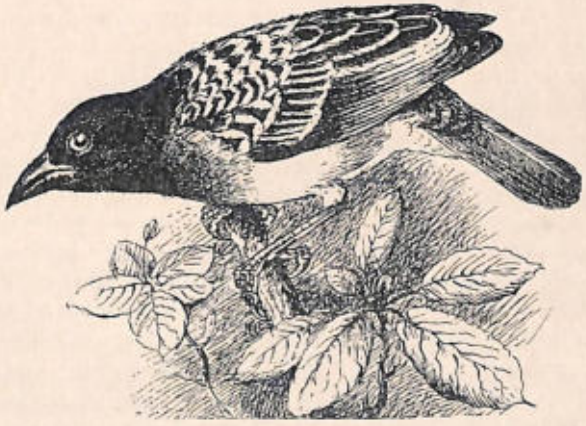
up to the borders of the desert through French Sudan, the upper Volta and French Niger and in the Northern Territories of the Gold Coast and Nigeria, reaching the coastal plains of Accra. Thence we find it across the Chad territory and Darfur to the Egyptian Sudan, including Sennar.

Its place is taken east of the Nile valley by *P. vitellinus uluensis* (Neumann), which inhabits southern Abyssinia, Somaliland, the drier parts of Kenya and north-eastern Uganda. A closely allied race occurs in parts of Tanganyika.

MOTTLED WEAVER

Plesiositagra collaris (Vieillot)

This is a large weaver about 6½ in. in total length and not unlike the common Village Weaver of West Africa, from which the females are indistinguishable, at any rate in the field. The male in full plumage is a handsome bird with its jet-black head, black-and-gold-spangled back and wings and chestnut breast with the black



of the throat extending in a V down the centre. The belly and under tail-coverts are bright buttercup-yellow. It has a heavy black bill and a conspicuous blood-red eye.

Compared with the male Village Weaver, the back of the Mottled Weaver is more spotted; in the former bird it is mostly yellow, with a conspicuous heavy black V on the mantle. Another point of difference is that the Mottled Weaver lacks the broad chestnut collar of the Village Weaver but has a chestnut breast which the Village Weaver lacks, the whole under parts of the Village Weaver being golden yellow below the black head and neck. In flight the

Mottled Weaver shows less yellow in the wings. It is, in fact, a duller-looking bird than the magnificent Village Weaver, whose fine appearance in the breeding season is difficult to beat.

As *P. cucullatus* will be described more fully, the above comparison should suffice to identify any specimen of *P. collaris*.

The measurements of the Mottled Weaver are: Bill 18·5–20 mm.; wing (male) 83–88 mm, (female) 75–81 mm.; tail (male) 48–52 mm., (female) 40–48 mm.; tarsus 21–22 mm.

In its habits this weaver, which barely comes within the limits of this book, is said to resemble very closely the Village Weaver, which will be dealt with next. In point of fact, few naturalists have seen it and information concerning it is scanty.

Distribution. The habitat of this fine weaver extends from the region of Pointe Noire and Kwamouth in the Moyen-Congo, where it occurs side by side with *P. cucullatus*, southwards to Benguella. The bird is evidently common in northern Angola around Catumbella and Ndala Tando, and we have learned recently that it is the commonest weaver in the region of Brazzaville. Its presence in Gaboon requires to be substantiated.

VILLAGE WEAVER

Plesiositagra cucullatus cucullatus (Müller)

The male of the Village Weaver is one of the handsomest of the whole family, with its black head surrounded with the broad chestnut collar, spangled black and golden-yellow back, brown wings fringed with yellow, yellow rump and green tail. It is sometimes named the V-marked Weaver from the jet-black mark of that shape on the yellow mantle. The whole under parts from the breast downwards are bright yellow, often suffused with chestnut on the breast. Rather large in size, 6½ in. or more from bill to tail, it is too well known about the villages of West Africa to need more description. The female lacks the brilliance of colouring of her consort and has an olive-green crown, sparrowy-brown back and yellow under parts, the belly being white in some examples, all yellow in others, apparently varying with age. The bill measures 19–21 mm.; wing (male) 82–99 mm., (female) 85–90 mm.; tail (male) 49–55 mm., (female) 42–49 mm.; tarsus (male) 23–26 mm., (female) 21–22 mm.

The Village or V-marked Weaver is the best known of all its family in West and Central Africa. It is to be found in all types of country, near the sea, in the savanna belt, in forest clearings and in the semi-arid, wherever there are large trees which will hold its vast colonies. The further north towards the desert it ranges the more

local it becomes, but once the baobabs are left behind it is seen no more. It can only be termed ubiquitous in the area we deal with in this book. Almost every village has its colony, but it is more likely to be the large trees in the vicinity which attract it than the presence of human beings. From Senegal to Cameroon the villages resound with its cries, and the louder the hubbub of village life the more do the weavers appear to appreciate it, adding their shrill chatter to the noise.

The Village Weaver has a perfect mania for building, and in the nesting season a colony in full occupation is a sight to be remembered. In early November hundreds of their nests swing from the branches of the silk-cotton and other giants of the forest, the nests being clustered closely together. The nests are almost too well known to need description. The variations in their outline are found chiefly in the length of the funnel opening, which is sometimes entirely missing or has an exaggerated downwards extension. Each nest is suspended to a separate twig and is cleverly woven of strips of palm leaf. The birds secure the strips by biting a small slit and then flying away with the end in the beak, tearing off the strip from the frond. Both sexes take part in nest construction. In the Inundation Zone of the Niger the borghu grass is a favourite nesting material in use, and on their return from the swamps, as each bird makes for its nest site, it carries a long streamer of borghu trailing behind it.

The nest itself is very strongly woven, has a lining often of fine fibres, and is rounded in shape with usually a short entrance tube hanging down. It seems to be immaterial whether it is made of palm strips, banana-leaf strips or grass; whichever is most handy is used.

Although so closely associated with the life of a native village, *P. cucullatus* will not hesitate to form a nesting colony far from any human habitation.

As to the nesting season, that seems to cover most months of the year. On the whole, the late summer and autumn seem to be the height of the breeding season.

The eggs are so astonishingly varied that only an outline of the clutches examined can be given. They appear to fall into three types:

Type A. Plain eggs ranging from pinkish white through white to palest powder blue through all intermediate shades of blue to deep sky blue. Occasionally very indistinct spotting occurred in one or two eggs in a clutch.

Type B. Ground colour palest blue to sky blue more or less blotched and spotted, usually more heavily at the obtuse end, with every shade ranging from olive through various browns to purple and lavender.

Type, *C.* Pinkish white to white blotched and spotted, usually more so at the obtuse end, with various shades of brown.

Measurements are 18·7–25·7 × 14–16·6 mm.

Distribution and Races. The typical subspecies ranges throughout the whole of West Africa from Senegal to southern Cameroon, occurring in all our West African possessions and widely spread in French territory as far north as the baobab occurs. Eastwards it ranges to the Chad territory. It is also found in Fernando Po. This weaver does not appear to have penetrated to Aïr, though it is found in the vicinity of Zinder. In the villages near the coastal area it swarms.

In the eastern Belgian Congo its place is taken by *P. cucullatus feminina* (Ogilvie-Grant), which ranges to Uganda and Kenya, a very closely allied race, *P. c. abyssinicus* (Gmel.), living in Abyssinia and the Sudan around the Blue Nile. Numerous other races have been described, among which may be mentioned *P. c. bohndorffi*, which ranges from Gaboon to the Uelle district of the Congo.

The Village Weaver has been dealt with at length in my larger work, volume vii, pp 87–94.

LOANGO SLENDER-BILLED WEAVER

Icteropsis subpersonata (Cabanis)

The adult male has forehead, crown, cheeks, ear-coverts and throat jet-black; the hind part of the crown and nape are golden yellow strongly tinged with chestnut, passing into yellowish olive on the hind neck. Mantle, back and scapulars are olive tinged with yellow, becoming brighter yellow on the rump, which is tinged with fulvous. Wing-coverts and wings are dark brown, the former rather broadly, the latter narrowly, margined with olive-yellow. The tail is brown. The sides of the neck and breast are golden yellow strongly washed with chestnut, the rest of the under parts being dull yellow; the under tail-coverts are fulvous. Axillaries are yellow; the under wing-coverts are grey tipped with golden yellow; the bill is jet-black. Measurements are: Bill 17 mm., wing 67 mm., tail 49 mm., tarsus 20 mm.

There seems to be some doubt whether a female example of this weaver has ever been obtained. The specimen described is a male and the only one in the British Museum.

Nothing has been discovered about this narrow-billed weaver since the type was secured about 1876 and a second example in 1883. Its habits are unknown.

Distribution. Known only from the Loango Coast, Landana and from Chinchoxo, Portuguese Congo.

COMPACT WEAVER

Pachyphantes pachyrhynchus (Reichenow)

(see Plate 49, facing page 1388)

In their full breeding plumage both sexes have bright yellow under parts and black cheeks, the male with a golden crown and the female with a black crown, a broad yellow band over each eye, and buff under the tail. In this plumage the Compact Weaver is not so difficult to recognise, especially as it is rather smaller than other weavers with which it might be confused. It is remarkable that both male and female pass completely out of the yellow dress as soon as the breeding season is over. The off-season plumage, though dull without any yellow, is still quite distinctive. The under parts are tawny brown with a broad cinnamon-chestnut stripe over the eye, a black band through the eye, and buff cheeks. The upper parts are brown and the inner wing feathers have light margins, which are noticeable. The wing measures 64–71 mm.; tail (male) 44–46 mm., (female) 40–45 mm.

Tall grass seems to be essential to the habitat of this bird, which is nowhere common. It has a wide distribution in the savanna belt, inhabiting all our Colonies with the exception of Gambia. Wherever it has been seen in West Africa it has been either on the tall grass-stalks or on little trees growing in swampy places, or else flying about in small parties on the grassy plains. Considering how many collections have reached me from West Africa in which this bird is not represented, it can only be met with here and there in suitable terrain. In Uganda and Kenya it is reported to be confined to forests and well-wooded areas in the near vicinity of marshes between the breeding seasons and to repair to the marshes for breeding.

The Compact Weaver has a more attractive voice than most of its family, for, as well as the normal call-note, which sounds like *chee*, it utters a musical *cheewery cheewery cheewery* which is pleasing to the ear. When the grasses are seeding it lives exclusively upon seeds, but when these cannot be found it feeds upon insects and insect larvae.

The nest is sometimes attached to elephant-grass, and when patches of elephant grass are growing among short grass the nests are very noticeable, even at thirty yards. In shape the nest is globular, very slightly retort-shaped, with the entrance at the side. It is placed singly and slung to some tall grass-stem. The clutch is three or four, and breeding takes place both in Sierra Leone and in southern Nigeria in September and October, when the grass is at its full height. Eggs have a ground colour which varies from white almost entirely covered with fine stone-coloured stipplings and

smears to brownish-stone colour, some clutches being more densely marked, particularly round the broad end. Eggs measure 18·5–19 × 13–13·5 mm.

Distribution. The savanna belt from Sierra Leone to northern Angola and along the Uelle River, northern Belgian Congo to the Sudan and Uganda. It is fairly well distributed in Sierra Leone but in the Gold Coast and Nigeria appears to be very local. It is found in the Cameroons up to 3,300 ft. on the Tibati plateau but does not occur in the mountains. In East Africa it ranges to Mounts Maroto and Elgon and it has been found at Bukoba in Tanganyika and in the Semliki valley in the eastern Congo. Its range seems to encircle the equatorial forest.

A race named *P. pachyrhynchus omoensis* Neumann was described from the Omo River but is not distinguishable, so that southern Abyssinia must be embraced within the range also.

SÃO THOMÉ WEAVER

Thomasophantes st-thomae (Hartlaub)

This weaver is unlike any other bird on the island and is likely to be easily recognised. Its colouring is distinctive, with its black crown and hind neck, rusty-yellow face and broad eyebrow of the same colour, dark brown back and yellowish rust-coloured breast.

Its horn-coloured bill is finer and more tapering than in most of the Golden Weavers of its size, which is about that of a sparrow. Added to this it has pale flesh-coloured legs and feet.

Measurements are: Bill (male) 17–18 mm., (female) 15–15·5 mm.; wing (male) 76–81 mm., (female) 75–76 mm.; tail 44–49 mm.

The adult female differs from the male in having the black of the crown less intense, the mantle and back more olive-brown, the

throat more inclining to white and the breast isabelline-brown, lacking the rusty colour of the male.

This is a fairly common bird in its island home but is usually encountered above 3,000 ft. It is common also in the virgin forest which still remains round Lagoa Amelia. In its behaviour it reminds one of a nuthatch rather than a weaver, tending to move along the stems, branches and twigs even of small bushes, as opposed to hopping about. It climbs like a nuthatch, going down as well as up a tree trunk. It does not search for its food systematically but will move from one point to another in quick succession. On the whole it feeds on bushes as often as on large trees where both are available. It has on rare occasions also been seen on the ground. Birds were often seen carrying food in the bill—probably seeds, as seeds and insects have been found in the stomach of specimens examined.

While searching for food it often utters an incisive *chip chip* which often precedes the little song, which has some resemblance to that of a wood-warbler's. The *chip* note speeds up and gradually turns into the song.

The São Thomé Weaver has been found building its nest in the second week of September all over the plantations. The Oxford University Expedition in 1949 paid attention to the nests which this weaver builds, often in groups of two or three in the same or neighbouring trees. The nest is round with a funnel pointing downwards and is made of creepers and twigs woven into a ball with a lining of lichens. In Bocage's notes, quoted in my larger work, he described the nest as a communal structure, the various cavities being united by a common passage, the bottom cavity in the shape of a horn. On occasion, therefore, the birds may construct that type of nest, but that described first by Mr. Snow is evidently more usual. The egg is uniform pale blue or pale green and rather elongated. One measured 23 × 15 mm.

Distribution. Restricted to the island of São Thomé.

GIANT WEAVER

Hyphantornis grandis Gray

THERE can be no possibility of mistaking this, the largest known weaver bird, with its enormous heavy black bill, reminiscent more of a shrike than of a weaver but, of course, without the hook. In size it might almost be taken for a Black-headed Oriole; the males with their black heads and bright yellow bellies have olive-yellow backs and tail, which lend some colour to the resemblance. At close quarters the dark chestnut breast and collar of the males are a

distinctive feature. From bill to tail the males must measure nearly 8½ in., which is exceptionally large for a bird of this family. The females are almost as large but are much duller plumaged than the male, being olive-brown above and with much white below, especially on the belly and below the tail, the sides of the body brown and the crop washed with pale rust-colour. The wings are dark, and an indistinct wing-bar is present. The bill measures (male) 27–28 mm., (female) 25–27 mm.; wing (male) 111–115 mm., (female) 101–111 mm.; tail (male) 65–76 mm., (female) 59–65 mm.; tarsus 28–30 mm.

In 1909, when Boyd Alexander explored São Thomé, this fine weaver was found to be numerous on the lower ground in the vicinity of cocoa plantations, and it is therefore remarkable that in 1949 it was not even seen by the members of the Oxford University Expedition to that island.

A description of its nest, which must be very large, is still awaited, and I cannot believe that the egg taken by a Portuguese collector and said to have belonged to this bird could possibly have been identified correctly. The measurements which I quoted in my larger volume are far too small for such a large weaver to lay, though I overlooked that fact when previously quoting from Professor Bocage's description. In my larger work I remarked that the bird is evidently in no danger of extinction, for it had been collected from sixteen different localities in the island, so that it is all the more astonishing that Mr. Snow and his Oxford party failed to observe it. They may have been just extraordinarily unlucky.

Distribution. The island of São Thomé and Rollas islets, formerly widely distributed on the main island. Its status today is uncertain.

SWAINSON'S SPECTACLED WEAVER

Hyphanturgus brachypterus brachypterus (Swainson)

(see Plate 49, facing this page)

This is another Golden Weaver, the male with golden-chestnut crown and face, a black patch through the eye and a black throat. The rest of the upper parts are yellowish olive-green, including the wings and tail; the under parts of the body are bright yellow. The female has the entire upper parts, including the head, olive-green, no black on the throat, which is yellow like the rest of the under surface. It has, however, the black patch through the eye and a yellow stripe over it bordering the crown. For distinctions between this and Uganda Spectacled Weaver (*H. ocularius crocatus*) see the latter species.

[redacted]

Black-faced Dioch ♂
Quelea quelea

Orange Weaver ♂ and ♀
Xanthophilus aurantius

Red-headed Dioch ♂
Quelea erythrops

Red-winged Anaplectes ♂
Anaplectes melanotis

Compact Weaver ♂ and ♀
Pachyphantes pachyrhynchus

Spectacled Weaver
♂ (left) ♀ (right)
Hyphanturgus brachypterus

Measurements are: Bill (male, female) 15–17 mm.; wing (male) 71–81 mm., (female) 70–77 mm.; tail 50–58 mm.

This is a fairly common weaver in the savanna country of West Africa which extends into forest clearings and spreads along gallery forests and is sometimes to be seen in the heart of the forest, though that is a rare occurrence. Usually it is to be seen in pairs or in small straggling parties frequenting the tall grass and the millet plantations.

As evening approaches the birds gather into flocks and repair to the grass beds to roost but that is the only time when this weaver shows any inclination to be gregarious. In the morning these same birds scatter around the clearings, individually or in pairs. They may occasionally be found feeding among grasses and ground herbage, but the trees of the cultivated areas are their special attraction. Deliberately and leisurely they search the foliage for food and will then allow close inspection, peering down at the observer without taking alarm. Its alarm cry when uttered is twangy and ugly but is not distinctive.

The nest is very like that of the Village Weaver, made of intricately woven strips of grass-blades or palm leaf and having a tubular entrance some 4–5 in. in length. Almost invariably the nests are single and attached to the bushes which grow in the grass or to the stems of a palm-tree or an isolated tree. It does not attach the nest to grass, and very rarely has it been known to build in a colony. The eggs show a wide range of colouring and shape. They may be pure white or pale blue or with white or blue ground, spotted with red. Measurements are 20·2–21·6 × 14–15 mm. Both sexes take part in nest-building and in incubation, the male spending more time at the nest.

Distribution and Races

The typical subspecies described above occurs from Senegal and Gambia through Sierra Leone, the Gold Coast and Nigeria to the Ubangi River. It is a very common bird in certain localities from Nigeria westwards. I have seen one male collected in British Cameroons at Tombel lat. 4° 40′ N., long. 9° 40′ E. (1,500 ft.) and one female specimen from the environs of Cameroon Mountain. This subspecies does not occur east of the Ubangi-Chad watershed.

In Fernando Po it is represented by *Hyphanturgus brachypterus po* Hartert, which in the male has a longer and more powerful bill (male 18–19 mm., female 15–17 mm.).

In Lower Guinea and the Belgian Congo it is represented by *Hyphanturgus brachypterus nigricollis*, which in my larger work I retained as a distinct species, *H. nigricollis nigricollis*. It has, however, been shown to be conspecific with *H. brachypterus*. The British Cameroon population is mainly intermediate in the colour of the

plumage, and this is not, as I once considered, the result of hybridisation. As the difference between the extremes of *H. brachypterus brachypterus* and *H. brachypterus nigricollis* is so marked I have dealt with each under a separate heading in this handbook, which has not been my usual plan when discussing subspecies of a species found in the area with which I am dealing.

In place of the English name Black-necked Weaver employed in my larger work (vol. vii, p. 113) I propose to refer to *H. brachypterus nigricollis* as Vieillot's Weaver.

Another race of this weaver, *H. brachypterus melanoxanthus* Cabanis, was described from Mombasa and ranges from the coastal districts of Kenya north to southern Abyssinia and south to the Pangani River.

The Lower Guinea race of *H. brachypterus* is described next in detail under the name of Vieillot's Weaver.

VIEILLOT'S WEAVER

Hyphanturgus brachypterus nigricollis (Vieillot)

This weaver is a striking bird, especially the male, with its golden-chestnut head and bright yellow under parts, the black throat and lores being in strong contrast to the yellow. The yellow head is very sharply defined from the black collar and sepia mantle. Wings and tail are brown washed with olive. The eye is brown, the bill is black and the legs and feet are dark slate-brown.

The adult female has the crown and nape jet-black, and a narrow yellow frontal band which is continued over and beyond the eye, forming a conspicuous yellow eye-stripe. Lores and stripe through the eye are black. Mantle and back are dark olive-brown, becoming pure olive-green with darker fringes on the rump and upper tail-coverts. Wings and tail are as in the male. Chin and throat are bright golden yellow, as are the whole of the rest of the under parts. Soft parts are as in the male.

Measurements are: Bill 16–17 mm., wing 71–78 mm., tail 50–56 mm.

In the forests of southern Cameroon, where this bird is locally named the Nga, it is one of the commonest weavers, but it is a retiring bird which is seldom plainly seen. Its note is more frequently heard, and though resembling the *chee chee* of other weavers, it is sweeter and more liquid in tone.

The nests are woven of fine materials and have a vestibule or entrance extending 2–5 in. below the bottom of the nest. In the Cameroon forests the nests are almost invariably composed of the slender, tough dry runners of the convolvulaceae and sometimes have grass interwoven. These nests are to be found hanging on

bushes, not on trees. The old nests are often used by other birds such as the dusky blue flycatcher in which to deposit their eggs, thus saving themselves the trouble of building.

In Cameroon the main breeding time is August and September at the beginning of the principal rainy season, and rather smaller numbers breed in March when the little rains begin. In Uganda the birds breed chiefly between March and June and then repair to the open country dotted with small trees, large bushes, clumps of elephant grass and clusters of palms growing around old antheaps.

The bird is very tit-like in many of its habits, creeping about in thick bush or in tall forest tree-tops and dense undergrowth, feeding on caterpillars, spiders, beetles and other insects. It has been observed in Uganda that the nest is frequently well hidden by the foliage to which it is attached, in which respect it differs from the nests of *H. ocularius crocatus* (which it closely resembles), which are rarely, if ever, hidden and have a larger spout.

The series of eggs which have been collected in Cameroon and Uganda show that there are four types of coloration: (1) pure white, (2) uniform pale greenish blue, (3) pale bluish green finely but sparingly freckled with lilac-grey and umber-brown, (4) pale pinkish white thickly and evenly freckled with red and pale lavender-grey. Variations of these have also been taken. Eggs measure 18–23 × 13·5–14 mm., twenty-nine eggs averaging 21 × 14 mm.

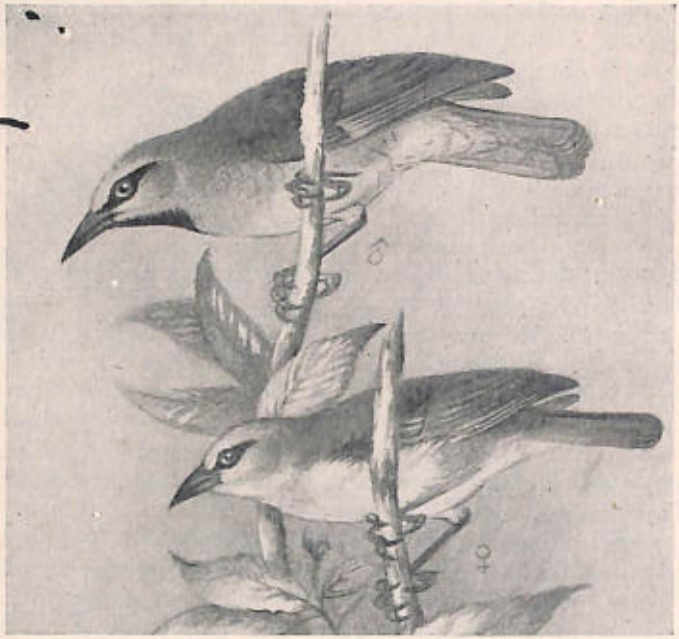
Distribution. Vieillot's Weaver ranges from northern Angola through Gaboon to the Sanaga River in Cameroon, then east through the Belgian Congo forest country to Uganda and Mount Elgon. A representative race, *H. brachypterus melanoxanthus*, occurs in the East African coastal districts as already mentioned under the typical subspecies.

It has been remarked too that the population of British Cameroon is intermediate between *H. b. brachypterus* and *H. b. nigricollis* but more closely approaches the latter, showing an increasing amount of black on the head, mantle and back.

UGANDA SPECTACLED WEAVER

Hyphanturgus ocularius crocatus (Hartlaub)

THE Spectacled Weaver is noteworthy for its longer and more slender black bill than the other golden weavers with which it might be confused. Its yellow face and forehead set off to advantage the black which surrounds the eye and is in the form of a band passing through it. Both sexes agree in this respect, the male being



distinguished from the female by the jet-black throat. The black area does not overspread the whole throat but only the middle, the malar region and cheeks being bright buttercup-yellow like the entire under surface. The upper parts, except for the forepart of the crown, are yellowish olive-green. The tail, which is olive, has a decided brown wash, making a contrast with the colour of the back. The bill measures 17–19 mm.; wing (male) 73–81 mm., (female) 70–78 mm.; tail 50–60 mm.

Adult male examples of this weaver never assume sparrow-like plumage like so many weavers dealt with already. It does not appear to undergo any seasonal change of dress.

There is no doubt that the males of *H. ocularius* are very like the

males of *H. brachypterus*, and if the females were equally close to one another (which they are not) there would be some excuse for making one a race of the other, a course with which I disagree. Comparing the two birds, we have the male of *H. o. crocatus* with a more slender and longer bill, a yellow, not golden chestnut, face and forecrown, a more golden and less chestnut crop and generally a browner and less green tail.

Now to compare the females. Even in the field it will be noted that the female of *H. b.abrachypterus* has the entire crown olive-green; the only yellow present is restricted to the feathers adjoining the upper mandible and a faint yellow eyebrow-streak bordering the black band through the eye. There is no golden-chestnut wash on the under parts, the whole of which are yellow. Taking these points into consideration, I do not agree that the species *brachypterus* and *ocularius* can be united. Nothing is gained by so doing, and the very marked differences which exist between the two females would tend to be overlooked.

In southern Cameroon this weaver inhabits the grass country and the more open parts of the forest, and its solitary nest may be seen hung on grass-stalks suspended over streams. It is exactly the same bird whose retort-shaped nests are so widely known in Uganda and Kenya, for the bird itself is shy and is not fond of close inspection. It is generally found singly or in pairs, creeping about in search of insect food in thick bush or lichen-covered boughs of tall trees, very much in the manner of a European Great Tit. Its note is very distinctive—a shrill, tremulous, tinkling trill, or, as it has been described, a shrill and laugh-like warbling song, descending in tone and modulation. Its warning note is similar to that of other weavers —a sharp metallic chirp.

The nest is neat and tidy, constructed throughout with the long thread-like fibre of palm leaves which the bird strips for itself. The nest is not attached at the side but is suspended by a sort of woven stem from twig or papyrus, and is frequently, though not invariably, hung over water. It is retort-shaped with the entrance spout loosely woven but very strong, the tunnel varying in length from a few inches to a foot or more. Eggs are almost invariably two in number —pale bluish white spotted and freckled with dark and pale grey and underlying spots of mauve. They measure 20–21·5 × 14–15 mm.

Distribution and Races. British and French Cameroon, ascending in the former to 7,000 ft. Southwards it ranges to northern Angola. In East Africa it is found in the Sudan, western Kenya, Uganda and the Belgian Congo.

Its place is taken in the coastal area of Kenya and Tanganyika by *H. o. suahelicus* and in south-eastern Africa by the typical race.

MONTEIRO'S GOLDEN WEAVER

Xanthophilus xanthops xanthops (Hartlaub)

THE Golden Weaver barely comes within our limits and must be dismissed briefly. Its range is across Africa from south of the Congo forest, but we find it again in Kenya and Uganda.

In total length it measures about 7 in. The crown is golden yellow in the male, the rest of the upper parts an olive-yellow, the rump being yellower than the back. Wing are brown, the wing-coverts edged with olive-yellow. The whole under parts and cheeks are bright yellow, the bill is black, and the legs and feet are brown.

The female is duller and lacks the yellow forehead, the whole crown being olive-green like the rest of the upper parts. The under side too is duller yellow than in the male.

The bill measures (male) 19–21 mm., (female) 17–18 mm.; wing (male) 91–94 mm., (female) 85–89 mm.; tail 62–67 mm.

The Golden Weaver has generally been observed in the vicinity of water, even though it may be only in swampy places in the grass-lands. Often it is to be found along waterways, patches of high reeds in the beds of slow-flowing marshy streams attracting it, whether at the base of hills or out in the plains.

It builds singly, or two or three together. The nest (in Nyasaland) is said to be large with little or no spout but usually a veranda of seed-heads. Eggs described from Angola had rose-pink shells spotted with reddish brown, but in Nyasa showed much variation from unspotted white or blue to heavily marked eggs with either ground colour. An average size is 25 × 16 mm. (Belcher).

Distribution. From northern Angola north to the Lower Congo and south to Benguella, then across the southern Belgian Congo to Nyasaland, Portuguese East Africa and southern Tanganyika.

Another race with more extensive golden orange, tinged with chestnut on the foreneck, has been named *X. xanthops camburni* (Sharpe), and ranges from northern Tanganyika to Uganda, Kenya and the eastern Belgian Congo.

PRINCIPE GOLDEN WEAVER

Xanthophilus princeps (Bonaparte)

THIS is rather a large weaver measuring 7 in. in the flesh in total length. Its very bright plumage should easily betray it—brilliant yellow below, yellowish green above, with, in the male, the crown and sides of the neck strongly washed with rufous-orange. The

females may be distinguished from the males by their white belly and white under the tail and by lacking any rufous-orange on the crown, which tones with the back. The eye is bright yellow, the bill horn-colour; the legs and feet are flesh-colour. Measurements are: Bill 20–22 mm.; wing (male) 86–90 mm., (female) 83–86 mm.; tail (male) 52–56 mm., (female) 49–51 mm.

This is a common bird in all parts of the island and is a prolific breeder. It makes a beautiful pear-shaped nest of split palm leaves and grass with the entrance pointing downwards and slightly to one side. The nest is firmly attached to the extreme end of a palm leaf, exceptionally to some other tree, and swings a lot in the wind. The male tears strips from the palm frond with which to weave the nest, which when completed is said to be entirely rainproof. The eggs are blue, two being the full complement.

This is a conspicuous and noisy species which has maintained if not increased its numbers, for it was reported fifty years ago to be numerous and is now (1949) the commonest bird on the island. Noisy scattered parties are constantly seen and may be met with almost anywhere from low bushes to the tops of the tallest trees. Except in the thick hill forest they are hardly ever out of sight or earshot and occur in greatest abundance in the mixed plantations of coffee, coconut and banana. They are less common in the south-east of the island.

Much of the time they sit almost inactive, especially the males, but when feeding they search diligently both twigs and leaves. From their manner of feeding it is believed they are largely insectivorous. The voice of the male is peculiar, as it utters a wheezing screech accompanied by rapid fluttering of the wings. The females were observed to be much quieter.

Distribution. Restricted to the island of Principe.

ORANGE WEAVER

Xanthophilus aurantius aurantius (Vieillot)

(see Plate 49, facing page 1388)

This weaver measures about 6 in. in total length. The males are very brightly coloured, the whole head and under surface of the body being bright golden with a chestnut wash on the throat and breast, the rest of the upper parts being olive. The black wings have conspicuous yellow borders to the feathers. A black spot in front of the eye is noticeable and the bill is black. Females are olive above, with a yellowish wash on the throat and white bellies, and the bills are horn-colour. The bill measures 14–16 mm.; wing (male) 67–74 mm., (female) 65–67 mm.; tail 37–42 mm.

The male of the typical race is said to have a black bill and a reddish-brown eye, but the Uganda race (*rex*) never assumes a black bill even in the breeding season and has no breeding dress.

The localities in West Africa from which the Orange Weaver is recorded point to its being a savanna-frequenting bird which is usually encountered near the coast. That seems to hold good for its range between Liberia and Nigeria, but from there it extends inland north of the Congo forest and turns up again in the savannas west of the Congo.

In Liberia colonies may be found close to the seashore, and the small islands and banks of the rivers are equally frequented. Much the same accounts of its favourite haunts reach me from southern Nigeria, where colonies have been located at the mouth of the Dodo and Cross Rivers among other places. It seems, even in its inland habitats, to be closely associated with water, building its nest in bushes overhanging streams. Even a dirty ditch will serve for the purpose.

Seen from above the nest of this weaver appears as round as a ball, with the entrance, which has a slight portico, below. It is woven from grass and not from palm leaves. The rainy season is the breeding season. A few pairs will join up to form a little colony, and as many as tweny-five nests have been found together in West Africa. Perhaps the colonies of the East African race on the shores of Lake Victoria are larger. It is there known to build in company with two other weavers.

Two eggs are the usual number laid, and these are very variable in shape and markings. Some are pale blue irregularly blotched with chocolate-brown, but the ground may also be pinkish white, pale brown or greenish, and the markings vary from fine dots to large round spots or blotches of various shades of brown. Those of the East African representative measure 20–22 × 14–15 mm., and the only eggs from West Africa come within this range.

Distribution and Races. From Liberia to the Congo mouth, mainly in coastal areas in Upper Guinea, then across the Ubangi and Congo savannas to western Uganda, where it intergrades with the Uganda race. Its range, plotted from specimens secured, is not continuous. It has not been reported from Sierra Leone but is quite common but local in Liberia. We hear of it in the Ivory Coast but not in the Gold Coast, while Nigerian colonies seem to be restricted to the tidal estuaries and mangrove belt. In the Ubangi-Shari it occurs locally on the Ubangi and Goruba Rivers and again on the Aruwimi and Uelle.

In Uganda its place is taken by the race *Xanthophilus aurantius rex* Neumann, which is common on the islands of Lake Victoria and in the vicinity of the lake.

GENUS MALIMBUS

Key to the Weavers in the Genus Malimbus

1. Belly and breast red
Malimbus erythrogaster erythrogaster ♂ ♀, p. 1406
Belly black 2
2. Under tail-coverts brightly coloured in contrast to belly 3
Under tail-coverts black like belly 4
3. Under tail-coverts yellow .. *Malimbus racheliae* ♂ ♀, p. 1406
Under tail-coverts red
Malimbus scutatus scutatus and subsp. ♂ ♀, p. 1404
4. Breast red 5
Breast black 7
5. Crown glossy black like rest of upper parts; bill blue
Malimbus nitens nitens ♂ ♀, p. 1400
Crown red; bill black 6
6. Throat and cheeks black .. .. *Malimbus cassini* ♂, p. 1401
Throat and cheeks red
Malimbus malimbicus malimbicus and subsp. ♂ ♀, p. 1397
7. Entire plumage black, no red on head 8
Part or all of crown red 9
8. Legs and feet black; short outermost (1st) primary broad at tip, not tapering to point and about 26 mm. in length
Malimbus coronatus ♀, p. 1403
Legs and feet brown or dark grey; short outermost (1st) primary attenuated, very short and narrow, not exceeding 22 mm. in length .. .. *Malimbus cassini* ♀, p. 1401
9. Crown only red, red feathers not extending on to nape or side of neck .. .. *Malimbus coronatus* ♂, p. 1403
Red feathers of crown extending on to nape and sides of neck *Malimbus rubricollis rubricollis* and subsp. ♂ ♀, p. 1399

CRESTED WEAVER

Malimbus malimbicus (Daudin)

(see Plate 50, facing page 1400)

Two races of the Crested Weaver come within our limits, the typical race in Lower Guinea and *M. m. nigrifrons* in Upper Guinea.

Both sexes of this weaver are very similarly coloured, the main difference being that in the male the crimson feathers of the crown are elongated to form a distinct crest, which is prolonged over the

nape, while in the female these feathers are short and end in an abrupt line across the occiput. The neck, like the rest of the upper parts, wings and tail, is black. In both sexes the forehead is black, the cheeks and throat are scarlet, which is continued on to the upper breast; bill and feet are black. Young birds have a black chin and throat, often with a mixture of red feathers coming in among the black, and have pale-coloured bills. It measures 7 in. in the flesh and has a wing expanse of 10¾ in. The bill measures 15–18 mm.; wing (male) 81–92 mm., (female) 80–87 mm.; tail (male, female) 53–59 mm.

Whether the Crested Weaver is as uncommon in the forests of Upper Guinea as field observations suggest is doubtful, for it is a bird which frequents very thick forest and is apt to be overlooked in consequence. A good many specimens have been collected, especially in Sierra Leone. It is said to have a cry which runs into sweet notes, but on the whole we know very little about its life-history. Small bits of insects mixed with fibres of palm nuts have been found in the stomach of birds dissected.

The Crested Weaver does not appear to be confined to the forest canopy, for it has been observed on various occasions climbing about the undergrowth and may be seen in the bird armies in the forest. Nor are its nests invariably out of reach. One found in Liberia was slung from the end of a long drooping frond of a climbing palm hanging directly over a small brook in the forest and not more than 15 ft. from the ground. Nests of the typical race seen in the forests of southern Cameroon are generally hung from the vine palm (*Calamus*), to a frond of which they are attached. The nest is roughly woven, with a short uneven or ragged entrance tube pointing downwards; one was composed of strips of the leaves of the palm upon which it was hanging. Eggs number two in a clutch and are almost without gloss, the ground colour being greenish white covered with diffused and undefined spots or shading of pale grey or light brown. The two eggs measured 24·5 × 16 and 24 × 16 mm. This weaver breeds during the rains.

Distribution and Races

M. malimbicus malimbicus (Daudin) is the Lower Guinea race, which extends from Portuguese Congo to the Cameroon Mountain lowlands. Between the mountain and the Niger Delta I have not seen specimens but would expect birds from that area to be somewhat intermediate between the typical subspecies and the Upper Guinea race.

M. m. nigrifrons (Hartlaub) ranges from western southern Nigeria to Sierra Leone. It differs from *M. m. malimbicus* in having the whole under parts uniform black, including the belly and under tail-coverts, instead of a brown belly as in the Lower Guinea race. Also

it has a greater extent of black on the forehead and lores and the male has a shorter crest.

Birds from Uganda and north-eastern Belgian Congo have been named *M. r. crassirostris* Hartert, described from the Budongo Forest.

RED-HEADED WEAVER

Malimbus rubricollis (Swainson)

(see Plate 50, facing page 1400)

THREE races of this weaver come within our area, and these will be compared in the last paragraph. The Gold Coast race, *M. rubricollis bartletti*, is depicted in the coloured plate.

This fine large weaver in adult plumage is a striking bird. The body plumage, wings and tail are jet-black, and the crown and nape are brilliant crimson, which colour extends on each side of the neck in a half-collar. The cheeks and area of the eye are black. The crimson hood comes almost on to the shoulders. In the breeding season the eye is red. The female resembles the male except that the front part of the crown is velvety black. *M. r. bartletti* measures: Bill 19–22 mm., wing 96–108 mm., tail 58–66 mm.

This weaver lives mainly in the quiet depths of the forest, but there in the tall forest trees it must be fairly numerous, judging by the numbers which are represented in the British Museum collection from many localities. It captures most of its insect food by inspecting the bark of the larger trees, when it may be seen clinging to the perpendicular tree trunks and branches like a woodpecker or climbing like a nuthatch. Occasionally it will fly out and seize an insect on the wing, and has been observed hawking in the evening for insects in the manner of a flycatcher. It is almost as numerous in some places in the thick second growth and is a regular member of the bird armies which move through the forest, driving the insects before them. The possessor of a harsh chirp, it has also been heard to utter the usual *ze-e-e-e* as it moves along.

The Red-headed Weaver goes about in pairs or singly and builds its nest at the end of a branch of a tall tree and is nearly always inaccessible. The nest is an untidy structure of creepers and grass blades and is retort-shaped, with a spout much larger in diameter but shorter in proportion than that of *Hyphanturgus ocularius*. The only eggs which have been found have been white, but as Malimbus Weavers' eggs show considerable variety in colour in other species we may expect those laid by *M. rubricollis* also do the same.

Distribution and Races

M. rubricollis rubricollis (Swainson) differs from the Gold Coast race (*bartletti*) in having the red of the head and sides of the neck bright orange-scarlet instead of crimson. It ranges from Portuguese Congo, through Gaboon and Cameroon to the environs of Cameroon Mountain, and is the race which is found on Fernando Po.

M. rubricollis bartletti Sharpe differs from the race above as described in the previous paragraph and from *M. r. nigeriae* in having the colour of the head a darker and less bright shade of crimson. This race ranges from the Gold Coast to Sierra Leone.

M. rubricollis nigeriae Bannerman has the head a lighter and brighter shade of crimson than *M. r. bartletti* and no shade of orange-scarlet as in *M. r. rubricollis*. It extends certainly from Lagos to the mouths of the Niger and probably to the Cross River.

In East Africa we have *M. rubricollis centralis* Reichenow in Uganda and Kenya ranging to the Semliki valley, and in Angola *M. rubricollis praedi* Bannerman, which is very small in size but resembling otherwise the pale-headed Uganda race.

GRAY'S BLUE-BILLED WEAVER

Malimbus nitens nitens (Gray)

(see Plate 50, facing this page)

THE entire plumage of this bird is black with the exception of the throat and upper part of the breast, which are bright crimson. The rest of the breast is black and glossy, the belly and under tail-coverts are unglossy and more nigger brown than jet-black. Although the sexes are almost exactly alike, the female appears to have the under parts more of a dark brown shade, and the black area of the breast is less glossy than in the male. The most striking feature in the field is the blue bill, which feature alone should distinguish it from *M. malimbicus*. Moreover *M. nitens* has no red on the head in either sex. Another aid to the identity of *M. nitens* is its red eye. In *M. malimbicus* the eye is dark brown. The measurements of *M. nitens* are: Bill 20–22 mm.; wing (male) 84–93 mm., (female) 79–85 mm.; tail (male) 52–61 mm., (female) 48–53 mm.

Young birds are duller, and the red of the breast is replaced by a scarlet or crimson wash varying in intensity.

The most characteristic feature in its habits is the choice of forest pools and streams over which to suspend its nest, and throughout its very wide range its love of water for this purpose has been remarked. It lives almost entirely in forest or in very thick bush, and except in its nesting is very shy. It hunts for insects in the forest, and may be encountered in little parties of six or seven birds, which

Gray's Blue-billed Weaver ♂
Malimbus nitens

Gold Coast Crested Weaver ♂
Malimbus malimbicus nigrifrons

Red-bellied Weaver ♂
Malimbus erythrogaster

Rachel's Weaver ♂ and ♀ (head)
Malimbus rachelae

Bartlett's Red-headed Weaver
♂ (left), ♀ (right)
Malimbus rubricollis bartletti

Red-vented Weaver
♂ and ♀ (head)
Malimbus scutatus

hunt independently. At other times it joins a bird army and may often be met with in one of the organised drives of the forest inhabitants.

When breeding it can be approached quite closely, and then shows no fear. Some naturalists have observed how inquisitive it is even in the non-breeding season, and how it can be attracted from its normal haunts in the tree-tops to a much lower level to satisfy its curiosity.

Along most of the forest streams and by secluded pools its nests may be seen; particularly does this weaver favour the swampy parts in which the *raphia* palm grows. The nest is suspended from the palm and is then composed of shreds torn from the palm leaves. Elsewhere the nest may be made of strong rootlets and fibres and rather openly woven, the entrance from below opening into a kind of antechamber. The nests are placed singly and not built in colonies. Two eggs are laid with ground yellowish stone or grey or green, freckled or blotched with brown and mauve or with darker grey or green. They measure 24–26 × 16 mm.

Distribution. From Portuguese Guinea and the Loss islands this weaver ranges to the Loango coast or Portuguese Congo and probably far into the Congo forest. It is found commonly in the forests of all our British Colonies and at the foot of Cameroon Mountain.

A race *M. nitens microrhynchus* Reichenow has been described from the north-west of Lake Albert but does not appear to range into Uganda.

CASSIN'S WEAVER

Malimbus cassini (Elliot)

The male of Cassin's Weaver is brightly coloured, the forehead, crown, nape, sides of the neck and breast being scarlet, the rest of the plumage black. It is perhaps most easily confused with *Malimbus scutatus* which resembles it closely but has a red vent, and with *Malimbus rubricollis* with its crimson hood and black cheeks, which is also a larger bird.

Comparison of the coloured figures of these weavers should help to imprint the colour pattern on one's mind, for these forest weavers are far from easily identified. Two of them, *Malimbus cassini* and *Malimbus coronatus*, have all-black females which can only be distinguished by the colour of the legs and feet, which in *M. cassini* are dark grey or brownish but in *M. coronatus* are black. There is another weaver, *Melanopteryx nigerrimus*, which is also black, the male being almost indistinguishable in the skin, but in life its pale eye should identify it from Cassin's Weaver with its dark brown eye.

I have attempted to define briefly the distinctions of these black weavers on page 1346 when discussing *Melanopteryx nigerrimus*.

The measurements of *Malimbus cassini* are: Bill 15–17 mm., wing 88–94 mm., tail 50–55 mm.

Cassin's Weaver is another member of the genus whose home is in the primeval forest in the canopy of the high trees. It is a constant

member of the bird armies which scour the forests at a lower level than the birds usually live, but it soon repairs again to the tree-tops and is therefore a difficult species to watch. Even its nests are seldom encountered, but when seen they are distinctive. One, which was located in the forest of southern Cameroon, when both birds were secured, to make sure of identity, was in plain view but not conspicuous, as it resembled closely the dry fronds of the vine palm (*Calamus*) to which it was attached. The long tubular entrance was 2–3 ft. in length and pointed diagonally downwards, and its walls were so thin as to be transparent. The nest itself was woven of narrow shreds torn from the leaves of the palm. The eggs of this weaver are unknown.

Cassin's Weaver is said to resemble *M. coronatus* in its mode of life in so far as it has been studied, but we have much to learn about both. They are both insect-catching birds which have their habitat in the depth of the forest.

Distribution. Recently this Lower Guinea species has been found in the forests of southern Nigeria in Owerri Province and also near Ibadan. Its real home is in the forest of southern Cameroon, whence it ranges to Gaboon and to the western Belgian Congo. Eastwards it has been found in the vicinity of the Lualaba River and Upper Congo (Ponthierville). The species is not represented in Uganda or Kenya Colony.

RED (OR SCARLET) CROWNED MALIMBUS

Malimbus coronatus Sharpe

THE male of this weaver may be recognised by its scarlet crown, all the rest of its plumage being black. The top of the head is not

entirely scarlet, for the large patch of that colour is bordered with black.

The adult female is entirely black and is almost indistinguishable from the female of *M. cassini*. For long its skins were confused with

that bird and also with *Melanopteryx nigerrimus*. It has, however, a very long first primary, nearly 30 mm. in length, which extends half-way down the length of the second primary (i.e. the first long one). In *Malimbus cassini* the first primary is not much over 20 mm. in length and certainly does not reach half the length of the second primary. The male of *Melanopteryx nigerrimus*, in addition to having a much heavier bill than *Malimbus coronatus*, has a bright yellow eye, whereas *M. coronatus* has a brown eye.

Measurements of *M. coronatus* are: Bill 15–17 mm., wing 82–89 mm., tail 50–55 mm.

This weaver may well have a wider range in the West African forests than is indicated by the specimens in museums, and we may yet find that (like the last species discussed) it ranges into Nigeria. Where it occurs in Cameroon it is said to be more common than Cassin's Weaver, but for all that we know next to nothing about its life-history. It lives in thick primeval forest and is seldom seen by Europeans.

A nest in which the parent birds were captured was a large construction but with a short entrance only 6 in. long, thus differing markedly from that of Cassin's Weaver's nest. It was woven mostly of tendrils, with the ends bristling out, giving it a rough appearance. The eggs are still unknown.

Distribution. Spanish Guinea and Cameroon, ranging east through the Belgian Congo to the Semliki valley and found along the Uelle River in the northern Belgian Congo. Unknown as yet in Upper Guinea and Uganda.

RED-VENTED WEAVER

Malimbus scutatus (Cassin)

(see Plate 50, facing page 1400)

Two races of this weaver occur in our area. It is the typical race which we find from the Volta westwards, and *M. s. scutopartitus* in Lower Guinea and most of southern Nigeria as far west as Porto Novo.

Reference to Mr. Lodge's painting will give the best clue to the appearance of the Red-vented Malimbus, the scarlet hood and collar of the male (the female has an all-black head) and scarlet breast of both sexes being very striking against the jet-black of the rest of the plumage, while the best character of all is the red under the tail shared by both male and female, a conspicuous feature when the bird is seen from below, for no other species of Malimbus Weaver has scarlet under tail-coverts. The males of *Malimbus scutatus scutopartitus* and *Malimbus cassini* are very similar in appearance and best

distinguished from one another by the red under the tail of the former species, the under tail-coverts of *M. cassini* being black.

The measurements of *M. s. scutatus* are: Bill 14–15 mm., wing 86–95 mm., tail 47–55 mm.

This widely spread species is also one of the commonest of its genus in West Africa, its harsh cries being a familiar bird sound of the forest. It seems to be restricted in the Ibadan district of Nigeria to an area where there are patches of high forest still remaining. In Owerri it occurs in all kurimis and forest lands and is frequently to be seen in the bird armies which hunt the upper canopy of the forest. Little parties of half a dozen birds join forces for the purpose. The birds utter some low soft notes which may almost be identified as a song, for they are said to be very distinctive and variable in tone.

It is in the breeding season when these weavers can be observed to the best advantage. Invariably a palm-tree is chosen for the nest site, and the palm may be situated in forest, bush, field or plantation. Four to seven nests may be placed in a single tree, but the bird does not nest in a colony and does not exhibit that frenzy of nest-building which is common to various Ploceine species in West Africa.

The nest of the Red-vented Weaver is a very beautiful object, shaped like a sock with long, delicately woven entrance tubes 18 in. to 2 ft. or more in length, hanging vertically downwards. The main chamber is lined with a copious mass of bits of frond, not necessarily gathered from the oil-palm only. Both sexes take part in nest-building, and the male delights in waylaying the female in the entrance tube, when a great scuffle ensues, the female, like other female species, objecting to love-making during working hours! Adult non-breeding birds have been found late in the evening roosting in their nests. The eggs are apparently always pure white and measure 21–22·5 × 15–16 mm.

Distribution and Races

Malimbus scutatus scutatus (Cassin) extends from Sierra Leone to the Gold Coast, being especially partial to country in which the oil-palm is found growing. Somewhere in the vicinity of Porto Novo it is believed to intergrade with the Nigerian-Cameroons race, *Malimbus scutatus scutopartitus* Reichenow.

The latter race is distinguished by the male having the scarlet crop-patch continued lower on to the breast than in the typical form and the female by having the black of the chin and throat continued down the breast, thus dividing the scarlet crop-patch down the central line. The wing is 87–97 mm. This race inhabits the coastal strip of southern Nigeria from Ilaro, Abeokuta and Lagos to Duala and perhaps to Gaboon and ascends Cameroon Mountain to 3,500 ft.

RACHEL'S WEAVER

Malimbus racheliae (Cassin)

(see Plate 50, facing page 1400)

THIS very conspicuous bird cannot be confused with any other species except *Malimbus scutatus*, of which it might at first sight be considered a sport, the yellow on the breast and under tail-coverts taking the place of the scarlet in *M. scutatus*. Birds in the plumage described, with the crop scarlet and the breast and under tail-coverts yellow in both sexes, have turned up in various localities over a fairly wide area, and when pairs have been found breeding both male and female have been similarly coloured. There is no instance known of a bird of either sex being paired with *M. scutatus*, and so far as we know, these yellow-breasted, yellow-vented birds breed true.

Measurements are: Wing 81–83 mm., tail 46–48 mm.

This forest-dwelling weaver differs in its habits in no way from the Red-vented Weaver (*M. scutatus*). It builds the same retort-shaped nest such as has been described under that bird, and is an insect-eating species. It is everywhere rare, and if indeed it is entitled to the specific rank which I have given it, that can only be proved by keeping a nesting pair and their offspring under observation.

Distribution. It seems to be confined to the coastal districts of Cameroon and Gaboon, especially along the rivers. In British Cameroon it has been obtained at Massaka and in Nigeria once at Mbarakpa.

RED-BELLIED WEAVER

Malimbus erythrogaster erythrogaster Reichenow

(see Plate 50, facing page 1400)

THIS is a striking bird in the field and should be easily recognised when present. Both sexes have vermilion crowns, the red feathers extending almost on to the mantle and down the sides of the neck. In the female the whole under parts are vermilion from chin to under tail-coverts, while in the male the throat and cheeks are black. In the female only the ear-coverts and feathers surrounding the eye are black. In both sexes the back, wings and tail are black. Adults have a black bill and dark brown eye, the legs being brown. It is a forest species, like the rest of the genus in which it is placed.

Measurements are: Bill 19–22 mm., wing 88–90 mm., tail 55–60 mm.

Nothing has been discovered about the habits of this weaver, which is known to be a forest-frequenting bird, getting its living by hunting insects. It displays a sociable habit in its choice of nesting place, sometimes building in numbers near the eyrie of an eagle, or again in the same tree as the Giant Plantain-eater. Other nests have been found singly. Its eggs do not appear to have been described.

Distribution. Known from several localities in French Cameroons (Yaunde, Lolodorf, and eastern Cameroon) and from the Belgian Congo. Westwards it ranges to the Niger delta and is likely to be found in the Warri Province of Nigeria, as it occurs in the Owerri high forest.

Another race, *M. erythrogaster fagani* Ogilvie-Grant, has been described from the Semliki valley.

SÃO THOMÉ GROSBEAK

Neospiza concolor (Bocage)

I BELIEVE this remarkable bird to be a nearer relative of *Linurgus* and *Poliospiza* than any weaver, as Shelley pointed out, but retain it here in the *Ploceinae* solely because I do not wish to confuse the reader by dealing with it in this handbook in a different family and in a different sequence from that given in my larger work. I placed it in the *Ploceinae* in my seventh volume, following its position in Sclater's *Systema Avium*.

One would imagine that it could not easily be overlooked in its island home, as it is not a small bird, measuring quite 8 in. in total length. Its almost parrot-like bill, which is said to be pale-coloured in life and is certainly whitish horn in the dried skin, must be very conspicuous, so broad and decurved is the upper mandible, while the lower mandible is boat-shaped with a fine cutting edge. The whole plumage colouring is rufous-brown, the wings are rather short, as is also the tail, the first five long primaries all being about the same length, thus in flight the wing would appear rounded rather than pointed. We know so little concerning this extraordinary bird that no field characters can be given other than an indication of its general appearance and colouring.

The bill measures (exposed culmen) 21 mm., breadth below the nostrils 12 mm., breadth of lower mandible at exposed base 14 mm., wing 190 mm. (about), tail 68 mm., tarsus 23 mm.

Unfortunately the members of the Oxford University Expedition to São Thomé in 1949 failed entirely to meet with this bird, so we are still without knowledge of its habits.

Distribution. Known only from São Thomé island in the Gulf of Guinea, where it has been obtained at the Rio Quija near Angolares and seen only at San Miguel—all previous to 1888. No collector or naturalist has set eyes on it since, so there is some excuse for our lack of knowledge of its systematic position.

WHITE-FRONTED GROSBEAK

Amblyospiza albifrons (Vigors)

Two races come within our limits, *A. a. capitalba* in Upper Guinea, *A. a. saturata* in Lower Guinea, probably extending to southern Nigeria.

Both male and female of the Grosbeak Weaver have a distinctive

appearance which should aid in their identification. The male is a stalwart-looking bird, whose heavy bill, black in the male, horn and yellowish in the female, is a noticeable feature, capable of making short work of the berries, grain and fruit upon which it feeds, but seemingly very heavy as an implement for nest-weaving, of which it is a past master.

In size it is a large weaver, a skin of a male measuring 7 in. in total length. Its general appearance is shown in the illustration, but it is an ungainly bird with its large head and bill, and holds its body very erect on its perch. It has no bright colours but some conspicuous marking, chief of which are the broad white forehead contrasting with the chestnut head and the striking white patch on the black wing which can be seen clearly on the outer primaries when the wing is folded, and naturally more conspicuously when the bird flies. The rest of the body plumage of the male is blackish, including the tail, with a slate-grey belly and light tips to the feathers under the tail. The female is perhaps the more noticeable of the two, being dark brown above, with the entire whitish under parts heavily streaked with dark brown. Its pale yellow under mandible and the white mark at the edge of the wing just below the bend are two minor features to observe.

Measurements of *A. a. capitalba* are: Bill 20–22 mm.; wing (male) 82–88 mm., (female) 79 mm.; tail 54–57 mm.

The White-fronted Grosbeak seems to be largely restricted to those localities in Upper and Lower Guinea where the spear grass or cane grass grows, to the stems of which it attaches its wonderfully woven nest. There are very wide areas between Sierra Leone and the Gold Coast from which it has never been recorded; but where this giant grass is to be found, there likely as not the grosbeak will be in the vicinity. It is to be found near Abeokuta, south-western Nigeria, in the reed-beds and other tall aquatic vegetation in the marshes and backwaters of the Ogun River, where nests were located in June, July and August, containing two or three eggs.

On their breeding territory the males are full of excitement and exuberance, flicking their wings and tails as they cling to a swaying reed, making wide circular flights over the reed-beds and breaking forth at times into song which makes up in vehemence what it lacks in quality. One observer has even likened its vocal effort to a canary, but that is surely paying it too high a compliment.

The nest is a large globe 6 in. or more in diameter which is attached by one or both sides to the stems of tall grass. It is woven entirely of fine shreds resembling flax torn from the leaves of *Panicum* grass. The woven structure is neater and closer than in most weavers' nests. The entrance is a hole in the side, the edges all being tucked in so that a selvedge edge is formed. Some nests, by no means all, have a vestibule added. The latter nests are believed to be cock nests, in which eggs are never laid but are used solely for roosting purposes. Evidence to this effect will be of interest. Eggs number two or three in a clutch and vary in ground colour from white to pale rufous, the surface being sparingly marked with spots and dots of brown, orange-brown or maroon-red and

massing towards the broad end. Eggs of *A. a. capitalba* measure 19–23·6 × 13·9–16·5 mm. and of *A. a. saturata* 20–26 × 14·5–16 mm. A long account of the nesting of both races is given in my larger work, volume vii, pp. 152–8.

Distribution and Races

Amblyospiza albifrons capitalba (Bonaparte) ranges from Sierra Leone to Abeokuta in south-western Nigeria (*cf.* Ibis, 1950, p. 93).

Amblyospiza albifrons saturata Sharpe ranges from Nigeria (Ilorin) to southern Cameroon. It may be distinguished by its darker plumage (particularly on mantle and belly) and by its larger size, with wing (male) 89–96 mm., (female) 82–85 mm.; tail 55–67 mm.

Several other races occur in tropical Africa, *A. a. tandae* in Angola, *A. a. melanota* in Uganda and White Nile, *A. a. montana* in Kenya, and the typical subspecies in southern Africa.

RED-WINGED ANAPLECTES

Anaplectes melanotis (La fresnaye)

(see Plate 49, facing page 1388)

The male bird has the crown, nape, neck, throat (except the chin) and breast rosy crimson, and the lores, ear-coverts, cheeks and chin black. The mantle, back and scapulars are dark brown, with some of the mantle-feathers washed with rose-crimson. The wing is brown, the greater coverts are margined with rose-colour, and the quills are edged with bright crimson. The tail is brown, with crimson edges on the basal portion. Below the rose-crimson breast the under parts are white, including the under tail-coverts.

The female has the crimson margin to the wings as in the male but lacks all crimson on the head and breast, the upper parts being uniform brown, the under parts whitish. The bill in both sexes is a conspicuous field character, being rather large, terminating in a fine point, and crimson in colour.

The wing measures (male) 80–88 mm., (female) 75–84 mm.; tail (male) 49–57 mm., (female) 47–53 mm. The bill is 16–18 mm.

The Red-wing Anaplectes will only be seen in somewhat arid country, where it frequents the orchard bush of the Northern Territories of our West African possessions, but does not appear to have been observed north of lat. 9° 30′ N. It is usually seen in pairs or alone, searching the foliage of trees for insects which form its diet and in quest of which it will climb and hang in all manner of positions, reminding one then more of a tit than a weaver.

In East Africa it is described as a bird of the acacia country, generally to be seen on the tops of thorns or other trees and not to

be shy. In its manner it is reputed to be quiet, but there is much we need to learn still about its way of life.

The nests, as found in Nigeria in April and May, are woven globular structures which hang from the extremity of small branches of trees 10–15 ft. above the ground. They are compactly made of strong spines of leaves and small rootlets with an entrance tunnel on one side hanging down, 3–6 in. long. The male appears to do the weaving. *A. melanotis* lays a plain sky-blue egg, sharply pointed with a polished surface. One egg measures 21 × 13·5 mm.

Distribution. This bird is not certainly known from west of the Gold Coast, where it was secured at Gambaga and has been seen around Tamale. Thence we find it ranging to northern Cameroon near Garua and to various places in northern Nigeria. Its general distribution is very wide, for it is found in the Nile valley, in southern Abyssinia, Somaliland, and the drier parts of Kenya and Uganda south to Tanganyika Territory. In part of this last-mentioned area it seems to intergrade or interbreed with the yellow-winged *Anaplectes m. rubriceps*, a bird which does not extend north of Tanganyika.

BOB-TAILED WEAVER

Brachycope anomala (Reichenow)

As its name implies, the most noticeable feature about this weaver is its extremely short tail, appearing as if its normal tail had been cut in half. That gives it an unusually stumpy figure. In any case it is a small bird, the male with black cheeks and throat, yellow forehead and yellow breast. Back and wings are very dark-coloured, the black middles and pale fringes to the feathers of the mantle and scapulars giving it a streaky appearance on the upper surface. The male bird has a jet-black bill and brown legs and feet.

The female Bob-tailed Weaver resembles a miniature sparrow except for its short tail, and unless seen with the male is unrecognisable from many other female weavers in off-season dress. In flight it may be recognised by its short tail and very rounded wings, which are also short.

The wing of this weaver is 60–62 mm. and the tail 26–30 mm.

Residents in the British possessions of West Africa need not concern themselves with this bird, which has never occurred in Upper Guinea. Its habits will not be discussed here, as it barely comes within our limits.

Distribution. From the mouth of the Congo it ranges along the Aruwimi River and the Congo River to the Ituri district and has a wide distribution in the Belgian Congo.

BLACK-FACED DIOCH

Quelea quelea quelea (Linnæus)

(see Plate 49, facing page 1388)

THE best guide to the identification of this little weaver is its strong bright red bill, black forehead (variable in width), cheeks and throat, and the yellow edges to the primaries discernible at close quarters only. These are the only parts of the bird which do not exhibit strange variation in colour from the male bird depicted on Plate 49. Some specimens have the crown and nape pale golden buff as well as the breast; in some males the crown and nape and breast are rose-pink, in others the whole under side is strongly suffused with pink; but always the red bill and nearly always the black mask remain constant to give a clue to the species. Very rarely the black mask is wanting in quite adult birds, but that is a rare variety which must be ignored in this paragraph.

The females are sparrowy-looking birds with streaked backs but without any black on the face. They possess the red bill, however, and are usually in company with their black-faced consorts. In size the Black-faced Dioch is small—under 5 in. in total length as a rule. The bill measures 12–15 mm., wing 63–69 mm. and tail 34–38 mm.

There is another dioch in West Africa, *Quelea erythrops*, the male of which has an entirely red head, the only black being indicated on the throat, no black frontal band or ear-coverts, all of which are crimson. Like *Quelea quelea quelea*, the Red-headed Dioch has yellow margins to the primaries and streaked plumage on the back, but it may always be distinguished from that species by having a dark bill, black in the breeding season, horn-coloured in the off-season, with pale lower mandible. The females of *Q. erythrops* can be distinguished from the females of *Q. q. quelea* by the same important character—the horn-coloured bill—and also by having a yellow eye-stripe instead of the buff or white eye-stripe of the Black-faced Dioch.

Of the two species of dioch which occur in West Africa the black-faced lives nearer to the desert and in more arid country than the red-headed species. Its status is a little uncertain, for though it is recorded from many localities between Senegal and Lake Chad in the semi-arid and grassy savanna belts, it has not been certainly encountered in the vast numbers in which it may be seen in the Anglo-Egyptian Sudan and Uganda. It is a species which frequents the open grasslands in winter, preferring short grass and native cultivations lying fallow. When not breeding, the birds congregate together and move around in the huge flocks already described.

We have still much to learn concerning its wanderings in West Africa.

The Black-faced Dioch builds a conspicuous nest—a scanty but neat network of fine green grass woven on two or more stems of tall grass or reeds. I have not seen eggs from West Africa, but in East African races the eggs vary from immaculate pale blue to clutches which are either sparsely or thickly spotted with dusky brown. They measure 17–21·8 × 11–14·8 mm.

Distribution. *Q. quelea quelea* (Linnæus) ranges from Senegal to Bornu across the thorn-scrub and grass savanna north of the Congo forest to where it meets the range of *Q. quelea centralis* in Uganda and *Q. quelea aethiopica* in the Anglo-Egyptian Sudan. Another race, *Q. q. lathamii*, inhabits South Africa.

RED-HEADED DIOCH

Quelea erythrops (Hartlaub)

(see Plate 49, facing page 1388)

The male Red-headed Dioch in breeding dress is one of those species which can be recognised with great ease, for there is no other bird like it. The bright crimson head contrasts so noticeably with the otherwise sparrow-like plumage, and the reddish-black throat is equally distinctive surmounting the buff breast. Like the Black-faced Dioch, the Red-headed Dioch has yellow margins to the primaries but is easily distinguished from that bird in and out of the breeding season, for the Black-faced Dioch has a red bill. I have, under the latter species, dealt with the distinctions between these two diochs when in non-breeding dress. Always the female Red-headed Dioch may be recognised by the pronounced yellow eye-stripe.

In breeding dress *Quelea erythrops* is readily known by the scarlet head. The rest of the upper parts are brown, with yellowish edgings to some of the wing- and tail-feathers. The under parts are buff and whitish; chin and throat are plum-colour. In undress plumage the "Poker-heads" are not easily distinguishable from the two Bishops, *Euplectes hordacea* and *E. orix franciscana*.

The wing measures 58–67 mm. and the tail 28–34 mm.

The country inhabited by this dioch lies nearer the coast than that in which we find the Black-faced Dioch. It prefers the more cultivated lands and an altogether damper environment. Thus, in the arid bush of Senegal and Gambia it is only rarely encountered. It loves the grass-covered fadamma such as border some rivers in Nigeria and the Gold Coast and makes constant raids on the native millet crops. We can trace its range all the way from Sierra Leone

to the Loango coast, wherever the grass-woodland and savanna country is found. It seems that it will not entirely shun forest clearings, even for breeding purposes, but it does not enter the closed forest.

For its nesting it requires grass fields or rather specialised marshlands, and there several hundred pairs will concentrate their nests within a circumscribed area. The building is done by the male, incubation by the female. The completed nest is made of woven grass strips to the form of a rounded pouch, completely roofed with an oval aperture. It is unlined. The clutch numbers two or three (exceptionally). Eggs have blue shells tinged with green and are unmarked. They measures 17·4–20·7 × 12·5–14·3 mm.

Distribution. Widely spread in the savanna belt from Sierra Leone (west of which it is uncommon) to northern Angola, ranging eastward to the White Nile and Abyssinia south through Kenya and Uganda to Mozambique.

Key to the male Bishop Birds in breeding plumage in the genus Euplectes

1. With much scarlet in plumage 2
   Without scarlet in plumage, which is black and yellow 3
2. Crown scarlet; upper tail-coverts short
   Euplectes hordacea hordacea, p. **1414**
   Crown black; upper tail-coverts very long, almost concealing rectrices .. .. *Euplectes orix franciscana*, p. **1416**
3. Crown of head yellow .. .. *Euplectes afra*, p. **1420**
   Crown black 4
4. Entire mantle and back golden yellow *Euplectes aurea*, p. **1419**
   Entire mantle black, the rump lemon-yellow
   Euplectes capensis pheonicomera, p. **1418**

FIRE-CROWNED BISHOP

Euplectes hordacea (Linnæus)

(see Plate 51, facing page 1416)

THE male in breeding dress is one of the most decorative birds in Africa: fiery red or orange-scarlet on the crown, neck, breast and rump, shining black ear-coverts and throat, a reddish-chestnut mantle, and black wings, tail and belly. To complete the picture the thighs and under tail-coverts are fawn-coloured, both mandibles black and the legs brownish-flesh colour. The male in full dress is only likely to be confused with *E. orix franciscana*, from which it is easily known by its black wings. Moreover its tail too is black, and

not being so hidden by the upper tail-coverts is noticeable. It is easily confused with *Coliuspasser macrourus* in the off-season, while the males in undress plumage and the females are not easily distinguished from those of *Euplectes orix franciscana* and *Quelea erythrops*.

The wing of the Fire-crowned Bishop measures (male) 70–80 mm., (female) 65–70 mm.; tail (male) 39–42 mm., (female) 34–38 mm.

The brilliantly plumaged bishops must be familiar to everyone during the rainy season, when the males have assumed full breeding dress and are then conspicuous in the grassy plains and on abandoned farms and especially among tall elephant grass. The sparrowy-plumaged females are naturally less noticeable, but as they are much more numerous than the males they come in for a good deal of attention, particularly as the Fire-crowned Bishop indulges in polygamy to a great extent, some males having at least three wives.

The male spends a great deal of his time in display. Situated near the top of a grass stem or bush, but rarely as high as a tree, he puffs out the scarlet feathers of his chest and rump and utters a weak metallic song of a few notes. This is often accompanied by a slow flopping, descending flight of a few yards from one perch to a lower one, the song being uttered during the flight. The flight described is in marked contrast to the normal swift and direct flight with comparatively rapid wing-beats. Each male vigorously defends his territory, in which he spends almost the entire day, the area having rigidly defined boundaries, any intruder being at once attacked and driven out.

When not breeding the Fire-crowned Bishops go about in small flocks, and as the males are then practically indistinguishable in their off-season dress from the females they attract little attention. It is confidently reported that they entirely abandon their breeding grounds when nesting is finished, but whether that is invariably the case, as many Africans affirm, or just that they look so different in their dull winter garb, I am not absolutely certain. From some districts the birds certainly disappear from November until February. The male birds lose their gorgeous dress about January and begin to assume it again about July in the Cameroons, but further north breeding dress is taken on earlier, about April or early May. The latitude has naturally much influence on the breeding season and consequent plumage changes.

Although polygamy is rife it is not invariable, some males having only a single hen, to which presumably they remain faithful. Both the male and female take part in the nest-building. The nest, which is woven of grass strips, finally takes the shape of a ball rather longer than broad, with an entrance in one side and with a shelf projecting inwards from the base of the entrance. The nest has no porch, and

the bottom is so thin that eggs can be seen through the structure. In northern Nigeria many nests with full clutches may be found in July, August, September and October. Nests may be attached to the grass stems, or sometimes are placed in small bushes among the long grass. Two or three eggs are laid, uniform pale blue in colour, rather deeper in shade than the eggs of *E. o. franciscana* and in a series larger in size. Rarely a few small spots and blackish hair-lines are present on the blue or greenish-blue ground. The female incubates, but the male has also been found sitting.

Distribution. The whole of tropical Africa from the Senegal eastwards to the White Nile, where it intergrades with the only recognisable race, *E. h. craspedopterus*. I unite with *E. h. hordacea* the race formerly known as *E. h. sylvatica*.

In Cameroon and the Belgian Congo it occurs in the open spaces in the forest region as well as in the savanna; it is common in the grasslands north of the forest and throughout the whole of the savanna country of the Ubangi-Shari. The only West African island from which it has been reported is São Thomé, where it was introduced about 1893, being unknown prior to that date. Within our limits it is exceedingly common in suitable environment and when in breeding dress is widely recognised, but when the males have finished nesting and assume their sparrowy plumage they are not distinguishable from many other species, which has given rise to the view that the birds have forsaken the area.

In Gambia this is the least common of the three bishops in the colony and is less often seen in the swampy area. In Sierra Leone it is widely spread in many areas, especially in the dry grass country. It is not uncommon in the Peninsula during the rains, nesting on the banks of streams. In Gambia, as well as living in the usual environment, it inhabits also the open spaces in the forest as it does in the Cameroons. In Nigeria and British Cameroon it occurs wherever suitable grass country is to be found and is thus widely distributed.

ORANGE OR LITTLE BISHOP

Euplectes orix franciscana (Isert)

(see Plate 51, facng page 1416)

In the breeding season the male bird is a most brilliantly coloured weaver. The whole upper side, except the wings which are brown and the top and sides of the head which are black, is brilliant scarlet. Although the tail is really brown, it is very short and almost entirely hidden by the long scarlet upper tail-coverts. It appears, in fact, as if the bird has a scarlet tail. The under side is scarlet on the

Black Whydah ♂
Coliuspasser ardens concolor

Yellow-crowned Bishop ♂
Euplectes afra

Black-and-Yellow Bishop ♂
Euplectes capensis ph. entocomera

Orange Bishop ♂
Euplectes oryx franciscana

Yellow-mantled Whydah ♂
Coliuspasser macrourus

Fire-crowned Bishop ♂
Euplectes hordacea

Bocage's Fan-tailed Whydah ♂
Coliuspasser axillaris bocagei

throat and upper breast, black on the lower breast and belly, and scarlet again on the under tail-coverts. The bill is black and legs brown.

The female, and the male in winter dress, is light brown, the upper parts from crown to rump being heavily streaked with black, the under parts are buffish on the breast and sides, white on the chin and belly, and no streaks. The under tail-coverts too are plain buffish white. A yellowish-white eye-stripe is noticeable. Bill and legs are pale in colour. The wing measures (male) 60–67 mm., (female) 53–60 mm.; tail (male) 30–35 mm., (female) 28–32 mm.

Always met with in flocks, which at times are very large, the Little Bishop is a parkland species which is to be found wherever there is long grass. Areas of fadammas and thickets by streams are favourite haunts, and the village fields are frequented for the guinea-corn and millet. Towards evening the flocks make for their customary drinking places, which may be a clump of bushes overhanging a stream or pool, before settling to roost in a thicket or in tall grass.

From December until May approximately both sexes are alike in plumage and soberly clad. In June the male begins to assume his gorgeous breeding dress of black and scarlet, and by July all males are in full plumage. The flocks now begin to break up, and males are to be seen going about with two or three females. The males guard their territories fiercely, and nesting is in full swing from the last week of June onwards. The breeding season is protracted, and in Nigeria nests with eggs have been found up to the third week of October. During the breeding season the male has a bouncing flight and at times makes a clapping noise with its wings, not only when flying.

When nesting duties are over—and this may be in September with those which have nested early—the flocks, which never entirely break up, get together once more and the Orange Bishops then join up with many other species of the weaver family to feed on the seeding grasses. Even at the height of the breeding season considerable flocks of Orange Bishops may be encountered which are all in sparrowy plumage. These flocks are composed of male and female non-breeding birds, all in more or less worn plumage. Some of these birds build false nests in which eggs are never laid. All these birds are in their first year's plumage and do not breed until their second year, when for the first time their showy adult summer garb is acquired.

Great care must be taken in identifying the female bird at the nest, since it is not possible to distinguish between the nest and eggs of *Euplectes oryx franciscana* and those of *Euplectes hordacea*. The globular nest is woven of tough strips of grass which also serve to

secure the nest to the grass or weed-stems among which it is built. It is rarely lower than three feet from the ground or higher than six. Inside is a distinct and readily separated lining of grass-tops. Very rarely a nest is built in trees or in bushes. The eggs are blue in colour, usually a deep hedge-sparrow blue, and only exceptionally have any markings. In the latter event the egg is spotted and speckled with purplish markings about the large end. Eggs measure 15·5–19 × 11·5–13·6 mm. Some males, but not all, are polygamous.

Distribution. The West African race of *Euplectes orix*, which was first described from Accra, ranges from Senegal to northern Cameroon and across Africa to the Nile valley, extending in East Africa to northern Uganda and western Kenya as far as the Rift valley. In western Africa the Orange Bishop has a range which extends further north than the Fire-crowned Bishop and is more numerous in our colonies north of lat. 9° N. than south of it. In many localities, however, both birds occur and breed side by side. Its local distribution, for which there is no space to enter here, is discussed in some detail in my larger work (*cf.* vol. vii, pp. 180–6).

The typical *E. orix orix* is a South African species with local races in southern Uganda, Abyssinia and western Africa.

BURTON'S BLACK-AND-YELLOW BISHOP

Euplectes capensis phoenicomera Gray

(see Plate 51, facing page 1416)

VELVETY black above and below with bright yellow shoulder-patches and rump and with a very broad (but not long) black tail, the male of this weaver in breeding dress is a very fine sight. It is remarkable that even at the height of the breeding season only the upper mandible is black, the lower being white. The light brown legs are also rather conspicuous. When they lose this plumage the males go into eclipse, then assume a sparrowy plumage and lose all trace of black feathers, but they retain the bright yellow rump and shoulder-patches. The upper mandible then becomes horn-brown. Females are sparrowy with olive or mustard-yellow on the rump and shoulder-patches, the latter often being concealed. The adult female's plumage, apart from the yellow patches mentioned above, is light brown heavily streaked with black, including the crown; the tail is dark brown narrowly margined outwardly with olive-yellow, the chin is whitish and the rest of the under parts are pale brown with narrow darker brown shafts.

Measurements are: Wing (male) 70–76 mm., (female) 65–74 mm.; tail (male) 45–49 mm., (female) 43–46 mm.

This is a mountain weaver with relatives in other highland parts of Africa but in West Africa is restricted to the montane area of the Cameroons. Named after the discoverer, Sir Richard Burton, somewhere in the neighbourhood of 7,000 ft. on the mountain, it has since been found on various neighbouring peaks, where it frequents the remote grassy slopes up to 9,500 ft., descending as low as 4,000 ft. It assumes its nuptial plumage in June, when the males may be seen perched prominently on some high grass or sprig.

The nest is ball-shaped with some of the surrounding grasses drawn down over the nest and others incorporated in its structure. It is made of intertwined grass stems and lined with grass-heads. The clutch numbers three. The eggs are light brown in colour tinged with green, the shell being heavily blotched, spotted and streaked with dark brown and grey. Measurements are 20·5–21·5 × 13·7–15 mm.

Distribution. Cameroon Mountain from the forest grasslands border *circa* 6,500–9,500 ft., descending to 4,000 ft. Also the neighbouring highlands of the Bamenda Division to 8,000 ft., Genderu and Banso Mountains.

GOLDEN-BACKED BISHOP

Euplectes aurea (Gmelin)

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In its island home there should not be any difficulty in recognising this bright-coloured weaver in its breeding dress, the males resplendent in their bright yellow mantle and back, in such striking contrast to the black head and black under side and the patch of white under the tail. The grey-brown upper tail-coverts and those of the lower rump have the appearance of belonging to a bird in non-breeding dress, but all nine breeding males in the British Museum have these feathers alike. Wings are blackish with the palest edges, and the tail is dark brown. This weaver has a very powerful bill, and both mandibles are jet-black in the breeding male. Females appear rufous heavily streaked with black on the upper side, yellow eyebrows and chin, and rufous-brown breast, with some dark shaft-streaks and white bellies. They have horn-coloured bills, the lower mandible being white. The legs of both sexes are brownish-flesh colour. The bill measures 16–17 mm.; wing (male) 68–71·5 mm., (female) 65–67 mm.; tail 35–37 mm.

This weaver is somewhat of a mystery. It is not certain in fact that it occurs on the mainland of Africa, though it has been doubtfully recorded from Gaboon and Angola. In its island headquarters, São Thomé, it has been obtained by several collectors, but it did not figure in the recent collections made there in 1949 by the

Oxford University Expedition. Nothing is known about its habits, and until female specimens have been secured from São Thomé we

shall not know for certain whether specimens once considered to be of this species from Luanda on the African mainland have, in fact, been correctly determined.

Distribution. São Thomé in the Gulf of Guinea, and perhaps also on the mainland between Gaboon and the Quanza River in Angola.

YELLOW-CROWNED OR NAPOLEON BISHOP

Euplectes afra (Gmelin)

(see Plate 51, facing page 1416)

THE male of this species in breeding dress is a delightfully gay bird, its black cheeks, throat and belly contrasting with the brilliant yellow of the crown, rump and under tail-coverts. A blackish collar and scapulars form another dark patch on the back. In comparison the dull-looking female (above brown, streaked with black, with whitish under parts and streaky breast) is almost unrecognisable

among the other sparrowy-plumaged weavers, and into this drab plumage the brilliantly coloured male passes in the winter. At close quarters the breeding males will be seen to have some chestnut feathers, which vary in extent individually, in the centre of the crop. The wing measures 52–60 mm. and the tail 27–30 mm.

The adult female Napoleon can just be recognised in the field by a competent observer from female and immature of the Orange Bishop (*E. o. franciscana*) by the streaked flanks and lemon-yellow instead of buffish-white head markings.

The Napoleon Bishop has a much stronger preference for swamps and marshy areas than any of the foregoing bishops with which I have already dealt, at any rate during the breeding time. To what extent it is migratory is difficult to say, but in Darfur birds have been known to arrive in a swamp for the purpose of breeding from which they had been previously absent, and when nesting was finished, in the second week of November, to leave the neighbourhood. What is true of Darfur may be equally true in West Africa, but observations have not been so carefully carried out in the specific area with which we are mainly concerned.

So fond is this bishop of swampy land that it is quite a normal occurrence for its nests to be destroyed by flood. No doubt this unfortunate habit leads the birds to forsake a district in the middle of the season and to put in appearance elsewhere unexpectedly.

The Napoleon Bishop has been described as being aggressively territorially minded, driving away intruders with the greatest vehemence. The males are very conspicuous objects in the breeding season as they fly about with a whirr of wings, this way and that within the bounds of their territories. The frequent abrupt changes of direction during their headlong flight are unaccompanied by any change of speed and give the flight its distinctive erratic character. The displaying male also perches near the top of a grass stalk fluttering its wings for periods of several seconds.

The breeding season lasts approximately from July or August to October, varying according to locality. In northern Nigeria males are just coming into summer plumage in mid-July and breeding is in full swing in August. Nests are almost invariably built over water and are attached to growing aquatic plants. In shape they are semi-domed, elliptical structures with a large supero-lateral opening. They are woven of tough herbaceous stems and securely attached to supporting grasses. The lining is of grass-tops. Nests are placed in close proximity to one another as a rule. Whether the male of this species is polygamous has not been determined. Eggs are white faintly tinged with grey, the markings consisting of small, well-defined spots and black specks, chiefly round the large end. They measure 16·1–19·2 × 11·9–13·5 mm.

Distribution. Widely spread over all suitable country in West Africa from Senegal to northern Angola, ranging eastwards north of the equatorial forest to Darfur. In French Equatorial Africa it is found along the rivers and lakes. In the Belgian Congo it is found too in the forest clearings and second growth near the Congo. In the Saharan sub-region it occurs along the partly inundated banks of the Upper Niger. In Gambia it is one of the commonest bishops, occurring in the non-breeding season in immense flocks in the dry swamps. In Sierra Leone it is seen only in swampy country among the long reeds but much more commonly in the Gold Coast and in Nigeria. In both countries it is locally distributed, restricted to the vicinity of marshes and rivers.

GENUS COLIUSPASSER

Key to the male Whydah Birds in breeding plumage

1. Whole mantle lemon-yellow
Coliuspasser macrourus macrourus, p. 1422
Whole mantle black like back 2
2. Entire plumage and wings black, no coloured shoulder-patches; tail enormously elongated
Coliuspasser ardens concolor, p. 1429
Entire plumage not black; shoulder-patches brightly coloured 3
3. Tail not much elongated, not exceeding 3 in. in length; shoulder-patches orange or reddish orange; greater wing-coverts chestnut .. *Coliuspasser axillaris batesi*, p. 1424
C. a. bocagei, p. 1424
Tail elongated, considerably over 3 inches in length .. 4
4. Broad white patch on the wing, axillaries and under wing-coverts white
Coliuspasser albonotatus asymmetrurus, p. 1426
No white wing-patch on the primaries; axillaries and under wing-coverts not white
Coliuspasser hartlaubi humeralis, p. 1427

YELLOW-MANTLED WHYDAH

Coliuspasser macrourus macrourus (Gmelin)

(see Plate 51, facing page 1416)

The male in breeding plumage is a long-tailed black bird with a bright yellow patch on the back. Through glasses the fine white edges to some of the outer webs of the primaries and secondaries

show as narrow light lines on the wing. The tail is wide and sometimes looks almost fanned. The male may often be seen during the nesting season perched on the top of a grass stalk or twig of a bush uttering its thin little notes and constantly moving its long tail. It also has a habit of puffing out the feathers of its neck and making a small ruff which is very noticeable.

The adult female has sparrow-like plumage throughout, light brown above heavily marked with dark brown, the streaking on crown and mantle almost black. A yellowish-buff stripe passes over the eye. Chin and throat are buffish, the breast yellowish buff, indistinctly streaked. The tail is brown. The adult male in non-breeding plumage resembles the female in her sparrow dress, but he retains the bright yellow shoulder-patches always.

Measurements are: Bill 15–16 mm.; wing (male) 76–86 mm., (female) 65–70 mm.; tail (male) 92–122 mm., (female) 46–54 mm. It will be seen that there is a very great individual difference in the size of the tail in male examples. Males in full dress have the mantle, scapulars and lesser wing-coverts bright yellow, and by this they may always be distinguished.

Few birds have a wider distribution in tropical Africa, and as it is extremely numerous and equally conspicuous it is well known to all who take an interest in the bird life of the continent. As the males never lose their yellow shoulder-patches they, unlike many male weavers, can be recognised in and out of the breeding season.

Open grass country is its main habitat, and it has a distinct liking for marshy ground and the low-lying ground near the coast. It may be seen perched on bushes which provide a view of the landscape above the level of the tall grass, and there the male will sit in a commanding position while the hen remains in the grass below. He puffs out his frill or ruff as he sings a *chee-ee* in an extremely small voice. Flying from bush to bush the male's flight is a bouncing one, but this motion becomes less apparent if the bird takes a longer flight. It seems always to be engaged with the management of its long tail, especially when perched.

In the dry non-breeding season these whydahs gather together at evening and repair to the most enormous roosts. Birds begin to come into breeding dress about mid-May, but it is not until their second year that they do so. In most of West Africa it is not until July and August that breeding is at its height, but young have been found in the nest in June and late broods are reared up to October.

The nests may be woven among esong grass and also among taller grasses, the pairs keeping to themselves once the male has selected his territory and staked out his claim. Often nests are situated in lower herbage and fairly close to the ground, one or two feet and seldom more than four feet above it. Compared with the

nests of *Euplectes orix franciscana* the weaving is less strong and intricate, and the opening in the side is larger and lacks the well-defined border. The lining of grass-tops is much more profuse and projects to form an untidy ragged porch. Eggs are grey-green thickly and evenly marked with spots, speckles and streaks of dark brown or blackish, with (generally obscured) purplish shell marks. They measure 16·75–21 × 13·3–14·9 mm.

Distribution. The whole of Upper and Lower Guinea from Senegal to the Congo, ranging across the open country eastwards to the Upper Nile, Uganda, Nyasaland, northern Rhodesia and western Tanganyika. In Upper Guinea it ranges to the borders of the desert from the coastal districts wherever open grasslands and bushy plains occur in the savanna country from west to east. It does not occur in forest country.

FAN-TAILED WHYDAH

Coliuspasser axillaris (Smith)

(see Plate 51, facing page 1416)

Two races of the Fan-tailed Whydah come within our limits, to be detailed hereafter.

The male in its velvety-black breeding dress with brilliant orange-yellow shoulder-patches above the chestnut greater wing-coverts is a very handsome bird which measures in the flesh rather less than 7 in. in total length. In off-season plumage it assumes a sparrow-like dress, but the males retain their bright shoulder-patches throughout the year. The axillaries and under wing-coverts are chestnut, and when the wing is expanded these parts show up in strong contrast to the black plumage of the under side. The edge of the wing below the joint is yellow. The bill is short and stumpy and Cambridge blue in colour, the legs being black.

The male bird in eclipse plumage is pale fulvous brown above heavily streaked on the entire upper parts with black, the scapulars being similarly marked. The bird retains the bright orange shoulder-patches and the chestnut wing-coverts, the primaries being black and the secondaries broadly edged with chestnut. The under parts are pale brown streaked on the sides and on the breast, and the throat is buffish white.

The adult female closely resembles the male in off-season dress but is entirely brown streaked above with blackish. Only the lesser wing-coverts are black, broadly fringed with chrome yellow.

Measurements of *C. a. bocagei* are: Bill 15–16 mm.; wing (male) 85–89 mm., (female) 88 mm.; tail (male) 62–70 mm., (female) 60 mm. (8 males and 1 female measured).

Measurements of *C. a. batesi* are: Wing (male) 86–87 mm., (female) 71–74 mm.; tail 52–57 mm. (2 males and 3 females measured).

There is an astonishing variation in the wing measurements of this whydah, and the fact is discussed in my larger work, volume vii, page 204, with its implications.

We know very little about the habits of the two West African representatives of this whydah. It is a species which may be seen in flocks even in the breeding season, when others are engaged in their nesting colonies. The birds nest in long grass 3–4 ft. high and attach the finely woven ball nest to the grass stems. A few blades are invariably bent down and woven over the top of the nest. The entrance, as usual, is at the side. Eggs of the West African races have not been taken, but those of the Uganda representative are greenish grey clouded and marbled with purple-brown and flecked with spots and scrawls of very dark purple-brown. The cock guards its territory with great vehemence, chasing off any intruders, and by displaying in its vicinity will often give away the presence of its nest.

The race which was discovered on the Niger was found in small flocks on the alluvial flats over which the water was rising at the end of July and early August. The males were then all in off-season plumage, but their black wings made them conspicuous.

Distribution and Races

The typical subspecies, *Coliuspasser axillaris axillaris* (Smith), is an inhabitant of South Africa but has many representatives in other parts of the continent, the species as a whole ranging from the Upper Niger and Abyssinia south to Cape Province, Natal, and Angola.

The race with which we are concerned is *C. axillaris bocagei* (Sharpe), which ranges from the Benguella Province of Angola to British Cameroons, in which area it is subject to great variation in size.

Another race, *C. axillaris batesi* Delacour, seems to be confined to a small area through which the Niger flows around the great bend of the river which lies north of lat. 14° N. It was found in French Niger between Tillabéry and Gao and again at Mopti in French Sudan. *C. a. batesi* is distinguished from *C. a. bocagei* by having the lesser wing-coverts more reddish orange.

Another race, *C. a. phoenicea* (Heuglin), is found in the Sudan and Uganda, and it is from this race that I have quoted the field notes mentioned above.

ANGOLAN WHITE-WINGED WHYDAH

Coliuspasser albonotatus asymmetrurus (Reichenow)

This bird is easily distinguished from the other black long-tailed whydahs by the very large white patch on the wing and the bright lemon-yellow shoulder patches. It is the same size as the Black Whydah in body—about 80 mm. from bill to the root of the tail.

The black tail is narrow and does not exceed 5 in. in length, never attaining anything like the length of tail assumed by the Black Whydah. The male moults its black dress after breeding and then assumes the sparrow-like dress of so many other weavers, but it still retains the yellow shoulder-patches and the broad white wing-patch which is an unfailing guide to its identity.

The adult female is striped brown and blackish above but less boldly than the male in off-season dress. A yellow eyebrow is present; the under parts are mostly white, with a tinge of yellow on throat and gape, and the breast and flanks are washed with brown. The

wings and tail are brown, the lesser wing-coverts with blackish centres and chrome-yellow borders, the edge of the wing below the bend also being yellow.

The male in off-season dress resembles the adult female but may always be recognised by the white wing-patch, which is shown in the accompanying illustration.

Measurements of this bird are: Bill 15–16 mm.; wing (male) 72–75 mm., (female) *circa* 63–66 mm.; tail (male) breeding 107–135 mm., non-breeding 50–56 mm., (female) 38–44 mm.

This is a bird of the grass-savanna country, but it does not range into Upper Guinea and, with the exception of one or two isolated records, has not occurred north of Angola. The typical subspecies is widely spread in South Africa, however. On the wing it is a conspicuous species, the white wing-patch proclaiming the identity of the male bird from afar. It flies quickly and turns rapidly in flight and has been seen in Portuguese East Africa to pitch into high tree-tops—a very unusual thing for a whydah to do.

The nest is supported by having the upright grass stems incorporated with the weaving on each side of the entrance but is otherwise pendant. The flimsy outer structure is made of semi-green and dry grass. In general construction it resembles the nest of *C. axillaris*. The normal clutch is of three eggs, which resemble those of *C. ardens* but are greener in colour, the freckling being mixed with heavier spots and some cloudings, in which respect they resemble more the eggs of *C. axillaris*.

Distribution. The race with which we are concerned extends from the Cunene River through most of Angola and Portuguese Congo to Gaboon. It has also been collected on the island of São Thomé in the Gulf of Guinea but has not yet been recorded from Cameroon.

UGANDA MARSH WHYDAH

Coliuspasser hartlaubi humeralis (Sharpe)

The large size of this whydah, added to its black colour and orange shoulder-patch, enable it to be identified without much difficulty. The female is smaller and is heavily striped above with black and pale fawn, the blackish lesser wing-coverts being edged with chrome yellow. A pale fawn eyebrow is also present. In the male the bill and legs are bluish horn and dusky brown respectively, and in the female both bill and legs are light horn-colour. The male in the non-breeding season resembles the female but is larger in size and retains the orange shoulder-patches of the breeding bird. This Marsh Whydah has much the same plumage changes as *Coliuspasser macrourus*, which have been discussed under that species.

Measurements are: Bill 16–18 mm.; wing (male) 95–98 mm., (female) 79–84 mm.; tail (male) 103 mm., (female) 60–64 mm. The accompanying illustration gives a good idea of the adult male and female in breeding dress and of a male in the non-breeding season.

A truly aquatic bird, as its English name implies, we know very little about its life-history. As with the whydahs in general, the male may be seen in the breeding season perched in some commanding position in its territory, persistently chasing away any other male which dares to venture near. Its cry has a peculiar wild ring which enables anyone familiar with it to recognise the sound even when the bird remains out of sight.

In the Nun valley in British Cameroons it is a well-known species in the marshes but is difficult to observe closely, as it is well content to live far from firm ground where reeds grow sparsely in deep water. Much of its time is spent, not on the ground, but on the huge lily leaves, sudd and other vegetation beloved of the Jaçana. In

September the birds on the Nun marshes were in breeding plumage, but owing no doubt to the difficulty of the terrain they frequent their nests have not been found.

Distribution. This is a Uganda species, whence it extends eastwards to the Rift valley and occurs also in the highlands of British Cameroon and adjoining French territory. It is recorded from Akonolinga and Ngaundere on the Plateau and has been heard at Tibati. Nowhere is it so common as in the Nun marshes, which extend from British territory into the French sphere.

LONG-TAILED BLACK WHYDAH

Coliuspasser ardens concolor (Cassin)

(see Plate 51, facing page 1416)

THERE can be no mistaking the Black Whydah when it has assumed the remarkable tail-feathers which are such a feature of the males in

the breeding season. The body of this whydah is very small. From the tip of the bill to the root of the tail is under 3 in., but the tail of narrow plumes may be 10 in. in length and is used in display when by slow flight against the wind the shafts are held stiffly down

while the tips wave like a flag. Their all-black body plumage, with no brightly coloured shoulder-patches to relieve the dead black, combined with their short round wings and astonishingly long tails, leaves no room for confusion with any other species.

The female is unfortunately quite impossible to distinguish in the field from several other female weavers. It has the entire upper parts striped black and fawn-colour, with a broad yellow stripe over the eye and buffish ear-coverts with dark border and yellowish lores. Wings and tail are brown with broad fawn margins to all the feathers except the bastard wing. Chin and throat are buff, becoming fawn-colour on the breast with some indefinite dusky markings. The rest of the under parts, including the under tail-coverts, are buff. Axillaries and under wing-coverts are also buff and the wing-lining is pale. The eye is dark brown, the bill brownish horn; the legs and feet are brown.

The adult male in non-breeding plumage closely resembles the adult female but has the black markings of the upper parts more jet-black than in the female and more pronounced. Measurements are: Bill 14–15 mm.; wing (male) 72–85 mm., (female) 68–70 mm.; tail (male) in breeding dress 190–265 mm., in non-breeding dress 55–62 mm., (female) 50–56 mm.; tarsus 21–33 mm.

The Black Whydah appears to be as much at home in the savanna country of Sierra Leone as it is in the high grasslands of the Cameroon highlands. The males probably do not acquire their long tails before the second year, but once assumed they proclaim the owners' identity at a long distance. In normal flight the long central feathers are held close together, while their shafts are sufficiently stiff to prevent their waving up and down in a wind and thus impeding the bird's progress. In display flight the middle rectrices are curved vertically, so that the tail then resembles the keel of a boat. During display the wings are beaten vigorously, though the bird makes little progress. A butterfly-like flight is also indulged in at the time of sexual activity, when the long tail hangs down, or may be half a dozen males will be seen following a female in line, like so many little rockets. Fights between males take place and the females are chased about in all directions.

The breeding season varies according to the latitude and altitude in which the birds are living. In Liberia they are in full plumage in September, and eggs have been found in that month. The nest was woven among the tops of tall rice-stalks, a little round ball consisting of grass strips and fibres, about 4 ft. from the ground. The three eggs which it contained on 14th September had a greenish ground and were heavily speckled with dark markings of purplish brown. In British Cameroon the Black Whydah was found to be exceedingly common in the Banso highlands (5,000–6,000 ft.) in the

month of September. Males were chasing females and breeding was evidently about to begin. In the Nun marshes, at a rather lower altitude, where the floods cover a vast area, the males were to be seen among the reeds a considerable distance from terra firma.

Distribution. Locally distributed in West and Central Africa in the savanna belt from Senegal to Angola, ranging eastwards through the savanna country of the Belgian Congo north of the equatorial forest to reach the Great Lakes. It is found in Uganda, the eastern Congo, western Tanganyika and Nyasaland and Mozambique, in all of which countries it may be found side by side with the typical race, sometimes intergrading.

C. ardens ardens may be distinguished by having a crescent-shaped patch of scarlet across the chest which is absent in *C. ardens concolor*.

Throughout the range in western Africa only the all-black birds are to be found.

SUB-FAMILY ESTRILDINAE

It has not been possible in this volume to depict in colour more than twenty species of the sub-family Estrildinae. In volume vii, *The Birds of Tropical West Africa*, 46 species were figured in colour this sub-family alone, and those who are able to do so are strongly advised to secure volume vii of my larger work, of which an extra large edition was printed for the Crown Agents for the Colonies and can be obtained separately.

Key to the Weaver-Finches in breeding plumage in the sub-families Estrildinae and Viduinae

1. Males which in breeding plumage have central tail-feathers greatly elongated to about twice length of body or more 2

   Central tail-feathers not elongated in either males or females 3

2. Middle pair of elongated tail-feathers broad, and set perpendicularly to plane of back; collar surrounding neck chestnut .. *Steganura orientalis orientalis* ♂ and races in breeding dress, p. 1503

   Middle pair of elongated tail-feathers narrow and ribbon-like, set horizontal to plane of back as in a normal tail; collar surrounding neck white *Vidua macroura* ♂ in breeding dress, p. 1501

3. Upper parts, especially mantle, streaked with black or dark brown shaft-streaks on brown or buff ground colour. No bright colours in plumage. Belly white or whitish 4
Plumage not as described above 7

4. Crown of head with light patch or streak down centre of crown bordered with black or brown 5
Crown of head uniformly streaked like mantle and back
Anomalospiza imberbis tibatiensis ♀, p. 1507

5. Terminal portion of outer tail-feathers white on inner web
Vidua macroura ♀, and ♂ in non-breeding dress, p. 1501
Terminal portion of outer tail-feathers not white on inner web 6

6. Size larger (wing over 70 mm.), streaking on mantle prominent *Steganura orientalis orientalis* and races ♀, and ♂ in non-breeding dress, p. 1503
Size smaller (wing under 70 mm., usually not exceeding 65 mm.), streaking on mantle rather obscure
See separate key to the genus *Hypochera*, p. 1494

7. Entire plumage above and below glossy dark blue, dark green or purplish black, upper parts and under parts similar in colour; very small bird about 4 in. in length with pink or whitish bills
See separate key to the genus *Hypochera*, p. 1494
Plumage not as described in the paragraph above .. 8

8. Breast and upper tail-coverts turquoise-blue 9
Breast and upper tail-coverts not turquoise-blue .. 11

9. Crimson patch on ear-coverts
Uraeginthus bengalus bengalus ♂ and subsp. ♂, p. 1491
No crimson patch on ear-coverts 10

10. Turquoise-blue of breast and cheeks very bright; upper parts mouse-colour .. *Uraeginthus angolensis* ♂, ♀, p. 1493
Turquoise-blue of breast and cheeks rather dull; upper parts warm brown
Uraeginthus bengalus bengalus ♀ and subsp. ♀, p. 1491

11. With scarlet, crimson or pink on upper tail-coverts .. 12
Without scarlet, crimson or pink on upper tail-coverts 44

12. Whole of head glossy crimson
Genus *Pirenestes*, see separate key, p. 1457
Whole of head not crimson 13

13. Mantle and back dark crimson or bright crimson and belly either uniform olive-green or spotted with white on grey or black ground 14
Plumage not as described above 15

14. Under parts grey or blackish with round white spots *Clytospiza dybowskii* ♂ ♀, p. **1453**
Under parts uniform olive-green; flanks with crimson *Cryptospiza reichenovii reichenovii*, p. **1454**

15. Under tail-coverts orange or orange-scarlet *Estrilda subflava subflava*, p. **1482**
Under tail-coverts not orange or orange-scarlet 16

16. Under parts from breast to under tail-coverts chestnut spotted with white .. *Clytospiza monteiri* ♂ ♀, p. **1452**
Under parts not chestnut spotted with white 17

17. Breast scarlet .. *Spermophaga haematina haematina* ♀ and *Spermophaga haematina pustulata* ♂ ♀, p. **1455**
Breast not scarlet 18

18. Belly and flanks (and in most cases breast also) prominently barred 19
Belly and flanks not barred but occasionally small white spots or flecks present 26

19. Upper parts brown or dark grey 20
Upper parts olive or rusty-olive or with strong olive wash 21

20. Margin of wings yellow or orange-yellow *Pytilia hypogrammica* ♂ ♀, p. **1466**
Margin of wings red *Pytilia phoenicoptera phoenicoptera* ♂ ♀, p. **1465**

21. With red or scarlet on face 22
Without red or scarlet on face 24

22. Breast bright yellow .. *Pytilia melba citerior* ♂, p. **1468**
Breast olive-yellow or olive-brown indistinctly barred 23

23. Under tail-coverts white or creamy white without any spotting .. .. .. *Pytilia melba melba* ♂, p. **1469**
Under tail-coverts black, broadly tipped with white *Pytilia afra* ♂, p. **1467**

24. Under tail-coverts white or creamy white without any spotting 25
Under tail-coverts black and white *Pytilia afra* ♀, p. **1467**

25. Barring of under parts distinct but not heavy, contrast between white ground and olive-brown barring not very marked, as if bars were faded
Pytilia melba citerior ♀, p. 1468

Barring of under parts heavy, almost black on white ground, contrast much greater than in above
Pytilia melba melba ♀, p. 1469

26. Mantle, back and scapulars very finely (and in one species obscurely) barred. Unless handled, barring can easily be overlooked 27

Mantle, back and scapulars uniform without faintest trace of barring, however closely examined 29

27. Crown of head black 28

Crown not black but almost same olive-brown as back in colour .. .. *Estrilda paludicola anambrae* ♂ ♀, p. 1485

28. Under parts very pale grey, including belly and under tail-coverts *Estrilda nonnula nonnula* ♂ ♀ and subsp., p. 1487

Under parts dark smoke-grey, belly and under tail-coverts black or smoke-brown
Estrilda atricapilla atricapilla ♂ ♀, p. 1488

29. Cheeks orange .. *Estrilda melpoda melpoda* ♂ ♀, p. 1483

Cheeks not orange 30

30. Crown, mantle and under parts pure dove-grey or grey with faint rosy wash on under parts 31

Crown, mantle and under parts not grey 33

31. Throat black
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BRONZE MANNIKIN

Spermestes cucullatus cucullatus Swainson

The adult of the Bronze Mannikin should not be difficult to identify; the sexes are alike. Its black bill, sometimes with a light spot at the base of the lower mandible, should alone distinguish it from *S. bicolor*, which has a blue bill. Its head and throat appear very dark, the former with a green gloss which is not apparent except at close quarters. In contrast to the head, the back is grey-brown with two dark green metallic patches on each shoulder, the rump and upper tail-coverts are barred black and white and the tail-feathers black. Below the throat the under parts are white with two dark glossy green patches on either side and the flanks barred like the under tail-coverts. The Bronze Mannikin is not quite so stoutly built as the Blue-billed Mannikin, and unlike the latter species does not penetrate into the forest. It is a bird of the open grassland and is gregarious in its habits. Small flocks feed together on the tall grass and when disturbed fly up together to settle in the branches of low trees. Young birds are very brown above and never sooty as in the Blue-billed Mannikin.

Measurements are: Bill 9–10 mm., wing 47–52 mm., tail 26–31 mm.

It is important to differentiate between the young of the Bronze Mannikin and the young of the Blue-billed Mannikin. The former is earth-brown on the upper parts, the latter very much darker and of a sooty grey-brown. There is little difference on the under parts, but the flanks of *S. cucullatus* are usually browner.

The Bronze Mannikin is a general favourite by reason of its tameness and engaging ways. It occurs mainly upon open land, where it gains its living by picking seeds from the grasses or from those which have fallen to the ground. It is nearly always to be seen in family parties but often in far greater numbers, and mingles freely with other species. When feeding it emits a low chirp, but at roosting time utters a lively twitter as the flocks gather in the tall grasses to spend the night.

This little bird will occasionally build a roost which resembles the nest which it constructs for its eggs, except that the structure is less elaborate and substantial. All the members of the family join in the work, collecting the grass in the immediate vicinity of the roost. If later the site chosen is not approved, the roost is equally easily dismantled and reconstructed elsewhere. Before going to roost the mannikins repair to a drinking place, preferring a stream or pool where the overhanging grasses dip conveniently to the water. Here the birds dally for a while, twittering and swinging on the grass stems.

Like many other species, this mannikin will flock to a swarming of white ants, and in company with Orange-cheeked Waxbills will seize the termites among the grass. The poor little bird itself has many enemies, and apart from being so often trapped by native boys, falls an easy prey to the predacious Wood Kingfisher, which has been seen to sweep up the young mannikins in its bill one after another and gobble them up.

The breeding season is an extended one, and in Nigeria alone nests with eggs or young have been found in every month from June to December. Some pairs begin building as early as April, but the most active period is from June to August. Nests are often situated on the outskirts of villages, in clearings as well as in open bush. They are not necessarily in colonies, though several nests may be in the same neighbourhood and sometimes an orange-tree will hold four or five nests. Many nests are built under the eaves of a house. The sexes share in building and in incubation; old and young will roost in the nest together long after the young have flown.

The nest itself is built of light grass and is globular with a small entrance hole. Sometimes there is a feather lining, often no lining at all. The nest is placed about 6–14 ft. from the ground in mango,

orange and frangipani trees, among others, and is supported by the boughs, not slung. It is not unusual to find one in close association with a colony of wasps. The clutch varies from three to seven, five being the usual complement. The eggs are dead white with only a faint trace of gloss. Sixty eggs measured 12·3–15·5 × 9·5–11 mm.

Distribution. Widely spread over the whole grasslands from Senegal to Gaboon as well as on Principe and São Thomé islands. It ranges across Africa to meet and intergrade with *Spermestes cucullatus scutatus* in the area of the White Nile, Uganda and the eastern Belgian Congo. In all our West African possessions it is exceedingly numerous and in the non-breeding season especially may literally be seen in swarms.

S. c. scutatus has a browner throat, less heavily barred rump and upper tail-coverts, less evident patch of metallic green on the sides of the breast, which is often entirely absent in *S. c. scutatus*. Birds which cannot be satisfactorily assigned to either race occur over a wide area in Uganda and in the vicinity of the upper White Nile.

BLUE-BILLED MANNIKIN

Spermestes poensis (Fraser)

THERE are two races of this mannikin in West Africa. The typical race, which was discovered first in Fernando Po, occupies the

greater part of Lower Guinea on the mainland, while its place is taken in Upper Guinea by *S. poensis bicolor*. Their respective ranges and characteristics will be detailed hereafter.

This small mannikin, about 4¼ in. from bill to tail, is entirely black glossed with bottle-green except for the pure white lower half of the breast, belly and under tail-coverts. A prominent feature is the lavender-blue bill, which is short and stumpy, very heavy-looking for such a small bird. Wings and tail are black, but in flight some white is often noticeable at each side of the base of the tail. The bill in *S. p. bicolor* measures 11–12 mm., wing 48–51 mm. and tail 29–32 mm.

The Blue-billed Mannikin is throughout its range a bird of forest clearings and undergrowth, small flocks of which may often be observed in the cane grass. It shares company with the Magpie Mannikin in such surroundings. The latter is a larger bird with entirely white under parts except for the black throat. In the cleared land adjoining the forest it may be seen with the Bronze Mannikin, but that bird is a grass-loving inhabitant of the savanna and shuns the forest. Apart from the different country which each inhabits, the range of these two is very much the same, and consequently they may often be seen together in the open country, in cane grass, rice-fields and on cleared land, but then they appear to be good companions.

The subject of this note is never seen in such numbers as the Bronze Mannikin, nor does it seek human habitations to the same extent. It loves best the high forest undergrowth, where parties of four to six may be encountered together. Sometimes they join the bird armies which work systematically through the forests. The male has quite a sweet voice and occasionally sings a little ditty from the top of a tree.

No one appears to have taken much note of its feeding habits, and seeds are presumed to be its staple food. One bird shot in July, which was then in breeding condition, had its crop crammed with insects. In Nigeria and the Gold Coast it breeds from March to August, and the rainy season everywhere is no doubt its nesting time in both Upper and Lower Guinea.

This mannikin builds false nests in which to roost, and a number of the little birds will squeeze into one of these "sleeping" nests, which somewhat resemble a European wren's nest but are less bulky and are lined with some soft material, in one case a white hair-like substance believed to have been collected from a rubber-tree. The nest in which it finally deposits its eggs resembles that of *S. c. cucullatus* and is made of grass-heads with stalks and is surrounded on the exterior with dried leaves. Seed-down may also be used in its construction. The nest is placed in a low tree such as a holly, on a branch, and is never hung. It may be 7–15 ft. from the ground. Eggs are pure white, three to five in the clutch, and measure about 14 × 10·5 mm.

Distribution and Races

Spermestes poensis poensis (Fraser) occurs on Fernando Po and on the mainland. It is found in southern Cameroon from the vicinity of Yaunde southwards to Angola. It ranges across equatorial Africa to Uganda, western Kenya, south-western Abyssinia and south-western Tanganyika. Its wing is 48–54 mm. and tail 30–35 mm.

In the neighbourhood of Cameroon Mountain, it intergrades with the Upper Guinea race, i.e. *Spermestes poensis bicolor* (Fraser), which ranges from Portuguese Guinea to British Cameroon in the forest country of West Africa. These two races may be distinguished from each other by the typical subspecies (*S. p. poensis*) having a row of small white spots along the outer web of the quills except at the terminal portion, and by the rump and upper tail-coverts being barred with white.

MAGPIE MANNIKIN

Amauresthes fringilloides (Lafresnaye)

The Magpie Mannikin is considerably larger than the mannikins with which we have been dealing, being about 5 in. in total length. Its bill is large and heavy, and as the upper mandible is black, that feature alone should distinguish it from the smaller Blue-billed Mannikin, with which species it sometimes consorts. Apart from its black head glossed liberally with dark blue, there is a striking black patch on either side of the white breast which accentuates the white crop, the white area extending on to the sides of the neck as depicted in the plate. When the wings are lifted some rusty-brown feathers are exposed to view. Back and wings are brown, but the tail is black. The wing measures 57–63 mm., the tail 33–37 mm. The sexes are alike in plumage.

Magpie Mannikins are commonly seen on farmlands, especially those where rice is grown, when flocks of 30–40 birds may be encountered after the breeding season is over. Although it has a strong preference for rice-grains and is usually to be found where rice is grown, yet it is not essential to it, and these mannikins can live exclusively on the seeds of wild grasses miles from where rice is cultivated. It may often be found associating with *Spermestes cucullatus* and in the vicinity of forest land with *S. bicolor*.

At night these Magpie Mannikins resort to communal roosting places in reed-growths or bamboos and make a considerable noise with their twittering calls. Although so widely spread in plantations and cleared lands in West Africa it can only be considered a local species, being nothing like so common as the Blue-billed Mannikin,

which is more a bird of forest clearings than the species under discussion, though they are often seen together. It seems to have spread to southern Cameroon following the cultivation of rice in the neighbourhood of Bitye.

The birds nest in colonies, often in association with *Spermestes cucullatus* but sometimes singly, building their nests in almond-trees, bamboos, palms and young conifers. The nest is in the shape of a dome and built of grass. It is an untidy structure with odd leaves and stems added to the inch-thick outer wall of dry grass. It has a prominent porched entrance like that of *Spermestes*. Eggs are pure white, four to six being the normal complement. They measure 14·9–16·5 × 10·7–11·9 mm.

Distribution. Locally distributed from Senegal to southern Cameroon, and widely spread in East Africa from the Upper White Nile to Natal. It is now nearly exterminated in Senegal and Gambia and has not been reported from Nigeria but occurs in the north of British Cameroon.

WARBLING SILVERBILL

Euodice cantans cantans (Gmelin)

This little bird has a rather long blackish and graduated tail, the middle feathers of which are elongated and taper to a point, the whole tail and rump contrasting with the light brown of the body plumage. In total length, including the tail, it measures about $4\frac{3}{4}$ in. The pale border to the feathers of the crown give the forehead a scale-like appearance, but perhaps the most noticeable feature is the blue colour of the blunt bill, especially the lower mandible. In flight the wings appear darker brown than the body, and a patch of white can be seen on either side at the base of the tail, the under tail-coverts being white like the belly. The bill measures 9·5–10 mm., wing 52–56 mm. and tail 37–44 mm.

The plumage changes of this bird from the juvenile to the adult are discussed in some detail in my larger work (volume vii, p. 238).

The Silverbill is an inhabitant of dry country and must be sought in the semi-arid belt across the whole of Africa from Senegal to the Red Sea. Although it is one of the commonest species to be seen in the Sudan, it is surprising how few are the field notes which have reached me concerning it in West Africa.

They are sociable little birds which are found on the plains in flocks and may often be seen perched in a tree, where they huddle close to one another and sit thus for hours at a time. When so occupied they give forth their little song *sotto voce* from which they have gained their colloquial name,

In waterless country the Silverbills gather round the wells to drink when the flocks are watered should any of the precious liquid be spilled. Only in the depths of the wilderness does its range die out. In the vicinity of Timbuktu it is to be found most, if not all, of the year. Both north and south of the Niger it is to be found throughout its length where the river flows through semi-desert country. Similarly in the great wastes of the Chad and Niger territories the Silverbill may be encountered at many places. In the off-season the birds congregate in large flocks and no doubt move about from place to place.

The nesting season is a long one—in Darfur it is said to extend from October to March, but in French Niger a clutch of five eggs was found on the point of hatching on 23rd September, and at Timbuktu a female was found to be on the point of laying, while in Bauchi Province two nests had eggs in the second week of March. Nests are placed under the eaves of houses or in thorny acacias. Nests are made of grass and loose feathers, sometimes of little twigs, and have a lining of fine grass, feathers and hair. An entrance spout points nearly upwards. Two or three eggs seem the normal complement. They are dull white, unmarked and measure 14·2–15·3 × 10·8–11·9 mm.

Distribution. From Senegal and Gambia eastwards through the semi-arid belt of the French Sudan and French Niger, the Upper Volta and the Northern Territories of Nigeria and northern Cameroon (Marua and Garua), ranging east through Chad and Darfur to the White Nile. East of the White Nile, in the Red Sea Province of the Sudan, Somaliland, Eritrea and northern Kenya highlands its place is taken by *E. cantans orientalis*, which is browner on the upper parts than the typical race.

WOODHOUSE'S ANT-PECKER

Parmoptila woodhousei woodhousei Cassin

This little bird is about 4¼ in. from bill to tail and has more the appearance and build of a warbler than of a weaver bird. Its cheeks and top half of the throat are rufous and the rest of the under parts appear to be profusely spotted on a whitish-buff ground. The upper side is brown except for a ruby patch on the forehead in the male; the beak is black and rather fine, not thick and stumpy like the Estrildine Weavers. The flesh-coloured legs are rather long and warbler-like with very fine tarsi; when fully outstretched they reach almost to the tip of the tail in a dried skin. The bill measures 10–11 mm., wing 48–53 mm., tail 36–40 mm. and tarsus 14·5–15·5 mm.

The Ant-pecker is to be found both in the undergrowth of the

forests and in bushes on open land, where it may be observed in little parties of half a dozen birds or so, feeding on the insects (mainly ants) upon which they thrive.

For such a tiny bird it makes a very big nest, a large domed pile of dried leaves with fine fibres of plantain leaves and with a quantity of moss thrown loosely over the outside. The entrance is at one side and has a kind of portico above it. It may be placed in a tree on a forked twig. Eggs number four in the clutch and are uniformly white. Measurements are 13–14·5 × 10–10·5 mm.

Distribution. This bird has a comparatively short range and is not known to occur in West Africa west of the Niger delta. A young bird believed to be of this species has been taken at Old Calabar and in primary forest in British Cameroon at Kumba and Ndoi; thence we find it in many localities in French Cameroon, ranging as far south as the Camma River in Gaboon.

South of the Congo River another race, *P. w. ansorgei* Hart., has been described from northern Angola which ranges east to the Kasai district of the Belgian Congo.

RED-FRONTED ANT-PECKER

Parmoptila rubrifrons (Sharpe and Ussher)

As this little bird is extremely rare and is only known from the Gold Coast, I have included the full description of male and female from my larger work, in the hope that it may be recognised should it turn up again.

The adult male has the forehead and the entire forepart of the crown bright red, the hind-crown, nape and neck olive-brown, each feather tipped with dull white; lores, cheeks and ear-coverts the same, ground colour profusely speckled with white, the white spots at the tip of the ear-coverts continued in white shaft-streaks up the feathers, so that the cheeks and malar region appear more streaked than spotted. General colour of the upper parts and wing-coverts is olive-brown, the coverts with paler margins. Primaries, secondaries and tail-feathers are brown. The chin is creamy white; the whole of the rest of the under parts from the throat to the under tail-coverts are rich chestnut, rather dark in shade.

The adult female measures: Bill 10 mm., wing 49 mm., tail about 42 mm., tarsus 14 mm. It is very different from the male. The crown is dark brown with pale ochraceous tips to the feathers, the forehead inclining to rufous. Cheeks and ear-coverts are dusky with the same whitish markings as in the male. The mantle, back, wings and tail are uniform dark brown. The entire under parts from the chin to the vent are creamy white with very dark brown tips

to the feathers, the breast being more heavily spotted than the belly, upon which the markings become indistinct.

An apparently juvenile specimen collected at the same time and place resembles the female on the upper parts except that the crown is unspotted, only the forehead being minutely speckled. The under parts are buff with subterminal dusky-brown bars, indistinctly defined.

We know nothing about this bird, which was collected many years ago at a spot named Kaizaraku near Denkera in the forested country of the Gold Coast, a locality which it is difficult now to locate but was known to be thickly forested in 1871 when the bird was first discovered.

Distribution. The Gold Coast, probably Ashanti forests. Mr. G. S. Cansdale tells me that he has on several occasions seen this bird in the forests of the Gold Coast, but not realising its rarity took little more notice of it than to make sure of its identification.

TINY TIT-WEAVER

Pholidornis rushiae (Cassin)

THERE are three recognisable races of the tit-weaver in our area and another which is found in Uganda.

This minute bird is one of the smallest in Africa, its total length barely reaching 3 in. There is little about it to suggest that it is a

weaver, and indeed its correct position in the avian tree has been for long under dispute. Its colouring is fairly distinctive when that can be seen. The whole of the crown and nape is striped, the feathers with whitish fringes and almost black centres, the sides of the neck and ear-coverts being similar. Mantle, scapulars and back are dark brown with buffish-white margins; the rump and upper tail-coverts are yellow and the wings and tail are dark brown. Chin, throat and breast are white, with dark brown shaft-stripes varying in breadth according to the race. The rest of the under

parts, including the flanks and under tail-coverts, are yellow. Axillaries are yellow and the under wing-coverts white. The eye is red (in the male); the legs and feet are yellow. The bill is mainly black. In size the typical race measures: Bill 8·5–9·5 mm., wing 42–51 mm., tail 23–26 mm. and tarsus 10 mm. Unless one is familiar with this bird it is likely to be mistaken for a tiny flycatcher.

The Tit-weaver is usually to be seen in company with others of its kind, three or four together, flitting about in the tree-tops and picking minute insects from the branches and twigs. Its stomach is sometimes crammed with *Cocci*, which adhere to the bark of twigs. When feeding it makes a scarcely audible twitter. As they are so partial to high trees, they are very difficult to locate. So small are they that one has been found entangled in a spider's web.

Occasionally the tit-weavers will descend to lower levels, but even then they are not easy to observe, as they are very shy and avoid human beings. They climb about on creepers and cling to twigs like a crombec.

The nest is very large for so small a bird, domed, and with overhanging entrance so that the bird enters vertically upwards. Nests found near Kumasi of *P. r. ussheri* were composed entirely of rubber-seed down forming a fabric-like felt, and were invariably attached to a bramble which in turn was suspended from a tree. It takes a considerable wrench to detach either the nest from the bramble or the bramble from the tree. The nests are described as being hanging and weaver-like. One nest, in actual course of construction, was occupied at night by four birds which used it as a sleeping place. The eggs are white without markings and are quite indistinguishable from some of those of the small waxbills.

Distribution and Races

Pholidornis rushiae rushiae (Cassin) has been described in detail. The stripes on the breast are fairly coarse and prominent. Its range extends from southern Cameroon westwards through Nigeria as far as Lagos.

Pholidornis rushiae ussheri Reichenow differs from the above in having the striations on the throat and breast much finer and the brown primaries edged with olive-yellow. The wing measures 42–47 mm., tail 22–24 mm. It ranges from the Gold Coast to Sierra Leone.

Pholidornis rushiae bedfordi Ogilvie-Grant is distinguished from both the above races by having the striations on throat and breast darker, almost black, and much broader. There are other minor differences also. The wing measures 45·5–46 mm., tail 25–30 mm. This race is restricted to Fernando Po.

A fourth race, *Pholidornis rushiae denti* Ogilvie-Grant, has been described from Avakubi in the eastern Belgian Congo and is found also in western Uganda—Mabira forest.

GREY-CROWNED NEGRO-FINCH

Nigrita canicapilla (Strickland)

(see Plate 52, facing page 1452)

Two races come within our limits on the west coast, to be mentioned hereafter. The sexes of this negro-finch are alike.

This is one of the easiest weavers to recognise by reason of its distinctive black face, including the forehead as far as the level of the eyes, bordered along the crown with white, the black wings with round white spots on the coverts and the jet-black under parts.

The hind-crown and back are grey, and the rump appears whitish in contrast to the black tail. It has, moreover, a bright yellow eye which is a conspicuous feature, and a black bill which is quite powerful for so small a bird. In size the Grey-crowned Negro-Finch measures about 6 in. in total length, the black tail being noticeably rounded and the wings rather pointed and long. In flight the whitish rump and the pure white spots on the wings are apparent at close quarters. The wing measures 65–72 mm. and the tail 42–50 mm.

Care must be taken in southern Nigeria and Fernando Po, where their ranges overlap, not to confuse this with another little Estrildine Weaver, i.e. the Pale-fronted Negro-Finch (*Nigrita luteifrons*). The

latter is distinctly smaller in size, about 4½ in. from bill to tail measured in the flesh, but like the Grey-crowned Negro-Finch it is entirely black on the under side and has a grey crown and back, but its forehead instead of being jet-black is white, often stained a dirty yellow, which fades into the grey hind-crown. Another point of distinction is that *N. luteifrons* has no white spots on the wing-coverts, the entire wing being uniformly dark; it also has a much shorter, stumpier bill when compared in the hand and its eye is cream-coloured, not yellow. Still another difference—an important one—exists between these two birds. In *N. canicapilla* the sexes are alike, in *N. luteifrons* different, the hen of the latter being grey on both upper side and under side. Young birds are so like one another that only careful comparison can determine the species, but there is usually some indication of wing-spots in the young of *N. canicapilla*, and the larger bill of that species is apparent at a very early age.

The negro-finch inhabits wooded country and is especially to be found wherever there are kurimis and tall bush. More rarely it is encountered in really open country, but the birds seem quite as much at home in that environment as in more dense growth. It has a preference for the high trees of plantations and gardens and is more often located above 40 ft. from the ground than below it. It is usually in pairs or singly. The male has a very distinctive short song, which is delivered from a favourite song-perch in a tree in a forest clearing or in neighbouring farmland.

Very little has been recorded about its breeding habits. A nest found on 23rd July at Kumba (British Cameroons) of the Lower Guinea race was a bulky, loose, untidy structure the size of a foot-ball, lodged 12 ft. from the ground in the smaller branches of an evergreen tree in a garden. Built of grass, fibre, moss and leaves and lined with fresh grass-heads, it was a domed structure with a large lateral opening. Five eggs completed the clutch and these were ovate in shape, devoid of gloss and pure white. Eggs measure 17·2–17·8 × 12·7–13·2 mm.

Distribution and Races

Nigrita canicapilla canicapilla (Strickland) was described first from Fernando Po and ranges on the mainland from southern Nigeria (Lagos) to the Congo, occurring in British Cameroons, whence it extends through the northern Belgian Congo to the Semliki valley.

Nigrita canicapilla emiliae Sharpe is distinguished by having a greyer rump and reduced spotting on the wing-coverts. It is also smaller in size, with wing 62–67 mm. and tail 39–47 mm. This race ranges from French Guinea, through Sierra Leone, Liberia, the Ivory Coast and Gold Coast to former German Togoland, east of which it merges with the typical race.

Various other races have been described. West of the Rift valley

we find *N. c. schistacea*, which is the race in Uganda and Kenya, while south of the Congo we find *N. c. angolensis*. Still another race has been described from Tanganyika.

PALE-FRONTED NEGRO-FINCH

Nigrita luteifrons Verreaux

(see Plate 52, facing page 1452)

THERE are two races of this bird in West Africa but only one, the typical race, on the mainland. The sexes are unlike one another.

This small bird measures under 4½ in. from bill to tail. The cheeks of the male bird up to and just surrounding the eye, and the entire under side, wings and tail are black; the whole of the upper parts are lead-grey, paler on the forehead, which is tinged with buff above the black bill. The eye is cream-colour and the feet are flesh-colour. The female is all grey, both above and below, with dark wings and black tail and a few black feathers round the pale eye. Care must be taken not to confuse it with the Grey-crowned Negro-Finch, which is a larger bird and has the cheeks and under parts black and is grey above, but it should easily be distinguished from *N. luteifrons* by having a broad black band across the forehead and the wing-coverts conspicuously spotted with white. The wing measures 55–60 mm. and the tail 33–41 mm.

The Pale-fronted Negro-Finch appears to be a rather uncommon species, nothing like so common as the Grey-crowned Negro-Finch. We know very little concerning it, and it is never caught in the traps set by native boys in the Cameroon forest to which the grey-crowned species often falls victim. It may be that it is less given to feeding on or near the ground than that bird, capturing the *Cocci*, upon which it partly subsists, on the twigs of higher trees. Its nest has never been found.

So dissimilar are the sexes that not until an undoubted pair were obtained was it realised they were of the same species. Both sexes had been given Latin names in the days when they were believed to represent two distinct species.

Distribution and Races

Nigrita luteifrons luteifrons Verreaux extends from northern Angola through Gaboon and Cameroon, including Cameroon Mountain area, to southern Nigeria as far west as Lagos.

Nigrita luteifrons alexanderi Ogilvie-Grant differs from the above in having the pale golden buff of the forehead extending on to the crown and by the more robust bill. In size it is larger, with wing 58–65 mm. and tail 33–40 mm. Its range is confined to the island of Fernando Po, where it seems to be not uncommon.

CHESTNUT-BREASTED NEGRO-FINCH

Nigrita bicolor Hartlaub

(see Plate 52, facing page 1452)

Two races come within our limits.

The very distinctive vinous-chestnut face and under parts of this negro-finch enable it to be easily recognised, and as the crown, back and wings are uniformly slate-colour in the race under discussion (though browner in the Nigerian form) only two colours have to be borne in mind: dark grey (or brown) and chestnut. It is a small bird, with wing 53–59 mm. and tail 36–43 mm. in the typical subspecies.

Its habitat is the forest, and it is solitary in disposition. In the forests it must be sought in the clearings and undergrowth. The forest is not its boundary, for it may be seen in the trees of cultivated land and in patches of thick bush. Heavy forest it seems to shun, keeping to the paths and borders. At Abeokuta in south-western Nigeria it was not common but was always associated with oil-palms.

This bird has the reputation of being shy, and being so small and dully coloured it may easily be overlooked in dense growth. Sometimes this little creature will join the bird armies searching through the forest, as was observed in Sierra Leone. All naturalists have remarked on its pretty little song, low, sweet and mournful. Sometimes it will ascend to a tree-top from which to pour out its sad refrain, but more often it keeps to the lower growth. It seems to feed on both fruit and insects as well as smooth caterpillars.

The nest is a domed structure of fine grasses, usually 10–16 ft. from the ground. The mango is a favourite tree in which to build. Moss is found in the body of some nests, which are lined with grass-tops. Two white eggs are laid which measure 14·5–16 × 11·3–11·6 mm.

Distribution and Races

Nigrita bicolor bicolor Hartlaub ranges from the Gold Coast westwards to Sierra Leone and has once been reported from Casamance.

Nigrita bicolor brunnescens Reichenow differs from the typical race by having the crown and back earth-brown instead of slate-grey and the chestnut under parts brighter, more rufous than vinous chestnut. The females are decidedly lighter and brighter below. The wing measures 57–64 mm. and the tail 39–45 mm. This race was described from Principe island and on the mainland extends from southern Nigeria (Abeokuta and Lagos) to northern Angola (Quicolungo), ranging east along the Aruwimi and Uelle Rivers to merge with *N. b. saturatior*, the Kenya and Uganda race, in the neighbourhood of the Semliki valley.

WHITE-BREASTED NEGRO-FINCH

Nigrita fusconota Fraser

(see Plate 52, facing page 1452)

Two races are found in West Africa and both occur in British territory, the typical subspecies from Cameroon Mountain southwards.

From the other negro-finches this little bird, about 4 in. in total length, is easily distinguished, especially by its entirely white under parts from the chin to the under tail-coverts, the grey wash on the

feathers being apparent only when the bird is handled. The whole crown is very dark glossy blue extending on to the ear-coverts and nape, where it merges with the earth-brown back. A pale isabelline rump contrasts with the very dark blue upper tail-coverts and tail—a character which is found only in the Gold Coast race. The wings are dark brown and are rather short and rounded; the tail, on the contrary, is nearly 2 in. in length and is strongly graduated, with the central rectrices protruding to a point. The white under parts often show signs of a yellowish stain from the bird's habit of feeding on the oily husk of the palm nut.

Measurements are:

N. f. fusconota: Wing 49–55 mm., tail 40–47 mm.
N. f. uropygialis: Wing 48–54 mm., tail 44–50 mm.

Not much is known about this negro-finch, which in the south of Cameroon seems to be found only in the forest, where it delights to sing from the topmost branches of some high tree, and from the ground is almost too small to be seen. Its distinctive little song begins

with a trill which slows down till it ends with three separate notes, *chip, chip, chip*. It was heard singing high up in the tree-tops in Fernando Po by another naturalist, who observed that it was breeding there in November.

Most of the specimens obtained in the Cameroon forest country were trapped by natives under palm-trees as they came to feed on the oily fibrous husks of the palm nuts. Insects, too, are devoured by this bird. In Ashanti, the home of the more westerly race, it was discovered in very thick bush in the forest area, the specimens obtained being in breeding condition in January.

The nest is a large globular construction of fine fibres of plantain leaf-stalks and has a side entrance. Nests are built in the angles of the stubs of palm fronds. The clutch appears to be of three eggs, pure white and glossless, measuring 13–14·5 × 10·3–11 mm.

Distribution and Races

N. fusconota fusconota Fraser extends from Cameroon Mountain to northern Angola and occurs on the island of Fernando Po. It ranges across the Belgian Congo to the Semliki valley and extends to Uganda and as far east as Mount Elgon in Kenya Colony.

N. fusconota uropygialis Sharpe is the western representative of this negro-finch, which ranges from western Nigeria to the Gold Coast and probably beyond, but no specimens have been collected so far as I know from west of the Gold Coast boundary. This race differs from the typical subspecies in having the feathers of the rump isabelline-buff and those of the back and mantle paler brown. This difference is quite constant.

Specimens from the country between the Cross River and Lagos have not been examined to determine to which race they belong.

BROWN TWIN-SPOT

Clytospiza monteiri (Hartlaub)

(see Plate 52, facing this page)

This very conspicuously marked bird should not be difficult to identify. The most distinctive feature in its plumage is the chestnut chest and belly covered closely with small round white spots, which are continued on to the flank-feathers. The white-spotted chestnut under parts are in strong contrast to the all-grey head with (in the male) the little crimson mark in the middle of its grey throat. There is not much contrast between the grey crown and brown back and wings, but a splash of colour is provided by the extensive crimson patch at the base of the black tail, the feathers of the tail being exceptionally broad for so small a bird. In total length the Brown

White-breasted Negro-finch
Nigrita fusconota

Chestnut-breasted Negro-finch ♂
Nigrita bicolor

Brown Twin-spot
♀ (upper), ♂ (below)
Clytospiza monteiri

Pale-fronted Negro-finch
♂ (left), ♀ (right)
Nigrita luteifrons

Dybowski's Twin-spot
♂ (below), ♀ (above)
Clytospiza dybowskii

Grey-crowned Negro-finch ♂
Nigrita canicapilla emiliae

Twin-spot—so named because the white spots on each breast-feather are arranged in pairs—is about 5 in.

The sexes appear almost exactly alike in the field unless a view of the throat can be obtained, when it will be noted that a white chin and a white line down the middle of the grey throat take the place in the female of the crimson feathers in the centre of the throat of the male. In flight the twin-spot will be seen to have very short rounded wings, and then the crimson upper tail-coverts are likely to catch the eye. As already remarked, the tail is noticeably broad and when spread is fan-shaped.

Measurements are: Bill 11–13 mm., wing 55–60 mm., tail 44–53 mm. and tarsus 17–18 mm.

This bird comes into British territory in the Cameroons and its range extends eastwards, but not westwards to the Guinea coast. It is an inhabitant of grass country, spending most of its time in the long grass and going about in small flocks. It has a particular liking for white ants and can be snared by using them as bait. In British Cameroon, around the station at Bamenda, pairs were seen feeding on lichen-covered boulders. The constant twittering note has been likened to that of the Black-crowned Waxbill (*E. nonnula*).

In the Belgian Congo this bird has been found to make use of the abandoned nests of other birds, such as weaver-finches, coucals and so on, in which to lay its eggs, first adding a slight lining of matted hair and pieces of snake-skin. The pure white eggs number six in a full clutch. Measurements are not available.

Distribution. From the grass plateaux in French Cameroon and the Bamenda district in British territory this bird ranges south to Portuguese Congo and northern Angola but does not occur in the forest country of southern Cameroon. It ranges across Africa by way of the Ubangi-Shari and the Uelle River district north of the forest to the Upper White Nile, Bahr el Ghazal and Uganda.

The bird from Uganda has been separated as distinct, but I cannot see that it differs from the typical subspecies.

DYBOWSKI'S TWIN-SPOT

Clytospiza dybowskii (Oustalet)

(see Plate 52, facing page 1452)

It should be easy to recognise this twin-spot in the field. The slate-grey head, neck and breast and the crimson back and rump are the least conspicuous parts of the bird, for if it is seen from below, or a view of the under parts obtained, the round white spots on the black ground of the sides and belly are very noticeable. The female

is very like the male, but as the belly in that sex is slate-grey and not black, the white spots do not stand out so vividly as in the male bird. In total length this bird measures about 4¾ in. The tail-feathers are very broad and the tail is rounded at the tip. The base of the tail appears to be crimson, but actually it is the crimson upper tail-coverts which produce this effect, as they extend much further down the black tail than is usual. The bill measures 11–12 mm., wing 49–57 mm., tail 39–47 mm. and tarsus 16–17 mm.

This is evidently a bird of the grassland, occurring not only on the high plateaux where the breast-high grass is always dripping from the mountain mists, as in the Tingi Mountains of Sierra Leone and on the Birwa plateau, but also at lower elevations where it has been disturbed from clumps of grass by a river bank in Nigeria and from the highlands of Cameroon around Bamenda, to mention some of the far-separated localities from which this rather rare bird has been collected. It lives on grass seeds when the grass is seeding but at other times on insects.

Its nest has never been found and its eggs remain unknown.

Distribution. Discovered in 1892 by Dybowski on the Upper Kemo River, an affluent of the Ubangi, it has since been found in the highlands of British Cameroon, again on the high plateaux of French Cameroon, and in various localities in Ubangi-Shari. In the west it has been recorded from the Plateau Province of Nigeria and in the highlands of Sierra Leone, but is not known from anywhere else in West Africa.

REICHENOW'S CRIMSON-WING

Cryptospiza reichenovii reichenovii Hartlaub

This very beautiful species has an olive-brown head, neck and under parts with, in the male, a broad ring of scarlet round the eye extending to the base of the bill, while in the female instead of a scarlet ring it is bright straw-colour. The whole of the rest of the upper parts below the neck are deep crimson, as are the inner feathers of the wing. The primaries and the tail-feathers are black. If the wing is raised it will be seen that the sides of the belly are also crimson. The bill is black and the legs are brown. Young birds have no red or straw colour on the head and the crimson on the body and wings is much less apparent. Total length in the flesh is: (male) 122 mm., (female) 119 mm. average. The wing measures 53–57 mm. and the tail 37–41 mm.

Reichenow's Crimson-wing seldom leaves the shade of the forest, where the crimson on its plumage shows up very little. Since I published the seventh volume of my large work further examples of

C. reichenovii have been secured in British Cameroons on Manenguba Mountain and at Oku. It was seen at higher altitudes only (above 6,000 ft.) in shrubbery or undergrowth within the forest or on its edge, always near or on the ground, either in pairs or in small parties.

It is a silent bird and on being disturbed quickly disappears into thick ground cover. It does not appear to rise more than a dozen feet above the ground except when visiting its nest. This Crimson-wing possesses a soft, sweet song which is seldom audible but is said to be highly individual, four long-drawn notes descending in major thirds, each followed by a staccato chirp. The ordinary call is a rasping *tzeet*. On Cameroon Mountain this bird has been seen as low as Buea, which is situated below the forest growth, tempted perhaps by the seeds of some favourite plant.

The nest of the West African race has not been discovered, but a near relative in Tanganyika builds a spheroid nest of skeletonised leaves with a wide porched entrance and lines it with feathery seed-heads. Other nests are made of fine grass. Tree ferns and saplings with thorny stems are favourite nest sites 15–20 ft. from the ground. The eggs are white.

Distribution and Races

C. r. reichenovii Hartlaub is restricted to the highlands of Cameroon and Fernando Po. On Cameroon Mountain it occurs at 3,000–4,000 ft. On Manenguba and Oku it occurs above 6,000 ft. and at Bamenda at 5,500 ft.

In the highlands of East Africa *C. r. australis* Shelley takes the place of the typical race.

BLUE-BILLED WEAVER

Spermophaga haematina (Vieillot)

Two races come within our limits, whose range will be defined hereafter.

This is a brightly coloured bird the sexes of which are unlike one another. The male has glossy blue-black upper parts, including the wings and tail, without any colour to relieve it. The under parts are striking: the breast is bright scarlet, the belly black. The female has the forehead, lores and cheeks dull crimson, slate-coloured upper parts, with crimson upper tail-coverts, wings and tail dark brown. Chin, throat and sides of the body are glossy scarlet, the middle of the breast, belly and flanks being dull black profusely spotted with white.

This bird has a striking pearl-blue bill, the tip red or orange, eye mahogany red and the legs reddish-brown. The bill measures

(male) 16–18 mm., (female) 14–17 mm.; wing 64–73 mm.; tail 47–56 mm.; tarsus 20–23 mm. These measurements apply to the typical subspecies from the Gold Coast westwards.

The Blue-billed Weaver is an inhabitant of dense undergrowth and thickets and seems to prefer swampy ground or dense bush bordering streams. It keeps successfully hidden in the tangled vegetation but will occasionally venture on to the rice-fields to feed on the grains. Throughout its extensive range it is known to be an exceedingly wary bird which is seldom seen despite the bright colours which its plumage exhibits. The bills of these little weavers are very powerful, and, judging from the pinch it can inflict on the fingers of the unwary, it must be able to crack very hard seeds and no doubt puts its mandibles to very good use.

Most of its life is spent in bushes near the ground, and though it may be seen from time to time crossing paths and clearings, it does not appear to frequent the heavy forest, keeping to the edges. Its voice is said to consist of a number of separated rambling notes, and naturalists have lived in close proximity to it for many years before learning to which species the song belonged.

Nests have been found in low bushes near the ground and appear as loose globular piles of ferns with a central portion of grass-tops, the whole about the size of a football with an opening at the side. Three white eggs are laid which are devoid of gloss and measure 19–19·5 × 13·5–14 mm.

Distribution and Races

Spermophaga haematina haematina Vieillot, which is described above, ranges from former German Togoland (now Dahomey) westwards through the Gold and Ivory Coasts to Sierra Leone and Gambia and has been found in all intermediate territory, being especially numerous in Liberia and Sierra Leone. West of the Gambia River it has not been obtained.

Its place is taken in western Nigeria and throughout Cameroon to Gaboon by another subspecies *Spermophaga haematina pustulata* Voigt, which ranges south to Malimba in Portuguese Congo. In the North Belgian Congo it has been found along the Aruwimi and Uelle Rivers. This race differs from *S. h. haematina* in only one particular, for both in the male as well as the female the upper tail-coverts are scarlet. Where the two races meet we find some individual specimens with the upper tail coverts a darker shade of red. *S. h. pustulata* has a wing of 65–74 mm. and tail 49–56 mm.

GENUS PIRENESTES

Key to the species of Crimson Seed-crackers

1. Mantle, back and belly black 2
   Mantle, back and belly brown 4

2. Lower mandible wider than 17·5 mm., wing exceeds 64 mm. in length .. *P. o. maximus* ♂, p. 1461
   Lower mandible less than 17·5 mm. in width, wing less than 64 mm. in length 3

3. Lower mandible usually over 14·5 mm. wide
   P. o. ostrinus ♂, p. 1459
   Lower mandible usually under 14·5 mm. wide
   (*a*) Of wide distribution .. .. *P. o. rothschildi* ♂, p. 1461
   (*b*) Restricted to basin of Ogowe River, Gaboon
   P. o. gabunensis ♂, p. 1461

4. Lower mandible over 17 mm. in width 5
   Lower mandible under 17 mm. in width 6

5. Whole head glossy red, this colour including nape and chest extending to sides of breast *P. s. sanguineus* ♂, p. 1458
   Red areas more restricted, less defined, brown colour showing basally at least on nape and chest
   P. s. sanguineus ♀, p. 1458
   *P. o. maximus** ♀, p. 1461

6. Whole head, nape and chest glossy red, which colour extends down sides of body .. *P. s. coccineus* ♂, p. 1458
   Red colour much more restricted, not continued to base of nape; brown feathers of chest only tipped with red, brown bases showing and red not continued down sides of chest 7

7. Lower mandible 14·5 mm. or more in width (average 15·7 mm.) .. .. .. *P. o. ostrinus* ♀, p. 1459
   Lower mandible usually under 14·5 mm. in width .. 8

8. Sexes very similar in colour, neither sex having black in plumage. Range so far limited to countries west of Ivory Coast (Sierra Leone and Liberia)
   P. s. coccineus ♀, p. 1458
   Sexes dissimilar, males having black in plumage. Not known to occur west of Ivory Coast 9

* As *P. s. sanguineus* and *P. o. maximus* are not known to occur within hundreds of miles of each other there should not be any difficulty in deciding to which species a bird belongs when the locality is known, even though the females are so alike.

9. Lower mandible 11·5–11·8 mm. in width; range practically restricted to basin of Ogowe River, Gaboon
P. o. gabunensis ♀, p. 1461

Lower mandible 11–14 mm. in width (average 12·2 mm.); range embraces a wide area but does not include basin of Ogowe River .. .. .. *P. o. rothschildi* ♀, p. 1461

CRIMSON SEED-CRACKER

Pirenestes sanguineus Swainson

Two races of the Crimson Seed-cracker are found in our area, both in Upper Guinea. It is a large bird in comparison with most estrildine weavers and is about the same size as a sparrow but very dissimilar in build and colour. Its enormous bill, as broad as or broader than it is long, is in life steel-blue with an almost metallic sheen. Except for the sepia back, wings and belly, the plumage of the male is brilliant crimson. The tail is dark brown and crimson, the middle feathers of the latter colour and the fringes of the other rectrices dark crimson. The wings are short and rounded, the legs and feet fairly powerful and olive-brown in colour. The eye is dark brown.

Crimson Seed-cracker

The measurements of the males of the typical race are as follows: Bill from base to tip 16–17 mm., breadth at base 18 mm.; wing 69–75 mm.; tail 55–60 mm.; tarsus 20–21 mm.

The female of the typical race is not represented in the British Museum but is doubtless very similar, if not exactly so, to *P. sanguineus coccineus*. It differs from the male in having the crimson feathers of the head ending abruptly at the occiput; the throat is less bright crimson and does not extend on to the breast, which is olive-brown like the rest of the under parts, nor do the crimson feathers extend down the sides as they do in the male.

There is a great difference in the size of the bill in the two races. That of *P. s. coccineus* is much smaller (11–13 mm. in length and 11·9–15 mm. in breadth). The wing measures (male) 60–68 mm., (female) 57–63 mm.; tail 44–51 mm.; tarsus 17–20 mm.

In life a noticeable feature of this bird is the conspicuous pair of upper and under eyelids of perfectly white skin, which gives it a spectacled appearance. In length *P. s. coccineus* varies from 5⅛ to 5½ in. So far as we know, this species does not range east of Liberia, though it may be found eventually in the Ivory Coast. East of that

its place is taken by various races of the Black-bellied Seed-cracker which also have large blue bills, which differ in size according to the subspecies.

The Crimson Seed-cracker is fond of swampy ground and may be encountered wherever there is bushy growth along streams or on flooded rice-fields. It is a shy bird which on the least alarm flies up with many twists and turns to disappear in some remote part of the swamp. It may be seen sometimes with the Blue-billed Weaver (*Spermophaga haematina*) haunting the same swamps and farms. Its habit of rising high in the air to move from one spot to another and the curious undulations in its flight are sure to betray it. The only practical way to secure specimens is to set snares in the rice plantations which the birds are known to frequent. More rarely it may be met with on some bush path in little parties of three or four feeding on the ground.

Sierra Leone Crimson Seed-cracker

The nest is bulky and consists of a heap of dead reeds with a lining of soft grass-panicles and an aperture at the side. Nests are well hidden in the forks of branches concealed by foliage and at about 4 ft. from the ground. Eggs are pure white and measure about 17 × 13 mm. The number in the clutch is uncertain. Six are reputed to have been discovered in a nest in Liberia.

Distribution and Races

P. sanguineus sanguineus Swainson is certainly an inhabitant of Portuguese Guinea, but whether it is found in Senegal and Gambia at the present day is open to some doubt. No modern collectors have met with it in those two countries.

In Sierra Leone and Liberia we find the smaller representative, *P. sanguineus coccineus* Cassin, which differs in its dimensions from the typical race and especially in its much smaller bill.

No seed-cracker has been found in the Ivory Coast, but from the Gold Coast eastwards its place is taken by *P. ostrinus*, whose plumage in the male bird is black where it is brown in *P. sanguineus*.

BLACK-BELLIED SEED-CRACKER

Pirenestes ostrinus (Vieillot)

THE adult male has the entire head, cheeks, nape, neck, chin, throat and breast bright crimson, as are also the upper tail-coverts. The tail is dark crimson with black shafts, the middle pair of tail-feathers uniformly coloured, the remainder black on the inner web, dark crimson on the outer web. The mantle, back, rump, wings,

belly and flanks are velvety black, with some crimson feathers continued down the sides of the body. Under tail-coverts are black, with some of the coverts dull crimson on the inner web or washed with dull crimson. Axillaries and under tail-coverts are brown. The eye is dark dull red or reddish brown; eyelids are wax-white. The bill is dark metallic blue, lighter at base, blackish at tip. Legs and feet are brown.

The adult female has the forehead, crown, cheeks and throat crimson, but the red feathers are not continued on to the brown nape. All those parts which are black in the male are brown in the female. The breast is brown strongly washed with crimson. Upper tail-coverts are crimson but not so bright as in the male. The tail is dull crimson with black shafts, the inner webs of all but the middle pair washed with crimson. The eye is dark brown, the bill dark blue; legs and feet are brownish red.

Immature birds have the entire plumage uniform brown except the upper tail-coverts which are washed with rust-red, and the tail-feathers which are washed with dull crimson. Here and there a red feather may appear at an early stage among the brown feathers of the head or throat.

Naturalists are still divided as to the best method of dealing with this seed-cracker, whether to separate it, as I did in my seventh volume, into various subspecies according to the size of the bill, or whether to treat it as a single species with unusual variation in the size of the bill. Although the variation is largely influenced by geography, their ranges are hard to delimit and do overlap. The varieties, with the names which have been applied to them, will be given in the final paragraph.

The Black-bellied Seed-crackers, whatever size their bills may be, have one point in common: all of them frequent the banks of swampy streams running through dense bush or forest or open marshy places in the forest overgrown with sedges bearing hard seeds. When it chances to venture into the open this seed-cracker is a conspicuous bird, but it prefers to remain hidden in dense tangled vegetation or among groups of trees and bushes growing in a swamp. For the most part it lives on hard seeds, but grains of rice have been found in its stomach and it is known to vary its diet with insects.

The nest is typically estrildine—a large globular mass of dry broad strips of palm leaf, woven loosely together with an opening at one side and lined with a few fine grass-tops. A clutch of three white glossless eggs have measurements of 19–20 × 14 mm.

Distribution and Races accepted in my Seventh Volume

Pirenestes ostrinus ostrinus (Vieillot) extends from the Gold Coast and Nigeria to Angola, eastwards along the North edge of the

Congo forest to the Lendu Plateau and the Bugoma and Mabira forests of Uganda. Measurements are: Bill from nostril 10–12·5 mm.; width of lower mandible 14·5–17·6 mm.; wing 62–73 mm.; tail 47–59 mm.

Pirenestes ostrinus maximus Chapin is recorded from Togoland, Nigeria (several localities), Middle Cameroon, western Belgian Congo and the Uelle district, also a sight record from Ubangi-Shari. Resembles the typical subspecies in plumage but the bill is much larger—from nostril 12–13·3 mm., width of lower mandible 17·5–20·1 mm. The wing is 65–74 mm. and tail 50–65 mm.

Pirenestes ostrinus rochschildi Neumann extends from the Gold Coast and Nigeria to northern Angola and east through the Congo forest to the Ituri district. Widely distributed in the Belgian Congo In this race the only distinction between it and *P. o. ostrinus* is in the narrower bill, which measures (from nostril) 8·4–11 mm., width of lower mandible 10·2–14 mm. The wing is 58–68 mm. and tail 42–53 mm.

Pirenestes ostrinus gabunensis Neumann is confined in my opinion to the basin of the Ogowe River, Gaboon. In this bird the red of the crown and on the upper tail-coverts is a little deeper. The bill (from nostril) measures 8·3–9·8 mm. The wing is 57·5–63 mm. and the tail 43·5–47 mm. The distinctions between this and *P. o. rothschildi* are so slight that it may be wiser to unite them under one name.

CUT-THROAT WEAVER

Amadina fasciata fasciata (Gmelin)

The male cut-throat is one of the easiest of the little estrildine weavers to recognise in the field by reason of the striking red band across the throat from ear to ear, bordered above and below with white, from which the little bird receives its English name. The chestnut patch in the middle of the breast of the male is also a conspicuous feature. A warm fawn or buff above, closely vermiculated with black and a finely barred crown on a buffish-white ground are the general features of the upper side. In flight the wings are much darker than the body and the broad buff tips to the secondaries appear as a pattern of spots. It is then that the white tips to the black tail are so noticeable, for on the ground these white tips are generally hidden. The red eye, blue-grey and pink bill and red chest-band are all conspicuous features. The bill measures 10–12 mm., wing 64–70 mm. and tail 35–41 mm.

The cut-throat is a bird of the semi-arid parts of Africa which ranges from Senegal to the Red Sea. It seems to be generally

distributed in Gambia and in similarly dry country, and a great many are captured by the bird trappers for export. In Gambia it is to be seen in the bush around clearings and swamps as well as in the villages. In the non-breeding season it appears to wander about a good deal in flocks and at that time of year is highly gregarious. The flocks break up in the late summer, and at a time when all the other weavers have finished breeding the cut-throats are just settling down to their domestic duties.

We have very little data as regards its nesting in West Africa, but it is not before autumn that eggs can be found. Breeding continues in the winter months. The nest is a sparrow-like ball of hay lined with feathers, with often a short entrance funnel, and is placed in a bush or in the bole of a tree. That is not the whole story, for in its nesting it exhibits some peculiar traits. Pairs have been observed entering the nests of Sociable Weavers in East Africa and others pulling to pieces the nests of Buffalo-Weavers and carrying the lining to another, as if to appropriate that. There is still much to be learned about the nesting of this species, which we do not yet understand. In Darfur it was found to lay seven to nine eggs in the clutch. These were glossless and chalky in appearance and immaculate white. They average 17 × 13·3 mm.

Distribution and Races

Amadina fasciata fasciata (Gmelin) extends from Senegal to northern Nigeria and Lake Chad, ranging east through the French Sudan and French Niger, the Upper Volta and Northern Territories of the Ivory and Gold Coasts across the semi-arid belt to the Nile, the southern Sudan and north-western Uganda. East of the Nile valley its place is taken by *Amadina fasciata alexanderi* Neumann, which ranges south from Abyssinia and Eritrea to Kenya Colony and northern Tanganyika and probably to Rhodesia.

QUAIL-FINCH

Ortygospiza atricollis (Vieillot)

THERE are no fewer than seven races of this bird in Africa listed in the *Systema Avium*, of which three found a place in my larger volumes on West African birds, and other recognisable races are found in East and South Africa.

This tiny little weaver is a characteristic bird of the tussock-grass in the drier districts of Africa but is usually found within easy distance of water. It has been likened to a miniature partridge as regards its colour pattern, with its white-barred flanks, earth-brown upper parts and the chestnut breast-patch. Measured in the flesh it barely exceeds 4 in. in length, and its wing-spread of 6¾ in. is very small.

It is found in open country wherever there is short grass growing in tussocks. It never perches in any prominent position but flies up from the grass when disturbed, to dive down into cover after a short flight. When flying it utters peculiar short squeaky cries.

The males are distinguished from the hens by their blackish faces, and both sexes have the under parts fairly heavily barred with white except across the middle of the breast, which is chestnut. In flight

the white border to the outer tail-feathers can usually be seen, and the little bird's manner of springing into the air with sudden jerky flight, only to pop down as quickly into hiding, is as characteristic as the peculiar, oft-repeated, soft trumpet-like notes which it utters on the wing. Its measurements are: Bill 8–10 mm., wing 50–56 mm., tail 25–27 mm.

So inconspicuous is this minute creature that it passed unobserved for several years in Gambia until it was finally located on certain swamps, hidden in the grass until almost trodden upon. It lives chiefly on grass seeds, which diet it varies with small insects and the pupae of ants.

In Nigeria it breeds from September to December, the earliest eggs having been taken on 25th September, the latest on 26th December. Clutches have also been found in October and November. The nest is built on the ground at the foot of a tussock of grass or small bush in either moist or dry surroundings, sometimes in the hollow of a furrow with only weeds surrounding it. It is loosely constructed of dry grass-blades and rootlets, lined with grass-tops

and a few feathers. The entrance is at the side. Some nests are constructed of grass alone. The eggs are white and slightly glossy. The clutch varies from two to four and the eggs measure 13·7–15 × 10·5–11·2 mm. At the nest this weaver sits close and when flushed mounts quickly to a height of 50 ft. or more. After flying around it drops suddenly to the ground. When it returns to the nest it will, if anyone is watching, fly around in gradually diminishing circles, suddenly to drop close by the nest and run on to the eggs.

Distribution and Races

Ortygospiza atricollis atricollis (Vieillot) inhabits the semi-arid belt from Senegal, Gambia and the Northern Territories of our Colonies, the French Sudan, Niger Territory and Chad to the White Nile.

Its place is taken by *Ortygospiza atricollis ansorgei* Ogilvie-Grant in the coastal districts from Portuguese Guinea, Sierra Leone (throughout the Protectorate) and Liberia, probably ranging to southern Nigeria, from which locality specimens have not been examined. This race differs from *O. a. atricollis* in being darker throughout, the upper parts more grey than brown and the breast and flanks decidedly darker, especially the chestnut breast-patch. The wing measures 48–54 mm.

Ortygospiza atricollis gabonensis Lynes is known only from two specimens collected in Gaboon without the exact locality being specified. The male has a blackish face and throat and heavily barred chest and flanks. The female lacks the black on the face and throat, which are grey, the barring on the chest is much fainter than in the male and the breast tawny buff. The upper parts in both sexes are mottled brown.

Other races occur elswhere in Africa: *O. a. mülleri* Zedlitz in Kenya and Tanganyika; *O. a. dorsostriata* van Someren in Uganda, the latter having no white on the chin or round the eye, which is a character of the Kenya subspecies.

SCHLEGEL'S TWIN-SPOT

Mandingoa nitidula schlegeli (Sharpe)

This is one of the most distinctively marked of all the estrildines, both male and female having the under parts from the breast to the vent black covered with round white spots. The male is distinguished from the female by the vermilion sides of the face and throat, these parts being buff in the female. Both sexes are yellowish green on the upper side from the crown to the rump, but the males may again be distinguished by the orange-red wash on the upper tail-coverts, which feathers in the female are green. The wing measures 50–55 mm. and the tail 28–32 mm.

This Twin-spot has a very extensive distribution in West Africa and ranges across the continent to Kenya and Uganda. For all that it is rather rare and very little seems to be known about it. In its habits it is a solitary species, frequenting thickets of weeds and low growth in the forest country as in Liberia. Rice farms are also frequented by it as well as cassava plantations, upon the root of which the twin-spots have been seen feeding. On the whole it is a silent bird and may easily be overlooked in the long grass in which it passes much of its life and seeks its food. Its tiny chirp is like that uttered by the Crimson-wing, and it has also a chittering note and a squeaky *tseet*.

The eggs have not been found, but the nest is a large untidy domed structure placed in the fork of a tree some 15 ft. from the ground. One such nest was at the edge of a mangrove forest and was decorated with a snake-skin.

Distribution. M. n. schlegeli ranges from Sierra Leone, the Gold Coast and Nigeria as far south as the Congo River and has been found in British and French Cameroons, Gaboon and Fernando Po. It extends eastwards to Uganda and the western shores of Lake Victoria.

In Kenya Colony and Tanganyika *M. n. chubbi* takes its place, and in Natal the typical race *M. nitidula nitidula* occurs.

RED-WINGED PYTILIA

Pytilia phoenicoptera phoenicoptera Swainson

This is the bird which is sometimes seen in captivity in Britain and is known to aviculturalists as the Aurora Finch. The general colour of the upper parts is dark grey, including the head and neck; the feathers of the rump are washed and tipped with crimson, as are also some of the scapulars. Wings are brown, the coverts broadly edged with crimson. The upper tail-coverts are entirely crimson, the tail-feathers blackish. The breast is grey as well as the throat, the belly finely barred with white and washed with pale brown.

The female is more brown than grey on the upper surface, though like the male it has crimson edges to the wings. On the under side the ground colour is buffish brown and the whitish indistinct barring extends from the throat to the under tail-coverts.

Measurements are as follows: Wing 56–59 mm., tail (male) 35–38 mm., (female) 31–35 mm. The bill measures 10–11 mm.

The Aurora Finch is an arborial species, and as it is not particularly shy it is easy to observe and may be seen in the vicinity of native villages, to which it is no doubt attracted by the chance of spilled grain. It is to be found in open woodland, orchard bush and parkland generally, and favours cultivated clearings. More often

than not it is seen perched in a tree fairly high up; occasionally three or four join company, but more often it is alone or in pairs.

It is only quite recently that it has been discovered breeding. Nests found in Nigeria in November, December and February were in open park grassland placed in small leafy trees a few feet from the ground. The nest is usually made of grass-tops which have not been stripped of their seeds and has a meagre lining of feathers and a side entrance. The full clutch appears to number four eggs, which are large for the size of the bird, rounded ovate in shape and slightly glossy. They measure 15–16·7 × 12–13·2 mm.

Distribution. In my larger work I united the western and eastern representatives of this bird under one name, as I failed to find sufficient distinction to uphold *P. phoenicoptera emini* described from Lado. The typical bird ranges from Senegal and Gambia and Portuguese Guinea through the southern border of the semi-arid belt and northern grass woodland to northern Nigeria, ranging then eastwards (if we refuse to accept an eastern subspecies) to the valley of the Upper White Nile, the Bahr el Ghazal and Ugánda. It is nowhere a common bird in our area, and though it has been found once or twice in the French Sudan near Kulikoro and in the Northern Territories of the Gold Coast around Gambaga, it is on the whole seldom met with. There is a single record of interest from Accra.

YELLOW-WINGED PYTILIA

Pytilia hypogrammica Sharpe

The crimson mask and golden-olive (or dark yellow) edges to the primary and secondary wing-feathers distinguish this bird at once from *Pytilia phoenicoptera* with its red wing-edges, the only species with which any confusion might take place. The forepart of the crown, area surrounding the eyes, ear-coverts, cheeks, lores and forepart of the throat are all carmine-red, the mantle and back brownish grey, the rump and upper tail-coverts crimson. The tail is blackish, the middle rectrices being washed with crimson on both webs. Apart from the crimson patch on the forethroat, the rest of the under parts are leaden-grey, the belly being marked with narrow white transverse lines. The under wing-coverts are grey and white. The eye is red, the bill black; the legs and feet are flesh-colour.

The female lacks the red on the head, which is brownish grey, but otherwise resembles the male on the upper surface. The entire under parts are pale brown narrowly barred with white.

Measurements are: Wing 55–59 mm., tail 33–36 mm.

It seems that the Yellow-winged Pytilia is more addicted to the

savanna type of country than the Red-winged Pytilia, which prefers a drier environment, but there are several localities from which both species have been collected within a mile or so of each other. The former bird has been collected in orchard bush within easy reach of a stream and, in places where the grass has been burned, in little trees which survived the fire. Like its red-winged relative, it does not gather into flocks but is met with usually in pairs or at most two or three together. It probably lives chiefly on grass seeds, judging from the crops of birds examined.

We know very little about its life-history, and neither its nest nor its eggs have been found.

Distribution. Between Sierra Leone and the grasslands of northern Cameroon this scarce bird has been found at various localities in the Ivory Coast, Gold Coast, Dahomey and Nigeria and is found to range eastwards to the Bamingi and Shari Rivers and the Ouam district of Ubangi-Shari.

In some places, as at Gambaga and Kaduna, it meets the range of *P. phoenicoptera*, but on the whole the range of *P. hypogrammica* lies further south than that of the Red-winged Pytilia. Many hundreds of miles which lie between Sierra Leone and the Cameroons can be traversed without meeting with it, but though extremely local and rare its range covers a very wide extent of country. It has not yet been found in our East African possessions.

GOLDEN-BACKED PYTILIA

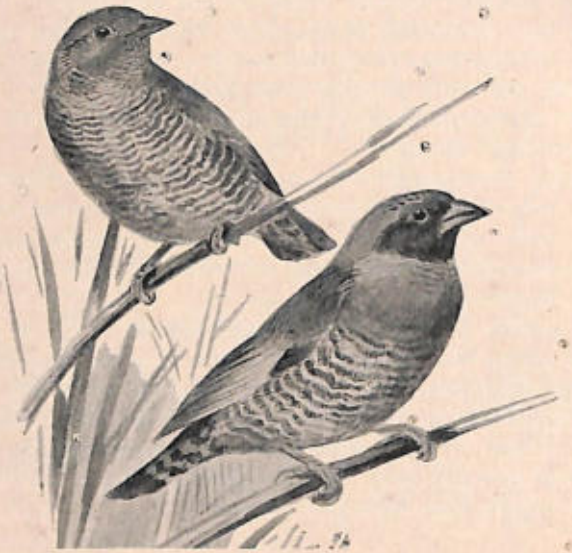
Pytilia afra (Gmelin)

THE male of this bird has the forehead, cheeks and upper throat carmine, the rest of the head and lower throat grey; the nape, mantle and back olive-yellow, the outer webs of the wing-feathers edged with golden-orange; the rump carmine-red. Under parts are grey, washed with olive and with scalloped white bars. The female is duller and has no red on the forehead, cheeks and throat. The crown is grey-brown and the throat greyish white. It retains the red on the rump and tail, however. The wing measures 56–61 mm. and the tail 32–37 mm.

There is another pytilia, known as the Melba Finch (*P. melba*), which in eastern Africa is found side by side with the Golden-backed Pytilia, but in West Africa *P. afra* only just comes within the southern boundaries dealt with in this handbook, at the mouth of the great Congo River. North of Portuguese Congo it has not been found. The points of distinction between the two species are given in some detail in my larger work.

Grassy country interspersed with bushes, the margins of riverside

timber belts and light bush is the terrain preferred by the Golden-backed Pytilia. It is not found in entirely open country or in primeval forest. When not breeding it will form into small flocks. The alarm note is a fairly high piping whistle of even notes uttered twice in quick succession.



The nest is roofed and made of thin grass stems, through which the bird is visible when sitting. Two white eggs, which measured 17 × 12·5 mm., have been found in a nest.

Distribution. In West Africa from Portuguese Congo to Benguela, ranging east through the Kasai district to Portuguese East Africa, whence it extends northwards as far as northern Uganda, the Upper White Nile and southern Abyssinia, occurring both in Kenya Colony and Tanganyika locally.

MELBA-FINCH

Pytilia melba citerior Strickland

Two races of this bird are found in West Africa, but the typical subspecies barely touches our southern limits near the Congo mouth. It is the subspecies named above which ranges widely in Upper Guinea and with which we are mainly concerned in this book.

The Melba Finch is a small bird about 4¾ in. in total length which attracts attention by the broad crimson tail. The male has a scarlet face and throat and bright yellow chest. Apart from the scarlet

forehead, the crown and neck are grey, passing into yellowish olive on the back and wings. If seen from below it will be observed that the bird has a white belly and under tail-coverts, fairly closely barred on the breast and flanks. The female has the head grey and lacks the scarlet face and the yellow chest of the male, but it too has a crimson tail in strong contrast to the yellowish-olive back. The female's chest is barred grey and white. The wing measures 56–61 mm. and the tail 44–48 mm.

Areas of thorn scrub in open country seem to be the favourite haunt of the Melba Finch, and wherever that type of country predominates it may be found. In the thin "ironstone" bush of Senegal it is sparsely distributed, and we can trace its range right across the semi-arid belt of Africa to intergrade with the more easterly subspecies in the Nile valley. It is an inconspicuous inhabitant of thorny thickets even along the edge of the desert, but when the thickets disappear and the country becomes more open the range of the Melba Finch ceases. It lives mainly upon grass seeds and occasionally termites, which must be picked up from the ground.

The breeding season in northern Nigeria begins in September, but birds secured on the border of the desert further north as late as October showed no signs of breeding, and it has been suggested that in these northern latitudes they fail to nest at all. That, I think, is disproved by the discovery of a pair on 31st October at Zinder which were undoubtedly on the point of nesting, the female having an egg in the oviduct ready for extrusion.

In the neighbourhood of Kano eggs have been taken on 31st August and 1st September. The nests were roughly globular and loosely constructed of dry grass lined with grass-tops. Feathers are also found in the lining sometimes. The large entrance hole is at the side. Three pure white eggs are laid which measure 15·5–17·5 × 11·5–12 mm. The male bird incubates during the daytime at any rate, but the female will occasionally take a turn.

Distribution and Races

Pytilia melba melba (Linnæus) ranges from Portuguese Congo to Damaraland and the Orange River and eastwards to reach Nyasaland, Mozambique and Natal. It differs from the next race in having the scarlet on the face of a darker shade, the yellow on chest being chrome instead of bright yellow and the under parts more heavily barred and spotted, which character also distinguishes the female. The under tail-coverts are uniform buff.

Pytilia melba citerior Strickland ranges from Senegal and Gambia through the whole thorn-scrub belt of the French Sudan and the Northern Territories of the Gold Coast and Nigeria and French Niger across the continent to the Lower White Nile valley, where it intergrades with the next race. It is described above.

Pytilia melba sudanensis (Sharpe) extends from the Upper White Nile and Bahr el Ghazal through northern Uganda, southern Abyssinia and Somaliland to the northern and eastern districts of Kenya. This race has narrow bars on the under tail-coverts.

Pytilia melba belli Ogilvie-Grant occurs in western Uganda and the country to the south and east of Lake Victoria and on the shores of Lake Tanganyika. This race is distinguished from the Sudan form by having the crimson of the foreneck extending further down and almost covering the golden of the breast.

Another race, *P. m. jessei* Shelley, inhabits Eritrea and the valley of the Blue Nile.

BLUE-BILLED FIRE-FINCH

Lagonosticta rubricata polionota Shelley

THREE races come within our limits; the above-named is that usually met with in Upper Guinea.

The bluish bill may assist in identifying this very small estrildine weaver, whose body colouring is not very distinctive. The whole under side of the male bird is rather bright crimson except for the black under tail-coverts, the crown grey, with a splash of crimson in front of the bill; a brown back, crimson upper tail-coverts and blackish tail. The female is paler, more fawn-coloured below washed with pink and has less crimson on the face, but otherwise resembles the male. The wing measures 45–49 mm. and the tail 35–40 mm.

These little birds are usually to be seen in pairs and spend much time feeding side by side on the bare ground or on short grass by the roadside. They come into compounds to search for small grass seeds but are shy birds and quickly take alarm. At such times they utter a peculiar note. A weak, plaintive song is also part of their vocabulary, and both cocks and hens have been heard warbling in a delicate manner.

Sometimes this fire-finch will mix with a flock of Senegal Fire-Finches, but usually it prefers to keep to itself and not mingle with the other small weavers which swarm in the grasslands of West Africa. Locally this species moves from place to place where it may best procure its food, but it is not really migratory as has been suggested, though here today and gone tomorrow. Restless, shy little creatures, they quickly take refuge in a weed-patch if disturbed on open ground. In Nigeria at the present day it may be encountered in the remote rocky hills as well as in the grassy plains.

A nest found on 20th August at Kafanchan was found in a patch of rank grass near a native compound. It was 2 ft. from the ground and was loosely constructed of dry parchment-like grass, lined with

fine grass-tops and a few fowls' feathers. The opening at the side had a small projecting porch. The slightly glossy white eggs measured 14·5–15 × 10·8–11·4 mm.

Distribution and Races

L. rubricata polionota Shelley extends from Portuguese Guinea to northern Nigeria and is the only race found in any of our West African colonies. In Upper Guinea it is widely distributed and not uncommon in open bush and grass country.

L. rubricata virata Bates inhabits the edge of the desert in French Sudan. It is only a local race, the males of which resemble those of *L. r. polionota*, but the females are distinguished by having their under parts almost as red as in the male.

Lagonosticta rubricata sannagae Reichenow inhabits the highlands of British and French Cameroon and the lower country in the valley of the Nun River and the Sannaga River, from which last it was first described. Compared with the Upper Guinea race (*polionota*) it has a more olive-brown back. The wing measures 46–52 mm.

Many other races of this fire-finch have been described. *L. rubricata congica* is the Uganda race and *L. rubricata hildebrandti* the Kenya representative.

LANADANA FIRE-FINCH

Lagonosticta landanae Sharpe

The adult male has head and cheeks rose-pink, the base of the feathers of the crown grey-brown. Feathers of the lores and those encircling the eye are crimson. The mantle, back and wings are brown; the rump is crimson, as are the upper tail-coverts; tail-feathers are black washed with crimson. Chin, throat, breast and sides of body are bright rose-pink, with some minute white spots on each side of the breast. Middle of the belly is brown; the under tail-coverts are black. The under wing-coverts are white, the border of the wing mixed brown and white. Axillaries are brown tipped with white. The eye is dark brown; the bill, upper mandible rose-madder with dark steel edge and tips; the rim of the eyelid is rose-madder.

The adult female is duller than the male, but on the upper surface and head this is less apparent than on the under side, which is much more buff washed with rose-pink. The only bright spot is the crimson on the rump and upper tail-coverts.

The wing measures 46–49 mm. and the tail 36–39 mm.

The habits of this bird are likely to be similar to the other fire-finches which have been dealt with in this volume.

Distribution. The grass savannas of Portuguese Congo and northern Angola.

BLACK-BELLIED FIRE-FINCH

Lagonosticta rara (Antinori)

THE male of this fire-finch, as its English name implies, has the belly and under tail-coverts black, a black tail, brown wings and the whole of the body plumage of a dull crimson-pink, which is distinctly brighter on the upper tail-coverts. It has a black bill with whitish base to the lower mandible, which last character must be fairly obvious in the field. About 4 in. in total length, it is far from being a conspicuous little bird. The female is duller and lacks the male's black belly, which is buff washed with rose-pink. It has a brown, not dull crimson head, but there is a tiny splash of crimson in front of the eye, which is characteristic, and the bill is marked in the same way as that of the male with pale patches on the lower mandible. Like the male she has a black tail, relieved by some crimson at the base where the upper tail-coverts overlap.

The wing measures 46–52 mm. and the tail 37–41 mm.

I am afraid it is almost impossible to recognise these little birds in the field from the various waxbills and fire-finches, which are all so much alike. Naturalists of long experience find them very puzzling to identify, and it is difficult to find characters to assist in their identification even when the birds are in one's hand.

The Black-bellied Fire-Finch is an inhabitant, like so many others, of grass country, where in its case it ascends to the high plateaux and is then seldom encountered unless it chances to cross one of the paths which traverse the high grass. It is to be seen sometimes in the bush in small parties.

A nest was found in Nigeria in a pile of brushwood on open farmland. It was a hollow sphere with the opening at the side. The outer layer consisted of loosely assembled grass, the inner layer of rootlets and grass fibres. Four white slightly glossy eggs measured 14·1–14·3 × 11–11·2 mm. That was on 21st July and is the only occasion when the nest of this bird has been discovered.

Distribution. First described from the region of the White Nile, this fire-finch ranges south to northern Uganda and westwards through the northern Belgian Congo and Bahr el Ghazal and French Ubangi to northern Cameroon and Nigeria. A single record was received from Sierra Leone (Saiama) in the east of the Protectorate, but no records from between Sierra Leone and Nigeria have come to hand.

SENEGAL FIRE-FINCH

Lagonosticta senegala (Linnæus)

Two races come within our limits, but it is the typical subspecies which is found in Upper Guinea with which we are mainly concerned.

This very small weaver measures little more than 3½ in. in the flesh from bill to tail. The males appear mostly crimson, with browner wings and back and the tail blackish and crimson. The tiny white specks on each side of the crimson breast cannot be discerned unless examined at very close quarters. Its amazing tameness will often permit close scrutiny. The most conspicuous feature is the red bill, shared by both sexes, with black stripe down the culmen. The female is much more drab in appearance—wholly brown, relieved by a little crimson patch in front of each eye and the crimson upper tail-coverts. The tail, too, is liberally washed with crimson but is not so black as in the male. The minute white spots on the breast are also present when adult. The wing measures 45–51 mm. and the tail 31–37 mm.

The little Senegal or Red-billed Fire-Finch is a great favourite in West Africa—it has won the heart of the white population by its extraordinary tameness added to a somewhat cheeky appearance, which its character does not belie. It will visit shops to pilfer the rice exposed for sale, and will enter houses to build in the rafters, singing its sweet little notes within a few feet of human beings, of which it shows not the slightest fear. It is, in fact, far too confiding, and numbers are captured by native boys with nothing more than their bare hands. Around the native houses the fire-finch may be seen searching for the grains of millet and broken rice, seeming to prefer the backyards of native dwellings to any other habitat. They wander further, too, and the bushes on the banks of a stream or river are favourite haunts. The fire-finch often associates with other small birds, most frequently perhaps with the Red-cheeked Cordon-bleu, but the parties vary. One may find the fire-finches feeding by the roadside with Lavender and Orange-cheeked Waxbills, or they may be among a flock of Orange Bishops or with Grey Waxbills. In villages the Grey-headed Sparrows are sometimes their companions or a solitary indigo bird.

The Senegal Fire-Finch builds its nest in a variety of situations, a favourite site being in the grass walls of native huts. Others will prefer the rafters of houses or the under side of a grass veranda. A nest has even been found in the hole of a sandy river bank.

Both male and female will brood the young. The nesting period extends over many months, fresh eggs having been taken in mid-April, mid-July, August, September, October and November, and

newly hatched young on 27th January. Probably it breeds all the year round. Four or five eggs is the usual complement, but as many as nine have been found in a nest, probably the product of two females. In the nest construction feathers are freely used as a lining to the main structure of grasses and fibres. Failing feathers, the little birds will use any material handy—postage stamps, cotton wool and so forth. The eggs are white with little gloss and measure 13–14·7 × 10·4–11·5 mm.

Distribution and Races

L. senegala (Linnæus) is the commonest fire-finch in Africa and is separated into many races, two of which are found in West Africa. The typical subspecies, *L. s. senegala*, ranges from Senegal to Nigeria and is found also in the Cape Verde Islands. East and north of Nigeria its place is taken by *L. senegala flavodorsalis* Zedlitz, which is found in British Cameroon, Rei Buba in Adamawa being the type locality. Some north-eastern Nigerian examples are like this race, which probably extends as far as the Bahr el Ghazal. The race named *flavodorsalis* is paler in colour than the typical race and has a slight yellowish wash on the mantle in the males. The females are indistinguishable.

Of the many other races which have been named the paler *L. s. brunneiceps* Sharpe ranges from the Nile valley to Kordofan and Darfur. The Uganda race is *L. s. ruberrima* Reichenow, and that inhabiting the western highlands of Kenya *L. s. kikuyuensis* van Som., distinguishable by its paler female from the Uganda bird. No fewer than nine forms have been accepted in the *Systema Avium*, from which the wide distribution of the species may be indicated.

BAR-BREASTED FIRE-FINCH

Lagonosticta rufopicta rufopicta (Fraser)

This is a tiny weaver 4¼ in. in total length, with a wing expanse of 6 in. The face is rose-pink like the breast, and upon the latter are minute bar-like specks too small to be noted unless at very close quarters. The crown, upper parts and wings are grey-brown, becoming more olive-brown with wear; a feature to note is the rose-pink patch at the base of the tail, which colour is continued on to the dark tail itself. The ground colour of the whole of the under side is rose-pink, greyer on the belly. This species has a red bill with a noticeable black stripe down the centre of the culmen. The wing measures 45–51 mm. and the tail 33–38 mm.

It is not always easy to distinguish the Bar-breasted Fire-Finch in the field from *Lagonostictá senegala*, the white flecks on the rose-red upper breast seldom being easily discernible, but the buffish-grey

under tail-coverts are usually fairly conspicuous. It is a bird of the grasses and keeps itself well hidden, flying up when approached, to dive down into the grass again and disappear.

The little fire-finch with white specks on the breast is a familiar species in many parts of West Africa and is the tamest bird imaginable, frequenting the vicinity of houses and hopping about in complete confidence that no one will harm it. It is a gregarious species, and being very abundant can hardly be overlooked. Small flocks may be seen feeding along the paths which intersect the thick bush and it has a great liking for water, frequenting the banks of streams in all parts of the savanna country. Many may be observed in the grounds of Government offices and such-like spots hunting for seeds, but they do not fly up in a flock like the waxbills.

It builds a round nest of fine grass-tops, skeleton leaves and other flimsy material, which it sometimes places in a shrub 7–8 ft. from the ground. Some nests have been found in creepers and others have been discovered a few inches from the ground in tussocks of grass. The nests are always domed, with a side entrance, and are usually lined with feathers. Four eggs is the normal clutch. They are white and measure 13·2–14·8 × 11–11·8 mm.

Distribution and Races

L. rufopicta rufopicta (Fraser) ranges from Senegal to northern Cameroons, occurring in all our Colonies and mandated territories. Eastwards its range extends through Ubangi-Shari in French territory, certainly to the Bamingi River.

Another race, *L. rufopicta lateritia* Heuglin, in which the tiny bars on the breast are more pronounced and the back and belly rather more greyish in tone, inhabits the Bahr el Ghazal and ranges from the Djur and Bongo districts of the White Nile to Gondokoro.

LAVENDER FIRE-FINCH

Lagonosticta caerulescens (Vieillot)

(see Plate 53, facing page 1484)

The sexes of this bird are alike. The crown, neck, mantle, scapulars, back and wing-coverts are pearl-grey, the wings browner but the inner secondaries and edge of the quills grey like the back. The rump, upper tail-coverts and two middle pairs of tail-feathers are crimson, the shafts of the rectrices black and also the inner webs of the outer feathers. Cheeks, chin and throat are almost white but faintly streaked with grey, the breast is pale grey becoming darker grey on the sides of the body. Flanks are leaden grey, under tail-coverts dark crimson. Axillaries and under wing-coverts are almost white. The eye is dark brown; bill blue-grey, the tip black; legs and

feet are slaty black. The wing measures 48–53 mm. and the tail 37–41 mm.

The general colour of this little bird is pearl grey, with a crimson rump and tail and dark crimson under the tail. It should be an easy bird to identify, as there is no other species resembling it.

Considering how widely it is spread in the drier parts of Upper Guinea we have much still to learn concerning it. In Gambia, where it is quite common, it can easily be studied, as it shows no alarm and will flit about within a few feet of an observer, having no natural fear of man. It is one of the little weavers which does not take kindly to confinement, and once caged, its days are numbered as a rule.

A gregarious species, it is possible to see a dozen or so huddled together on a branch in company with cordon-bleus and waxbills. The Lavender Fire-Finch has not the same preference for long grass as the waxbills, its favourite haunts in Nigeria being the more open spaces where the grass is comparatively short, and it may be observed by the roadside, on the edges of thickets and on the outskirts of fringing forest. On the rocky outcrops which are such a feature in northern Nigeria this fire-finch may be seen about the grass or bushes.

No one appears to have found its nest, but it should not be difficult to discover.

Distribution. From Senegal and Gambia the Lavender Fire-Finch ranges through Portuguese Guinea and Casamance and through the Northern Territories of our British possessions to French northern Cameroon (Maroua). It has not been taken further south, as the country is unsuited to its requirements. We find it sparingly in northern Nigeria, whence it ranges to Fort Lamy on the Shari River. Its northern range is bounded by tree growth, and it has not been seen nearer the desert than lat. 15° N. This bird has no races and has not occurred in East Africa.

BLACK-FACED FIRE-FINCH

Lagonosticta nigricollis Heuglin

(see Plate 53, facing page 1484)

In my larger work I kept up the name *L. nigricollis togoensis* (Neumann) for the West African representative of this fire-finch, but there is little justification for recognising more than one form throughout its range. The typical race from the Bahr el Ghazal is very slightly darker than the birds named *togoensis* from West Africa with type locality Kete-Krachi in Dahomey.

The Black-faced Fire-Finch has the crown and entire upper parts

of the body, wing-coverts and scapulars darkish grey, washed with brownish on the mantle; the rump is dull crimson, as are the upper tail-coverts and middle pair of tail-feathers, the remaining tail-feathers being black on the inner web, crimson on the outer. The wings are browner than the coverts. Cheeks, chin and throat are black; the rest of the under parts are lavender-grey, with the sides of the breast plentifully sprinkled with minute white dots. In some

examples in fresh plumage the grey breast is faintly washed with rose-pink. Under tail-coverts are black; under wing-coverts and axillaries are silky white, the former edged with grey. The eye is dark brown; the bill is blue, the tip blackish; legs and feet are grey-brown.

The adult female differs from the male in being altogether browner on the crown, back, mantle and wing-coverts. The tail is dull crimson like that of the male, but there is no black on the face or throat, which is greyish brown, the throat being paler, more buff-colour, washed with grey. The under parts are buffish brown, washed with grey on the breast and more uniformly buff on the belly. On each side of the breast are a number of minute white dots, as in the male. The wing measures 47–54 mm. and the tail 36–40 mm.

The male of this bird is darker grey than the Lavender Finch and has the face and throat black. The dull crimson upper tail-coverts and tail are in contrast with the nearly black under tail-coverts.

These are all features to bear in mind when attempting to identify the male. The female is browner throughout and lacks the black on the face, though the tail is crimson like that of the male.

In northern Nigeria the bird occurs sparingly over a large area but is nowhere common. It may be met with singly, in couples or in small parties, feeding on the ground by some thicket or on the outskirts of a kurimi or belt of fringing forest. It is a savanna bird which loves above all to frequent patches of grass in cultivated land. In comparison with most other waxbills it is a shy bird.

As the breeding season approaches it will be heard to utter a loud, clear song. It was found nesting at Kafanchan in northern Nigeria on 9th July in open farmland. The nest, which contained four eggs, was a loosely built ball of withered grass placed 2 ft. from the ground in a pile of brushwood. The domed nest had a side entrance and was lined with grass-tops. The white egg measures 13·7–14·5 × 10·8–11·4 mm.

Distribution and Races

L. nigricollis nigricollis Heuglin, described from the Djur River, Bahr el Ghazal, extends into the northern Province of Uganda and westwards to the Ubangi-Shari (Bozum).

If we recognise a western race it must be named *L. nigricollis togoensis* (Neumann) on account of its slightly paler coloration, which seems to be constant in the fourteen specimens available for comparison. It inhabits the interior of Togoland (now Dahomey), the Gold Coast and northern Nigeria, ranging to the Shari-Ubangi Divide and to Darfur, where it was believed to be a summer visitor only. In the Gold Coast it has been found as far south as Ejura in Ashanti, where it frequented the patches of unburnt grass.

VINACEOUS FIRE-FINCH

Lagonosticta vinacea (Hartlaub)

(see Plate 54, facing page 1488)

The male of this fire-finch is a very pretty little bird which must be described in full. The forehead and crown are grey, gradually passing on the nape and sides of the neck into vinous pink. Lores and a few feathers bordering the upper mandible are black. Mantle, back and rump are vinous pink; the upper tail-coverts and outer webs of all but the middle tail-feathers are brighter pink and inclining to crimson. Inner webs of the tail-feathers are black, the central pair dull crimson with black shafts. The wing is brown, the coverts being strongly washed with vinous pink. The sides of the head, ear-coverts, chin and throat are black, sharply defined on the throat from the rest of the under parts, which are vinous pink. There

are a number of tiny white spots on each side of the breast and sides of the body. Thighs and middle of belly are dusky. The under tail-coverts are black; under wing-coverts are silvery greyish white. The eye is dark red; bill, upper mandible dark olive-green, lower pale olive-green with rose-red patch on each side. The legs and feet are pale olive-green.

The adult female has the entire head and cheeks greyish brown and no trace of black. The chin is buffish white; the rest of the under parts are buff, the breast and sides being strongly suffused with vinous pink. The middle of the belly and under tail-coverts are buff, with the rest of the plumage, including the wings and tail, as in the male bird. On each side of the breast and on the flanks some minute white spots are apparent. The wing measures 48–52 mm. and the tail 36–39 mm.

The tiny white spots on each side of the breast proclaim its affinity with the *Lagonosticta* group.

In Gambia it is a distinctly local bird, always requiring the near presence of fresh water and liking especially the bamboo thickets, until they disappeared, when the birds became noticeably less common in places where they had formerly been seen. These fire-finches live most of the year in small parties, which are generally observed to feed by themselves, though occasionally they will join up with Senegal Fire-Finches and Cordon-bleus. The Vinaceous Fire-Finch is said to be quite hardy in captivity but to need a good deal of care at first to keep successfully as a cage bird.

We know very little about the bird on the whole, and its nest has never been found.

Distribution. Restricted to a comparatively small area in West Africa, *L. vinacea* ranges from Senegal to Portuguese Guinea and is likely to be resident, though not reported from the dry western portion of French Guinea.

WAXBILL

Estrilda astrild (Linnæus)

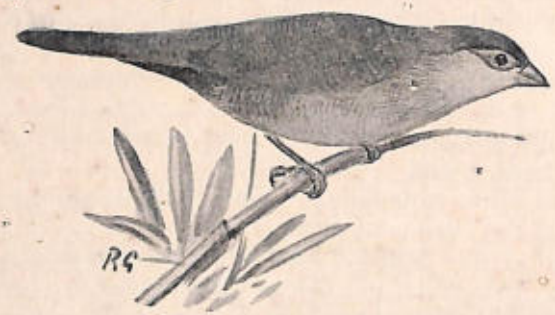
(see Plate 53, facing page 1484)

In my larger work I recognised four races from within our area. An island race must now be added from São Thomé which I did not previously recognise. Waxbills of this species are found all over Africa, and a great many races have been described. It is an extremely widespread species which must be known to everyone who takes an interest in African bird life.

The common waxbill is a tiny bird which barely exceeds 4 in. in total length even with its comparatively long fan-shaped tail, the

middle feathers of which protrude far beyond the outer ones. Grey-brown above and buffish white below, with a rose wash overspreading the breast and belly, the very fine bars are only perceptible at close quarters. The most conspicuous features are the red bill and the scarlet patch through the eye. Chin and cheeks are whitish and the under tail-coverts black like the under side of the tail.

Measurements of *E. astrild occidentalis* are: Wing 45–47 mm., tail 40–46 mm.



This tiny weaver goes about in considerable flocks seeking its food of grass-seeds and procuring them chiefly from the grass-tops rather than from the ground. Those seeds found in the crop have always been stripped of the husk. It is a strongly gregarious species, the little birds keeping close to one another, roosting huddled together and preferring to sit on one another's backs rather than be edged out into the cold. When feeding in the grass the flocks keep in compact formation even when in company with other small seed-eating birds. Like many other species, they are attracted to flying ants and may be seen flying up high into the air in pursuit of the insects. In September they cease to be gregarious and split up into pairs preparatory to breeding in October and November at the beginning of the dry season.

Nests are built of grass-tops. In Cameroon the panicum grass is used, the tops of which adhere to one another and are fashioned into a large hollow globe with a tubular entrance, the finished nest resembling a water-bottle in shape. Four or five white eggs are laid which measure 13–14 × 10 mm.

Distribution and Races

E. astrild occidentalis Jardine and Fraser, of which a description has been given, is found on Fernando Po and on the mainland ranges from the Gold Coast, and possibly the Ivory Coast, to southern Cameroon.

E. astrild sousae Reichenow is found in São Thomé. It is greyer than the mainland race, and I have now decided it must be recognised as distinct.

E. astrild kempi Bates ranges from Sierra Leone to Liberia; its plumage is more black and white and less rufous-brown than in *E. a. occidentalis*. The wing measures 44–47 mm.

E. astrild rubriventris Vieillot occurs in Gaboon and Portuguese Congo. It has the under parts more rosy carmine, a strong carmine wash on the upper tail-coverts and again on the mantle and back, which are dark brown finely barred, as in the other races.

E. astrild jagoensis Alexander is restricted to the Cape Verde Islands. It is paler and greyer on the upper parts than birds from the opposite mainland.

As already noted, the species is found all over Africa. Three other races are recognised in East Africa—*E. astrild nyanzae* in Uganda, *E. astrild massaica* in the highlands of Kenya and *E. astrild minor* in the coastal districts of Kenya and Tanganyika. The typical subspecies is confined to South Africa and *E. a. angolensis* inhabits Angola. Still others are recognised elsewhere.

BLACK-RUMPED WAXBILL

Estrilda troglodytes (Lichtenstein)

(see Plate 53, facing page 1484)

THE sexes are alike. The entire upper parts, including the crown, are pale grey-brown with a rosy wash over the plumage, the whole being very finely and obscurely barred but the barring almost imperceptible unless closely examined. The cheeks vary from whitish to buff, strongly tinged with rose-colour. A crimson band passes through the eye. Rump and upper tail-coverts are black. The tail is dark brown; the outer webs of the two outermost feathers are buffish white or white. Chin, throat and entire under parts are ashy washed with rose-colour, flanks obscurely barred, the middle of the belly crimson, especially in the male but less pronounced in the female. Thighs and under tail-coverts are buff; axillaries and under wing-coverts also buff. The eye is reddish brown, the bill dark red; legs and feet are blackish brown.

The wing measures 46–49 mm. and the tail 37–42 mm.

This very small bird has a total length of under 4 in. Its chief characteristics are the black rump and tail, contrasting with the grey-brown upper parts, the pinkish-buff under parts, and the red stripe through the eye.

It is an inhabitant of the semi-arid belt of West Africa and ranges across the continent so far as the same conditions maintain. It is the only waxbill which is found in the dry country nearing the desert, but even there it has a very restricted range and does not appear to extend beyond lat. 14° N. Although scattered over such

a wide area, it cannot be considered universally common. Like all the waxbills, it gathers into flocks of considerable size which pack close together. It is mostly north of lat. 11° N. that these flocks are met with in Nigeria and in all the middle zone of Central Africa. It seems to prefer open cultivated country where thorn thickets are plentiful. The Black-rumped Waxbill is one of those dry-country birds which occur on the plains around Accra. When resting its call-note somewhat resembles *chihooee*, drawn out and rising; its flight note, on the other hand, is *tiup-tiup-tiup* or something akin to it.

This waxbill breeds in the summer months, chiefly in July and August apparently, for birds in the Ké-Masina area of the French Sudan showed no signs of nesting in May. In the Kano and Zaria districts of Nigeria nests containing eggs were found from 17th July onwards. The nests are placed on the ground at the foot of a tuft of long grass or small bush, are built of dry grass-tops and are pear-shaped. A peculiarity of the nests examined was that all had a semi-covered cup-shaped extension on one side, which is used by the bird when not actually incubating as a resting place. On one occasion one bird sat on the eggs while its mate sat in the shelter. The eggs number six in a full clutch and are pure white with a glossy surface. They measure 11·5–15·5 × 9·5–11·25 mm.—a considerable variation in so small an egg.

Distribution. This is one of the few waxbills which has not been split up into races. It ranges from Senegal across the whole semi-arid belt to the Nile valley and is found in the northern parts of all our British Colonies in West Africa excepting Sierra Leone. Near Accra its range almost reaches to the sea, and we find it locally but fairly generally distributed in the area defined. Details are given in my larger work.

ZEBRA WAXBILL

Estrilda subflava subflava (Vieillot)

(see Plate 53, facing page 1484)

The orange and dark-barred flanks of this little waxbill, which can be clearly seen as it feeds on the ground, may help to distinguish it from the other species of waxbill. It is the smallest of all the waxbills and has a shorter tail. Both sexes have the upper parts plain olive-brown, the male with deep orange under parts, while the under side of the female is pale yellow. Both male and female have barred sides and flanks. It is a decorative little bird, and the red eye and black and red bill assist to that end. The wing measures 40–48 mm. and the tail 28–33 mm.

The Zebra Waxbill is usually to be seen in small flocks in the

savanna grass country but is nowhere common. Unlike many other waxbills, it is never seen about villages and seems to prefer wet places to dry. When met with it shows little alarm and allows close approach. In Gambia it is distinctly local and is confined for the most part to the swamps. Its range must embrace all our Colonies, including Sierra Leone, where it is evidently not uncommon, but curiously enough it has not been reported from the Gold Coast, though it must surely occur, for it inhabits both northern and southern Nigeria. It may be that it is a summer visitor to the swamps only. In British Cameroon it ascends to approximately 6,000 ft., occurring in the open grass country between Bamenda and Banso.

Considering its wide range (it extends across the whole continent), it is surprising how few field observations have been made concerning it. It is perhaps more strictly an inhabitant of open grassland than of any other environment, although partial, as aforesaid, to reeds and long grass near water. When disturbed the little birds fly off in straggling fashion in small groups, emitting a metallic twittering call. They have a habit of alighting on the grass-tops to feed on the seed-heads, whence they slide down the stems to search for fallen seeds on the ground.

The nest is peculiar in that the entrance faces directly upwards and is not at the side. The bulk of the nest is of grass-tops arranged in bundles in criss-cross fashion, the inside of the nest being liberally lined with feathers. The one described was about 4 ft. from the ground in tall rank grass, to the stems of which it was rather loosely attached. The five eggs which it contained were white and slightly glossy and measured 12·5–13·5 × 10·2–10·5 mm.

Distribution. The typical subspecies extends from Senegal, Gambia and Sierra Leone to British Cameroons and Nigeria across Africa north of the equatorial forest to the Nile and Abyssinia, ranging south to Uganda and the Mfumbiro volcanoes.

Its place is taken further south by *E. subflava clarkei* Shelley, the male of which has the under parts yellow instead of orange-scarlet. This is the race which occurs in Kenya Colony and ranges south to Natal.

ORANGE-CHEEKED WAXBILL

Estrilda melpoda melpoda Vieillot

(see Plate 53, facing page 1484)

Two races have been described from within our limits, but it is the typical subspecies which is generally distributed in both Upper and Lower Guinea with the exception of a small area in the region of Lake Chad.

The Orange-cheeked Waxbill has the general colour greyish, with a deep crimson rump and very noticeable orange cheeks (actually an orange stripe over the eye and orange ear-coverts). Thus the little bird may be briefly described. The male has a grey crown, brownish-olive back and wings, a crimson rump and black tail. The cheeks are orange-red, the sides of the head and body, breast and under tail-coverts bluish-grey; the middle of the belly is whiter, and there is a yellowish wash on the abdomen. It has a red bill and in size is not more than 4 in. in total length. The female is rather duller than the male but similarly coloured. The wing measures 44–49 mm. and the tail 38–48 mm.

This is one of the most numerous as well as the most ornamental of the African waxbills and is found in all political areas embraced in this book. It lives much of its life in the long grass and is constantly to be seen in the paths running through secondary forest. Large flocks frequent the native rice-farms on the edge of the reserve, where they may be seen in company with Bronze-wing and Magpie Mannikins. It has much the same movements and feeding habits as *Spermestes* but is more gregarious and keeps more to itself and is less likely to seek the company of other small birds except at roosting time. Its hunting grounds are widespread, for it favours the swamps more than many other estrildines, and its sweet little courting song uttered in a shrill note may be heard as the breeding season draws nigh. The bird's usual cry is a high-pitched squeak, but when indulging in his absurd courting dance, during which he holds a grass stem lengthways in his bill, then points it skywards, he dances up and down to the tune of *zee-whée-zee-whée* as he gradually edges towards the female. The lady of his choice never seems to take the slightest interest in the performance, or so it appears to an onlooker; but that may be just her little way.

In Gambia the commonest site for the nest is a low thorn on hard islands in the swamps, but in Sierra Leone their domed nests are often built in the long grass along the streams or attached to long elephant grass. In Nigeria various naturalists have sent me accounts of its nesting, and they agree that the nest is usually placed on the ground at the foot of a small bush or tuft of grass. Those examined were built of coarse grass and lined with grass-tops. It seems that the Orange-cheeked Waxbill has a wide choice of nesting sites and is not, as was once believed, entirely a ground nester. The eggs are usually five or six in number, pure white, and measure 11·5–14·8 × 8·75–11·1 mm.—a very considerable variation. The average seems to be 12·24–13·5 × 9·45–10·5 mm.

Distribution and Races

Estrilda melpoda melpoda Vieillot ranges throughout West Africa from the Senegal River to the Congo and into northern Angola.

Orange-cheeked Waxbill
Estrilda melpoda

Black-rumped Waxbill
Estrilda troglodytes

Perrein's Waxbill
Estrilda perreini

Sierra Leone Waxbill
Estrilda astrild kampi

Lavender Fire-Finch
Lagonosticta caerulescens

Zebra Waxbill ♂ and ♀ (below)
Estrilda subflava

Fawn-breasted Waxbill
Estrilda paludicola anambrae

Black-faced Fire-Finch ♂ and ♀ (below)
Lagonosticta nigricollis togoensis

Eastwards it extends through Ubangi-Shari and the northern Belgian Congo to the shores of Lake Tanganyika. It has no representative in Kenya.

The only other race which comes within our limits is *Estrilda melpoda tschadensis* Grote, which is paler on both the upper parts and under parts and is found in the vicinity of Lake Chad, the type having been obtained at Andali in North Adamawa.

FAWN-BREASTED WAXBILL

Estrilda paludicola anambrae Kemp

(see Plate 53, facing this page)

THE all-red bill, without any black line down the keel of the upper mandible, and the bright scarlet rump are the best distinguishing characters of this waxbill. The rest of the colouring is fawn-brown above, buff below. It has no red spot in front of the eye as has *Lagonosticta senegala*. Both *L. rufopicta* and *L. senegala* have crimson on the rump and upper tail-coverts, and the former is further distinguished by its blackish tail. When handled, *E. paludicola anambrae* will be found to have the obscure barring on the back and tail which is a feature of the genus *Estrilda* in which we place it. The sexes of this waxbill are alike. The wing measures 45–49 mm. and the tail 37–40 mm.

This tiny weaver was discovered in southern Nigeria at Agoleri on the eastern bank of the Anambra Creek not far from Onitsha. It is a district which in 1907, when the first specimens of the Fawn-breasted Waxbill were obtained, was almost entirely covered with open forest of the dry deciduous type, the ground between the trees bearing tall rank grass. It is in such an environment that this waxbill spends its life, evidently in, or in close proximity to, swampy country, for when the waters of the Niger rise, the country in the vicinity of the Anambra Creek becomes inundated.

We know very little about the life of this waxbill. The typical subspecies, which is a native of Uganda, is to be met with in parties in swampy ground and along the banks of streams. It builds a circular grass nest with side entrance which is placed on the ground among long grass. In a nest of this bird there was in addition to the four eggs of the waxbill an egg of the parasitic Pin-tailed Whydah (*Vidua macroura*).

Distribution and Races

E. paludicola anambrae Kemp is apparently restricted to an area of the Niger delta around the Anambra Creek in the Onitsha Province of southern Nigeria.

Five races have been described of *E. paludicola*, of which *E. p. poliopareia* Reichenow was discovered in the Congo, probably near Stanley Pool, and *E. p. paludicola* Heuglin in the Bahr el Ghazal. The latter is the race occurring in Uganda and ranging to Elgon. South of that *E. p. roseicrissa* Reichw. replaces the typical subspecies in Toro, Kivu and northern Tanganyika Territory.

PERREIN'S WAXBILL

Estrilda perreini perreini Vieillot

(see Plate 53, facing page 1484)

THE lavender-grey plumage of this waxbill with crimson rump and upper tail-coverts, but black tail, should enable it to be easily identified. There are other grey estrildines, it is true; but *Estrilda nigricollis* has a black throat and cheeks and a red tail, while *Lagonosticta caerulescens*, which resembles it closely in appearance except that it is much paler grey and has a red, not black, tail, is not known to occur in the same latitude. The measurements of Perrein's Waxbill are: Wing 47–52 mm., tail 42–50 mm.

This waxbill barely comes within our limits and will be dismissed briefly. Naturalists who have collected it have left no field notes of any value concerning it. Its ways of life are presumed to be the same as those of *E. astrild*, but as it has been confused with other species in the past it is best to ignore field notes which may not apply to it. It was found in Portuguese East Africa to inhabit dense cover and to have a call-note resembling *pseeu pseeu*—a thin bi-syllabic whistle.

Distribution. Portuguese Congo and northern Angola, ranging eastwards to the country between Lake Tanganyika and Lake Nyasa. Its reported occurrence in São Thomé is open to doubt and in Portuguese Guinea quite incredible.

BLACK-CROWNED WAXBILL

Estrilda nonnula Hartlaub

(see Plate 54, facing page 1488)

THE adult male has the forehead, crown, nape and lores black. Cheeks and ear-coverts are white, passing into smoke-grey on the sides of the neck. Mantle and inner wing-coverts are very finely barred black and grey. The tips of the feathers of the lower back, rump and upper tail-coverts are glossy crimson. The wings are brownish black, the secondaries barred grey and black. The tail is black. Chin, throat and entire under parts of the body are white, shading into grey on the sides of the belly and under tail-coverts. The sides of the body are crimson, these feathers being entirely concealed by the wings. Base of the under tail-coverts is also crimson, the terminal part of the feathers grey. Axillaries and under wing-coverts are white. The eye is dark hazel, the bill black striped with scarlet; legs and feet are black.

The adult female has the mantle and back browner but similarly barred as the male, the barring being pale brown and black rather than grey and black. There is an equal amount of crimson on the lower back, but the under parts are more smoke-grey and less white. The wing measures 46–50 mm., the tail 40–46 mm.

This is one of the prettiest of the waxbills, the white cheeks and throat of the male contrasting with the black crown, while the crimson on the rump and on the sides of the body give it a gay appearance, set off by a jet-black tail. For distinctions between this waxbill and the Black-headed Waxbill (*E. atricapilla*) see under the latter species.

Although *E. nonnula* does not extend its range into the Calabar Province of Nigeria, yet it is one of the commonest waxbills in British Cameroons "just round the corner." There it has a remarkable altitudinal range from near sea level (Victoria) to 8,000 ft., its varied habitat including grassy forest clearings, the foliage of forest edges, farms and grassland in the savanna and bracken-covered mountain slopes. Below Buea on Cameroon Mountain it is reported to be most tame and conspicuous among the large areas of elephant grass. In southern Cameroon this was found to be the commonest *estrilda* in the vicinity of the Ja River. In the latter

region this waxbill nests in September and November, in the Cameroon highlands in October and November. In the off-season flocks of a hundred birds or more are not uncommon.

The nest is placed in shrubs or hedges or again in grass-tufts by the roadside, built of panicum grass-tops. It is not rare to find a "cock" nest superimposed on the genuine one. Clutches are of five or six white eggs, which measure 13·4–15 × 10–10·7 mm.

Distribution and Race

E. nonnula nonnula Hartlaub is found in British and French Cameroons, whence it ranges eastwards along the Ubangi and Uelle Rivers to the Bahr el Ghazal and Nile valley, the greater part of Uganda and the Nandi district of Kenya Colony, extending south into northern Tanganyika.

A race *E. nonnula elizae* Alexander, said to have greyer under parts, has been described from Fernando Po but is doubtfully separable.

BLACK-HEADED WAXBILL

Estrilda atricapilla atricapilla Verreaux

(see Plate 54, facing this page)

THIS is a pretty little waxbill, its black crown contrasting with the greyish white of the face and throat, very finely barred grey and black back, a crimson-scarlet rump and a black tail. Adults have uniform grey breasts and much crimson on the flanks, the under tail-coverts being black. The wing measures 44–47 mm. and the tail 42–45 mm. The sexes are almost exactly alike, but when carefully examined the ground colour of the mantle and back of the female is brown rather than grey. It is just as distinctly barred as the male.

In places where the range of *E. atricapilla* overlaps that of *E. nonnula*, as in the forests of Cameroon, the two birds may easily be confused. The rump of *E. atricapilla* tends to be more scarlet and in *E. nonnula* to be more crimson. *E. atricapilla* has much darker under parts, the breast being sooty grey with more crimson visible on the lower half of the body. *E. nonnula*, on the contrary, has the under parts almost white. Again *E. atricapilla* has the red on the bill restricted to a small patch at the base of the lower mandible, but in *E. nonnula* there is a prominent streak of red on the upper mandible as well as at the base of the lower. If a further character is required, the considerable amount of crimson on the flanks of *E. atricapilla* should serve to distinguish the Black-headed Waxbill without much difficulty if a good view of it is obtained.

In the southern Cameroon forest country the Black-headed Waxbill is a most abundant species which frequents the more open spaces

Red-cheeked Cordon-bleu ♂ and ♀
Uraeginthus bengalus

Black-crowned Waxbill
♂ (above) and immature (below)
Estrilda nonnula

Black-headed Waxbill
Estrilda atricapilla

Vinaceous Fire-Finch
♂ (left), ♀ (right)
Lagonosticta vinacea

Banso Little Weaver ♂ and ♀ (below)
Nesocharis shelleyi bansoensis

White-cheeked Olive-Weaver
Nesocharis capistrata

in the forest regions, living among the high grass. The eastern representative of this bird lives in the glades and on the fringes of the bamboo forest and has been found up to 8,000 ft., but there are no such altitudes in southern Cameroon, and the little bird has not yet been found in the montane of British Cameroon, where the Black-crowned Waxbill (*E. nonnula*) seems to take its place. Both of these waxbills occur together in southern Cameroon, and as already noted, care must be taken in that area not to mistake one for the other.

The Black-headed Waxbill builds a nest in the shape of a water-bottle, composed entirely of grass-tops, and has been found set in the forks of a shrub about the height of a little girl's shoulders from the ground. To one nest built by this bird an additional compartment had been added which possessed a separate entrance and contained five eggs, while the other compartment was much larger and had been used as a roosting place, probably by several of the little birds. Without definite proof, there are indications that several hens build these nests and that more than one lays in the same nest. Five or six is the usual number of eggs in a nest, and that number is large for a single estrildine weaver to lay. Eggs are white and measure 13–14·5 × 10–10·5 mm.

Distribution and Races

E. atricapilla atricapilla Verreaux ranges from Gaboon northwards to the forest country of southern Cameroon, east to the Kasai and Ituri districts of the Belgian Congo.

Its place is taken by *E. atricapilla kandti* Reichw. in the Birunga volcanoes in eastern Congo, the Aberdare Mountains of Kenya Colony and on Mount Elgon—all high elevations around 8,000 ft. or more.

LITTLE OLIVE WEAVER

Nesocharis shelleyi Alexander

(see Plate 54, facing page 1488)

Two races come within our limits.

This minute bird measures in total length little more than 3 in. including the tail, which is short. The colouring of the male is very distinctive, unlike any of the other estrildine weavers, and the black head is in strong contrast to the golden-olive upper parts. Only the tip of the black tail shows above the long upper tail-coverts, which blend with the back. The grey belly and under tail-coverts are again in strong contrast with the golden-olive breast. The female is like the male above but entirely grey below. It has a black head like the male. The wing measures 42–45 mm. and the tail 24–25 mm.

The bird is remarkable for its very short tail, which barely extends beyond the upper tail-coverts.

Originally discovered on Fernando Po, the Little Olive Weaver was later to be found on Cameroon Mountain. The island birds were shot from the tops of tall thick-leaved trees. Another race was discovered in the Banso Mountains of British Cameroon which frequents other mountains in the same area as well. They go about in little parties, searching the leaves and small branches of trees in the mountain forests. They are very active and tit-like in their ways and make little cries as they move about. The notes are described as keen and needle-like, in keeping with their small size. Little flocks may be seen at the edge of patches of forest up to considerable elevations. The nest has never been described.

Distribution and Races

N. shelleyi shelleyi Alexander has been found in the Moka highlands of Fernando Po and on Cameroon Mountain.

N. shelleyi bansoensis Bannerman takes the place of the typical form in the neighbouring highlands of British Cameroon—Banso, Kumbo, Oku, Manenguba Mountain, etc. It differs in having the grey of the nape and belly some shades darker and the golden olive on the upper parts also darker. It lacks any trace of orange wash and has wing 45–48 mm., tail 28–31 mm.

WHITE-CHEEKED OLIVE WEAVER

Nesocharis capistrata (Hartlaub)

(see Plate 54, facing page 1488)

This bird is more easily recognised in the field than *Nesocharis shelleyi*, to the colour of which it has a superficial resemblance. To begin with, the male and female are alike and have silvery-white cheeks, with the black of the throat extending on each side to surround them partly with a black border. The crown is grey, but a white frontal band should be noticeable. The grey is continued on to the back of the neck but there gives way to golden olive, and the whole of the rest of the upper side is of that colour, including, when these are closed, the wings and tail. Below the black throat the under parts are grey, but the sides of the body are profusely washed with golden yellow, which is apparent when the wings are closed but is much more noticeable should the wings be raised. The wing measures 54–59 mm., the tail 42–46 mm.

From the localities in Upper Guinea where this little weaver has been observed it is not easy to describe the sort of country which it prefers. It has been found as far west as Gambia and is reported

from all British West African colonies, where it has been obtained in closed forest, in kurimis of lofty trees, in strips of gallery forest and on the banks of streams in grass country. In British Cameroons it has been found at 4,600 ft. between Kumbo and Fumban.

Usually met with singly or in pairs, it may be observed examining the foliage of trees for insect life, sometimes hanging upside down in tit-like fashion and performing acrobatic feats in the tree-tops. One bird seen on the ground was searching for seeds and small ants. It is evidently an uncommon and very local species. Collections made in areas which it is known to inhabit very seldom contain a specimen, and we are very much in the dark as regards its nesting habits.

Distribution. From Portuguese Guinea, where this bird was first discovered, southwards to British Cameroon. On rare occasions it has been found in Gambia, whence there is a gap to the Volta River, from which area it has not been obtained. It is more often seen in the central provinces of Nigeria, south of lat. 9° 30′ N., than elsewhere and occurs in British Cameroon in the foothills between 4,000 and 5,000 ft. Eastward it ranges via the northern Belgian Congo to the Bahr el Ghazal and the western shores of Lake Albert.

RED-CHEEKED CORDON-BLEU

Uraeginthus bengalus (Linnæus)

(see Plate 54, facing page 1488

Two races of this cordon-bleu are recognised in our area, but it is the typical subspecies which ranges over dry West Africa except in northern Cameroon.

This little bird is quite unmistakable, especially the male, with its large crimson cheek-patch. The body colouring is unique. Rump, tail, breast and sides are brilliant turquoise blue, and the rest of the plumage is pale drab brown. The blue tail is long (about 2¼ in.) for so small a bird and is strongly graduated, the central feathers being narrow and pointed at the tip. The female differs by lacking the crimson patch on the ear-coverts, which in her case are turquoise blue. On the under side the turquoise blue on the breast, throat and sides of the body is much paler than in the male, but the wings and tail are similar in both sexes. The wing measures 49–57 mm. and the tail 42–61 mm., the males having slightly the larger measurements. Immature birds have less blue in the plumage, and are generally paler, and the young male lacks the crimson cheek-patch. Juveniles are pale drab brown above, isabelline below, with a wash of blue on the throat, tail and upper tail-coverts.

This is a familiar bird to many, common enough in parkland

country and in open spaces in the bush, and is often to be seen feeding alongside the roads and paths, by thicket-clad banks of streams and in the cultivated fields. It is equally at home in thorny thickets in the wilds of the semi-arid belt and in the more southern districts is a bold little bird about towns and villages, picking up its living from the grain scattered by man. Although never encountered in immense flocks as are some of the waxbills,

little parties of cordon-bleus will congregate together, and there is no prettier sight than a bare branch covered with these little blue birds, sitting as close as they can to one another, in company maybe with a few Lavender Finches, twittering contentedly until a newcomer arrives to push into the middle of the row.

The Cordon-bleu is captured in numbers for export to Europe, being fairly hardy in captivity, and is said to breed easily in confinement. It should never be kept without a mate or at any rate without others of its kind, as the companionship it requires is obvious to anyone who has seen it in its native environment.

The breeding season in West Africa lasts from July to November. The nest is an untidy domed structure of grass and fine bents, lined with grass-tops and with side entrance, and is usually placed in a thorn bush about 6–10 ft. from the ground or in creepers on a

building. More rarely it may be in an orange-tree or a desert date. Most accounts of its nesting state specifically that no feathers are used in the lining, but in some cases at any rate feathers have been found in the lining in Nigeria, with the added peculiarity that the grass nests are encased in a layer of rootlets. The eggs are white with a faint gloss. They measure 12–15·2 × 9·6–11·6 mm. and number three to five in a clutch.

Distribution and Races

Uraeginthus bengalus bengalus Linnæus ranges from Senegal through the drier parts of our own and other colonies to northern Nigeria and Ubangi-Shari, extending eastwards through Darfur, Kordofan and the Nile valley to Eritrea. I do not recognise other races in this area.

Uraeginthus bengalus camerunensis Reichenow has been described from northern Cameroons and has been found in the Banso Mountains and at Ngambe, Tibati and Yoko at altitudes of 2,000–3,500 ft. The extreme north-east of the Bamenda division is where they are first encountered when travelling north. This is not a very good race, but the specimens I have examined appear to be rather more richly coloured, being slightly darker brown on the upper parts and a shade deeper blue on the breast.

In East Africa no fewer than three races are recognised by W. L. Sclater in Jackson's *The Birds of Kenya Colony and the Uganda Protectorate*, of which the best known is *Uraeginthus bengalus ugandae* Zedlitz, found in Uganda east to Elgon, *U. b. brunneigularis* Mearns in the highlands of Kenya, and *U. b. ugogoensis* Reichenow in the coastal districts of Kenya and northern Tanganyika.

ANGOLAN CORDON-BLEU

Uraeginthus angolensis angolensis (Linnæus)

This cordon-bleu is very similar to the female of *U. bengalus*, the males having no red cheek-patch as in that species and the sexes being practically alike. The colouring is very like that of *U. bengalus* which I have described, but the crown, back and wings are rather more mouse-coloured and not so brown. The wing measures 50–52 mm. and the tail 42–44 mm.

In habits this bird resembles the Red-cheeked Cordon-bleu, and as it barely comes within our limits no more need be said about it.

Distribution. Angola and the Lower Congo valley. A race *Uraeginthus angolensis niassensis* Reichw., described from northern Nyasaland, extends from northern Rhodesia to Natal. The species is not represented in West Africa north of Angola, nor is it found in Kenya or Uganda.

SUB-FAMILY VIDUINAE

GENUS HYPOCHERA

THERE are six Indigo Finches in the area with which I am dealing, and these very small birds are not easily identified from one another unless handled; even then extreme care is needed. The males are one-coloured, blackish birds glossed with blue, green or purple according to the species, and with streaky females which are indistinguishable from one another. Three of these combassous are figured in colour in Plate 14 of volume vii of my larger work, and if that can be consulted it should aid materially in their identification in the field. Each species will be described more fully than usual, owing to their similarity. Some authorities prefer to consider *H. aenia*, *H. neumanni* and *H. camerunensis* as subspecies of *H. chalybeata*, but as we know so little about the breeding range of each I have followed Grant and Praed and retained them as full species.

Key to the males in breeding plumage of the Combassous or Indigo-Finches in the genus Hypochera

1. With freshly moulted quills and tail-feathers black .. 2
   With freshly moulted quills and tail-feathers brown .. 4
2. Strong greenish sheen on glossy blue-black plumage *Hypochera aenea aenea*, p. 1496
   Gloss on plumage blue rather than green 3
3. Plumage bright glossy blue *H. ultramarina neumanni*, p. 1496
   Plumage glossy steel-blue .. .. .. *H. chalybeata*, p. 1494
4. Plumage dull purplish matt .. *H. funerea wilsoni*, p. 1499
   Plumage deep glossy blue .. .. *H. camerunensis*, p. 1500
   Plumage glossy green .. .. .. *H. nigeriae*, p. 1498

This key cannot be a sure guide to the identification of individual specimens, as unfortunately the colours upon which it is based are comparative. The colours of the bill and feet are not sufficiently constant to be of much help except in one instance.

SENEGAL COMBASSOU OR INDIGO-FINCH

Hypochera chalybeata (Müller)

THE Senegal Combassou has the entire body plumage glossy steel-blue, wing and tail-feathers black, the rectrices with narrow dull whitish tips. Under wing-coverts are whitish tipped with brown,

axillaries white, under tail-coverts glossy steel-blue like the body feathers. The eye is blackish, and the bill waxen white or pinkish white; the legs and feet vary much in colour, being either pale orange-yellow, pinkish yellow, brownish yellow, yellowish-flesh colour, pale reddish-flesh colour, or even pale coral.

The adult female has the upper parts pale buffish brown with dark centres to the feathers, a dark band on each side of the crown and a pale broad central streak. The wings are dark brown, the coverts brown with pale tips. The tail is dark brown with paler margins to the rectrices. The throat is dirty white; the breast and sides are pale brown, becoming white on the middle of the lower breast and belly. Under wing-coverts are dull brown, as are the axillaries. Under tail-coverts are creamy white. The adult male in non-breeding plumage resembles the adult female but in size is slightly larger.

Measurements are: Bill 8–9 mm.; wing 60–66 mm.; tail 35–37 mm.

In the field the male in full plumage is distinguished from other small weaver finches except the species in the same genus by the uniform blackish-blue plumage, throughout with a strong blue sheen on the feathers. In contrast the bill is waxen white and the legs and feet vary in tone from yellowish-flesh colour to orange-yellow or coral. The female is dull brown with streaky upper parts, quite impossible to identify in the field unless with the male. Males out of breeding plumage are impossible to distinguish from adult females.

This is a common bird of the semi-arid belt which is generally to be seen about native villages, but unless in breeding plumage it is unlikely to attract attention. Being a grain feeder, it spends much of its time on the ground. Despite being quite numerous in some places, we know very little about its life-history. In the French Sudan and French Niger Territory these little birds may be encountered here and there, especially at Ansongo and Gao on the Niger, where they pick up tiny seeds on the sandy ground. The seeds of *Eleusine coracana* are so minute that it is surprising the birds can detect them, but specimens have been examined with their crops crammed with these seeds and nothing else.

The breeding season is a long one, lasting from July to November; the cock birds come into colour by July in Gambia and are then conspicuous, when earlier in the year they are unrecognisable from the other brown and streaky weavers which swarm in the non-breeding season.

There has been much speculation as to whether or not the Senegal Combassou is parasitic on other species, especially on *Lagonosticta senegala*, the fire-finch, but actual proof is not yet forthcoming. It may be that these two species build exactly similar nests, untidy masses of grass stuffed into holes in the thatch of huts or into

the mud walls of buildings. It must be left to residents in West Africa to solve the problem of the Combassou's breeding habits. In no single species do we know for certain that it builds its own nest.

Distribution. *Hypochera chalybeata* is now considered to be a species without any races, and as such is apparently restricted to Senegal, Gambia, the French Sudan and probably French Niger Territory.

HARTLAUB'S GREEN COMBASSOU

Hypochera aenea Hartlaub

THE adult male has the entire plumage glossy blue-black with a strong greenish sheen. The green gloss is particularly apparent when specimens are viewed in sunlight. Wings and tail-feathers are black. Axillaries are whitish and under wing-coverts white marked with brown. The eye is reddish brown, bill greenish white; legs and feet are pale reddish brown.

There are no females of this species in the British Museum collection, but these will resemble the females of *H. chalybeata*. As in that species, the males will assume an eclipse plumage in the non-breeding season.

The bill measures 9 mm., wing 62–65 mm. and tail 36–38 mm.

Hartlaub's Green Combassou is similar in appearance to *H. chalybeata* but has a green instead of a bluish gloss on the feathers. In the field both birds appear black, but the stumpy white bills are noticeable. Both species have flesh-coloured legs.

There are no field notes available on this species, which has always been confused with the Senegal Combassou. No doubt the two live in the same area and have the same habits.

Distribution. Known from five examples in the British Museum, which were all collected in Senegal at Dakar, Kirtaona (3) and Dagama.

NEUMANN'S BLUE COMBASSOU

Hypochera ultramarina neumanni Alexander

THE adult male in breeding plumage has the entire plumage deep glossy blue. Axillaries and under wing-coverts are dull black and white, wings and tail-feathers black. The eye is probably dark brown, the bill dull pink or livid flesh-colour; legs and feet are dull orange or pinkish. The adult female resembles the female of *H. chalybeata*. The adult male in eclipse plumage closely resembles the adult female. The bill measures 8·5–9 mm., wing 60–68 mm. and tail 33–35 mm.

Like all the combassous, this is a plump-looking little bird about 4 in. in length with glossy dark blue plumage and black (not brown) wings and tail. The legs are not whitish as in some of the other species but are described as pinkish or dull orange, and this may be a good field identification mark. The bill is said to be pink.

Although this combassou may be met with in Nigeria, it is only in the eastern part of its range, in Darfur, that it appears to have attracted much attention where it gathers in small family parties in

the off-season to frequent villages and never seems to wander far afield. It breeds in Darfur in autumn and early winter and is certainly resident throughout the year. It is probably this species which is reported to be common about Kano and is almost certainly the species which has been found dead by a nest at Lokoja on 18th June. The nest with four eggs was placed on the dead leaf of a borassus palm, one of the fronds of which had folded over to form a cavity, part of which covered the nest. A combassou which had apparently become entangled in some way was lying spread-eagled on the leaf just outside the nest. There was no evidence to prove that the dead combassou had itself built the nest. The eggs in this nest were white and measured 13·4–13·7 × 10·7–10·9 mm., but again may not have been those of the combassou although that was suspected.

Distribution: Northern Nigeria (Zaria, Lokoja, Bauchi and Kano), the area of Lake Chad, ranging south to Fort Lamy and extending east to Darfur.

NIGERIAN COMBASSOU

Hypochera nigeriae Alexander

THE adult male in breeding plumage has the whole of the body plumage and wing-coverts black glossed with steel-green, also the inner secondaries. Primaries and tail-feathers are ash-brown with whitish edge to the feathers; the outer secondaries are also brown. The eye is blackish brown or dark brown, the bill white, pinkish white or whitish-flesh colour; legs and feet vary from horn-white to pale flesh-colour or yellowish-flesh colour. The adult female is indistinguishable from the female of *H. chalybeata* already described. The bill measures 9 mm., wing 61–65 mm. and tail 33–36 mm.

In the field the strong greenish sheen on the blue black plumage of the male may be observed at close quarters and the brown wings and tail in comparison with the black wings and tail of *H. chalybeata*. The bill appears white in the field, and the legs and feet are flesh-colour rather than pink.

Of all the combassous in our area this is the one which seems to have the widest distribution. It has been found in Darfur and Nigeria with *H. ultramarina neumanni* and in northern Cameroon with *H. camerunensis* and ranges as far west as Portuguese Guinea, where it may come within the territory of *H. chalybeata* if that species occurs so far south, which is quite possible. In northern Cameroon on the grassy plateaux it is the commonest indigo-finch to be met with, the breeding male perched in some little tree by the roadside, singing sweetly to the dull female nearby or hidden in the grass.

It is the Nigerian Combassou which has been found breeding in Darfur in mid-September, but it was not established whether all the combassous present were of this species, for they were there in some numbers through September and October and November in breeding dress. The difficulty of determining to which species a particular bird belongs has prevented a proper appreciation of their distribution, for it is bewildering to find one species after another turning up in territory far removed from the place of its original discovery. It is only of recent years that it is realised to what extent overlapping occurs.

Distribution. Roughly the Nigerian Combassou's range extends from Portuguese Guinea and Sierra Leone through the northern provinces of the Gold Coast and Nigeria to northern Cameroons, ranging from there across the dry country to Darfur in the Sudan, specimens having been obtained at Kulme and Zalingei which are exactly like the type of *H. nigeriae* from Kiri on the Gongola River.

WILSON'S DUSKY COMBASSOU

Hypochera funerea wilsoni Hartert

The adult male in breeding plumage has the entire plumage black with a violet-purplish gloss in sunlight. The colour when viewed in ordinary daylight is rather dull with a matt effect, the plumage never exhibiting the sheen of the other West African species of *Hypochera*. Wings and tail-feathers are ash-brown. The eye is black or dark brown, the bill whitish or pinkish white.

The adult female is sandy rufous with dark middles to the feathers, broad blackish stripes on each side of the crown over the eyes and the centre of the crown sandy-coloured; wings and tail are brown. Throat and breast are pale brown, more buff-coloured on the sides of the body; the middle of the breast, belly and under tail-coverts are white. The bill measures 9 mm., wing 60–69 mm. and tail 32–38 mm.

From the little we know of this species in West Africa it appears to be a bird of the open country, shunning the habitations of man and thus differing markedly from the Senegal Combassou, which is always to be found about villages. Moreover Wilson's Combassou inhabits the country south of the semi-arid belt and is a true savanna bird.

It is clearly a race of *Hypochera funerea*, a species found in the country lying south of the Equator which is known to be an extremely local bird. In other parts of Africa, and presumably within our own limits also, it is to be seen in the vicinity of large clearings. When travelling through open country it may be observed on the telegraph wires or on the branches of a bare tree. Full-plumaged males are not infrequently seen in company with two or three others in female dress, or possibly immature males which have not assumed nuptial plumage. There are indications that Wilson's Combassou is polygamous, but proof is difficult to obtain, especially in a species which is believed to be parasitic.

The pure white egg of this indigo bird has been taken in the nest of the common waxbill. The full number laid is believed to be six, but whether the hen deposits them all in the same nest is a moot point. When on the ground the bird has the same quick shuffling movements as the Bronze Mannikin.

Distribution and Races

It is only *H. f. wilsoni* which is found in our area, and very few examples have actually been collected. I have records of it from Senegambia, Portuguese Guinea, Nigeria (where it has been found at Aguleri, Abeokuta, and Yelwa on the Middle Niger, Cameroon (Genderu and Dodo), French Ubangi-Shari and the Sudan; where

it has been obtained on the Upper Nile and in Equatorial Province. Reports of indigo-finches from Calabar and from Lagos which were not obtained are more likely to have been of this species than of any other.

The typical *H. funerea-funerea* ranges from Natal to Nyasaland and perhaps enters Tanganyika, while another race, *H. f. nigerrima*, inhabits Angola and ranges to the eastern Belgian Congo. This combassou does not range to Kenya or Uganda. Its place is taken in those countries by *H. ultramarina purpurascens* Reichenow, a species which is not represented in West Africa. Its black plumage has a bluish metallic wash, and it is one of the combassous which seek the habitations of man. Being quite a common bird, it is well known to the white population. Like other species, this indigo-finch frequently adopts the nests of other birds in which to lay its eggs, but whether it broods them itself is not so certain. It has been found breeding in a nest at Kisumu situated in a thick spray of Cape lilac which contained three white eggs, but whether the Purple Combassou had built the nest itself we are not informed. It is named the Kenya Purple Indigo-bird in Jackson's *The Birds of Kenya Colony and the Uganda Protectorate* and seems to be the only representative of the genus in Kenya and Uganda.

CAMEROON COMBASSOU

Hypochera camerunensis Grote

THE adult male in breeding plumage has the entire plumage black glossed with deep blue; the wings and tail-feathers are brown with whitish edges. The eye is very dark brown, the bill whitish or horn-white or very pale brown; legs and feet are light brown, or light brownish-plum colour or pale purplish flesh. The adult female resembles the female of the species already described but is greyer-brown below with less buff on the sides. The bill measures 8–9 mm., the wing 59–67 mm. and the tail 33–35 mm.

Seen in a good light, this combassou appears very dark blue with a blue, not greenish, gloss, a horn-white or pale brown bill and purplish flesh-coloured legs. When expanded it will be seen that the wings and tail are brown, not black. The Cameroon Combassou has a similar off-season dress to the Senegal Combassou (*H. chalybeata*), from which it is then quite indistinguishable.

This is another member of the group which seems to have a very wide distribution, coming within the range of other species in the genus. It is for that reason we have recently decided to treat them all as distinct species rather than races of *Hypochera chalybeata*, which was the fashion not many years ago. No species have been subject

to such confusion as the indigo-finches in the past, and we have still a great deal to learn, not only about their distribution but about their daily life.

In the high grasslands of the Cameroons this combassou has often been observed around Tibati, the breeding male perched in some little tree by the roadside, singing sweetly, the female probably hidden in the grass. In exactly the same place the Nigerian Combassou (*H. nigeriae*) was found at the breeding season, also singing its heart out by the roadside, and it was not realised at the time that two distinct species were present on the same ground. That was in the month of October, when the males were in full song. A French ornithologist of note in Bangui, M. Blancou, has observed that this combassou has a distinct liking for haunting the source of brooks.

It was a surprise to those familiar with this bird in Cameroon and Equatorial Africa to find it turning up in Sierra Leone, hundreds and hundreds of miles from where it was described, and now it has been found not only on the Gribingui but also in south-western Abyssinia—a truly remarkable range, which may be defined roughly as follows.

Distribution. Portuguese Guinea, Sierra Leone (Wonkufu, Bumban, Rokupr, Batkanu and Bendugu), British Cameroon (Kumbo-Bamenda road) and French Cameroon (Tibati), Ubangi-Shari and Abyssinia.

PIN-TAILED WHYDAH

Vidua macroura (Pallas)

THE adult male of this bird in breeding dress is black and white with an abnormally long tail, the black ribbon-like central feathers varying in length from 7 to 10 in. or even more and extending far beyond the next longest tail-feather, which does not exceed 2 in. in length. The forehead, crown and nape are glossy bluish black, the cheeks and throat white, the white area being continued in a band round the neck. The rest of the upper parts are mainly black, with some white on the rump and upper tail-coverts. The under parts from chin to ventral region are white except for a black crescent on the breast. Apart from the elongated central tail-feathers, the others are black with white tips and wedges on the inner webs, which white area becomes noticeable when the tail is spread. The bill is light red; the legs and feet are slate-colour. In non-breeding plumage this bird closely resembles the adult female to be described next.

The adult female in breeding dress has the centre of the crown sandy rufous bordered on each side with black, the mantle and

scapulars buff or sandy heavily striped with blackish, the middles of the feathers being black and the borders brown, sandy rufous or buffish according to the amount of wear and bleaching. The rump is more uniform brown, with indistinct striping. Wings and coverts are black, the coverts with sandy-brown or rufous margins, quills black with white edges. The tail is black or blackish brown tipped narrowly and edged with white. The throat is white and the rest of the under surface white, with a variable amount of buff on the breast and some darker markings. Axillaries, under wing-coverts and under tail-coverts are white. The eye is dark brown, bill pinkish horn to salmon pink; legs and feet are light brown.

The bill measures 9·5–10 mm.; wing (male) 69–76 mm., (female) 63–67 mm.; tail (male) middle rectrices 180–260 mm., next pair 42–47 mm., (female) 38–50 mm.

The plumage changes undergone by this weaver are complicated and are accompanied by changes in the colour of the bill. They have been discussed briefly in my larger work. It may be mentioned that juvenile Pin-tailed Whydahs are entirely brown in colour with horn-coloured bills and, of course, no long tail-feathers.

As this is one of the most widely spread of all the weavers in the Ethiopian region, it follows that it is fairly well known to the European and African population, the male in breeding dress drawing attention to itself by its black and white plumage and narrow long tail and by its curious actions when courting the female. It occurs in all types of country with the exception of that which is covered in forest or by arid desert.

This is a tame bird and allows itself to be observed at close quarters. It changes its position with tiny shuffling movements and when disturbed flies up to the branches of the nearest tree. Clearings in orchard bush and parkland forest are favourite haunts, but it will come freely into the villages and may be seen feeding on the ground among the low weeds and on patches of bare earth. When the breeding season is over it congregates into flocks.

The display of the male is remarkable; with rapid but widely separated wing-beats the bird hovers over the female, with every beat of the wings jerking its long tail. The hens sit on the ground or perch in bushes, viewing the dance in the air with little concern. A twittery noise sometimes accompanies the nuptial display. Should another male intervene, it will be quickly driven off. The suggestion that it is polygamous has never been proved, and more than one field naturalist of long experience believes that it is not. That it is parasitic is much more certain, and the discovery of eggs, believed to have been laid by *Vidua macroura* in nests of *Spermestes* and *Lagonosticta*, has gone far to prove what has long been suspected. The details are given in my larger work, volume vii, pp 381–9.

The eggs are usually cream in colour, but sometimes as white as those of the host, from which they can be picked out by their larger size. They measure about 14·5 × 11 mm.

Distribution. The whole Ethiopian region from Senegal and Darfur south to Cape Province, excepting the desert and the forest. Within our area of West Africa also on the islands of Fernando Po and São Thomé; and perhaps also on Principe. Lat. 15° N. is about the northern limit of the bird's range on the mainland. In some parts of its distribution it is subject to considerable local movements but is not migratory in the true sense of the word. At the time of the rains the birds will appear in dry territory from which they are absent when the rains have ceased. No bird will repay closer observations of its breeding habits than have been made hitherto than the Pin-tailed Whydah, which throughout its vast range shows no inclination to adapt itself to a changed environment. It has not been found possible to distinguish a single race except the typical.

GENUS STEGANURA

This is the genus in which we place the Paradise Whydahs. They may be split up into two groups. *Steganura orientalis* has long band-shaped tail-feathers, the webs of which are of equal width throughout their length and rounded at the tip. It has a number of representatives in West Africa. *Steganura paradisea* has the tail-feathers narrower and tapering to a fine point and is restricted to East Africa and southern Africa south of the Equator. The latter is not represented in West Africa within our limits.

In a few districts in Eritrea, Abyssinia, Angola, Northern Rhodesia, Nyasaland and Portuguese East Africa representatives of the *orientalis* group have been found side by side with birds of the *paradisea* group. It is, in my view, a mistake to unite all the Paradise Whydahs under one name as some authors have done.

BROAD-TAILED PARADISE WHYDAH

Steganura orientalis (Heuglin)

This species is represented in West Africa by four races. Throughout most of our area we find *S. orientalis aucupum*, which extends from Senegal to Nigeria, meeting the range of local races in Togoland, Chad and eastern Cameroon, to be specified hereafter.

There should be no confusion between this species and the black and white Pin-tailed Whydah, the latter with its white breast, white collar and white wing-patches, added to which it has a very narrow

tail, four of the central feathers being elongated into narrow ribbon-like plumes. The Paradise Whydah is a heavier-looking bird, and the breadth of its two elongated tail-feathers gives it a very awkward appearance which the other bird does not share. All the races of the Paradise Whydah have black heads and throat, black mantle, back, wings and tail and a chestnut or golden collar, chestnut on the breast and golden-buff under parts. The tail is, in breeding plumage, the most remarkable feature. The two central plumes are greatly elongated and are carried perpendicularly to the plane of the back. The next pair, though not nearly so elongated as the central pair, also extend some distance beyond the normal tail-feathers, and often have the shaft tapering far beyond the webs in hair-like appendages. The under surfaces of the two longest tail-feathers face one another and are curved inwards from the shafts. The two longest feathers extend anything from 8 to 13 in. beyond the outer tail-feathers, and being set on edge give the bird a most curious appearance when in flight.

The female has the middle of the crown white, a white eye-stripe and the rest of the crown black. The white feathers sometimes are tinged buffish. The mantle and back are pale rufous with blackish middles or shaft-streaks; rump is uniform brown. Scapulars are like the mantle. The wings are brown, the coverts with pale edges. Under parts from chin to under tail-coverts are white, becoming pale brown on the breast and sides of the body; the flank-feathers are sometimes rufous buff, but a considerable amount of variation is present. The tail is brown with rufous-buff margins. The eye is brown, the bill dark at the tip, the base beneath whitish; legs and feet are brown. The female Paradise Whydah is indistinguishable, if seen apart from its mate, from the female Pin-tailed Whydah.

The measurements of *Steganura o. aucupum* are as follows: Bill 10–11 mm.; wing (male, female) 73–76 mm.; tail (male, in breeding dress), central feathers 230–255 mm., width about 25 mm.; next pair 55 mm.; tail (female) 51–55 mm.

In off-season plumage it is useless to attempt to name these weavers in the field. The birds do not acquire adult dress, nor do they breed in their first year; consequently there are many immature males mixed up in a flock which resemble the females and add to the difficulty of an observer.

The Paradise Whydah is a bird of the savanna country but is not particular as to its immediate environment. Open bush country is favoured by it, and there it may often be seen on the tops of trees. Gardens in the neighbourhood of habitations are also frequented, and as the males have a strong territorial sense they may be seen chasing away intruders to their particular domain with no little pugnacity. It is as often to be seen in the approaches to villages and

in plantations nearby as it is in the little trees in the open burnt bush in the dry season. In certain parts of its range—and this refers especially to Gambia and the dry northern districts in our colonies—a good deal of local movement seems to take place. Its numbers increase there during the rains.

Naturalists of experience have expressed the view that this bird is not polygamous, but that the harems and polygamous habits commonly attributed to it may be explained by first-year birds of both sexes "hanging on" to the adults long after they should be independent. This was Admiral Lynes's view.

In Darfur young are abroad in January, which points to breeding having taken place in that latitude in the autumn. It is surprising how little we know of the Paradise Weaver's reproductory habits in West Africa, or indeed in any other part of its range. As the mating season approaches the males may be observed to soar to a height of 300 ft. or so and to hover in the air with flapping wings, presently to descend with great velocity. They have a habit, too, of flying from one bush to another, perching for a while on the topmost twig. The elongated tail makes the male a very conspicuous creature when indulging in these nuptial antics. The females are much more rarely seen, and apart from being much less conspicuously marked are distinctly shyer than the male birds and keep hidden from view most of the time.

It is generally believed that the Paradise Whydah never builds its own nest but lays its eggs in the nests of other birds. The usual host is believed to be a pytilia, which breeds at the same time as the whydah, and in whose nests pure white eggs measuring 18–19 × 13·5–14 mm. have been found which are larger than a pytilia's egg and have been attributed to the Paradise Whydah. To this day we have no absolute proof that this supposition is correct, though the evidence certainly points to it.

The Paradise Whydah is imported in great numbers to Europe and is an easy bird to keep in captivity, living a considerable time. It has gentle manners towards other species and is content to eat grain. One pair in captivity were reported to have built a nest; but if that is true it does not follow that it does so under anything but abnormal conditions, such as captivity is bound to impose. Residents in Africa where these whydahs are common have an opportunity to unravel some of the problems which the breeding of this species presents. It should be a fascinating study for anyone with the time to spare.

Distribution and Races

Steganura orientalis orientalis (Heuglin). The males are very similar to *S. o. aucupum* already described in detail, but the two central tail-feathers are shorter and broader. Full-plumaged males have the

collar straw-colour; in *S. o. aucupum* the collar inclines to golden chestnut. Females are indistinguishable in all the races. This, the typical race, inhabits the stretch of semi-arid country from Chad and Ubangi-Shari east through the valleys of the Blue and White Nile to Eritrea and through the area north of the Congo forest and along the Uelle River.

Steganura orientalis aucupum Neumann. Already described on page 1504. It inhabits the whole of the dry belt of West Africa from Dakar to Nigeria, in the French Sudan and French Niger mainly between lat. 12° and 16° N. It occurs in the Northern Territories of the Gold Coast and the Northern Provinces of Nigeria east to the Benue.

Steganura orientalis togoensis Grote. Resembles the above in having a dark collar of golden chestnut but differs from both the above races in its enormously long central tail-feathers, some examples reaching 14 in. or even exceeding it (290–360 mm.). The limits of the range of this bird are uncertain; specimens are known from Sierra Leone (no locality stated), Togoland (Kete), Ivory Coast (Bandama) and Gold Coast (near Tumu).

Steganura orientalis interjecta Chapin. The tail in this subspecies is much longer than in *orientalis* or *aucupum* but shorter and much broader than in *togoensis*. Middle tail-feathers measure 270–298 mm. (breadth 29–33 mm.). This race ranges from east of the Benue River in northern Nigeria to the steppe country of eastern Cameroon and to the Bozum division of Ubangi.

In Kenya Colony, especially in the country east of the Rift Valley to the coast, another species of Paradise Whydah takes the place of *S. orientalis*. That is *Steganura paradisea* (Linnæus), the typical race, which ranges from Eritrea and Somaliland through Kenya and Tanganyika south to Natal and Angola. It may be distinguished, as has already been pointed out, from the West African birds by having the central tail-feathers tapering and pointed at the tip instead of being broad and rounded at the ends.

I am firmly of opinion that *S. paradisea* and *S. orientalis* are best retained as species rather than that *orientalis* be made a race of *paradisea*. Opinion on this point is divided.

GENUS ANOMALOSPIZA*

THE CUCKOO-WEAVER

Anomalospiza imberbis tibatiensis Bannerman

THE total length, in the flesh of the Cuckoo-Weaver is 135 mm. In breeding dress the male is olive-green above, the back and wings with black centres to the feathers giving a mottled appearance. The crown is more golden and lacks the dark centres, and there is a golden superciliary stripe which is not very marked. The under parts are bright yellow washed with greenish yellow in the middle of the breast; there are a few dark streaks on the flanks. Bill, legs and feet are all very dark brown. The males in eclipse plumage are sparrow-like in their streaked brown dress and not unlike the females, which have no olive or yellow in the plumage but are heavily streaked with rather whitish bellies and no trace of yellow. The bill measures 10–11 mm. and wing 62–65 mm. in this race, of which only three males are available. In the typical race the wing measures 64–73 mm. The tail in *A. i. tibatiensis* measures 36–37 mm.

The bird goes through several plumage changes, which would require too much space to describe in this handbook. They are discussed at length in the seventh volume of my larger work. The variation is most pronounced in both sexes between fresh-moulted birds, birds that are actually breeding, and birds which have come through the breeding season. In males, fresh-moulted specimens are olive-green with greyish tips to the feathers of the upper and under sides. Breeding birds are greenish yellow with orange-yellow crown, a more distinctly streaked mantle and flank-feathers with dark shafts. Examples which have finished breeding have the crown yellow, the mantle still more distinctly streaked and the under side bright yellow.

It would have been pleasant to complete this handbook with a full and accurate life-history of this very puzzling bird, which has been the cause of so much trouble to systematists. To be honest, we do not really know where to place it in the avian tree, and it was included in the *Viduinae* by the writer for the first time in his larger work. In days past it found a position in the *Fringillidae*, but its habits are so un-finchlike that it seems to have a closer affinity with the *Ploceidae*. It is one of those curious birds which does not build

* The correct position of this genus is unknown. It was placed in the Ploceidae by Dr. Chapin tentatively near *Quelea*. I have retained it in the *Viduinae* rather than the *Ploceinae* solely on account of its parasitic habits but am perfectly willing to acknowledge that this may be an error. We have still very much to learn concerning it.

its own nest but is parasitic on other species, especially the grass-warblers (*Cisticola*), in whose nests it lays its eggs. Certain it is that the tiny grass-warblers rear the young Cuckoo-Weavers. The latter are, of course, much larger when full grown, and as many as two have been found fledged in the same nest. Whether the parent birds lay in the grass-warbler's nest before the former lay their eggs is not known for certain, nor is there any proof that the baby *Anomalospiza* ejects or smothers any other occupants of the nest in which it is hatched.

The Cuckoo-Weaver spends much of its life in the grass where the *Cisticolas* are common, and as it is numerically plentiful it should not be difficult to discover a grass-warbler's nest in which the egg of a Cuckoo-Weaver has been laid. It will not be so easy to identify the parent or to discover what becomes of it after it has laid its unwanted egg. *Prinia* is another genus whose members are victimised by the Cuckoo-Weaver. I wrote all that I could discover about *Anomalospiza* in my larger work, but that was very little considering what an interesting bird it is. Here again is a splendid field of research for a keen field naturalist to unravel the life-history of *Anomalospiza imberbis* from start to finish.

Presumably after breeding the birds gather into flocks, and it has been suggested that the males band together. I wrote "presumably" because male examples obtained from these flocks sometimes show that their reproductive organs are still active. What, then, are these birds doing in flocks?

The egg has been described, but as there seems to be some doubt as to its authenticity it is better to await the discovery of an egg over which there can be no possible doubt.

The Cuckoo-Weaver in West Africa is rare in comparison with East Africa. The few obtained were found inhabiting the grassy uplands of northern Cameroon. In East Africa it is a savanna bird which may be seen on the trees and bushes on the grassy slopes of hillsides and on the grass prairies, coming into gardens and not showing any particular fear. The young are fed by their foster-parents with insects, but when adult the Cuckoo-Weaver lives principally upon seeds.

Distribution and Races

The West African race was named by myself *A. imberbis tibatiensis* from the plateau of Tibati, where it was first discovered; it has also been found in Sierra Leone. It is smaller in size than *A. imberbis imberbis* (Cabanis).

Whether more than one race can be recognised from East Africa has been disputed. In Kenya and Uganda *A. i. imberbis* occurs, and if we eliminate the races which have been described, its range must extend from Abyssinia to Natal, including the islands of Zanzibar and Pemba, ranging west into the Belgian Congo.

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