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COLEOPTERA. STAPHYLINIDÆ.—VOL. IV. PART II.

BY

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Subfamily XIV. ALEOCHARINÆ (contd.).

Tribe II. MYRMEDONIINI (contd.).

Genus PELIOPTERA Kr.

Pelioptera Kr., Linn. Ent. xi, 1857, p. 55; Fenyès, Gen. Ins. 173 B, 1920, p. 282; Cam., Trans. Ent. Soc. Lond. 1920 (1921), pp. 361, 393; Treubia, vi, 1925, p. 197.
Termitopora Motsch., Étud. Ent. viii, 1859, p. 91.

Parallel species, in facies much resembling certain species of *Atheta*, s. str., and *Liogluta*, but differing in the structure of the tongue and mesosternum. Head suborbicular, exserted, narrower than the thorax, the eyes moderate or large, the temples with only a short border behind. Antennæ thickened

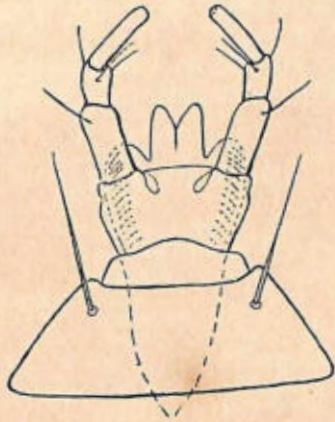


Fig. 106.—*Pelioptera micans*, labium.

towards apex, the penultimate joints transverse. Labrum transverse, the sides nearly straight and parallel, the anterior border rather broadly and deeply arcuately emarginate and furnished with a membrane, the anterior angles rounded. Mandibles small, short, curved, pointed and edentate. Maxillary palpi with small 1st joint, 2nd elongate, lightly curved and a little thickened towards apex, 3rd a little longer and a little thicker at the apex, 4th subulate, about half as long as the 3rd. Inner lobe of maxilla narrow, curved, and pointed at apex, closely ciliate internally; outer lobe closely ciliate at apex. Mentum transverse, trapezoidal, truncate in front. Labial palpi 3-jointed, the 1st joint cylindrical, about twice

as long as broad, 2nd a little narrower and shorter, 3rd a little narrower than the 2nd and about as long as the 1st. Tongue short, broad, parallel-sided, in front triangularly emarginate, forming two short lobes with rounded apices. Thorax more or less transverse, the sides with one or two feeble setæ, the pronotal epipleura visible laterally. Prosternum short, broadly rounded behind. Mesosternal process broad, truncate behind, extending half the length of the coxæ and separated from the metasternum by a short intersternal piece, the coxæ rather widely separated. Elytra not or but slightly longer than the thorax, not emarginate postero-externally, the postero-internal angle rounded. Abdomen parallel, the first three visible segments transversely impressed at their bases. Legs moderate, the tibiæ with or without distinct setæ. Tarsi 4, 5, 5; the anterior with the first three joints short and subequal, the 4th as long as the preceding three together, middle with the first four joints short and subequal, the 5th as long as the preceding three together, posterior longer, the first four joints gradually decreasing in length. Claws lightly curved, simple.

Some of the species may be termitophilous, but others are found in various situations, under bark, in vegetable refuse, and rotting fruit.

Key to the Species.

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| 1. Large species (4 mm.); penultimate joints of antennæ scarcely transverse; posterior margins of the sternites distinctly yellowish-red | <i>dubia</i> Kr., p. 413. |
| Smaller species; penultimate joints of antennæ distinctly transverse | 2. |
| 2. Thorax more or less transverse | 3. |
| Thorax as long as broad | 13. |
| 3. Head and thorax black without metallic reflex | 4. |
| Head and thorax with metallic reflex . | 10. |
| 4. Head and thorax shining | 5. |
| Head and thorax dull; elytra pale yellow | <i>opaca</i> Kr., p. 418. |
| 5. Elytra longer than the thorax | 6. |
| Elytra not or scarcely longer than the thorax | 7. |
| 6. Antennæ entirely black; elytra brown. Antennæ with 1st joint and the elytra reddish-yellow | <i>indica</i> , sp. n., p. 419. |
| 7. Elytra yellow or brownish-yellow | <i>differens</i> , sp. n., p. 418. |
| Elytra brown | 8. |
| 8. 4th joint of antennæ distinctly transverse; elytra yellow | <i>exasperata</i> Kr., p. 418. |
| 4th joint of antennæ scarcely transverse; elytra brownish-yellow | <i>micans</i> Kr., p. 415. |
| 9. 10th joint of antennæ as long as broad, the preceding transverse | 9. |
| 10th joint of antennæ transverse like the preceding | <i>beesoni</i> , sp. n., p. 416. |
| | <i>fraterna</i> , sp. n., p. 416. |

- | | |
|--|--|
| 10. Thorax reddish-brown | 11. |
| Thorax black | 12. |
| 11. 4th joint of antennæ longer than broad. | <i>pelioptera</i> Kr., p. 414. |
| 4th joint of antennæ distinctly transverse | <i>acuticollis</i> Kr., p. 414. |
| 12. Thorax finely, rather closely punctured. | <i>assamensis</i> , sp. n., p. 417. |
| Thorax very finely, sparingly punctured. | <i>madrasiana</i> , sp. n., p. 417. |
| 13. Head and thorax strongly coriaceous, dull, with distinct violet reflex | <i>coriacea</i> , sp. n., p. 420. |
| Head and thorax feebly coriaceous, shining, with feeble violet reflex | 14. |
| 14. Elytra finely, closely punctured | <i>angusticollis</i> , sp. n., p. 419. |
| Elytra very finely, obsolete and more sparingly punctured | <i>andreucesi</i> , sp. n., p. 420. |

1947. *Pelioptera dubia*.

Homalota dubia Kr.*, Arch. Naturg. xxv, 1859, p. 37.

Pelioptera longicornis Cam., Treubia, vi, 1925, pp. 194, 197; id., Ann. Mus. Civ. Gen. lii, 1925, p. 44 (♂).

Shining; head black, thorax black or dark reddish-brown, both with distinct metallic-violet reflex; elytra brownish-yellow, infusate at the sides and postero-external angles, sometimes also with a trace of the metallic reflex seen on the head and thorax; abdomen black, the first two visible segments dark reddish-brown. Antennæ black, the first two joints brownish-yellow. Legs reddish-yellow. Length 4 mm.

The unique type is a ♀ and immature, but it appears to be identical with *longicornis* Cam. Very similar to *pelioptera*, but larger, the thorax more transverse, the puncturation equally fine but closer, the row of larger punctures on each side of the middle scarcely indicated, the metallic reflex much stronger.

A large species, in build much resembling *Atheta granigera* Kies., but rather more depressed, much shorter elytra and different colour. Head suborbicular, extremely finely, sparingly punctured, finely pubescent, with scarcely perceptible ground-sculpture; eyes large, not prominent, longer than the post-ocular region. Antennæ with 2nd and 3rd joints of equal length, elongate, 4th and 5th about as long as broad, 6th to 9th slightly transverse, 10th distinctly longer than 9th, as long as broad, 11th longer than 9th and 10th together. Thorax slightly transverse (6:5), the sides rounded in front and narrowed behind, extremely finely and not very closely punctured and with scarcely perceptible ground-sculpture, finely pubescent. Elytra scarcely as long as but broader than the thorax, transverse, very finely and rather closely punctured, finely pubescent. Abdomen extremely finely and not closely punctured, yet more sparingly behind, finely pubescent. Middle tibiæ with rather long distinct black seta, the posterior with a shorter and finer one.

♂: unknown. The description of the ♂ in Ann. Mus. Civ. Gen. lii. 1925, p. 44, applies to *pelioptera*.
Ceylon. Also in Sumatra.

1948. *Pelioptera pelioptera*.

Homalota pelioptera Kr.*, Arch. Naturg. xxv, 1859, p. 30.

Shining; head black, thorax dark reddish-brown, both with slight metallic reflex, elytra clear yellow infuscate at the scutellum, abdomen pitchy-black, the 1st visible segment and the posterior margins of the following narrowly reddish-brown. Antennæ black, the first three joints and the legs reddish-yellow. Length 2.75-3 mm.

In colour and general facies much like *heterocera* Cam., but with the thorax less transverse, the fore-parts without ground-sculpture, the elytra less closely, more obsoletely punctured. Head suborbicular, a little narrower than the thorax, the eyes large, longer than the post-ocular region, extremely finely, sparingly punctured and without ground-sculpture. Antennæ with the 3rd joint a little shorter than the 2nd, 5th to 10th distinctly transverse, differing but little amongst themselves, the 11th fully as long as the two preceding together. Thorax slightly transverse (4.5:4), the sides slightly rounded in front, straighter and very slightly retracted behind, the posterior angles rounded, scarcely perceptibly impressed before the scutellum, extremely finely, rather sparingly punctured, on each side of the middle with a row of two or three larger but very superficial and obsolete punctures, ground-sculpture absent. Elytra as long as but broader than the thorax, transverse, extremely finely, moderately closely punctured. Abdomen a little narrowed before the apex, extremely finely, rather sparingly punctured on the first two visible segments, yet more sparingly on the following, and without ground-sculpture. The whole insect sparingly pubescent, the pubescence rather long and yellow.

♂: 7th abdominal segment with a little tubercle near the posterior margin, sometimes absent; 8th narrowed and arcuately emarginate, in front of the emargination on each side with a tubercle or oblique ridge, near the lateral margin on each side with a little tubercle or granule.

"Ind. Port." British India: Nilgiri Hills. Also in Sumatra.

1949. *Pelioptera acuticollis*.

Homalota acuticollis Kr.*, Arch. Naturg. xxv, 1859, p. 28.

Pelioptera pernitada Cam. (♀), E. M. M. lvi, 1920, p. 96.

Elongate, linear, black, very shining, elytra brownish-testaceous, infuscate at the postero-external angles, the head

and thorax with slight violaceous reflex; first two joints of the antennæ and the legs testaceous. Length 2.5-3 mm.

Differs from *P. micans* Kr. in the longer antennæ, with less transverse penultimate joints, the longer and narrower thorax, and the faint metallic reflex of the fore-parts; in build somewhat resembles *Atheta angusticollis* Thoms., but with shorter elytra. Head suborbicular, narrower than the thorax, the eyes a little longer than the post-ocular region, not prominent, smooth along the middle, at the sides with some obsolete punctures, finely coriaceous. Antennæ extending a little beyond the base of the thorax, the 3rd joint a little shorter than the 2nd, 4th small, transverse, 5th to 10th more strongly so, but differing but little amongst themselves, 11th as long as the 9th and 10th together. Thorax very slightly transverse, the sides rounded in front, straighter and a little retracted behind, with two or three fine setæ, the posterior angles obtuse (in the ♂ with the posterior margin produced before the scutellum, truncate and thickened); along the middle impunctate and more shining, on each side broadly, superficially longitudinally impressed and with a row of two or three larger but very superficial punctures, the puncturation towards the sides very fine and scanty, closer towards the middle, finely but distinctly coriaceous. Elytra broader, but scarcely longer than the thorax, transverse, very finely, moderately closely punctured, in the ♂ with a little keel on each side of the suture behind the scutellum and with the sculpture on the disc distinctly granular and rather close, elsewhere very fine and moderately close as in the ♀. Abdomen parallel, scarcely narrowed before the apex, very finely and very sparingly punctured. The whole insect with a sparing yellow pubescence. Tibial setæ fine.

♂: 4th segment with a tubercle in the middle at the posterior margin; 7th with two little tubercles close together at the middle of the posterior margin; 8th truncate and with six little keels, the lateral margins raised.

Ceylon: Dikoya, alt. 3800-4200 feet.

1950. *Pelioptera micans*.

Pelioptera micans Kr.*, Linn. Ent. xi, 1857, p. 56; id., Arch. Naturg. xxv, 1859, p. 42, tab. 1, fig. 4; Cam., Trans. Ent. Soc. Lond. 1920 (1921), p. 393; id., Treubia, vi, 1925, p. 197. *Termitopora adustipennis* Motsch., Étud. Ent. viii, 1859, p. 93, tab. 1, fig. 7.

Parallel, shining, black, the elytra yellow, sometimes narrowly infusate at the base. Antennæ blackish, the first two or three joints reddish-yellow. Legs reddish-yellow. Length 2-2.5 mm.

Head suborbicular, narrower than the thorax, the eyes large, longer than the post-ocular region, the disc sometimes with

a small fovea, extremely finely, very sparingly punctured, very finely coriaceous. Antennæ with the 3rd joint as long as the 2nd, 4th small, transverse, 5th and following more strongly so, about twice as broad as long, but differing little amongst themselves, the 11th as long as the two preceding together. Thorax nearly a half broader than long, the sides gently rounded, more retracted behind, with two or three fine setæ, the posterior angles obtusely rounded, before the scutellum sometimes with a fine, short, impressed line, the sculpture scarcely differing from that of the head. Elytra as long as and a little broader than the thorax, transverse, as finely but much more closely punctured. Abdomen parallel, very finely and sparingly punctured on the first three segments, yet more sparingly on the following. Middle tibiæ with a fine seta, the posterior with a finer one. The whole insect very finely and sparingly pubescent.

♂: 8th dorsal segment truncate and crenulate.

Ceylon. India: Dehra Dun. Ghum. Also in Singapore and Java.

1951. *Pelioptera beesoni*, sp. n.

Shining, black, the elytra brownish-yellow, infusate at the scutellum. Antennæ black, the 1st joint pitchy. Legs reddish-yellow. Length 3 mm.

Larger and more robust than *micans*, the thorax less transverse, the elytra more obscurely coloured, the antennæ stouter, the joints less transverse, the 10th about as long as broad, the head and thorax without ground-sculpture. Head very finely, sparingly and obsoletely punctured. Thorax transverse (4.75 : 4), the sides feebly rounded in front, nearly straight and retracted behind, the puncturation as on the head but closer. Elytra as long as the thorax, very finely but more distinctly and moderately closely punctured. Abdomen very finely and very sparingly punctured.

♂: 7th dorsal segment with a small tubercle in the middle near the posterior margin; 8th with a small triangular excision, the margins of which are raised; 6th ventral segment a little produced, scarcely narrowed, truncate.

Chakrata district, alt. 5000-9000 feet. Ghum, alt. 8000 feet.

1952. *Pelioptera fraterna*, sp. n.

Shining, black, the elytra brownish-yellow, a little infusate postero-externally. Antennæ black, the 1st joint reddish. Legs reddish-yellow. Length 2.5 mm.

Build, colour and lustre of *beesoni*, but smaller, the antennæ shorter, the joints more transverse, the 9th and 10th of similar

form. Head and thorax finely but distinctly coriaceous, the puncturation scarcely differing from that of *beesoni*. Antennæ with the 4th joint scarcely, the 5th to 10th about a half, broader than long, scarcely differing amongst themselves. Thorax transverse (3.5 : 3), the sides rounded in front, straighter and retracted behind. Elytra as long as the thorax, finely and moderately closely punctured as in *beesoni*. Abdomen sparingly punctured, especially behind. Middle tibiæ with a fine seta, the posterior with a yet finer one.

♂ : 7th dorsal segment of abdomen with a small tubercle ; 8th truncate, in the middle with a small arcuate emargination, on each side with a fine short spine separated by an arcuate emargination from the truncate part.

Dehra Dun.

1953. *Pelioptera assamensis*, sp. n.

Shining, black, the head and thorax with metallic reflex ; elytra brownish-yellow, infuscate at the postero-external angles. Antennæ black, the 1st joint brownish-yellow. Legs reddish-yellow. Length 2.75 mm.

Build and colour of *fraterna*, but the head and thorax with metallic reflex, the antennæ a little thinner, the 4th joint distinctly transverse, puncturation of the thorax less fine, more distinct and closer than in that species, that of the elytra, however, finer and more obsolete. In other respects like *fraterna*. Differs from *madrasiana* in the less fine and closer puncturation of the fore-parts and less distinct ground-sculpture.

♂ : unknown.

Assam : Naga Hills, Laimatak.

1954. *Pelioptera madrasiana* sp. n.

Shining, black, the elytra brownish-yellow, a little infuscate at the base and postero-external angles, the head and thorax with distinct, the elytra with less distinct metallic reflex. Antennæ black, the first two joints brownish-yellow. Legs reddish-yellow. Length 2-2.75 mm.

Differs from *fraterna* in the metallic reflex of the fore-parts, the narrower thorax, which is scarcely a third broader than long, the finer and less close puncturation and the rather more evident ground-sculpture. In other respects scarcely differing from *fraterna*.

Differs from *assamensis* in the finer and more sparing puncturation of the fore-parts and the more distinct ground-sculpture.

♂ : unknown.

Madras : Nilgiri Hills. Nilambur.

a small fovea, extremely finely, very sparingly punctured, very finely coriaceous. Antennæ with the 3rd joint as long as the 2nd, 4th small, transverse, 5th and following more strongly so, about twice as broad as long, but differing little amongst themselves, the 11th as long as the two preceding together. Thorax nearly a half broader than long, the sides gently rounded, more retracted behind, with two or three fine setæ, the posterior angles obtusely rounded, before the scutellum sometimes with a fine, short, impressed line, the sculpture scarcely differing from that of the head. Elytra as long as and a little broader than the thorax, transverse, as finely but much more closely punctured. Abdomen parallel, very finely and sparingly punctured on the first three segments, yet more sparingly on the following. Middle tibiæ with a fine seta, the posterior with a finer one. The whole insect very finely and sparingly pubescent.

♂: 8th dorsal segment truncate and crenulate.

Ceylon. India: Dehra Dun. Ghum. Also in Singapore and Java.

1951. *Pelioptera beelsoni*, sp. n.

Shining, black, the elytra brownish-yellow, infusate at the scutellum. Antennæ black, the 1st joint pitchy. Legs reddish-yellow. Length 3 mm.

Larger and more robust than *micans*, the thorax less transverse, the elytra more obscurely coloured, the antennæ stouter, the joints less transverse, the 10th about as long as broad, the head and thorax without ground-sculpture. Head very finely, sparingly and obsoletely punctured. Thorax transverse (4.75 : 4), the sides feebly rounded in front, nearly straight and retracted behind, the puncturation as on the head but closer. Elytra as long as the thorax, very finely but more distinctly and moderately closely punctured. Abdomen very finely and very sparingly punctured.

♂: 7th dorsal segment with a small tubercle in the middle near the posterior margin; 8th with a small triangular excision, the margins of which are raised; 6th ventral segment a little produced, scarcely narrowed, truncate.

Chakrata district, alt. 5000-9000 feet. Ghum, alt. 8000 feet.

1952. *Pelioptera fraterna*, sp. n.

Shining, black, the elytra brownish-yellow, a little infusate postero-externally. Antennæ black, the 1st joint reddish. Legs reddish-yellow. Length 2.5 mm.

Build, colour and lustre of *beelsoni*, but smaller, the antennæ shorter, the joints more transverse, the 9th and 10th of similar

form. Head and thorax finely but distinctly coriaceous, the puncturation scarcely differing from that of *beesoni*. Antennæ with the 4th joint scarcely, the 5th to 10th about a half, broader than long, scarcely differing amongst themselves. Thorax transverse (3.5 : 3), the sides rounded in front, straighter and retracted behind. Elytra as long as the thorax, finely and moderately closely punctured as in *beesoni*. Abdomen sparingly punctured, especially behind. Middle tibiæ with a fine seta, the posterior with a yet finer one.

♂ : 7th dorsal segment of abdomen with a small tubercle ; 8th truncate, in the middle with a small arcuate emargination, on each side with a fine short spine separated by an arcuate emargination from the truncate part.

Dehra Dun.

1953. *Pelioptera assamensis*, sp. n.

Shining, black, the head and thorax with metallic reflex ; elytra brownish-yellow, infuscate at the postero-external angles. Antennæ black, the 1st joint brownish-yellow. Legs reddish-yellow. Length 2.75 mm.

Build and colour of *fraterna*, but the head and thorax with metallic reflex, the antennæ a little thinner, the 4th joint distinctly transverse, puncturation of the thorax less fine, more distinct and closer than in that species, that of the elytra, however, finer and more obsolete. In other respects like *fraterna*. Differs from *madrasiانا* in the less fine and closer puncturation of the fore-parts and less distinct ground-sculpture.

♂ : unknown.

Assam : Naga Hills, Laimatak.

1954. *Pelioptera madrasiana* sp. n.

Shining, black, the elytra brownish-yellow, a little infuscate at the base and postero-external angles, the head and thorax with distinct, the elytra with less distinct metallic reflex. Antennæ black, the first two joints brownish-yellow. Legs reddish-yellow. Length 2-2.75 mm.

Differs from *fraterna* in the metallic reflex of the fore-parts, the narrower thorax, which is scarcely a third broader than long, the finer and less close puncturation and the rather more evident ground-sculpture. In other respects scarcely differing from *fraterna*.

Differs from *assamensis* in the finer and more sparing puncturation of the fore-parts and the more distinct ground-sculpture.

♂ : unknown.

Madras : Nilgiri Hills. Nilambur.

a small fovea, extremely finely, very sparingly punctured, very finely coriaceous. Antennæ with the 3rd joint as long as the 2nd, 4th small, transverse, 5th and following more strongly so, about twice as broad as long, but differing little amongst themselves, the 11th as long as the two preceding together. Thorax nearly a half broader than long, the sides gently rounded, more retracted behind, with two or three fine setæ, the posterior angles obtusely rounded, before the scutellum sometimes with a fine, short, impressed line, the sculpture scarcely differing from that of the head. Elytra as long as and a little broader than the thorax, transverse, as finely but much more closely punctured. Abdomen parallel, very finely and sparingly punctured on the first three segments, yet more sparingly on the following. Middle tibiæ with a fine seta, the posterior with a finer one. The whole insect very finely and sparingly pubescent.

♂: 8th dorsal segment truncate and crenulate.

Ceylon. India: Dehra Dun. Ghum. Also in Singapore and Java.

1951. *Pelioptera beelsoni*, sp. n.

Shining, black, the elytra brownish-yellow, infusate at the scutellum. Antennæ black, the 1st joint pitchy. Legs reddish-yellow. Length 3 mm.

Larger and more robust than *micans*, the thorax less transverse, the elytra more obscurely coloured, the antennæ stouter, the joints less transverse, the 10th about as long as broad, the head and thorax without ground-sculpture. Head very finely, sparingly and obsoletely punctured. Thorax transverse (4.75 : 4), the sides feebly rounded in front, nearly straight and retracted behind, the puncturation as on the head but closer. Elytra as long as the thorax, very finely but more distinctly and moderately closely punctured. Abdomen very finely and very sparingly punctured.

♂: 7th dorsal segment with a small tubercle in the middle near the posterior margin; 8th with a small triangular excision, the margins of which are raised; 6th ventral segment a little produced, scarcely narrowed, truncate.

Chakrata district, alt. 5000-9000 feet. Ghum, alt. 8000 feet.

1952. *Pelioptera fraterna*, sp. n.

Shining, black, the elytra brownish-yellow, a little infusate postero-externally. Antennæ black, the 1st joint reddish. Legs reddish-yellow. Length 2.5 mm.

Build, colour and lustre of *beelsoni*, but smaller, the antennæ shorter, the joints more transverse, the 9th and 10th of similar

form. Head and thorax finely but distinctly coriaceous, the puncturation scarcely differing from that of *beesoni*. Antennæ with the 4th joint scarcely, the 5th to 10th about a half, broader than long, scarcely differing amongst themselves. Thorax transverse (3.5 : 3), the sides rounded in front, straighter and retracted behind. Elytra as long as the thorax, finely and moderately closely punctured as in *beesoni*. Abdomen sparingly punctured, especially behind. Middle tibiæ with a fine seta, the posterior with a yet finer one.

♂ : 7th dorsal segment of abdomen with a small tubercle ; 8th truncate, in the middle with a small arcuate emargination, on each side with a fine short spine separated by an arcuate emargination from the truncate part.

Dehra Dun.

1953. *Pelioptera assamensis*, sp. n.

Shining, black, the head and thorax with metallic reflex ; elytra brownish-yellow, infuscate at the postero-external angles. Antennæ black, the 1st joint brownish-yellow. Legs reddish-yellow. Length 2.75 mm.

Build and colour of *fraterna*, but the head and thorax with metallic reflex, the antennæ a little thinner, the 4th joint distinctly transverse, puncturation of the thorax less fine, more distinct and closer than in that species, that of the elytra, however, finer and more obsolete. In other respects like *fraterna*. Differs from *madrasiensis* in the less fine and closer puncturation of the fore-parts and less distinct ground-sculpture.

♂ : unknown.

Assam : Naga Hills, Laimatak.

1954. *Pelioptera madrasiana* sp. n.

Shining, black, the elytra brownish-yellow, a little infuscate at the base and postero-external angles, the head and thorax with distinct, the elytra with less distinct metallic reflex. Antennæ black, the first two joints brownish-yellow. Legs reddish-yellow. Length 2-2.75 mm.

Differs from *fraterna* in the metallic reflex of the fore-parts, the narrower thorax, which is scarcely a third broader than long, the finer and less close puncturation and the rather more evident ground-sculpture. In other respects scarcely differing from *fraterna*.

Differs from *assamensis* in the finer and more sparing puncturation of the fore-parts and the more distinct ground-sculpture.

♂ : unknown.

Madras : Nilgiri Hills. Nilambur.

1955. *Pelioptera opaca*.

Pelioptera opaca Kr.*, Linn. Ent. xi, 1857, p. 56; id., Arch. Naturg. xxv, 1859, p. 42; Cam., Trans. Ent. Soc. Lond. 1920 (1921), p. 395; id., Treubia, vi, 1925, p. 197.

Black, rather dull; elytra yellow, narrowly infusate at the base. Antennæ black. Legs reddish-yellow. Length 1.5-1.78 mm.

Build of *micans*, but smaller, the fore-parts much less shining, the eyes smaller, shorter than the post-ocular region, antennæ with the 4th joint a little longer and so less transverse, the following also less transverse, puncturation of the head more distinct, closer, that of the thorax much closer and less fine, the ground-sculpture more distinct. Elytra extremely finely, rather closely punctured, as long as the thorax. Abdomen closely and finely punctured throughout, a little more sparingly on the posterior segments. Tibial setæ very indistinct.

♂: elytra on each side of the middle third of the suture with a group of five or six small granules, sometimes more or less obsolete; 7th segment of abdomen with a tubercle in the middle; 8th with the posterior margin rounded and crenulate, the two median crenulations larger than the rest, which are often very indistinct.

Ceylon. India: Dehra Dun. Also in Singapore and Java.

1956. *Pelioptera differens*, sp. n.

Shining, black, the elytra yellow, infusate postero-externally. Antennæ black, the first two joints brownish-yellow. Legs reddish-yellow. Length 2-2.5 mm.

At once distinguished from *micans* and *fraterna* by the longer elytra, which are a third longer than the thorax, the antennæ not quite so stout as in *micans*, the sculpture throughout scarcely differing from that species, but the seta of the middle tibiæ is finer, that of the posterior very feeble.

♂: 8th dorsal segment rounded and finely crenulate.

Dehra Dun.

1957. *Pelioptera exasperata*. (Plate II, fig. 2.)

Homalota exasperata Kr.*, Arch. Naturg. xxv, 1859, p. 32.
Atheta (Microdota) granulipennis Bernh.*, W. Z. B. lvii, 1907, p. 402.

Parallel, moderately shining, black, the elytra dark brown. Antennæ black, the first two joints pitchy. Legs dirty yellow, the femora a little infusate. Length 1.8-2 mm.

Head a little narrower than the thorax, the eyes large, a little shorter than the post-ocular region, extremely finely, moderately closely punctured, very finely coriaceous. Antennæ rather short, distinctly thickened towards the apex, the 3rd joint as long as the 2nd, 4th small, transverse, 5th to 10th more

strongly, but scarcely differing amongst themselves, fully a half broader than long, the 11th as long as the two preceding together. Thorax transverse (2.5:3), the sides gently rounded and with one or two fine setæ, a little retracted behind, the posterior angles rounded, sometimes obsoletely impressed behind along the middle, the sculpture as on the head. Elytra broader and slightly longer than the thorax, closely, finely and asperately punctured, very finely coriaceous. Abdomen parallel, very finely, moderately closely punctured on the anterior segments, more sparingly on the posterior. Seta of the middle and posterior tibiæ very fine, especially on the latter.

♂: Elytra at the postero-internal angle with a group of granules; 7th abdominal segment with a median keel near the posterior margin; 8th triangularly produced in the middle and divided by a little excision into two small blunt teeth.

Ceylon. India: Dehra Dun, Mussooree, Simla, and Chakrata districts. Nilgiri Hills. Darjeeling district, Ghum. Also in Japan.

1958. *Pelioptera indica*, sp. n.

Shining, black, the elytra obscure brownish-yellow, the reflexed sides and postero-external angles infuscate. Antennæ black. Legs yellow, the femora and tibiæ more or less infuscate. Length 2.5 mm.

In build and colour very like *exasperata*, but larger, more shining, and more robust, the head and thorax as closely but less finely punctured, the ground-sculpture very indistinct. Elytra a little longer than the thorax, in the ♂ closely, finely and asperately punctured, but rather less roughly than in *exasperata*, with some indication of a row of small granules along the sutural margin, in the ♀ as closely but scarcely asperately punctured; the abdomen is very finely and a good deal less closely punctured than in *exasperata*, the antennæ constructed as in that species, but a little longer.

♂: 7th dorsal segment with a keel before the posterior margin, which is impressed along its middle; 8th a little produced in the middle and divided by a small excision into two little teeth as in *exasperata*.

Dehra Dun. Siwaliks. Mussooree and Chakrata districts, alt. 2400-9300 feet. Ghum.

1959. *Pelioptera angusticollis*, sp. n.

Shining, black, the head and thorax with slight violaceous metallic reflex; elytra brownish-yellow, infuscate at the

postero-external angles. Antennæ black. Legs reddish-yellow. Length 2.5 mm.

♀: in build and colour very like *acuticollis* ♀, but narrower, the antennæ black but very similarly constructed, the head similarly punctured. Thorax not transverse, formed as in *acuticollis* ♀, but without the smooth, more shining space along the middle and the superficial impressions, but with four very small quadrately placed punctures, the puncturation very fine, sparing towards the sides, closer towards the middle, ground-sculpture very feeble. Elytra broader, but scarcely longer than the thorax, very finely closely punctured. Abdomen parallel, very finely and sparingly punctured.

♂: unknown.

Ghum.

1960. *Pelioptera andrewesi*, sp. n.

♀: in build and colour similar to *angusticollis*, but smaller (2 mm.), the antennæ shorter and not so stout, the 3rd joint shorter than the 2nd, thorax very similarly punctured, but with the four quadrately placed punctures scarcely indicated, the elytra much less closely and more obsoletely punctured than in *angusticollis*.

♂: unknown.

Nilgiri Hills.

1961. *Pelioptera coriacea*, sp. n.

In size, build, colour and antennal structure scarcely differing from *andrewesi*, but less shining, distinctly violaceous, the head and thorax distinctly coriaceous, the puncturation, however, scarcely differing, except that the four quadrately placed punctures on the thorax are usually distinct.

In the ♂ the 8th dorsal segment is truncate, on each side with a short ridge.

Madras: Nilambur.

Genus **JACOBSONIA** Cam.

Jacobsonia Cam., Tijdschr. Ent. lxxvi, 1933, p. 16.

In facies somewhat resembling *Canonica puncticollis*. Temples entirely bordered below. Maxillary palpi 4-jointed, the 3rd joint slightly dilated towards apex, 4th subulate, more than half as long as the 3rd. Mandibles curved, pointed, the right with a distinct bluntly pointed tooth at the middle of the inner border. Mentum transverse, trapezoidal, the anterior margin truncate, the anterior angles slightly prominent. Labial palpi distinctly 3-jointed, the 1st joint twice

as long as broad, 2nd as long as but narrower than the 1st, 3rd narrower and a little longer than the 2nd, its apex rounded. Tongue narrow, oblong, a little longer than the 1st joint of the labial palpi, at the apex with two long, narrow appendages. Paraglossæ extending slightly beyond the 1st joint of the labial palpi, finely ciliate. Pronotal epipleura visible from the side. Mesosternum pointed, its apex briefly rounded, extending about half the length of the coxæ; metasternal process not produced between the coxæ, separated from the mesosternum by an intersternal piece, the coxæ narrowly

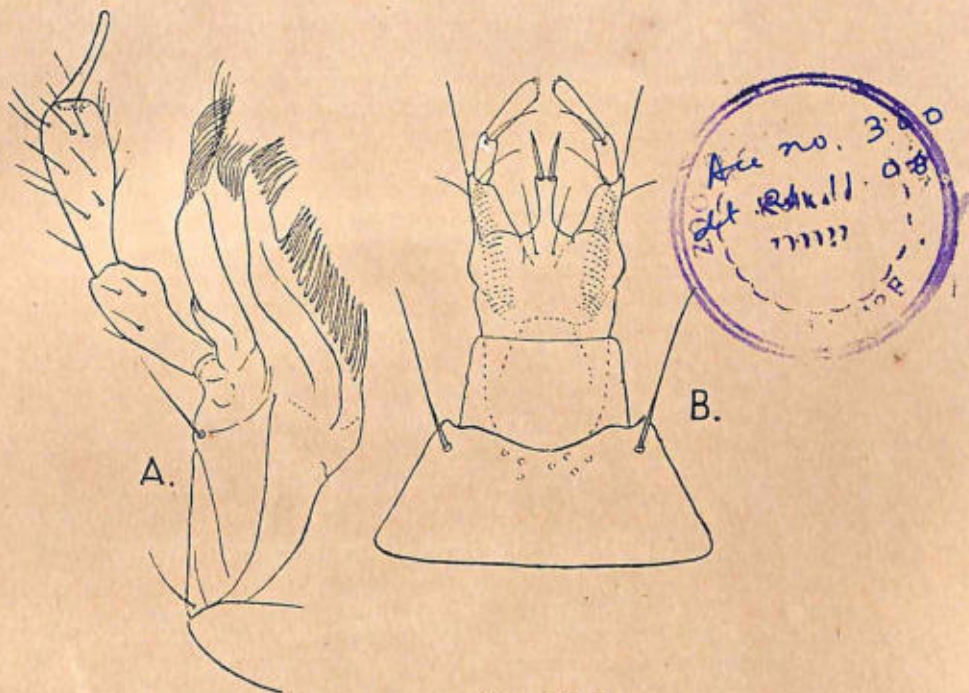


Fig. 107.—*Jacobsonia indica*. A, maxilla; B, labium.

separated. Elytra not sinuate postero-externally. Abdomen with the first three visible segments transversely impressed at the base. Tarsi 4, 5, 5; the anterior with the first three joints short, the 4th longer than the preceding three together, the middle with the first four joints short, the 5th as long as their combined length; posterior with the first four joints rather short, subequal, the 5th as long as the preceding three together. Middle tibiæ finely spinose, the others ciliate and without longer setæ. Remarkable in the presence of two setigerous pores on the head of the ♂, as in some species of *Thamiaræa* and *Zyras*.

postero-external angles. Antennæ black. Legs reddish-yellow. Length 2.5 mm.

♀: in build and colour very like *acuticollis* ♀, but narrower, the antennæ black but very similarly constructed, the head similarly punctured. Thorax not transverse, formed as in *acuticollis* ♀, but without the smooth, more shining space along the middle and the superficial impressions, but with four very small quadrately placed punctures, the puncturation very fine, sparing towards the sides, closer towards the middle, ground-sculpture very feeble. Elytra broader, but scarcely longer than the thorax, very finely closely punctured. Abdomen parallel, very finely and sparingly punctured.

♂: unknown.

Ghum.

1960. *Pelioptera andrewesi*, sp. n.

♀: in build and colour similar to *angusticollis*, but smaller (2 mm.), the antennæ shorter and not so stout, the 3rd joint shorter than the 2nd, thorax very similarly punctured, but with the four quadrately placed punctures scarcely indicated, the elytra much less closely and more obsoletely punctured than in *angusticollis*.

♂: unknown.

Nilgiri Hills.

1961. *Pelioptera coriacea*, sp. n.

In size, build, colour and antennal structure scarcely differing from *andrewesi*, but less shining, distinctly violaceous, the head and thorax distinctly coriaceous, the puncturation, however, scarcely differing, except that the four quadrately placed punctures on the thorax are usually distinct.

In the ♂ the 8th dorsal segment is truncate, on each side with a short ridge.

Madras: Nilambur.

Genus **JACOBSONIA** Cam.

Jacobsonia Cam., Tijdschr. Ent. lxxvi, 1933, p. 16.

In facies somewhat resembling *Cænonica puncticollis*. Temples entirely bordered below. Maxillary palpi 4-jointed, the 3rd joint slightly dilated towards apex, 4th subulate, more than half as long as the 3rd. Mandibles curved, pointed, the right with a distinct bluntly pointed tooth at the middle of the inner border. Mentum transverse, trapezoidal, the anterior margin truncate, the anterior angles slightly prominent. Labial palpi distinctly 3-jointed, the 1st joint twice

as long as broad, 2nd as long as but narrower than the 1st, 3rd narrower and a little longer than the 2nd, its apex rounded. Tongue narrow, oblong, a little longer than the 1st joint of the labial palpi, at the apex with two long, narrow appendages. Paraglossæ extending slightly beyond the 1st joint of the labial palpi, finely ciliate. Pronotal epipleura visible from the side. Mesosternum pointed, its apex briefly rounded, extending about half the length of the coxæ; metasternal process not produced between the coxæ, separated from the mesosternum by an intersternal piece, the coxæ narrowly

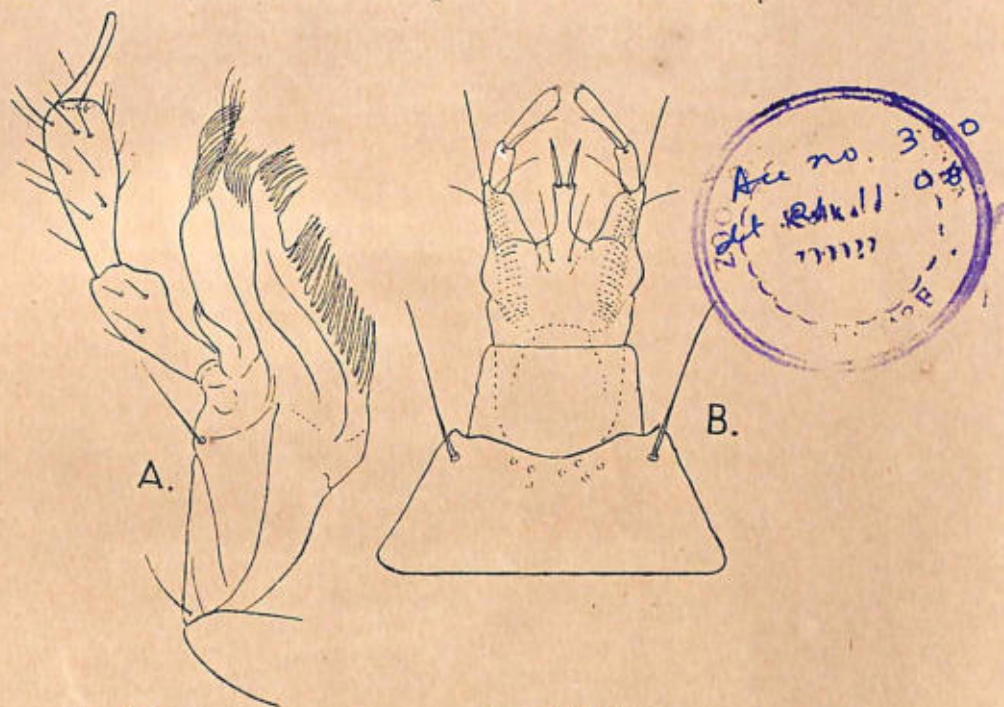


Fig. 107.—*Jacobsonia indica*. A, maxilla; B, labium.

separated. Elytra not sinuate postero-externally. Abdomen with the first three visible segments transversely impressed at the base. Tarsi 4, 5, 5; the anterior with the first three joints short, the 4th longer than the preceding three together, the middle with the first four joints short, the 5th as long as their combined length; posterior with the first four joints rather short, subequal, the 5th as long as the preceding three together. Middle tibiæ finely spinose, the others ciliate and without longer setæ. Remarkable in the presence of two setigerous pores on the head of the ♂, as in some species of *Thamiaræa* and *Zyras*.

1962. *Jacobsonia indica*, sp. n.

Subparallel, moderately shining; head black; thorax reddish-brown; elytra yellow; abdomen black, the base sometimes obscurely reddish. Antennæ black, the first two or three joints and the legs reddish-yellow. Length 3 mm.

Narrower, less shining and differently coloured than *malayana* Cam. Head transversely suborbicular, narrower than the thorax, the eyes moderate, in the ♂ with the vertex broadly impressed, coarsely and closely punctured except along the middle, which is impunctate, between the antennal tubercles with a pair of setiferous pores; ground-sculpture absent; in the ♀ not impressed, rather closely, finely and obsolete punctured, impunctate in front, finely coriaceous and without pores. Antennæ short, considerably thickened

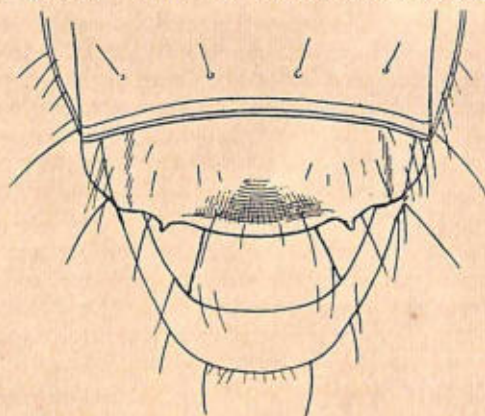


Fig. 108.—*Jacobsonia indica*, ♂, apex of abdomen.

towards the apex, the 3rd joint scarcely shorter than the 2nd, 4th small, transverse, 5th and following much more transverse, the penultimate joints about three times broader than long, the 11th as long as the 9th and 10th together. Thorax transverse (4 : 2.75), trapezoidal, the sides rounded in front, straighter and a little retracted behind, the posterior angles rounded, the setæ feeble, in the ♂ broadly impressed along the middle and with a narrow impunctate median space, elsewhere closely but less coarsely punctured than the head, very finely coriaceous, in the ♀ with a fovea before the scutellum, rather finely, obsolete, and rather closely punctured, except towards the sides, very finely coriaceous. Elytra a little broader and longer (3.5 : 2.75) than the thorax, finely, moderately closely, obsolete punctured. Abdomen a little narrowed before the apex, with a row of fine punctures along the posterior margins of the segments, elsewhere practically

impunctate. Pubescence fine and scanty, especially on the abdomen.

♂: posterior margin of the 8th dorsal segment broadly and feebly rounded and thickened, on each side usually with a minute tooth; 6th ventral segment considerably produced, only slightly narrowed and broadly rounded behind.

Dehra Dun. In fungus.

Genus **SCHISTOGENIA** Kr.

Schistogenia Kr., Linn. Ent. xi, 1857, p. 39; Fenyés, Gen. Ins. 173 B, 1920, p. 143; Cam., Trans. Ent. Soc. Lond. 1920 (1921), pp. 360, 397.

Readily recognized amongst the Aleocharinæ by the coarse rugose sculpture. Somewhat depressed, dull, the abdomen narrowed towards the apex. Head round, much narrower than the thorax, in which the broad neck is inserted; eyes moderate, the temples strongly bordered below, the gular sutures widely separated, slightly converging in front. Antennæ short and stout. Labrum transverse, the sides gently rounded, the apical margin truncate. Mandibles short, stout, curved, pointed, and edentate. Maxillæ much as in *Silusa*, the inner lobe narrow, corneous, pointed, and slightly incurved at apex, with 6 or 7 short teeth along the inner border, towards the base with longer setæ; outer lobe membranous, ciliate at apex, broader than the inner. Maxillary palpi with the 1st joint very small, 2nd elongate, slightly thickened towards the apex, 3rd oval, longer and a little stouter than the 2nd, 4th subulate, about a fourth as long as the 3rd. Mentum about as long as broad, the sides gradually retracted to the rounded apex, which is deeply and narrowly excised. Labial palpi distinctly 2-jointed, the 1st joint elongate, 2nd a little narrower and about half as long, the apex rounded. Tongue short, parallel, much shorter than the 1st joint of the labial palpi, its apex slightly emarginate. Thorax strongly transverse, the sides rounded and crenulate, rather strongly retracted in front and behind, the anterior margin truncate, the base bisinuate, the posterior angles rectangular and prominent. Prosternum well developed, carinate. Mesosternum keeled †, the keel not continued on to the mesosternal process, which is broad, parallel, rounded at apex, and produced nearly the whole length of the coxæ to meet the metasternum, the coxæ widely separated. Scutellum visible. Elytra a little broader than the thorax, feebly emarginate postero-externally. Winged. Abdomen narrowed towards apex, the first three visible segments transversely

† In *crenicollis* Kr. the type of the genus. In the African species *methneri* Bernh. no distinct keel is present.

impressed at the base. Legs moderate; tibiæ pubescent and without setæ. Tarsi 4, 5, 5; the anterior with the first three joints short and subequal, the 4th as long as the preceding together; middle with the first two joints rather short, subequal, the 3rd and 4th shorter, subequal; posterior with the 1st joint elongate, as long as the 2nd and 3rd together, 2nd to 4th subequal, 5th a little longer than the 1st. Claws simple, nearly straight.

1963. *Schistogenia crenicollis*.

Schistogenia crenicollis Kr., Linn. Ent. xi, 1857, p. 40; id., Arch. Naturg. xxv, 1859, p. 13.

Dull, lighter or darker reddish-brown, the head often blackish. Antennæ reddish-brown. Legs reddish-yellow. Length 3.5 mm.

In build much resembling a *Euryusa*. Head much narrower than the thorax, coarsely, closely, and deeply punctured, rugose. Antennæ with the first three joints rather short, subequal, 4th as long as broad, 5th to 10th differing but little amongst themselves, about twice as broad as long, 11th about as long as the 9th and 10th together. Thorax nearly twice as broad as long, the sides rounded and crenulate, equally retracted in front and behind, the rectangular posterior angles prominent, the base bisinuate, truncate in the middle, along the middle broadly and superficially impressed, towards the sides more obsoletely impressed, the sculpture as on the head. Elytra slightly broader and slightly longer than the thorax, transverse, rather convex, the sculpture as on the thorax. Abdomen narrowed towards the apex, the bases of the first four visible segments closely crenulate, the whole of the rest of the abdomen very finely and closely punctured. The whole insect with a fine, short, yellow pubescence, much closer on the abdomen.

Ceylon. India: Khandesh. Dehra Dun. Also in Penang, Borneo, Singapore, Sumatra, Java, S. China, and Hong-kong. Very abundant in rice-fields and also in other damp situations.

Genus **MIMACROTONA** Cam.

Mimacrotona Cam., Trans. Ent. Soc. Lond. 1920, p. 268, and 1921, p. 360.

Facies of a small *Acrotona*.

Labrum corneous, transverse, truncate, the anterior angles rounded. Mandibles rather short and stout, curved, pointed, the right with a small tooth at the middle of the inner margin, which in front is obscurely crenulate. Maxillary palpi 4-jointed, the 1st joint small, the 2nd elongate, slightly thickened distally, the 3rd as long as but a little stouter than the 2nd,

the 4th subulate, not half the length of the 3rd. Inner lobe of the maxilla rather broad, the apex pointed, the inner margin furnished with moderately long and rather stout pectinations; outer lobe with apex spinose. Tongue rather short and broad, not extending to the level of the apex of the 1st joint of the labial palpi, split to the middle into two diverging teat-shaped lobes. Paraglossæ distinct, ciliate, not extending much beyond the base of the 1st joint of the labial palpi. Labial palpi 2-jointed, the 1st joint rather stout, moderately long, notched internally before the apex, the 2nd much narrower and a little shorter than the 1st, the apex rounded. Gular sutures distant, divergent posteriorly. Temples bordered below. Thorax transverse, the pronotal epipleura not visible from the side. Prosternum obtusely angled posteriorly, keeled; mesosternal process narrow, sharply pointed, extending fully two-thirds the length of the coxæ, which are narrowly separated; metasternal process pointed, reaching to the mesosternal. Tarsal formula 4, 5, 5; the anterior pair with the



Fig. 109.—*Mimacrotona cingulata*, labium.

first three joints short and subequal, the 4th longer than the preceding three together; middle pair with the first four joints short and subequal, but longer than those of the front pair, the 5th as long as the preceding three together; posterior pair with the 1st joint a little longer than the 2nd, the 2nd, 3rd, and 4th gradually decreasing in length, the 5th a little longer than the preceding two together. Middle and posterior tibiæ without distinct setæ. Elytra emarginate postero-externally. Abdomen narrowed before the apex, the 4th and 5th segments without transverse impressions.

Key to the Species.

- | | |
|---|------------------------------------|
| 1. Entirely black species..... | <i>uniformis</i> , sp. n., p. 427. |
| Species in great part yellowish-red..... | 2. |
| 2. Fore-parts entirely yellowish-red; antennæ yellowish-red..... | <i>rugatipennis</i> Kr., p. 426. |
| Head and elytra blackish; antennæ black, the base reddish-yellow..... | <i>cingulata</i> Cam., p. 426. |

impressed at the base. Legs moderate; tibiæ pubescent and without setæ. Tarsi 4, 5, 5; the anterior with the first three joints short and subequal, the 4th as long as the preceding together; middle with the first two joints rather short, subequal, the 3rd and 4th shorter, subequal; posterior with the 1st joint elongate, as long as the 2nd and 3rd together, 2nd to 4th subequal, 5th a little longer than the 1st. Claws simple, nearly straight.

1963. *Schistogenia crenicollis*.

Schistogenia crenicollis Kr., Linn. Ent. xi, 1857, p. 40; id., Arch. Naturg. xxv, 1859, p. 13.

Dull, lighter or darker reddish-brown, the head often blackish. Antennæ reddish-brown. Legs reddish-yellow. Length 3.5 mm.

In build much resembling a *Euryusa*. Head much narrower than the thorax, coarsely, closely, and deeply punctured, rugose. Antennæ with the first three joints rather short, subequal, 4th as long as broad, 5th to 10th differing but little amongst themselves, about twice as broad as long, 11th about as long as the 9th and 10th together. Thorax nearly twice as broad as long, the sides rounded and crenulate, equally retracted in front and behind, the rectangular posterior angles prominent, the base bisinuate, truncate in the middle, along the middle broadly and superficially impressed, towards the sides more obsoletely impressed, the sculpture as on the head. Elytra slightly broader and slightly longer than the thorax, transverse, rather convex, the sculpture as on the thorax. Abdomen narrowed towards the apex, the bases of the first four visible segments closely crenulate, the whole of the rest of the abdomen very finely and closely punctured. The whole insect with a fine, short, yellow pubescence, much closer on the abdomen.

Ceylon. India: Khandesh. Dehra Dun. Also in Penang, Borneo, Singapore, Sumatra, Java, S. China, and Hong-kong. Very abundant in rice-fields and also in other damp situations.

Genus **MIMACROTONA** Cam.

Mimacrotona Cam., Trans. Ent. Soc. Lond. 1920, p. 268, and 1921, p. 360.

Facies of a small *Acrotona*.

Labrum corneous, transverse, truncate, the anterior angles rounded. Mandibles rather short and stout, curved, pointed, the right with a small tooth at the middle of the inner margin, which in front is obscurely crenulate. Maxillary palpi 4-jointed, the 1st joint small, the 2nd elongate, slightly thickened distally, the 3rd as long as but a little stouter than the 2nd,

the 4th subulate, not half the length of the 3rd. Inner lobe of the maxilla rather broad, the apex pointed, the inner margin furnished with moderately long and rather stout pectinations; outer lobe with apex spinose. Tongue rather short and broad, not extending to the level of the apex of the 1st joint of the labial palpi, split to the middle into two diverging teat-shaped lobes. Paraglossæ distinct, ciliate, not extending much beyond the base of the 1st joint of the labial palpi. Labial palpi 2-jointed, the 1st joint rather stout, moderately long, notched internally before the apex, the 2nd much narrower and a little shorter than the 1st, the apex rounded. Gular sutures distant, divergent posteriorly. Temples bordered below. Thorax transverse, the pronotal epipleura not visible from the side. Prosternum obtusely angled posteriorly, keeled; mesosternal process narrow, sharply pointed, extending fully two-thirds the length of the coxæ, which are narrowly separated; metasternal process pointed, reaching to the mesosternal. Tarsal formula 4, 5, 5; the anterior pair with the



Fig. 109.—*Mimacrotona cingulata*, labium.

first three joints short and subequal, the 4th longer than the preceding three together; middle pair with the first four joints short and subequal, but longer than those of the front pair, the 5th as long as the preceding three together; posterior pair with the 1st joint a little longer than the 2nd, the 2nd, 3rd, and 4th gradually decreasing in length, the 5th a little longer than the preceding two together. Middle and posterior tibiæ without distinct setæ. Elytra emarginate postero-externally. Abdomen narrowed before the apex, the 4th and 5th segments without transverse impressions.

Key to the Species.

- | | |
|---|------------------------------------|
| 1. Entirely black species..... | <i>uniformis</i> , sp. n., p. 427. |
| Species in great part yellowish-red..... | 2. |
| 2. Fore-parts entirely yellowish-red; antennæ yellowish-red..... | <i>rugatipennis</i> Kr., p. 426. |
| Head and elytra blackish; antennæ black, the base reddish-yellow..... | <i>cingulata</i> Cam., p. 426. |

1964. *Mimacrotona cingulata*.

Mimacrotona cingulata Cam., Trans. Ent. Soc. Lond. 1920, p. 269, and 1921, p. 396.

Rufo-testaceous, moderately shining, the head, 5th and 6th abdominal segments and base of the 7th blackish, the elytra more or less infuscate; first three joints of the antennæ, mouth-parts, and legs testaceous. Length 1.2 mm.

Facies of a minute *A. fungi* Grav. Head black or pitchy-black, transverse, suborbicular, very finely and rather closely punctured, finely pubescent. Antennæ rather short, the 2nd and 3rd joints of equal length, the 4th to the 10th transverse, gradually increasing in breadth, the penultimate fully two and a half times broader than long, the 11th rather short and stout. Thorax bright reddish-testaceous, half as broad again as long, the sides lightly rounded and narrowed, more strongly in front than behind, the posterior angles rounded, very finely and rather closely asperately punctured, finely pubescent. Elytra a little longer and broader than the thorax, transverse, the posterior margin sinuate internal to the postero-external angle; puncturation and pubescence similar to that of the thorax, but not quite so close. Abdomen narrowed behind, finely and rather closely punctured and pubescent anteriorly, more sparingly behind; ground-sculpture reticular; lateral and apical setæ weak. Intermediate and posterior tibiæ without setæ.

Dehra Dun. In fungus and under bark. Also in Singapore and the West Indies.

1965. *Mimacrotona rugatipennis*.

Homalota rugatipennis Kr.*, Arch. Naturg. xxv, 1859, p. 40.

Moderately shining, bright yellowish-red, the 5th and 6th abdominal segments infuscate. Antennæ reddish-yellow. Legs yellow. Length 1.3 mm.

More brightly coloured than *cingulata*, antennæ longer and more slender, head less finely punctured, elytra more roughly punctured, abdomen less finely punctured, its pubescence longer and coarser, the ground-sculpture scarcely reticulate. Head transverse, narrower than the thorax, the vertex more or less broadly impressed, closely, finely and distinctly punctured; ground-sculpture absent. Antennæ with the 3rd joint shorter and more slender than the 2nd, 4th as long as broad, 5th to 10th transverse, the penultimate about twice as broad as long, the 11th as long as the 9th and 10th together. Thorax a half broader than long, the sides evenly rounded, the posterior angles obtuse, convex, closely and finely punctured like the head, and without ground-sculpture. Elytra

as long as but slightly broader than the thorax, emarginate postero-externally, closely, finely and roughly punctured. Abdomen narrowed before the apex, finely and closely punctured, only a little less closely on the penultimate segment. Pubescence of the fore-parts fine, short, and yellow, that of the abdomen longer and coarser.

Ceylon. Also in Sumatra.

I have not examined the mouth-parts of this species, material not being available, but as only the 1st visible segment of the abdomen is transversely impressed and the general facies is that of *Mimacrotona* it has been referred to that genus.

1966. *Mimacrotona uniformis*, sp. n.

Moderately shining, black, the apex of the last abdominal segment yellowish. Antennæ black, the first three joints and legs reddish-yellow. Length 1.5 mm.

Slightly larger and more robust than *cingulata* and at once distinguished by the uniform black colour; the antennæ scarcely differ in structure, but the puncturation of the fore-parts is distinctly coarser and rougher, but about as close; the puncturation of the abdomen is similar to that of *cingulata* and with similar reticular ground-sculpture.

Assam: Manipur, Shugnu. Under bark.

LITOGLOSSA, gen. n.

In the facies and rough sculpture somewhat resembling certain *Datomicra*. Head a little transverse, suborbicular,

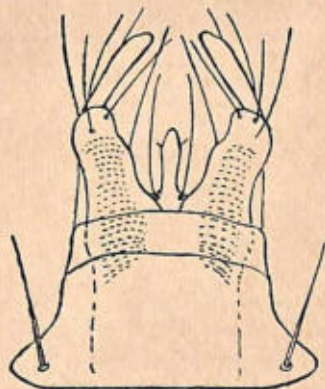


Fig. 110.—*Litoglossa opaca*, labium.

narrower than the thorax, eyes moderate, temples strongly and entirely bordered below. Antennæ slender. Labrum

transverse, scarcely emarginate, the anterior angles rounded. Mandibles short, curved, pointed, edentate. Maxillary palpi with the 1st joint small, 2nd slightly curved and slightly thickened towards the apex, 3rd distinctly longer and broader than the 2nd, oval, 4th rather short, subulate. Inner lobe of the maxilla pointed, along the inner margin with a few closely placed fine spines, outer lobe ciliate at apex. Mentum transverse, trapezoidal, truncate. Labial palpi 2-jointed, the 1st joint stout, about twice as long as broad, distinctly narrowed at the apex, 2nd narrower, but fully as long as the 1st, truncate and finely ciliate at the apex. Tongue narrow, elongate, but shorter than the 1st joint of the labial palpi, slightly widened towards the apex which is rounded, on each side before the middle with a fine short seta. Thorax transverse, the sides evenly rounded and without setæ, the pronotal epipleura not visible from the side. Mesosternal process narrow, acute, extending two-thirds the length of the coxæ and meeting the narrow metasternal process; coxæ narrowly separated. Elytra longer than the thorax, not emarginate postero-externally. Abdomen narrowed from base to apex, only the 1st visible segment transversely impressed at the base. Legs moderate. Tibiæ without setæ. Tarsi 4, 5, 5; the anterior with the first three joints short and subequal, 4th longer than all the preceding together. Middle with the first three joints rather short and subequal, 4th a little shorter than the 3rd. Posterior with the 1st joint a little longer than the 2nd, 2nd to 4th subequal, 5th longer than the 1st, as long as the 2nd, 3rd, and 4th together.

Type, *opaca*.

1967. *Litoglossa opaca*, sp. n.

Dull; head and abdomen black, thorax and elytra pitchy-black. Antennæ black, the first two joints brownish-yellow. Legs reddish-yellow. Length 1.75 mm.

Head transverse, narrower than the thorax, the eye about as long as the post-ocular region, the disc somewhat flattened, closely covered with a fine, rough, granular sculpture. Antennæ slender, not much thickened towards the apex, the 3rd joint a little shorter than the 2nd, 4th and 5th about as long as broad, the latter a little stouter than the preceding, 6th to 10th slightly transverse, differing but little amongst themselves, 11th as long as the two preceding together. Thorax not quite a half broader than long, the sides evenly rounded, without setæ, the posterior angles rounded, the sculpture as on the head. Elytra a little broader and a half longer than the thorax, the sculpture similar. Abdomen gradually narrowed from base to apex, without lateral setæ,

closely and finely punctured throughout, the ground-sculpture reticulate. Pubescence of the fore-parts very fine, short and indistinct, that of the abdomen longer and distinct.

Ghum district. In fungus.

PSEUDOXYPODA, gen. n.

In puncturation and pubescence much resembling the genus *Oxyypoda*. Head suborbicular, its base inserted in the thorax, the temples not bordered below. Labrum transverse, truncate, the anterior angles rounded. Mandibles short, stout, curved, pointed, edentate. Maxillary palpi with 1st joint small, 2nd moderate, slightly thickened towards apex, 3rd as long as the 2nd but thicker at the apex, 4th subulate, scarcely half as long as the 3rd. Inner lobe of maxilla densely ciliate along the inner margin and with three or four fine spines; outer lobe densely ciliate at apex. Mentum transverse, trapezoidal, feebly emarginate in front. Labial palpi indistinctly 3-jointed, 1st joint cylindrical, twice as long as broad, 2nd very short, narrower than the 1st and imperfectly chitinized, 3rd much narrower and a little longer than the 1st, the apex rounded, the paraglossæ extending to the base of the 1st joint. Tongue as long as the 1st joint of the labial palpi, split nearly to the base into two narrow diverging lobes. Thorax transverse, the pronotal epipleura not visible from the side. Mesosternal process narrow and acute, extending beyond the middle of the coxæ, their cavities narrowly separated. Elytra scarcely emarginate postero-externally. Abdomen narrowed from base to apex, the first two visible segments transversely impressed at the base. Legs moderate, tibiæ without setæ. Tarsi 4, 5, 5; the anterior with the first three joints short and subequal, the 4th as long as the preceding three together; middle with the 1st joint short, 2nd a little longer, 3rd and 4th gradually shorter; posterior with the 1st and 2nd joints rather long, equal, 3rd and 4th gradually shorter, 5th as long as the 1st. Claws slightly curved, simple. Differs from *Mimacrotona* in the immarginate temples, the 1st and 2nd joints of the posterior tarsi of equal length, and the fine dense puncturation and pubescence.

1968. *Pseudoxypoda colorata*, sp. n.

Scarcely shining; head dark reddish-brown, thorax and abdomen reddish-yellow, the 5th, 6th, and anterior half of the 7th segments pitchy-black. Antennæ reddish-brown, the first three joints and legs reddish-yellow. Length 2 mm.

In build much resembling *Placusa pygmaea* Kr., but in all other respects quite different. Head transversely suborbicular,

narrower than the thorax, the eyes a little longer than the post-ocular region, very finely, closely punctured, finely coriaceous. Antennæ a little thickened towards apex, 2nd and 3rd joints of equal length, 4th slightly longer than broad, 5th to 7th about as long as broad, 8th to 10th slightly transverse, 11th as long as the 9th and 10th together. Thorax a third broader than long, the sides and posterior angles rounded and without setæ, very finely and very closely punctured. Elytra a little broader and very slightly longer than the thorax, as closely but a little less finely, asperately punctured. Abdomen narrowed from base to apex, without lateral setæ, very finely and very closely punctured and pubescent throughout. The fore-parts covered with a very fine, short and close pubescence, subsericeous.

♂: 8th dorsal segment produced in the middle as a small tooth; 6th ventral segment produced, narrowed and rounded.

Dehra Dun. Siwaliks. Haldwani district; Kumaun: Parachinar, Kurram Valley (*H. G. Champion*). Nilgiri Hills (*Andrewes*).

Genus **MIMOXYPODA** Cam.

Mimozypoda Cam., *Treubia*, vi, 1925, p. 190.

Facies of *Oxypoda* Mannerh., but tarsal formula 4, 5, 5 and the labial palpi 2-jointed. Labrum transverse, rounded at the sides, slightly emarginate in front. Mandibles rather short, stout, pointed, the right with distinct tooth near middle of inner border. Outer lobe of maxilla narrow, pointed, the apex with a few long cilia; inner lobe with four or five teeth at inner side of apex, followed by eleven or twelve moderately long spines. Maxillary palpi with the 1st joint very short, 2nd longer, 3rd yet longer than preceding, very slightly and gradually thickened towards apex, 4th subuliform, scarcely half as long as 3rd. Tongue as long as broad, the sides straight, the anterior border gently rounded. Labial palpi 2-jointed, 1st joint rather long, cylindrical, 2nd narrower than 1st and about half as long. Temples strongly bordered below; gular sutures separated. Prosternum broadly rounded behind; prothoracic epipleura not visible when viewed laterally; mesosternum keeled, mesosternal process narrow, pointed, keeled, extending completely between the intermediate coxæ and meeting the short, blunt, metasternal process; middle coxæ narrowly separated; episterna of the metasternum extending beyond the elytra. Tarsi 4, 5, 5; the anterior pair with the first three joints short and subequal, the 4th as long as the preceding three together; middle pair with 1st joint as long as the following two together,

4th as long as 3rd, 5th as long as 3rd and 4th together; posterior pair with 1st joint as long as 5th, as long as 2nd and 3rd together. Tibiæ finely ciliate, the middle and posterior with a feeble seta at the middle of the outer borders. Elytra

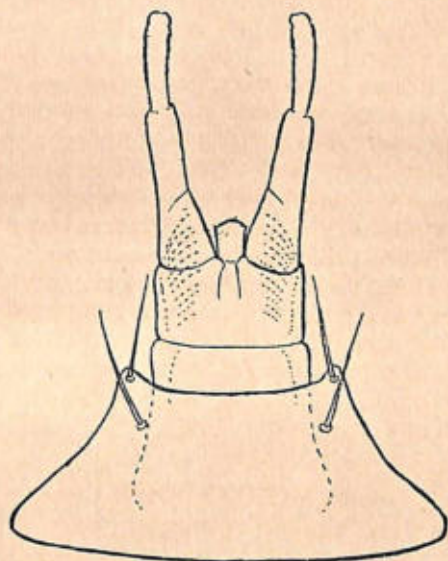


Fig. 111.—*Mimoxypoda indica*, parts of mouth.

strongly sinuate postero-externally. Winged. Abdomen narrowed from base to apex, the basal segments not transversely impressed.

Key to the Species.

Head and thorax yellow *nigricauda* Motsch., p. 431.
 Head black, thorax dark reddish-brown ... *indica*, sp. n., p. 432.

1969. ***Mimoxypoda nigricauda*.**

Oxyypoda nigricauda Motsch.*, Bull. Soc. Nat. Mosc. xxxiv, 1861, iii, p. 153; Cam., E. M. M. lxix, 1933, p. 220.

Shining; fore-parts reddish-yellow, the elytra infuscate, abdomen pitchy-black. Antennæ black, the first four joints and legs reddish-yellow. Length 2 mm.

Head a good deal narrower than the thorax, very finely, rather closely punctured, scarcely coriaceous. Antennæ with the 3rd joint shorter than the 2nd, 4th as long as broad, 5th to 10th transverse, increasing in width, the 11th as long as the 9th and 10th together. Thorax nearly a half broader than long, the sides rounded, retracted in front, the posterior

angles briefly rounded, very finely, rather closely punctured, scarcely coriaceous. Elytra as long as and a little broader than the thorax, emarginate postero-externally, very finely, closely and roughly punctured. Abdomen narrowed from base to apex, closely and finely punctured, more sparingly on the last two segments, the sculpture having a reticulate appearance. The whole insect covered with a rather close, fine, yellow pubescence.

Ceylon: Mt. Patanas.

1970. *Mimoxypoda indica*, sp. n.

Moderately shining, black, the thorax and elytra dark reddish-brown, the last abdominal segment reddish. Antennæ dark reddish-brown, the first two or three joints and the legs reddish-yellow. Length 1.5-2 mm.

Head transversely suborbicular, much narrower than the thorax, the eyes rather large, extremely finely, rather closely punctured; ground-sculpture absent. Antennæ short, the 3rd joint shorter than the 2nd, 4th to 10th transverse, the penultimate twice as broad as long, 11th as long as the 9th and 10th together. Thorax transverse (3.5:2), convex, the sides rounded, more retracted in front, without setæ, the posterior angles rectangular, the base bisinuate, very finely, closely punctured. Elytra as long as and as broad as the thorax, very finely, closely and roughly punctured. Abdomen narrowed from base to apex, very finely and closely punctured throughout, the sides with a few moderate setæ. Pubescence throughout fine and close, longer on the abdomen.

Chakrata and Mussooree districts. In stream moss and shingle.

Genus **THAMIARÆA** Thoms.

Thamiaræa Thoms., Öfv. Svenska Vet.-Akad. Förh. 1858, p. 35; Skand. Col. iii, 1861, p. 59; Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. iii, 1873, p. 147; Fowler, Col. Brit. Isl. ii, 1888, p. 61; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 125; Everts, Col. Neerl. i, 1898, p. 194; Reitt., Faun. Germ. ii, 1909, p. 46; Johansen, Danmarks Rovbiller, 1914, p. 118; Fenyès, Gen. Ins. 173 B, 1920, p. 144; Portevin, Encycl. Ent. A, xii, 1929, i, p. 261; Scheerp., Kol. Rundsch. xv, 1929, p. 17; id., Tierwelt Mitteleur. v, 2, 1930, p. 75.

In general facies much resembling *Atheta*, s. str., but differing in the structure of the labial palpi and the longer 4th joint of the maxillary palpi. Head broad, but narrower than the thorax, eyes rather large, temples completely bordered below, gular sutures slightly converging in front. Antennæ moderate, the penultimate joints more or less transverse.

Labrum transverse, truncate or feebly emarginate in front, the anterior angles rounded. Mandibles moderate, curved, pointed, the right with a small tooth about the middle, the left sometimes bisinuate. Maxillary palpi with small 1st joint, 2nd elongate, slightly thickened towards apex, 3rd as long as but stouter at the apex than the 2nd, 4th subulate, fully half as long as the 3rd. Inner lobe of maxilla narrow, pointed, its inner margin with numerous fine closely placed spines, the outer lobe a little shorter and broader, ciliate at apex. Mentum transverse, trapezoidal, the anterior margin truncate or slightly emarginate. Labial palpi rather long, 2- or indistinctly 3-jointed, the 1st constricted or narrowed before the apex, and sometimes with indication of a septum, giving the appearance of a rudimentary joint, 2nd shorter and narrower than the 1st, truncate or rounded at the apex. Tongue shorter than the 1st joint of the labial palpi, divided to the middle or beyond into two narrow diverging lobes. Paraglossæ feeble. Thorax transverse, the pronotal epipleura visible from the side. Prosternum feebly rounded or truncate behind, carinate. Mesosternal process reaching the middle of the coxæ, pointed or briefly rounded at apex, separated by a short intersternal piece from the metasternal process; coxæ narrowly separated. Elytra very slightly emarginate postero-externally. Abdomen parallel, a little narrowed before apex, the first three visible segments transversely impressed at the bases. Legs moderate. Middle tibiæ usually with a seta. Tarsi 4, 5, 5; the anterior with the first three joints short, subequal, 4th longer than the three preceding together; middle with the 1st joint short, 2nd to 4th slightly increasing in length, 5th nearly as long as the four preceding together; posterior similarly constructed, but with the 5th as long as the 2nd, 3rd, and 4th together. Claws slender, lightly curved. The genus is found in fungus throughout the world.

Key to the Species.

- | | |
|---|-----|
| 1. Penultimate joints of the antennæ strongly transverse..... | 2. |
| Penultimate joints of antennæ not or but slightly transverse | 14. |
| 2. First two visible segments of the abdomen bright reddish-yellow, sometimes with a median black spot on each; thorax red or yellowish-red | 3. |
| Abdomen black, at most with the posterior margins of the segments narrowly reddish | 10. |

angles briefly rounded, very finely, rather closely punctured, scarcely coriaceous. Elytra as long as and a little broader than the thorax, emarginate postero-externally, very finely, closely and roughly punctured. Abdomen narrowed from base to apex, closely and finely punctured, more sparingly on the last two segments, the sculpture having a reticulate appearance. The whole insect covered with a rather close, fine, yellow pubescence.

Ceylon : Mt. Patanas.

1970. *Mimoxypoda indica*, sp. n.

Moderately shining, black, the thorax and elytra dark reddish-brown, the last abdominal segment reddish. Antennæ dark reddish-brown, the first two or three joints and the legs reddish-yellow. Length 1.5-2 mm.

Head transversely suborbicular, much narrower than the thorax, the eyes rather large, extremely finely, rather closely punctured; ground-sculpture absent. Antennæ short, the 3rd joint shorter than the 2nd, 4th to 10th transverse, the penultimate twice as broad as long, 11th as long as the 9th and 10th together. Thorax transverse (3.5:2), convex, the sides rounded, more retracted in front, without setæ, the posterior angles rectangular, the base bisinuate, very finely, closely punctured. Elytra as long and as broad as the thorax, very finely, closely and roughly punctured. Abdomen narrowed from base to apex, very finely and closely punctured throughout, the sides with a few moderate setæ. Pubescence throughout fine and close, longer on the abdomen.

Chakrata and Mussooree districts. In stream moss and shingle.

Genus **THAMIARÆA** Thoms.

Thamiaræa Thoms., Cfv. Svenska Vet.-Akad. Förh. 1858, p. 35; Skand. Col. iii, 1861, p. 59; Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. iii, 1873, p. 147; Fowler, Col. Brit. Isl. ii, 1888, p. 61; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 125; Everts, Col. Neerl. i, 1898, p. 194; Reitt., Faun. Germ. ii, 1909, p. 46; Johansen, Danmarks Rovbiller, 1914, p. 118; Fenyès, Gen. Ins. 173 B, 1920, p. 144; Portevin, Encycl. Ent. A, xii, 1929, i, p. 261; Scheerp., Kol. Rundsch. xv, 1929, p. 17; id., Tierwelt Mitteleur. v, 2, 1930, p. 75.

In general facies much resembling *Atheta*, s. str., but differing in the structure of the labial palpi and the longer 4th joint of the maxillary palpi. Head broad, but narrower than the thorax, eyes rather large, temples completely bordered below, gular sutures slightly converging in front. Antennæ moderate, the penultimate joints more or less transverse.

Labrum transverse, truncate or feebly emarginate in front, the anterior angles rounded. Mandibles moderate, curved, pointed, the right with a small tooth about the middle, the left sometimes bisinuate. Maxillary palpi with small 1st joint, 2nd elongate, slightly thickened towards apex, 3rd as long as but stouter at the apex than the 2nd, 4th subulate, fully half as long as the 3rd. Inner lobe of maxilla narrow, pointed, its inner margin with numerous fine closely placed spines, the outer lobe a little shorter and broader, ciliate at apex. Mentum transverse, trapezoidal, the anterior margin truncate or slightly emarginate. Labial palpi rather long, 2- or indistinctly 3-jointed, the 1st constricted or narrowed before the apex, and sometimes with indication of a septum, giving the appearance of a rudimentary joint, 2nd shorter and narrower than the 1st, truncate or rounded at the apex. Tongue shorter than the 1st joint of the labial palpi, divided to the middle or beyond into two narrow diverging lobes. Paraglossæ feeble. Thorax transverse, the pronotal epipleura visible from the side. Prosternum feebly rounded or truncate behind, carinate. Mesosternal process reaching the middle of the coxæ, pointed or briefly rounded at apex, separated by a short intersternal piece from the metasternal process; coxæ narrowly separated. Elytra very slightly emarginate postero-externally. Abdomen parallel, a little narrowed before apex, the first three visible segments transversely impressed at the bases. Legs moderate. Middle tibiæ usually with a seta. Tarsi 4, 5, 5; the anterior with the first three joints short, subequal, 4th longer than the three preceding together; middle with the 1st joint short, 2nd to 4th slightly increasing in length, 5th nearly as long as the four preceding together; posterior similarly constructed, but with the 5th as long as the 2nd, 3rd, and 4th together. Claws slender, lightly curved. The genus is found in fungus throughout the world.

Key to the Species.

- | | |
|---|-----|
| 1. Penultimate joints of the antennæ strongly transverse..... | 2. |
| Penultimate joints of antennæ not or but slightly transverse | 14. |
| 2. First two visible segments of the abdomen bright reddish-yellow, sometimes with a median black spot on each; thorax red or yellowish-red | 3. |
| Abdomen black, at most with the posterior margins of the segments narrowly reddish | 10. |

3. Elytra pitchy-black; less shining species *subcoriacea*, sp. n., p. 439.
 Elytra brownish-yellow, more or less infusate posteriorly 4.
4. First two visible abdominal segments with median dark spot 5.
 First two visible abdominal segments without spot 6.
5. Larger (3 mm.); first four joints of antennæ reddish-yellow *flavicollis*, sp. n., p. 441.
 Smaller (2 mm.); first two or three joints reddish-yellow *crenulicauda*, sp. n., p. 439.
6. Thorax bright yellowish-red 7.
 Thorax brownish-red or brown 9.
7. Head black 8.
 Head red *insigniventris* Fauv., p. 445.
8. Elytra less finely, distinctly roughly punctured *armata* Fauv., p. 437.
 Elytra finely, much less roughly punctured *masuriensis*, sp. n., p. 438.
9. Larger (3.6 mm.); elytra very roughly punctured *basiventris* Bernh., p. 447.
 Smaller (2.75 mm.); elytra finely punctured *tricolorata*, sp. n., p. 438.
10. Thorax black *crenulata*, sp. n., p. 436.
 Thorax reddish-brown 11.
11. Abdomen with the basal segments practically impunctate *kotgarhensis*, sp. n., p. 435.
 Abdomen with the basal segments finely and distinctly punctured 12.
12. Broader and more robust species: head dark reddish-brown, elytra blackish, with the base and posterior part of the suture narrowly reddish-yellow *championi*, sp. n., p. 435.
 Narrower species; head black; elytra brownish-yellow or yellowish-brown. 13.
13. Thorax and elytra with distinct ground-sculpture *submontana*, sp. n., p. 445.
 Thorax and elytra with scarcely visible ground-sculpture *montana*, sp. n., p. 440.
14. Abdomen black, the posterior margins of the segments narrowly and obscurely reddish 15.
 Abdomen with the first two or three visible segments bright reddish-yellow, sometimes with median dark spot 16.
15. Larger (4.5 mm.); thorax black *dimorpha*, sp. n., p. 445.
 Smaller (3.75 mm.); thorax light reddish-brown *discreta*, sp. n., p. 444.
16. First two segments of abdomen without dark median spot 17.
 First two or three segments with dark median spot, the following segments black 18.
17. Antennæ red; 7th and 8th tergites dark *gardneri*, sp. n., p. 443.
 Antennæ dark, the base only reddish-yellow; 7th and 8th tergites reddish-yellow *germana*, sp. n., p. 441.

18. Antennæ red *rusticornis*, sp. n., p. 443.
 Antennæ dark, the base only reddish-
 yellow 19.
19. First three visible segments of abdomen reddish-yellow with dark median spot *bispina*, sp. n., p. 442.
 First two visible segments reddish-yellow with dark median spot ... *quadridens*, sp. n., p. 442.

1971. *Thamiaræa championi*, sp. n.

Moderately shining; head and thorax dark ferruginous-red; elytra blackish-brown, the shoulders and suture behind very narrowly reddish-yellow; abdomen black, the posterior margin of the 1st visible segment reddish. Antennæ black, the first three joints and legs reddish-yellow. Length 4 mm.

Very like *cinnamomea* Gr., but the antennæ not so stout, thorax less transverse, more narrowed behind, abdomen much more closely punctured on the anterior segments. Head transverse, narrower than the thorax, moderately closely, obsoletely punctured at the sides and base, almost impunctate on the disc, indistinctly coriaceous. Antennæ rather short and stout, 3rd joint as long as 2nd, 4th and 5th about as long as broad, 6th to 10th moderately transverse, 11th rather longer than the 9th and 10th together. Thorax a half broader than long, the sides rounded in front, straighter and retracted behind, with two or three black setæ, convex, before the scutellum with a fovea, rather closely but finely and obsoletely punctured, feebly coriaceous. Elytra broader and a fourth longer than the thorax, finely and closely punctured. Abdomen narrowed before the apex, the first three visible segments closely and finely punctured, the following except for a row of marginal punctures almost impunctate. Pubescence of the fore-parts fine, moderately close, that of the abdomen longer, coarser and stiffer.

♂: 7th dorsal segment with a fine keel along the middle behind; 8th nearly truncate, in the middle with a small acute notch, externally on each side with a broad triangular tooth.

Punjab: Kulu, Naggar, alt. 5000 feet (*H. G. Champion*).
 Simla Hills: Kotgarh, alt. 7000 feet. In *Polyporus*.

1972. *Thamiaræa kotgarhensis*, sp. n.

Extremely like *championi*, but with the elytra brownish-yellow, a little infuscate postero-externally and the basal segments of the abdomen almost impunctate; the structure of the antennæ and the sculpture of the fore-parts scarcely differ in the two species.

♂: 3rd to 5th segments each with a very small tubercle at the middle of the posterior margin; 8th with a strong keel along the middle, the posterior margin rounded and with two small teeth close together at the middle.

Simla Hills: Kotgarh, alt. 7000 feet. In *Polyporus*.

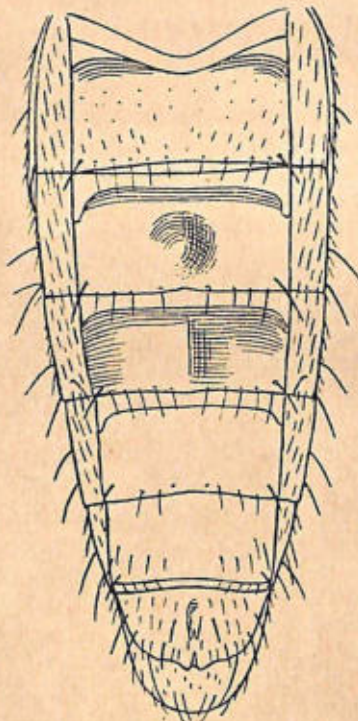


Fig. 112.—*Thamiaræa kotgarhensis*, ♂, abdomen.

1973. *Thamiaræa crenulata*, sp. n.

Moderately shining; head and abdomen black, the 1st and 2nd visible segments obscurely reddish, thorax pitchy-black, obscurely reddish at the sides; elytra brownish-yellow, a little infusate postero-externally. Antennæ black, the first two joints and legs reddish-yellow. Length 3 mm.

Build of *kotgarhensis* but smaller, the thorax darker in colour. Antennæ shorter, the penultimate joints more transverse, abdomen with the first three segments more closely punctured; the puncturation of the fore-parts differing but little in the two species.

♂: 8th dorsal segment truncate, closely and finely crenulate, on each side with a larger tooth.

Simla Hills: Kotgarh, alt. 7000 feet. In *Polyporus*.

1974. *Thamiaræa armata*.

Thamiaræa armata Fauv., Rev. d'Ent. xxii, 1903, p. 161.

Moderately shining; head black, thorax yellowish-red with the disc sometimes infuscate; elytra brownish or reddish-brown, more or less infuscate postero-externally, less shining than the thorax; abdomen yellowish-red, in the ♂ with the whole of the 6th segment and part of the 5th black, in the ♀ with the whole of the 5th and 6th black. Antennæ black, the first three joints and legs reddish-yellow. Length 3-3.5 mm.

Build of *championi* but smaller, less robust, more brightly coloured and more shining, the antennæ shorter and not so stout, abdomen much more sparingly punctured. Head

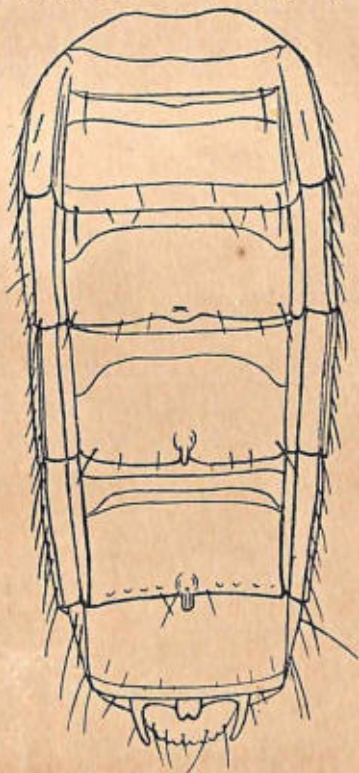


Fig. 113.—*Thamiaræa armata*, ♂, abdomen.

very finely and obsolete punctured at the base and sides, impunctate on the disc, finely coriaceous. Antennæ with the 3rd joint as long as the 2nd, in the ♂ laterally compressed, 4th as long as broad, 5th to 10th gradually more transverse, the penultimate a half broader than long, the 11th almost as long as the preceding three together. Thorax sometimes

lightly longitudinally impressed along the middle or with a small fovea before the scutellum, very finely, moderately closely punctured, finely coriaceous. Elytra broader and about a fourth longer than the thorax, finely, closely and roughly punctured, in the ♂ usually with the sutural margin elevated for a short distance behind the scutellum. Abdomen a little narrowed before the apex, in the ♂ very finely and very sparingly punctured, in the ♀ with the first three segments very finely and moderately closely punctured.

♂: in the forms with sutural elevation the 3rd to 6th segments have each a small tubercle at the middle of the posterior margin; the 8th carinate along the middle, the keel produced as a stout median process often notched at the apex, on each side with a finer keel which is produced as a longer and more slender curved spine; 6th ventral segment a little produced, rounded and finely crenulate. In the forms with simple elytra the 3rd to 5th segments have a very small tubercle (sometimes absent) at the middle of the posterior margin; 8th with two stout teeth at the middle of the posterior margin separated by a narrow arcuate emargination, on each side with a longer, more slender, slightly curved spine; 6th ventral segment a little produced, rounded, and finely crenulate.

S. India: Conoor. Nilgiri Hills.

1975. *Thamiaræa tricolorata*, sp. n.

Shining; head black, thorax brownish-red, elytra brownish-yellow, a little infuscate postero-externally, abdomen yellowish-red, the 5th and 6th segments and anterior half of the 7th black. Antennæ black, the first two joints and the legs reddish-yellow. Length 2.75 mm.

In build and colour very similar to *armata* but a little smaller and narrower, the antennæ shorter and stouter, the head with scarcely perceptible ground-sculpture, thorax less finely punctured, the punctures asperate, the ground-sculpture much less distinct, elytra more finely punctured; abdomen very finely, rather sparingly punctured, especially behind. The penultimate joints of the antennæ about twice as broad as long, the 11th a little longer than the 9th and 10th together.

♂: 8th dorsal segment truncate and closely and finely crenulate.

Dehra Dun.

1976. *Thamiaræa masuriensis*, sp. n.

Shining; head black, thorax bright yellowish-red; elytra brownish-yellow, more or less extensively infuscate posteriorly; abdomen yellowish-red, the 5th and 6th segments black. Antennæ black, the first three joints and the legs reddish-yellow. Length 3 mm.

Extremely like *armata*, the antennæ similar, but with the puncturation of the thorax and elytra finer and different ♂ characters.

♂: 7th dorsal segment with a tubercle at the middle of the posterior margin; 8th with two triangular teeth, separated

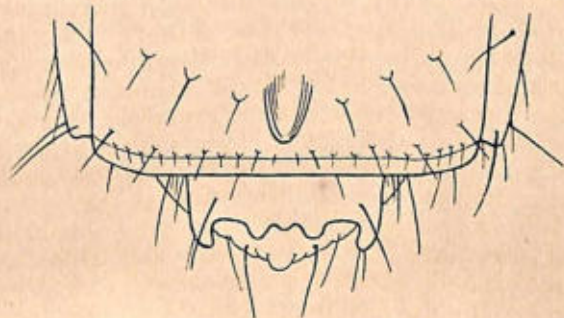


Fig. 114.—*Thamiaræa masuriensis*, ♂, apex of abdomen.

from each other by a small, almost truncate emargination, externally with a more slender and slightly longer spine.

Mussooree district. In fungus. Kumaun: Naini-Tal.

1977. *Thamiaræa crenulicauda*, sp. n.

Moderately shining; head black; thorax yellowish-red, more or less infuscate on the disc; elytra brownish-yellow, infuscate postero-externally; abdomen with the first two segments yellow, with a small transverse blackish spot in the basal depression, the following segments black, the last brownish-yellow. Antennæ black, the first two or three joints and the legs reddish-yellow. Length 2 mm.

In colour and build very similar to *masuriensis*, but much smaller, the antennæ similarly constructed but thinner, head less coriaceous, thorax less finely punctured, otherwise like *masuriensis*.

♂: 8th dorsal segment truncate and with four or five crenulations, on each side with a short spine.

Ghum district: Mangpu.

1978. *Thamiaræa subcoriacea*, sp. n.

Greasy lustrous, abdomen shining; head black; thorax red; elytra pitchy-black; abdomen with the first two visible segments yellowish-red, the following black, the last segment and posterior margin of the penultimate narrowly reddish. Antennæ black, the first two or three joints and legs reddish-yellow. Length 2-2.2 mm.

Build of *crenulicauda* but less shining, with differently coloured thorax, elytra, and abdomen and different puncturation. Head extremely finely, moderately closely punctured, coriaceous. Antennæ with the 2nd and 3rd joints of equal length, 4th slightly longer than broad, 5th to 10th gradually increasing in width, the penultimate twice as broad as long, 11th as long as the 9th and 10th together. Thorax very finely, closely, somewhat roughly punctured. Elytra about a third longer than the thorax, very finely, closely and roughly punctured. Abdomen very finely, moderately closely punctured on the first three segments, almost impunctate on the following.

♂: 8th dorsal segment with two broad teeth obliquely truncate at their apices and separated from each other by

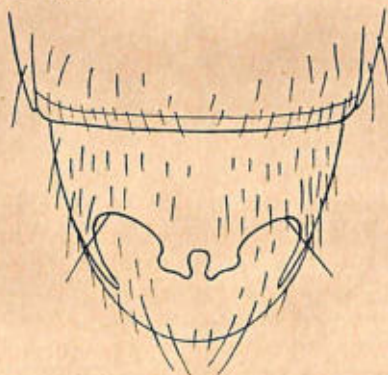


Fig. 115.—*Thamiaræa subcoriacea*, ♂, apex of abdomen.

a narrow arcuate emargination, externally with a rather long slender incurved spine on each side and separated from them by a broad arcuate emargination.

Mussooree district. Simla Hills: Fagu. Ghum district. Almora; Kumaun. In fungus.

1979. *Thamiaræa montana*, sp. n.

Moderately shining; head and abdomen black, the posterior margin of the first two visible segments very narrowly and obscurely reddish; thorax lighter or darker reddish-brown; elytra yellowish-brown, infuscate postero-externally. Antennæ black, the first two joints and legs reddish-yellow. Length 3.2 mm.

Head narrower than the thorax, very finely, moderately closely punctured, finely coriaceous. Antennæ rather stout, the 3rd joint as long as the 2nd, 4th scarcely, 5th to 10th more strongly transverse, the penultimate joints twice as broad as long, 11th as long as the 9th and 10th together.

Thorax a third broader than long, the sides gently rounded, slightly retracted behind, before the scutellum sometimes with a small impression, very finely, moderately closely, asperately punctured on the disc, less closely and less roughly towards the sides, very finely coriaceous. Elytra broader and a third longer than the thorax, finely, closely and asperately punctured, without distinct ground-sculpture. Abdomen a little narrowed before the apex, finely, moderately closely punctured on the first three segments, much more sparingly behind.

♂: 7th dorsal segment with a small tubercle at the middle of the posterior margin; 8th nearly truncate, finely crenulate, the upper surface closely covered with small granules and coriaceous.

Simla Hills: Theog, Fagu, Matiana, alt. 7600-7900 feet. Jaunsar, Mandali (*H. G. Champion*). Kashmir: Gulmarg, alt. 8000 feet.

1980. *Thamiaræa flavicollis*, sp. n.

Moderately shining; head black, thorax reddish-yellow; elytra brownish-yellow; abdomen more shining, the first two visible segments yellow, each with a median black spot, the following segments black, the posterior margin of the penultimate and the last segment yellow. Antennæ blackish, the first four joints and legs reddish-yellow. Length 3 mm.

Build of *montana* but differently coloured, the antennæ longer and thinner, the penultimate joints less transverse, thorax more coriaceous, the puncturation very similar but a little closer, elytra a little more closely punctured, abdomen much more sparingly punctured. The antennæ have the 4th and 5th joints a little longer than broad, the penultimate about a half broader than long.

♂: 8th dorsal segment with two stout teeth at the middle of the posterior margin separated by a small arcuate emargination, externally with a slightly curved cultriform process longer than the central teeth, the upper surface with a few fine granules.

Simla Hills: Matiana, Kotgarh, Narkanda, alt. 7000-9200 feet. Jaunsar, Mandali, alt. 6000 feet (*H. G. Champion*).

1981. *Thamiaræa germana*, sp. n.

Moderately shining; head black, thorax yellowish-red; elytra brownish-yellow, the reflexed margin behind and postero-external angles infuscate; abdomen more shining, the first three and last two segments reddish-yellow, the 6th (4th visible) black. Antennæ black, the first two or three joints and legs reddish-yellow. Length 3.2 mm.

Build of *montana*, the fore-parts very similar in colour, but with the antennæ much longer and thinner, the penultimate joints very slightly transverse, thorax more finely, less closely, not roughly punctured, elytra a little less closely and less roughly punctured, the abdomen much more sparingly punctured. Antennæ with the 2nd and 3rd joints of equal length, the latter laterally compressed in the ♂, 4th to 6th a little longer than broad, gradually decreasing in length, 7th about as long as broad, 8th to 10th slightly transverse, 11th longer than the two preceding together.

♂: 7th dorsal segment with strong median keel in the posterior half; 8th truncate, in the middle with two little teeth, on each side with a much stouter but scarcely longer one.

Ghum district: Rongdong Valley; Mangpu.

1982. *Thamiaræa bispina*, sp. n.

Moderately shining; head black, thorax yellowish-red, a little infuscate on the disc, elytra brownish-yellow, slightly infuscate at the postero-external angles; abdomen with the first three visible segments yellow, the first two with a round black median spot, the 3rd with a larger triangular black marking, the 4th and 5th black, the posterior margin of the latter narrowly and obscurely reddish, the 6th reddish-brown. Antennæ black, the first four joints and legs reddish-yellow. Length 3.2 mm.

In build and antennal structure similar to *germana*; differs from it in the colour of the abdomen, closer and rougher puncturation of the disc of the thorax, finer and rougher puncturation of the elytra, and the ♂ characters.

♂: 8th dorsal segment gently rounded, on each side with a narrow deep excision bounded externally by a long, stout, inwardly directed spine, scarcely extending beyond the central plate, which has a tubercle on each side of its base.

Ghum district: Tiger Hill, alt. 8000-10,000 feet.

1983. *Thamiaræa quadridens*, sp. n.

Moderately shining; head black, thorax yellowish-red to light reddish-brown, with the sides narrowly lighter; elytra brownish-yellow, the postero-external angles infuscate; abdomen with the first two visible segments yellow, with a dark spot in the middle of each, the following segments black. Antennæ black, the first three or four joints and the legs reddish-yellow. Length 3 mm.

Very similar to *germana*, but a little smaller and less robust, the build and antennal structure similar; differs in the coloration of the abdomen, the closer and rougher puncturation

Build of *montana*, the fore-parts very similar in colour, but with the antennæ much longer and thinner, the penultimate joints very slightly transverse, thorax more finely, less closely, not roughly punctured, elytra a little less closely and less roughly punctured, the abdomen much more sparingly punctured. Antennæ with the 2nd and 3rd joints of equal length, the latter laterally compressed in the ♂, 4th to 6th a little longer than broad, gradually decreasing in length, 7th about as long as broad, 8th to 10th slightly transverse, 11th longer than the two preceding together.

♂: 7th dorsal segment with strong median keel in the posterior half; 8th truncate, in the middle with two little teeth, on each side with a much stouter but scarcely longer one.

Ghum district: Rongdong Valley; Mangpu.

1982. *Thamiaræa bispina*, sp. n.

Moderately shining; head black, thorax yellowish-red, a little infuscate on the disc, elytra brownish-yellow, slightly infuscate at the postero-external angles; abdomen with the first three visible segments yellow, the first two with a round black median spot, the 3rd with a larger triangular black marking, the 4th and 5th black, the posterior margin of the latter narrowly and obscurely reddish, the 6th reddish-brown. Antennæ black, the first four joints and legs reddish-yellow. Length 3.2 mm.

In build and antennal structure similar to *germana*; differs from it in the colour of the abdomen, closer and rougher puncturation of the disc of the thorax, finer and rougher puncturation of the elytra, and the ♂ characters.

♂: 8th dorsal segment gently rounded, on each side with a narrow deep excision bounded externally by a long, stout, inwardly directed spine, scarcely extending beyond the central plate, which has a tubercle on each side of its base.

Ghum district: Tiger Hill, alt. 8000-10,000 feet.

1983. *Thamiaræa quadridens*, sp. n.

Moderately shining; head black, thorax yellowish-red to light reddish-brown, with the sides narrowly lighter; elytra brownish-yellow, the postero-external angles infuscate; abdomen with the first two visible segments yellow, with a dark spot in the middle of each, the following segments black. Antennæ black, the first three or four joints and the legs reddish-yellow. Length 3 mm.

Very similar to *germana*, but a little smaller and less robust, the build and antennal structure similar; differs in the coloration of the abdomen, the closer and rougher puncturation

on the disc of the thorax, and the ♂ characters, otherwise like *germana*.

♂: 8th dorsal segment truncate, with two stout median teeth, on each side with a cultriform process of the same size.

Ghum district: Mangpu, Rongdong Valley, Lopchu.

1984. *Thamiaræa gardneri*, sp. n.

Moderately shining; head black, thorax pitchy-black, elytra yellow, more or less infuscate about the scutellum and postero-externally; abdomen black, the first two visible segments yellow. Antennæ yellowish-red, slightly infuscate towards the apex. Legs reddish-yellow. Length 3 mm.

Build and antennal structure of *quadridens* but with the thorax pitchy-black, less finely and more closely punctured, the ground-sculpture stronger, the sculpture and colour of the elytra as in *quadridens*, the two basal segments of abdomen without central black spot.

♂: 8th dorsal segment with a cultriform process on each side, in the middle with a broad lobe, its apical border feebly arcuately emarginate.

Darjeeling district: Lepchajagat, ix. 29 (*Gardner*).

1985. *Thamiaræa ruficornis*, sp. n.

Moderately shining; head black, thorax yellowish-red, more or less extensively infuscate on the disc; elytra yellow, the postero-external angles infuscate; abdomen with the first two visible segments yellow, along the middle with a blackish marking, the following segments black. Antennæ reddish-brown, the first three joints and legs reddish-yellow. Length 3.2 mm.

Size, build and antennal structure of *germana*, but differing in the colour and the much more strongly coriaceous thorax, in other respects similar.

♂: unknown.

Simla Hills: Gahan. Ghum.

1986. *Thamiaræa submontana*, sp. n.

In colour, size and build scarcely differing from *montana*, but with the antennæ longer and more slender, the penultimate joints less transverse, the 4th joint fully as long as broad, thorax a little more finely, less roughly punctured, more coriaceous, the elytra with distinct ground-sculpture and different ♂ characters, in other respects like *montana*. Length 3 mm.

♂: 8th dorsal segment with a broad median plate, its edge a little elevated and turned inwards at the base on each side, forming a tubercle, externally on each side with a short

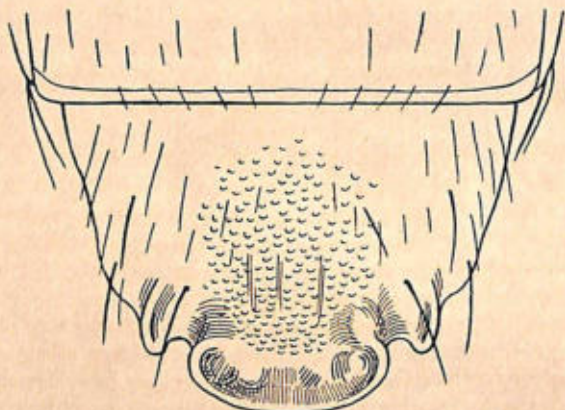


Fig. 116.—*Thamiaræa submontana*, ♂, apex of abdomen.

cultriform process, not extending backwards as far as the level of the posterior margin of the plate, and separated from it by a narrow excision.

Dehra Dun.

1987. *Thamiaræa discreta*, sp. n.

Colour and lustre of *submontana*, but a little larger (3.75 mm.) and more robust, the thorax less transverse, the antennæ longer, the penultimate joints as long as broad, elytra less finely and less closely punctured, the ground-sculpture scarcely visible, the ♂ characters different. Head very finely, moderately closely punctured, coriaceous. Antennæ rather long, the 3rd joint a little longer than the 2nd, 4th to 6th slightly longer than broad, 8th to 10th as long as broad, the 11th longer than the preceding two together. Thorax transverse, before the scutellum with a small fovea, a little flattened along the posterior half of the middle in the ♂, very finely, moderately closely punctured, feebly coriaceous. Elytra finely, less closely punctured than in *submontana* and without distinct ground-sculpture. Abdomen very finely, sparingly punctured.

♂: 8th dorsal segment truncate and finely crenulate, on each side with a larger tooth.

Mussooree district: Kemti Falls; Arni Gad; Dhobi Ghat.
Chakrata district: Sainj Khud; Chulli Khud; Binal Gad.
W. Almora: Kumaun (*H. G. Champion*).

1988. *Thamiaræa dimorpha*, sp. n.

Head and thorax greasy lustrous in the ♂, more shining in the ♀; head, thorax, and abdomen black, the latter with the posterior margins of the segments narrowly and obscurely reddish; elytra brownish-yellow, slightly infusate at the scutellum and postero-externally. Antennæ black, the 1st joint and legs reddish-yellow. Length 4.5 mm.

Head very finely, rather closely, obsoletely punctured, more strongly coriaceous in the ♂. Antennæ with the 3rd joint as long as the 2nd, 4th and 5th slightly longer than broad, 6th about as long as broad, 7th to 10th slightly transverse, 11th a little longer than the 9th and 10th together. Thorax transverse (3:2.5), the sides very slightly rounded and a little more retracted towards the front, in the ♂ broadly and superficially impressed along the middle, less shining and more strongly coriaceous than in the ♀; the puncturation fine, moderately close and obsolete, rather less close in the ♀. Elytra broader and a third longer than the thorax, finely, closely and roughly punctured. Abdomen a little narrowed before the apex, very finely, moderately closely punctured on the first three segments, much more sparingly on the following.

♂: 7th dorsal segment with a median keel along the posterior half; 8th with the posterior margin rounded and very finely crenulate.

Chakrata district: Khedar Khud, Patria Khud, Jadi Gad, alt. 7000-8000 feet. W. Almora: Kumaun, Upper Gumti Valley (*H. G. Champion*).

1989. *Thamiaræa insigniventris*.

Thamiaræa insigniventris Fauv., Ann. Mus. Civ. Gen. xii, 1878, p. 299, tab. 2, fig. 36.

Atheta (s. str.) *miriventris* Cam., Trans. Ent. Soc. Lond. 1920, p. 259.

Bright reddish-testaceous, the elytra obscure testaceous, infusate towards the postero-external angles; abdomen with a black transverse band before the apex; antennæ black, the first two joints and base of the 3rd, mouth-parts, and legs testaceous. Length 2.5-3.5 mm.

♀: head transverse, reddish-testaceous, not very shining (greasy lustre only), the eyes large, moderately prominent, their diameter considerably greater than the length of the temples, which are rounded and narrowed posteriorly; the centre of the disc impunctate, the rest of the surface very finely and not closely punctured and pubescent; ground-sculpture fine and coriaceous. Antennæ with the 2nd and 3rd joints of equal length, the 4th to the 7th scarcely longer

than broad, the 8th to the 10th transverse, gradually increasing in width, the 11th elongate, pointed, longer than the preceding two together. Thorax transverse, half as broad again as long, widest a little behind the anterior angles, the sides bordered, rounded and narrowed anteriorly, more strongly contracted posteriorly to the obtuse posterior angles; puncturation and pubescence very similar to that of the head, but not quite so fine; ground-sculpture as on the head; each side with two distinct setæ. Elytra a little longer and wider than the thorax, transverse, very finely, rather closely

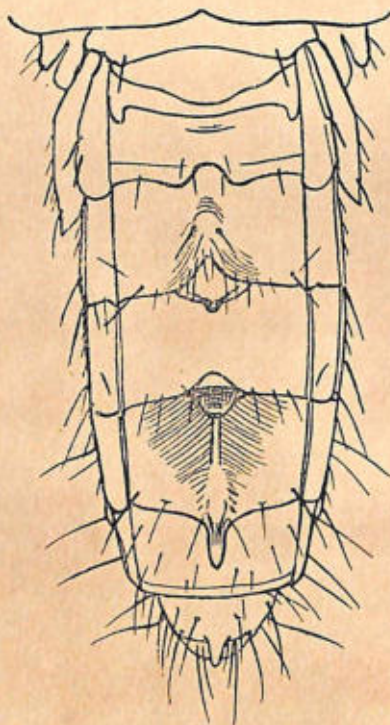


Fig. 117.—*Thamiaræa insigniventris*, ♂, abdomen.

and somewhat asperately punctured, finely pubescent. Abdomen more shining than the fore-parts, bright reddish-testaceous, the 5th, 6th and anterior part of the 7th segments black, glabrous and, except for a few setiferous punctures, impunctate. Middle and posterior tibiæ each with three setæ, of which the middle is the strongest.

♂: head anteriorly with a small crateriform tubercle from which arises a seta. Antennæ a little longer than in the ♀. Thorax with a small fovea before the scutellum, the disc with a fine longitudinal groove throughout. Elytra with the

postero-external angle usually furnished with a keel. Abdomen with only the 6th abdominal segment black; the 3rd to the 6th dorsal segments elevated in the middle line, appearing tectiform on transverse section; the 3rd segment with a small semicircular emargination in the middle of the posterior border; the 4th with a stout triangular tubercle at the base, the 5th with a broad triangular process arising from the base, the apex pointed and extending backwards for about a third of the length of the segment †; the 6th with the posterior margin produced backwards in the middle line as a pointed tooth reaching the level of the middle of the 7th segment; the 8th narrowed posteriorly, the posterior margin produced backwards in the middle line as a short blunt tooth; 1st ventral segment embracing the sides of the 3rd dorsal, its upper free edge bluntly pointed posteriorly; viewed from above it appears as a lamina springing from the 2nd dorsal segment and extending parallel to the 3rd; its true relations are, however, revealed on dissection.

Ceylon: Kandy. Also in New Guinea, Celebes, Sumatra, Singapore, Borneo, and the Philippines.

1990. *Thamiaræa basiventris*.

Thamiaræa basiventris Bernh., Col. Rundsch. v. 1916, p. 22.

This species has little in common with the European species, and is distinguished by the comparatively strong shining surface, very rough asperate puncturation of the elytra, rather depressed build and sharp posterior angles of the thorax. Pitch-brown, the head black, the abdomen, with the exception of a small part before the apex, dark reddish-yellow, the antennæ blackish-brown, the base lighter, the palpi and legs bright yellow. Head small, much narrower than the thorax, shining, impressed in front between the insertion of the antennæ, rather strongly and not very sparingly punctured, the temples about as long as the length of the eyes viewed from above, sharply and entirely bordered below. Antennæ moderately long, the 3rd joint longer than the 2nd, 4th oblong, the 5th scarcely, the following distinctly broader than long, the penultimate about a third broader than long, the 11th as long as the preceding two together. Thorax a good deal narrower than the elytra, about a third broader than long, rather flat, widest before the middle, retracted behind, the posterior angles blunt and prominent, before the scutellum with a rather deep transverse impression, produced

† The development of these processes on the 4th and 5th segments is very variable, and they are rudimentary in specimens in which the postero-external angle of the elytra is simple

in front as two parallel sulci, rather closely and rather strongly roughly punctured and rather shining. Elytra a third longer than the thorax, distinctly emarginate postero-externally, strongly, closely and asperately punctured, moderately shining. Abdomen very shining, sparingly punctured, behind practically smooth. Length 3.6 mm.

♂: 8th dorsal segment strongly narrowed and with two large tubercles close together.

Burma: Tenasserim, Mt. Moleyit, alt. 1800-1900 m., March 1887 (*Fea*). Unique (ex *Bernhauer*).

RHOPALETES, gen. n.

Small, subparallel. Head round, narrower than the thorax, eyes absent, temples finely and entirely bordered below.

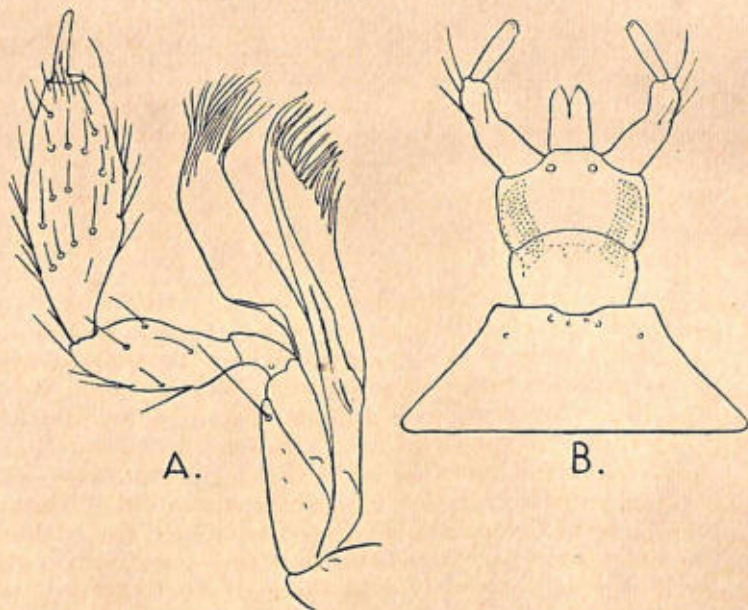


Fig. 118.—*Rhopaletes flavus*. A, maxilla; B, labium

Antennæ short, very strongly thickened towards apex. Mandibles short, curved, pointed, edentate. Maxillary palpi with small 1st joint, 2nd slightly thickened towards apex, 3rd longer and a little broader than the 2nd, oval, 4th subulate, about a third as long as the 3rd. Inner lobe of the maxilla pointed, slightly incurved, the inner margin with ten or eleven closely placed, nearly straight spines; outer lobe ciliate at

apex. Mentum transverse, trapezoidal, truncate in front. Labial palpi indistinctly 3-jointed, 1st joint moderate, cylindrical, suddenly constricted a little beyond the middle, 2nd much narrower and a little shorter than the 1st, cylindrical. Tongue rather broad, parallel, reaching nearly to the apex of the 1st joint of the labial palpi, split to the middle into two parallel, teat-shaped lobes. Paraglossæ reaching the base of the labial palpi. Thorax transverse, the pronotal epipleura not visible from the side. Mesosternal process narrow and acute, extending nearly the whole length of the coxæ, these narrowly separated. Elytra shorter than the thorax, not emarginate postero-externally. Abdomen parallel, a little narrowed before the apex, the first three visible segments transversely impressed at base. Legs moderate. Tibiæ without setæ. Tarsi 4, 5, 5; the anterior with the first three joints short, subequal, 4th longer than the preceding together; middle with the first four joints short, subequal, the 5th as long as the preceding three together; posterior with the 1st joint moderate, as long as the 2nd and 3rd together, 4th a little shorter than the 3rd, 5th as long as the 1st. Claws simple, slightly curved. Facies much like that of certain species of *Sipalia*.

Type, *flavus*.

1991. **Rhopaletes flavus**, sp. n. (Plate II, fig. 3.)

Moderately shining, entirely yellow or reddish-yellow. Antennæ reddish-yellow. Legs yellow. Length 1.75-2 mm.

Head round, a good deal narrower than the thorax, eyes absent, very finely, rather closely but indistinctly punctured, very finely coriaceous. Antennæ short and stout, the 3rd joint much shorter than the 2nd, 4th small, transverse, 5th and following much more strongly so, the penultimate four times broader than long, the 11th short and stout. Thorax a third broader than long, the sides evenly rounded and without setæ, a little more retracted behind, the posterior angles rounded, closely, less finely and more distinctly punctured than the head, the ground-sculpture similar. Elytra as broad as but a fourth shorter than the thorax, closely, less finely and somewhat roughly punctured. Abdomen parallel, a little narrowed before the apex, very finely, moderately closely punctured, a little less closely behind, the ground-sculpture reticulate. The whole insect with a moderately close, very fine yellow pubescence.

Simla Hills : Narkanda, alt. 9230 feet. In fungus.

Genus **WROUGHTONILLA** Wasm.

Wroughtonilla Wasm., D. E. Z. 1899, p. 157; Fenyès, Gen. Ins. 173 B, 1920, p. 293.

Facies somewhat resembling certain species of *Astilbus*, but differs in the shape of the thorax, rather more slender neck, the much less deep buccal sinus, which does not extend backwards beyond the level of the posterior border of the eye, the short rectangular mesosternal and the narrower metasternal process. Head narrower than the thorax, the eyes rather large, the post-ocular region rounded and rather strongly retracted to the neck, which is about a third as broad as the head. Temples not bordered below. Buccal sinus not extending beyond the level of the posterior border of the eye, gular sutures parallel, narrowly separated. Antennæ long and stout. Mandibles rather slender, curved, pointed, edentate. Maxillary palpi with small 1st joint, 2nd elongate, slightly thickened towards apex, 3rd longer but only slightly thicker, 4th very short, subulate. Maxillæ with the outer lobe elongate, ciliate at apex, the inner much narrower and shorter, ciliate, towards the apex with a few feeble spines. Mentum transverse, trapezoidal, the sides slightly emarginate, the anterior border truncate. Tongue short and broad, the anterior border with a small emargination. Labial palpi 3-jointed, the 1st joint cylindrical, about twice as long as broad, 2nd narrower and about half as long as the 1st, 3rd narrower, about as long as the 1st. Thorax longer than broad, the pronotal epipleura distinctly visible from the side. Prosternum rounded behind, not carinate. Mesosternal process very short, rectangular, extending but little between the coxæ, metasternal process narrow, elongate, bluntly pointed, separated from the mesosternal process by a short intersternal piece, coxæ narrowly separated. Scutellum triangular. Elytra not emarginate, the reflexed sides separated from the upper surface by an obtuse keel. Abdomen scaphoidal, the lateral margins strongly raised, only the first two visible segments transversely impressed at base. Legs rather long, the coxæ long; tibiæ ciliate. Tarsi 4, 5, 5; the anterior with the 1st joint short, 2nd and 3rd a little longer, subequal, 4th as long as the preceding three together; middle with the first three joints moderately long, subequal, 4th a little shorter than the 3rd, 5th a little longer than the 1st; posterior with the 1st joint a little longer than the 2nd, 2nd to 4th gradually decreasing in length; 5th a little longer than the 1st. Claws simple, lightly curved.

1992. *Wroughtonilla lobopeltæ*.

Wroughtonilla lobopeltæ Wasm.*, D. E. Z. 1899, p. 157, tab. ii, fig. 1.

Astilbus migratorius Fauv.*, Rev. d'Ent. xxii, 1903, p. 162.

Shining; head, elytra and abdomen black, the elevated side-margins of the latter brown, frequently the whole insect dark reddish-brown. Antennæ brown, the 11th joint yellowish. Legs brownish-yellow. Length 4 mm.

Head a little narrower than the thorax, strongly narrowed behind the large eyes, transverse, in the ♂ with broad transverse impression between the eyes; sculpture consisting of a few small scattered punctures and a very fine coriaceous ground-sculpture. Antennæ long and stout, the 3rd joint a good deal longer than the 2nd, 4th to 7th cylindrical, a little longer than broad, gradually decreasing in length, 8th as long as broad, 9th and 10th a little transverse, 11th as long as the preceding two together. Thorax slightly longer than broad, the sides slightly emarginate and slightly retracted behind, the anterior angles rounded, the anterior margin obliquely retracted to the neck, the posterior angles slightly obtuse, along the middle deeply and broadly impressed, postero-externally with a shorter, narrower and more superficial impression, practically impunctate in the median impression, elsewhere with small, scattered, asperate punctures; ground-sculpture very fine. Elytra as long as but broader than the thorax, convex, externally for the posterior two-thirds with a longitudinal impression, external to which is an obtuse keel, the sculpture similar to that of the thorax but with the punctures more numerous. Abdomen scaphoidal, in the middle broader than the elytra, with a few small, scattered punctures and very fine ground-sculpture. The whole insect with the punctures furnished with stiff semi-erect hairs, the sides of the elytra and abdomen with some longer ones.

Ceylon. S. India: Nilgiri Hills, Coonoor. Also in the Malay Peninsula. The species is associated with *Leptogenys (Lobopelta) diminuta* Smith.

Genus **AMAURODERA** Fauv.

Amaurodera Fauv., Rev. d'Ent. xxiv, 1905, p. 142; Fenyès, Gen. Ins. 173 B, 1920, p. 146; Notman, Bull. Amer. Mus. Nat. Hist. xlii, 1920, p. 730; Cam., Trans. Ent. Soc. Lond. 1920, pp. 361, 393; Scheerp., Kol. Rundsch. xv, 1929, p. 18.

In facies recalling certain *Falagria* subgen. *Stenagria* and also *Astilbus*. Head exserted, transversely suborbicular, the neck about a third of its width, temples rounded to the neck,

not bordered below, gular sutures parallel, narrowly separated, the buccal sinus not reaching the level of the posterior border of the eye, widely separated from its anterior border in front. Antennæ long and slender. Labrum transverse, slightly emarginate in front. Mandibles lightly curved, pointed, edentate. Maxillary palpi long, the 1st joint small, 2nd elongate, slightly curved and slightly thickened towards the apex, 3rd as long as 2nd but stouter, 4th subulate, nearly half the length of the 3rd. Outer lobe of the maxilla narrow, corneous, longer than the inner, ciliate at apex; inner lobe broader than the outer, membranous internally, at the apex

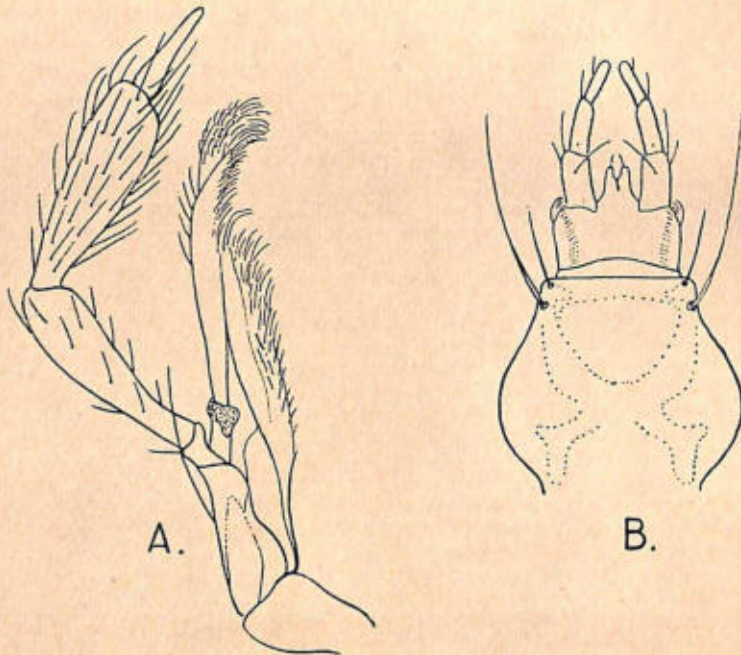


Fig. 119.—*Amaurodera bomfordi*. A, maxilla; B, labium.

with two or three spines, behind with a ciliate membrane. Mentum only slightly transverse, the sides rounded behind, retracted in front, the anterior border truncate. Labial palpi 3-jointed, the joints cylindrical, of equal length but decreasing in width. Tongue as long as the 1st joint of the labial palpi, split nearly to the base into two narrow lobes. Paraglossæ not extending beyond the base of the 1st joint of the labial palpi. Thorax distinctly longer than broad, dilated in front, strongly narrowed behind, the pronotal epipleura plainly visible from the side. Prosternum rounded behind, its posterior part more or less carinate. Mesosternal

process broadly rounded behind, extending nearly half the length of the coxæ and separated by a short intersternal piece from the broadly rounded apex of the metasternal process, the coxæ rather widely separated. Elytra not emarginate postero-externally. Abdomen a little narrowed at base and apex, the first three (visible) segments transversely impressed at the bases, the last segment granulate and with the posterior margin crenulate in both sexes. Legs long and slender. Tibiæ finely ciliate. Tarsi 4, 5, 5; the anterior with the first two joints moderately long and subequal, 3rd shorter, 4th as long as the preceding three together; middle with all the joints elongate, the first four gradually decreasing in length; posterior with the 1st joint as long as the following three together, these gradually becoming shorter, 5th a little shorter than the 1st. Claws slender, lightly curved.

Key to the Species.

- | | |
|--|--|
| 1. Species in greater part dark | 2. |
| Species in greater part reddish | 4. |
| 2. Larger (5-5.5 mm.); antennæ very long and slender; elytra shining, not or very indistinctly coriaceous; abdomen very sparingly punctured | 3. |
| Smaller (4.5 mm.); antennæ shorter; elytra distinctly coriaceous, greasy lustrous; abdomen moderately closely punctured on the anterior segments ... | <i>soror</i> , sp. n., p. 455. |
| 3. Antennæ with the first four joints pitchy | <i>opacicollis</i> Epp., p. 454. |
| Antennæ reddish-yellow, at most with the intermediate joints infuscate | <i>bomfordi</i> Epp., p. 453. |
| 4. Thorax with the median impressed line very short, limited to the anterior fourth; elytra extremely finely and extremely sparingly punctured | <i>elegans</i> , sp. n., p. 456. |
| Thorax with the median impressed line extending nearly to the anterior and posterior borders; elytra less sparingly punctured | [p. 456.
<i>veluticollis</i> Motsch., |

1993. *Amaurodera bomfordi*. (Plate II, fig. 4.)

Drusilla bomfordi Epp., W. E. Z. ix, 1890, p. 273 (♀); Schub., D. E. Z. 1908, p. 611 (♂).

Head, elytra and abdomen very shining, thorax in the ♂ with the anterior third shining, the posterior two-thirds dull, in the ♀ entirely dull. Head and 3rd and 4th (visible) abdominal segments black or pitchy, the rest yellowish- or reddish-brown; elytra dark brown; thorax in ♂ with the shining part reddish-brown, the rest black, in the ♀ entirely black. Antennæ and legs reddish-yellow, the femora sometimes a little infuscate towards apex. Length 5-5.5 mm.

Head suborbicular, as broad as the thorax, the eyes moderate, in the ♂ lightly impressed on the disc, with a very few fine scattered punctures, coriaceous in the ♂, much less distinctly in the ♀. Antennæ long and slender, all the joints much longer than broad, the 3rd longer than the 2nd, the following gradually decreasing in length, the 11th longer than the 10th. Thorax much longer than broad, the sides before the middle strongly subangulately dilated, from thence strongly retracted to the neck, posteriorly strongly retracted and arcuately emarginate, the posterior angles rounded, in the ♂ at the dilated part with a large, round, shining tubercle on each side, excavated internally, along the middle impressed and shining for the anterior two-thirds, with engraved line in the fundus of the impression, the shining part practically impunctate and finely coriaceous, the dull part strongly coriaceous, almost granular; in the ♀ without tubercles, the anterior half with a fine impressed median line, the whole surface dull, impunctate and strongly coriaceous, almost granular. Elytra convex, a third broader and distinctly shorter than the thorax, very finely, rather sparingly punctured, very finely coriaceous. Abdomen a little narrowed at the base, more distinctly before the apex, extremely finely, very sparingly punctured and without ground-sculpture, the last segment with the posterior margin rounded and crenulate, the upper surface distinctly coriaceous and with scattered granules. The thorax is without pubescence, the head and abdomen with a few fine stiff hairs, the elytra with more numerous ones.

Simla Hills: Kotgarh. Chakrata district: Kanasar, alt. 7000 feet.

1994. *Amaurodera opacicollis*.

Astilbus opacicollis Epp., D. E. Z. 1895, p. 385; Fauv., Rev. d'Ent. xxiv, 1905, p. 143 (*Amaurodera*).

Obscure pitchy-brown, rather shining, the thorax dull. Antennæ elongate, yellow (except the base), trochanters, base of the femora, tibiæ and tarsi yellow; thorax oblong, subcordate, the sides before the middle angularly dilated, canaliculate along the middle; elytra broader and shorter than the thorax, sparingly punctured, abdomen on the anterior segments extremely finely and sparingly punctured, very finely pubescent. Length 5 mm.

Of the size and build of *bomfordi* and very like many specimens of it; dark brown, rather shining, only the thorax dull, the long antennæ from the 5th joint, the trochanters and extreme base of the femora, tibiæ and tarsi bright yellow. Head suborbicular, narrower than the thorax, at the sides sparingly and extremely finely punctured, in the middle

with a round fovea. Antennæ long and slender, filiform, longer than the head and thorax, the first four joints pitch-brown, the rest bright yellow, the 3rd joint longer than the 2nd, the 4th as long as this, the following gradually decreasing in length but not increasing in width, the first of them almost twice as long as broad, the penultimate nearly a half longer than broad, the 11th cylindrical, a half longer than the 10th. Palpi pitch-black. Thorax a third longer than broad, somewhat elongate-cordate, the sides before the middle angularly dilated, then suddenly narrowed in a straight line to the posterior border, in front of the lateral angles obliquely truncate, a little convex above, with a fine impressed median line throughout, entirely dull. Elytra twice as broad but shorter than the thorax, slightly convex, dark brown, shining, finely, indistinctly punctured, finely and sparingly pubescent. Abdomen as broad as the elytra, the first four segments deeply transversely impressed at their bases, finely and very sparingly punctured and with a few short scattered hairs, behind entirely smooth. The legs, including the tarsi, long and slender.

♂: 6th (visible) segment finely granular, truncate and finely crenulate behind, the angles rounded. A single ♂.

Sikkim (ex *Eppelsheim*).

Whether this is actually a ♂ is doubtful, as both sexes in the genus have the characters above mentioned on the last segment.

1995. *Amaurodera soror*, sp. n.

Black, head and elytra greasy lustrous; abdomen shining, thorax dull in both sexes, only the reddish tubercles in the ♂ and the median line shining. Antennæ reddish-yellow, usually with the intermediate joints more or less infuscate. Femora brown or black, their bases, tibiæ and tarsi reddish-yellow. Length 4.5 mm.

Smaller and darker than *bomfordi* but of similar build, the head and elytra much less shining, both distinctly coriaceous, the former less orbicular, more transverse, the abdomen much more closely punctured. Head rather deeply impressed before the base in the ♂, without impression in the ♀, strongly coriaceous in both sexes, extremely finely and very sparingly punctured, the punctures confused with the ground-sculpture. Antennæ a good deal shorter than in *bomfordi*, the individual joints shorter, but all longer than broad. Thorax as in *bomfordi*, in the ♂ with similar shining reddish tubercles, but with the rest of the surface completely dull and very strongly coriaceous except for the fine impressed median line, which is shining, in the ♀ similar to *bomfordi* but with the median impressed line produced further backwards. Elytra distinctly

coriaceous, extremely finely and very sparingly punctured, the punctures confused with the ground-sculpture. Abdomen very finely, moderately closely punctured on the anterior segments, much more sparingly behind and with a fine ground-sculpture; the 8th segment in both sexes more strongly coriaceous and with several small granules.

♂: 8th dorsal segment truncate and crenulate; 6th a little produced and broadly rounded.

♀: 8th dorsal segment broadly rounded, less strongly crenulate than in the ♂.

Dehra Dun: Nim Nadi; Nun Nadi. Siwaliks: Kheri Rau.

1996. *Amaurodera veluticollis*.

Falagria veluticollis Motsch.*, Bull. Soc. Nat. Mosc. xxxi, 1858, iii, p. 261; Fauv., Rev. d'Ent. xxiv, 1905, p. 143 (*Amaurodera*); Cam., Trans. Ent. Soc. Lond. 1920, p. 393; id., E. M. M. lxix, 1933, p. 219.

Head, elytra and abdomen shining, thorax dull; head and thorax red, elytra reddish-brown, abdomen reddish-yellow, the 3rd and 4th visible segments black, the elevated side-margins of the 2nd and 3rd usually with a black spot. Antennæ yellowish-red. Legs reddish-yellow, the femora slightly infuscate towards the apices. Length 3.5 mm.

In build very similar to *bomfordi* ♀, but with the antennæ shorter. Head without trace of ground-sculpture, with a few very fine scattered punctures, thorax with strong coriaceous sculpture and a fine, shining, impressed line along the middle, reaching nearly to the anterior and posterior margins. Elytra very finely, sparsely but less sparingly punctured than in *bomfordi*; ground-sculpture absent. Abdomen very finely and very sparingly punctured, 8th segment feebly coriaceous and with several granules, the posterior border broadly rounded and crenulate.

Dehra Dun. Mussooree: Arni Gad. Siwaliks: Lachiwala. Burma: Tenasserim. Also in the Riouw Archipelago.

1997. *Amaurodera elegans*, sp. n.

♀: in build, colour and lustre scarcely differing from *veluticollis*, but larger (4.5 mm.), with longer antennæ which scarcely differ in structure from those of *bomfordi*. The head has a feeble impression on the middle of the disc, the puncturation extremely fine and sparing, the ground-sculpture absent; the thorax on each side at the dilated part has an obsolete tubercle, which, however, is not shining but strongly coriaceous like the rest of the surface; the impressed median shining line is very short, scarcely extending beyond the region of the tubercles, the elytra are more sparingly punctured

than in *veluticollis*, the abdomen is extremely sparingly punctured, almost impunctate, the 8th dorsal segment is sparingly granular, the posterior margin truncate and crenulate.

♂: thorax with two large obliquely placed, shining, lamellate tubercles as in *bomfordi*, 8th dorsal segment with a few granules, the posterior margin truncate.

Differs from *bomfordi* in the colour, the head and elytra without ground-sculpture, the latter much more sparingly punctured.

Mussooree district: Arni Gad. Kumaun: West Bhatkot (*H. G. Champion*).

Genus **TETRABOTHRUS** Bernh.

Tetrabothrus Bernh., Tijdschr. Ent. lviii, 1915, p. 240.

Allied to *Astilbus* Steph. and *Orphnebius* Motsch., but at once distinguished by the first four visible segments of the abdomen being deeply and broadly excavated at their bases and the short, very strongly clavate antennæ. Head transversely suborbicular, exserted, the neck about a third of its width; temples not bordered below, the buccal sinus separated by a wide space from the eyes in front, not extending as far back as the level of their posterior borders, the gular sutures narrowly separated, parallel. Antennæ very short, strongly clavate, the joints from the 4th very strongly transverse, the axis of these joints excentric, nearer the outer margin than the inner. Labrum transverse, arcuately emarginate in front, the anterior angles rounded. Mandibles moderate, lightly curved, pointed, edentate. Maxillary palpi elongate, the 1st joint small, 2nd lightly curved, slightly thickened towards apex, 3rd a good deal longer but scarcely thicker, 4th subulate, nearly half as long as the 3rd. Outer lobe of the maxilla narrow, pointed, longer than the inner, ciliate at apex; inner lobe broader, densely ciliate internally. Mentum transverse, trapezoidal, the anterior border deeply and broadly emarginate, the anterior angles prominent. Labial palpi 3-jointed, 1st joint rather long, cylindrical, 2nd narrower and scarcely half as long, 3rd narrower and a little longer than the 2nd, cylindrical. Tongue rather short and broad, shorter than the 1st joint of the labial palpi, narrowed towards the apex and split nearly to the base into two narrow pointed lobes. Paraglossæ distinct, extending to the level of the apex of the tongue. Thorax about as long as broad, the pronotal epipleura visible from the side. Prosternum truncate behind, not keeled. Mesosternal process very short and broad, very slightly rounded behind and extending about a third of the length of the coxæ, these widely

coriaceous, extremely finely and very sparingly punctured, the punctures confused with the ground-sculpture. Abdomen very finely, moderately closely punctured on the anterior segments, much more sparingly behind and with a fine ground-sculpture; the 8th segment in both sexes more strongly coriaceous and with several small granules.

♂: 8th dorsal segment truncate and crenulate; 6th a little produced and broadly rounded.

♀: 8th dorsal segment broadly rounded, less strongly crenulate than in the ♂.

Dehra Dun: Nim Nadi; Nun Nadi. Siwaliks: Kheri Rau.

1996. *Amaurodera veluticollis*.

Falagria veluticollis Motsch.*, Bull. Soc. Nat. Mosc. xxxi, 1858, iii, p. 261; Fauv., Rev. d'Ent. xxiv, 1905, p. 143 (*Amaurodera*); Cam., Trans. Ent. Soc. Lond. 1920, p. 393; id., E. M. M. lxix, 1933, p. 219.

Head, elytra and abdomen shining, thorax dull; head and thorax red, elytra reddish-brown, abdomen reddish-yellow, the 3rd and 4th visible segments black, the elevated side-margins of the 2nd and 3rd usually with a black spot. Antennæ yellowish-red. Legs reddish-yellow, the femora slightly infusate towards the apices. Length 3.5 mm.

In build very similar to *bomfordi* ♀, but with the antennæ shorter. Head without trace of ground-sculpture, with a few very fine scattered punctures, thorax with strong coriaceous sculpture and a fine, shining, impressed line along the middle, reaching nearly to the anterior and posterior margins. Elytra very finely, asperately but less sparingly punctured than in *bomfordi*; ground-sculpture absent. Abdomen very finely and very sparingly punctured, 8th segment feebly coriaceous and with several granules, the posterior border broadly rounded and crenulate.

Dehra Dun. Mussooree: Arni Gad. Siwaliks: Lachiwala. Burma: Tenasserim. Also in the Riouw Archipelago.

1997. *Amaurodera elegans*, sp. n.

♀: in build, colour and lustre scarcely differing from *veluticollis*, but larger (4.5 mm.), with longer antennæ which scarcely differ in structure from those of *bomfordi*. The head has a feeble impression on the middle of the disc, the puncturation extremely fine and sparing, the ground-sculpture absent; the thorax on each side at the dilated part has an obsolete tubercle, which, however, is not shining but strongly coriaceous like the rest of the surface; the impressed median shining line is very short, scarcely extending beyond the region of the tubercles, the elytra are more sparingly punctured

coriaceous, extremely finely and very sparingly punctured, the punctures confused with the ground-sculpture. Abdomen very finely, moderately closely punctured on the anterior segments, much more sparingly behind and with a fine ground-sculpture; the 8th segment in both sexes more strongly coriaceous and with several small granules.

♂: 8th dorsal segment truncate and crenulate; 6th a little produced and broadly rounded.

♀: 8th dorsal segment broadly rounded, less strongly crenulate than in the ♂.

Dehra Dun: Nim Nadi; Nun Nadi. Siwaliks: Kheri Rau.

1996. *Amaurodera veluticollis*.

Falagria veluticollis Motsch.*, Bull. Soc. Nat. Mosc. xxxi, 1858, iii, p. 261; Fauv., Rev. d'Ent. xxiv, 1905, p. 143 (*Amaurodera*); Cam., Trans. Ent. Soc. Lond. 1920, p. 393; id., E. M. M. lxxix, 1933, p. 219.

Head, elytra and abdomen shining, thorax dull; head and thorax red, elytra reddish-brown, abdomen reddish-yellow, the 3rd and 4th visible segments black, the elevated side-margins of the 2nd and 3rd usually with a black spot. Antennæ yellowish-red. Legs reddish-yellow, the femora slightly infuscate towards the apices. Length 3.5 mm.

In build very similar to *bomfordi* ♀, but with the antennæ shorter. Head without trace of ground-sculpture, with a few very fine scattered punctures, thorax with strong coriaceous sculpture and a fine, shining, impressed line along the middle, reaching nearly to the anterior and posterior margins. Elytra very finely, asperately but less sparingly punctured than in *bomfordi*; ground-sculpture absent. Abdomen very finely and very sparingly punctured, 8th segment feebly coriaceous and with several granules, the posterior border broadly rounded and crenulate.

Dehra Dun. Mussooree: Arni Gad. Siwaliks: Lachiwala. Burma: Tenasserim. Also in the Riouw Archipelago.

1997. *Amaurodera elegans*, sp. n.

♀: in build, colour and lustre scarcely differing from *veluticollis*, but larger (4.5 mm.), with longer antennæ which scarcely differ in structure from those of *bomfordi*. The head has a feeble impression on the middle of the disc, the puncturation extremely fine and sparing, the ground-sculpture absent; the thorax on each side at the dilated part has an obsolete tubercle, which, however, is not shining but strongly coriaceous like the rest of the surface; the impressed median shining line is very short, scarcely extending beyond the region of the tubercles, the elytra are more sparingly punctured

than in *veluticollis*, the abdomen is extremely sparingly punctured, almost impunctate, the 8th dorsal segment is sparingly granular, the posterior margin truncate and crenulate.

♂: thorax with two large obliquely placed, shining, lamellate tubercles as in *bomfordi*, 8th dorsal segment with a few granules, the posterior margin truncate.

Differs from *bomfordi* in the colour, the head and elytra without ground-sculpture, the latter much more sparingly punctured.

Mussooree district: Arni Gad. Kumaun: West Bhatkot (*H. G. Champion*).

Genus **TETRABOTHRUS** Bernh.

Tetrabothrus Bernh., Tijdschr. Ent. lviii, 1915, p. 240.

Allied to *Astilbus* Steph. and *Orphnebius* Motsch., but at once distinguished by the first four visible segments of the abdomen being deeply and broadly excavated at their bases and the short, very strongly clavate antennæ. Head transversely suborbicular, exserted, the neck about a third of its width; temples not bordered below, the buccal sinus separated by a wide space from the eyes in front, not extending as far back as the level of their posterior borders, the gular sutures narrowly separated, parallel. Antennæ very short, strongly clavate, the joints from the 4th very strongly transverse, the axis of these joints excentric, nearer the outer margin than the inner. Labrum transverse, arcuately emarginate in front, the anterior angles rounded. Mandibles moderate, lightly curved, pointed, edentate. Maxillary palpi elongate, the 1st joint small, 2nd lightly curved, slightly thickened towards apex, 3rd a good deal longer but scarcely thicker, 4th subulate, nearly half as long as the 3rd. Outer lobe of the maxilla narrow, pointed, longer than the inner, ciliate at apex; inner lobe broader, densely ciliate internally. Mentum transverse, trapezoidal, the anterior border deeply and broadly emarginate, the anterior angles prominent. Labial palpi 3-jointed, 1st joint rather long, cylindrical, 2nd narrower and scarcely half as long, 3rd narrower and a little longer than the 2nd, cylindrical. Tongue rather short and broad, shorter than the 1st joint of the labial palpi, narrowed towards the apex and split nearly to the base into two narrow pointed lobes. Paraglossæ distinct, extending to the level of the apex of the tongue. Thorax about as long as broad, the pronotal epipleura visible from the side. Prosternum truncate behind, not keeled. Mesosternal process very short and broad, very slightly rounded behind and extending about a third of the length of the coxæ, these widely

coriaceous, extremely finely and very sparingly punctured, the punctures confused with the ground-sculpture. Abdomen very finely, moderately closely punctured on the anterior segments, much more sparingly behind and with a fine ground-sculpture; the 8th segment in both sexes more strongly coriaceous and with several small granules.

♂: 8th dorsal segment truncate and crenulate; 6th a little produced and broadly rounded.

♀: 8th dorsal segment broadly rounded, less strongly crenulate than in the ♂.

Dehra Dun: Nim Nadi; Nun Nadi. Siwaliks: Kheri Rau.

1996. *Amaurodera veluticollis*.

Falagria veluticollis Motsch.*, Bull. Soc. Nat. Mosc. xxxi, 1858, iii, p. 261; Fauv., Rev. d'Ent. xxiv, 1905, p. 143 (*Amaurodera*); Cam., Trans. Ent. Soc. Lond. 1920, p. 393; id., E. M. M. lxix, 1933, p. 219.

Head, elytra and abdomen shining, thorax dull; head and thorax red, elytra reddish-brown, abdomen reddish-yellow, the 3rd and 4th visible segments black, the elevated side-margins of the 2nd and 3rd usually with a black spot. Antennæ yellowish-red. Legs reddish-yellow, the femora slightly infuscate towards the apices. Length 3.5 mm.

In build very similar to *bomfordi* ♀, but with the antennæ shorter. Head without trace of ground-sculpture, with a few very fine scattered punctures, thorax with strong coriaceous sculpture and a fine, shining, impressed line along the middle, reaching nearly to the anterior and posterior margins. Elytra very finely, asperately but less sparingly punctured than in *bomfordi*; ground-sculpture absent. Abdomen very finely and very sparingly punctured, 8th segment feebly coriaceous and with several granules, the posterior border broadly rounded and crenulate.

Dehra Dun. Mussooree: Arni Gad. Siwaliks: Lachiwala. Burma: Tenasserim. Also in the Riouw Archipelago.

1997. *Amaurodera elegans*, sp. n.

♀: in build, colour and lustre scarcely differing from *veluticollis*, but larger (4.5 mm.), with longer antennæ which scarcely differ in structure from those of *bomfordi*. The head has a feeble impression on the middle of the disc, the puncturation extremely fine and sparing, the ground-sculpture absent; the thorax on each side at the dilated part has an obsolete tubercle, which, however, is not shining but strongly coriaceous like the rest of the surface; the impressed median shining line is very short, scarcely extending beyond the region of the tubercles, the elytra are more sparingly punctured

than in *veluticollis*, the abdomen is extremely sparingly punctured, almost impunctate, the 8th dorsal segment is sparingly granular, the posterior margin truncate and crenulate.

♂: thorax with two large obliquely placed, shining, lamellate tubercles as in *bomfordi*, 8th dorsal segment with a few granules, the posterior margin truncate.

Differs from *bomfordi* in the colour, the head and elytra without ground-sculpture, the latter much more sparingly punctured.

Mussooree district: Arni Gad. Kumaun: West Bhatkot (*H. G. Champion*).

Genus **TETRABOTHRUS** Bernh.

Tetrabothrus Bernh., Tijdschr. Ent. lviii, 1915, p. 240.

Allied to *Astilbus* Steph. and *Orphnebius* Motsch., but at once distinguished by the first four visible segments of the abdomen being deeply and broadly excavated at their bases and the short, very strongly clavate antennæ. Head transversely suborbicular, exserted, the neck about a third of its width; temples not bordered below, the buccal sinus separated by a wide space from the eyes in front, not extending as far back as the level of their posterior borders, the gular sutures narrowly separated, parallel. Antennæ very short, strongly clavate, the joints from the 4th very strongly transverse, the axis of these joints excentric, nearer the outer margin than the inner. Labrum transverse, arcuately emarginate in front, the anterior angles rounded. Mandibles moderate, lightly curved, pointed, edentate. Maxillary palpi elongate, the 1st joint small, 2nd lightly curved, slightly thickened towards apex, 3rd a good deal longer but scarcely thicker, 4th subulate, nearly half as long as the 3rd. Outer lobe of the maxilla narrow, pointed, longer than the inner, ciliate at apex; inner lobe broader, densely ciliate internally. Mentum transverse, trapezoidal, the anterior border deeply and broadly emarginate, the anterior angles prominent. Labial palpi 3-jointed, 1st joint rather long, cylindrical, 2nd narrower and scarcely half as long, 3rd narrower and a little longer than the 2nd, cylindrical. Tongue rather short and broad, shorter than the 1st joint of the labial palpi, narrowed towards the apex and split nearly to the base into two narrow pointed lobes. Paraglossæ distinct, extending to the level of the apex of the tongue. Thorax about as long as broad, the pronotal epipleura visible from the side. Prosternum truncate behind, not keeled. Mesosternal process very short and broad, very slightly rounded behind and extending about a third of the length of the coxæ, these widely

separated. Metasternal process broad, truncate, nearly reaching the mesosternum but on a lower level, and separated from it by a short intersternal piece. Scutellum small. Elytra not emarginate postero-externally. Abdomen slightly narrowed at the base, more so towards the apex, the side-margins raised, the first four visible segments deeply and broadly excavate at their bases. Legs moderate. Tibiæ ciliate. Tarsi 4, 5, 5; the anterior with the first three joints gradually decreasing in length, 4th nearly as long as the preceding three together; middle with the first two joints moderate, subequal, 3rd and 4th gradually shorter; posterior

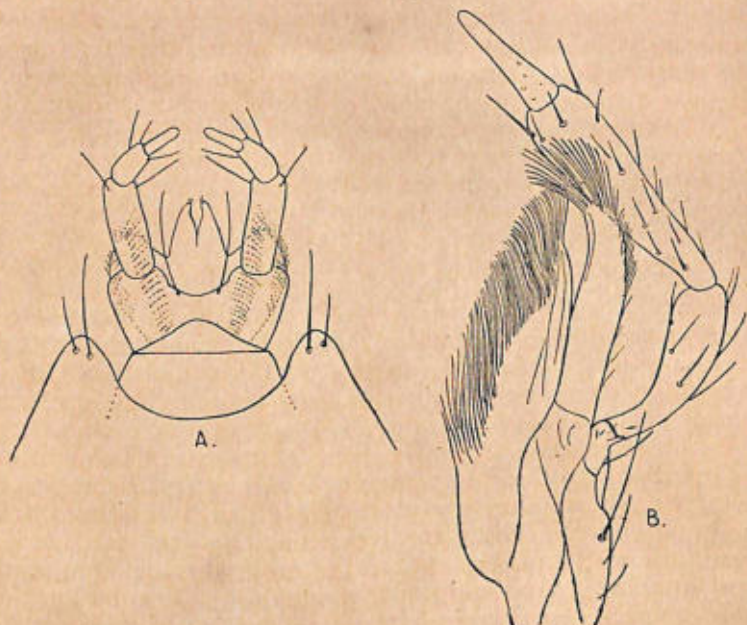


Fig. 120.—*Tetrabothrus pubescens*. A, labium; B, maxilla.

with the 1st joint elongate, as long as the 2nd and 3rd together, these of equal length, 4th shorter, 5th shorter than the 1st. Claws simple, lightly curved. The genus, so far only known from the Oriental region, is doubtless associated with ants.

Key to the Species.

- | | |
|---|----------------------------------|
| 1. Red species, the elytra yellowish-red. | <i>indicus</i> , sp. n., p. 459. |
| Fore-parts black or pitchy, only the abdomen red | 2. |
| 2. Antennæ entirely black; legs pitchy. | <i>bicolor</i> , sp. n., p. 460. |
| Antennæ with testaceous base; legs yellow, the apices of the femora pitchy. | <i>laticornis</i> Wasm., p. 459. |

1998. *Tetrabothrus laticornis*.

Orphnebius laticornis Wasm., Ann. Mus. Civ. Gen. xxxvi, 1896, p. 624.

Shining, pitchy, pilose; abdomen reddish-pitchy, the legs and base of the antennæ testaceous, the femora pale with pitchy apex. Head short, transverse, impunctate, neck short; eyes large, prominent. Antennæ with the 2nd and 3rd joints elongate, equal in length, 4th to 6th suddenly thickened, 6th to 10th very strongly transverse. Thorax convex, distinctly bordered, a little transverse, suborbicular, impunctate. Elytra nearly twice as long and more than twice as broad as the thorax, closely covered with yellow pubescence. Abdomen with the side-margins strongly raised, the sides a little rounded, the 2nd to 5th segments deeply impressed at their base. Posterior tarsi with the first four joints distinctly decreasing in length. Length 5 mm.

Bengal: Darjeeling (*Christie*). Unique (ex *Wasmann*).

Described as an *Orphnebius* by Wasmann, but the characters given for the abdomen are those of *Tetrabothrus*.

1999. *Tetrabothrus indicus*, sp. n. (Plate II, fig. 5.)

Shining, bright red, the elytra yellowish-red, posteriorly from the middle of the outer margin to behind the middle of the suture blackish. Antennæ red, the first two joints reddish-yellow. Legs pale yellow, the extreme apices of the femora brown. Length 5 mm.

In build and antennal structure scarcely differing from *javanus* Bernh., but of brighter colour, with paler legs and more finely punctured elytra. Head transverse, a little narrower than the thorax, the eyes rather large, the post-ocular region rounded and retracted to the neck, almost impunctate and without ground-sculpture, the pubescence yellow, long and scanty. Antennæ with the 1st joint stout, 3rd a little longer than the 2nd, 4th twice as broad as long, 5th to 10th fully four times as broad as long, 11th small, conical, shorter than the preceding two together. Thorax as long as broad, convex, widest behind at the broadly rounded posterior angles, the sides from thence straight and retracted to the rounded anterior angles, the anterior margin obliquely truncate to the neck, impunctate along the middle, elsewhere finely and rather sparingly punctured; ground-sculpture absent; pubescence as on the head. Elytra slightly longer and nearly twice as broad as the thorax, very finely but more closely punctured, the pubescence very long and rather close. Abdomen a little narrowed before the apex, practically impunctate and glabrous, at the sides and apex with tufts of hairs. In the single example the 8th dorsal segment is broadly, scarcely

perceptibly emarginate, the 6th ventral produced, narrowed and rounded.

Bengal: Kalimpong; Samsingh, alt. 1800 feet. On soil under elephant dung, xii. 1933 (*Balwant Singh*).

2000. *Tetrabothrus bicolor*, sp. n.

Shining; fore-parts black, abdomen red. Antennæ black. Legs pitchy-black, the tarsi reddish. Length 5 mm.

More robust than *indicus* and at once distinguished by the colour. Head strongly transverse, very slightly narrower, than the thorax, the eyes moderate, the post-ocular region rounded to the neck, impunctate along the middle, at the sides with a few small scattered punctures; ground-sculpture absent. Antennæ short and stout, the 3rd joint scarcely longer than the 2nd, 4th small, transverse, 5th to 10th more strongly so, the penultimate three times as broad as long, the 11th small, short and conical. Thorax slightly transverse (3.5:3), widest behind, gradually and slightly narrowed to the front, the sides practically straight, all the angles broadly rounded, impunctate along the middle, towards the sides with a few small scattered punctures, each with a stiff hair; ground-sculpture absent. Elytra a good deal broader and a third longer than the thorax, finely, rather sparingly punctured, the pubescence long. Abdomen gradually and slightly narrowed towards the apex, impunctate and glabrous, at the sides with small tufts of hairs.

Burma: Ruby Mines (*Doherty*).

Genus **ASTILBUS** Steph.

- Astilbus* Steph., Ill. Brit. Ent. Mandib. v, 1832, p. 106; Thoms., Skand. Col. ii, 1860, p. 259; Fauv., Faun. Gallo-Rhén. iii, 1872, p. 652; Redtb., Faun. Austr. ed. iii, 1874, p. 143 (note); Fowler, Col. Brit. Isl. iii, 1888, p. 59; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 124; Everts, Col. Neerl. i, 1898, p. 194; Reitter, Faun. Germ. ii, 1909, p. 75; Johansen, Danmarks Rovbiller, 1914, p. 99; Fenyès, Gen. Ins. 173 B, 1920, p. 261; Portevin, Encycl. Ent. A, xii, 1929, i, p. 294; Bernh., Zool. Anzeiger, lxxxii (Wasmann Festband), 1929, p. 143; Scheerp., Kol. Rundsch. xv, 1929, p. 18; id., Tierwelt Mitteleur. v, 2, 1930, p. 76.
- Camacopalpus* Motsch., Bull. Soc. Nat. Mosc. (3) xxxi, 1858, p. 231 (ex parte).
- Camacopselaphus* Gemm. et Har., Cat. Col. ii, 1868, p. 549; Fenyès, Gen. Ins. 173 B, 1920, p. 136.
- Drusilla* Leach, in Samouelle, Ent. Comp. 1819, p. 177 (not characterized); Mannerh., Mém. Acad. Sci. St. Petersb. i, 1830, pp. 427, 432; Boisd. et Lac., Faun. Ent. Paris, i, 1835, p. 554; Redtb., Faun. Austr. ed. i, 1849, p. 648 (note), ed. ii, 1858, p. 119 (note), and ed. iii, 1874, p. 143 (note).

Somewhat variable in facies but more or less elongate and

parallel. Head with the neck rather narrow, at most half as broad as the head, not concealed under the anterior border of the thorax. Eyes normal, temples not bordered below. Buccal sinus broad and long, separated by a moderately broad space from the anterior margin of the eye, and extending back at least to the level of its posterior border; gular sutures parallel, moderately separated. Antennæ rather long, not or but little thickened towards the apex. Labrum transverse, broadly and slightly emarginate in front. Mandibles moderate, lightly curved, pointed, each with a very indistinct tooth about the middle of the inner border. Maxillary palpi with the 1st joint small, 2nd elongate, slightly curved and slightly thickened towards the apex, 3rd longer and but little stouter, 4th subulate, about a third as long as the 3rd. Outer lobe of maxilla narrow, ciliate at the apex; inner lobe narrow, shorter than the outer, pointed, with three or four spines near the apex, ciliate behind. Mentum transverse, truncate in front, trapezoidal. Labial palpi 3-jointed, 1st joint cylindrical, 2nd a little shorter and narrower, 3rd much shorter and distinctly narrower than the 2nd. Tongue small, shorter than the 1st joint of the labial palpi and deeply divided into two narrow lobes. Paraglossæ feeble. Prothorax variable in shape, usually sulcate along the middle, the pronotal epipleura plainly visible from the side. Prosternum carinate, truncate behind. Mesosternal process short and broad, extending about half the length of the coxæ, broadly truncate behind, metasternal process rather broad, rounded at apex and separated from the mesosternal process by a short intersternal piece; middle coxæ rather widely separated. Elytra as long or not much longer than the thorax, only slightly emarginate postero-externally. Abdomen more or less fusiform, the first three visible segments transversely impressed at their bases. Legs long and slender, tibiæ ciliate, without long setæ. Tarsi 4, 5, 5; the anterior with the 1st joint moderate, 2nd and 3rd shorter, subequal; middle with the 1st joint as long as the 2nd and 3rd together, 2nd to 4th gradually decreasing in length, 5th shorter than the 1st; posterior with the 1st joint as long as the 2nd and 3rd together, 2nd to 4th gradually decreasing in length. Claws slightly curved, simple. Very closely allied to *Zyras*; differs in the much shorter 3rd joint of the labial palpi in relation to the 2nd, also in the post-ocular region being without a border below; in some species of *Zyras*, however, this is only developed behind. The species are associated with ants and termites and appear to be as polymorphic as *Zyras*.

Key to the Species.

1. Thorax with a more or less distinct lateral impression 2.
Thorax without lateral impression .. 12.
2. Species entirely yellow 3.
Species otherwise coloured 4.
3. Shining; thorax finely, sparingly punctured *gracilicornis* Bernh., p. 478.
Dull; thorax closely, rather roughly punctured *flavus*, sp. n., p. 467.
4. Elytra black, with an oblique yellowish-red fascia from the shoulders to apex of suture *mixtus*, sp. n., p. 474.
Elytra uniformly coloured 5.
5. Fore-parts dull or nearly dull 6.
Fore-parts shining 10.
6. Thorax and elytra extremely finely and obsolete punctured, the punctures confused with the ground-sculpture *planaticollis* Kr., p. 467.
Thorax and elytra closely and distinctly punctured 7.
7. Thorax with a tubercle on each side of middle of disc *incola* Fauv., p. 463.
Thorax without tubercles 8.
8. Elytra closely and deeply punctured; ground-sculpture feeble; head deeply and closely punctured *punctatissimus* Kr., p. 466.
Elytra finely, less closely punctured; ground-sculpture very distinct; head less deeply and less closely punctured 9.
9. Thorax more transverse, distinctly sinuate before the posterior angles; more coarsely punctured *proximus*, sp. n., p. 465.
Thorax narrower, not at all sinuate before the posterior angles; more finely punctured *andrewesi*, sp. n., p. 464.
10. Abdomen practically impunctate ... 11.
Abdomen finely and distinctly punctured *ruficornis*, sp. n., p. 478.
11. Eyes large, occupying nearly the whole side of head; antennæ reddish ... *flavicornis* Motsch., p. 476.
Eyes moderate, the temples rounded and a little dilated; antennæ (except base) blackish [p. 477.
bituberculatus Motsch.,
12. Head triangular, the temples rounded and dilated; eyes moderate, placed towards the upper surface 13.
Head suborbicular, the temples not dilated; eyes laterally placed 14.
13. Species in greater part reddish-yellow; elytra dull, with close, fine, more or less oblique rugæ *opacipennis* Bernh., p. 479.
Species in greater part dark; elytra shining, very finely, moderately closely punctured [p. 468.
trigonocephalus, sp. n.,
14. Thorax dull, strongly coriaceous and impunctate 15.

- Thorax more or less shining, distinctly punctured 16.
15. Thorax slightly transverse; antennæ with all the joints longer than broad; 7th abdominal segment closely covered with coarse elongate punctures as in *Orphnebius* *rubricollis*, sp. n., p. 468.
- Thorax strongly transverse; antennæ with the penultimate joints transverse; 7th abdominal segment granular *opacicollis* Cam., p. 480.
16. Penultimate joints of antennæ about three times broader than long *stevensi*, sp. n., p. 465.
- Penultimate joints of antennæ not or but slightly transverse 17.
17. Thorax very finely and very sparingly punctured *lineatocollis* Kr., p. 469.
- Thorax less finely, closely punctured or granular 18.
18. Thorax with granular sculpture 19.
- Thorax with normal punctures 21.
19. Head and thorax black *tuberculatus* Bernh., p. 473.
- Head and thorax reddish-brown 20.
20. Larger (4 mm.); antennæ longer, the 4th and 5th joints a little longer than broad *adjacens*, ♂, sp. n., p. 472.
- Smaller (3 mm.); antennæ shorter, the 4th and 5th joints transverse [p. 475.
- impressicollis*, ♂, Kr.,
21. Head and thorax black 22.
- Head and thorax reddish-brown 25.
22. Antennæ entirely black; abdomen impunctate *assamensis*, sp. n., p. 471.
- Antennæ with lighter base 23.
23. Elytra pitchy-black, the shoulders obscurely lighter; abdomen practically impunctate *nigrescens* Motsch., p. 472.
- Elytra reddish-yellow, the sides and sometimes the suture blackish; abdomen more or less punctured at the bases of the anterior segments. 24.
24. More robust and convex; thorax much more finely and sparingly punctured towards the anterior border *fea*, sp. n., p. 474.
- Less robust, flatter; thorax uniformly punctured *obliquus* Bernh., p. 470.
25. Larger (4.5 mm.); thorax coarsely and closely punctured; penultimate joints of antennæ not transverse *rufobrunneus*, sp. n., p. 471.
- Smaller (3 mm.); thorax finely and sparingly punctured; penultimate joints of antennæ transverse *impressicollis*, ♀, Kr., p. 475

2001. *Astilbus incola*.

Astilbus incola Fauv.*, Rev. d'Ent. xxiii, 1904, p. 63.

Fore-parts almost dull, abdomen shining. Head and elytra black, the humeral angles obscurely reddish, thorax and

abdomen pitchy, the anterior and posterior margins of the former narrowly reddish, the sides and posterior margins of the segments of the latter more or less broadly reddish. Antennæ black, the first three joints (except apex of the 3rd) and apex of the 11th reddish-yellow. Legs reddish-yellow. Length 6.5-7 mm.

Head strongly transverse, as broad as the thorax, the eyes large and prominent, between the insertion of the antennæ with a small tubercle; in the ♂ broadly and deeply impressed on the disc and more distinctly coriaceous, in the ♀ broadly but more superficially impressed and less coriaceous, the puncturation in both sexes rather close, moderately fine. Antennæ longer than the head and thorax, thickened towards apex, the 3rd joint a third longer than the 2nd, 4th to 6th a little longer than broad, decreasing in length, 7th to 10th about as long as broad, 11th as long as the 9th and 10th together. Thorax subquadrate, scarcely a fourth broader than long, the sides rounded in front, sinuately retracted behind, immediately before the base with a little notch, so that the posterior angle forms a little tooth, the anterior angles rounded, the disc broadly superficially impressed almost throughout its length, the fundus of the impression with a fine impressed line, towards the sides with a shorter, more superficial oblique impression, slightly before the middle on each side with a small shining tubercle, closely, moderately finely, roughly punctured. Elytra broader and a fourth longer than the thorax, closely and roughly punctured, but more finely than the thorax, and with a fine coriaceous ground-sculpture. Abdomen parallel, a little narrowed before the apex, very finely, rather closely punctured on the first three visible segments, nearly impunctate on the last two, the last segment in both sexes feebly and broadly emarginate. The whole insect practically glabrous.

Nilgiri Hills. Burma: Carin Cheba; Carin Asciiui Ghécu, alt. 900-1500 metres (Fea). According to Fea this species lives with termites.

2002. *Astilbus andrewesi*, sp. n.

Head black, greasy lustrous, thorax and elytra dull pitchy-black, the anterior and posterior margins of the former narrowly and obscurely reddish, the abdomen shining reddish-brown. Antennæ black, the first two joints and legs reddish-yellow. Length 5.5-6 mm.

In colour, lustre and build very like *incola*, but with the thorax a little less transverse, the sides straight behind, its sculpture and that of the elytra much finer. Head scarcely narrower than the thorax, the eyes large and prominent,

the disc in the ♂ broadly impressed, in the ♀ with a short median impressed line, rather closely covered with small, superficial, umbilicate punctures, coriaceous. Antennæ with the 3rd joint twice as long as the 2nd, 4th and 5th slightly longer than broad, 6th to 10th slightly transverse. Thorax very slightly transverse (4:3.5), the sides gently rounded in front, rather strongly retracted and almost straight behind to the obtuse posterior angles, in the middle broadly and superficially impressed and finely sulcate, in the ♂ with a small tubercle on each side near the middle as in *incola*, near the lateral margin with a feeble oblique impression in both sexes, puncturation moderately fine, close, strongly coriaceous. Elytra broader and a little longer than the thorax, similarly but more deeply punctured, strongly coriaceous. Abdomen closely, very finely punctured, much less closely on the penultimate segments. The whole insect practically glabrous.

♂: 8th dorsal segment feebly arcuately emarginate; 6th ventral segment a little produced and broadly rounded.

♀: 8th dorsal segment truncate.

Nilgiri Hills (*Andrewes*).

2003. *Astilbus proximus*, sp. n.

In size, build, colour, lustre and antennal structure very similar to *incola*, but differing in the following respects: the head has only a small superficial impression in the middle, the puncturation a little finer, the thorax has all the margins rufescent, the anterior and posterior more broadly than in *incola* and is without the tubercles seen in that species, the puncturation is very similar, but not so rough, the elytra more finely and scarcely roughly punctured, coriaceous, and with the suture narrowly and obscurely rufescent, the abdomen has the 8th dorsal segment truncate. Length 6.5 mm.

Dehra Dun (*Balwant Singh*). Unique.

2004. *Astilbus stevensi*, sp. n.

Moderately shining; head and elytra pitchy-black, thorax and abdomen brownish-red. Antennæ reddish-brown. Legs reddish-yellow. Length 5 mm.

Near *proximus* but smaller and narrower, head not so broad, antennæ much thicker, thorax without lateral impression. Head suborbicular, distinctly narrower than the thorax, the eye slightly longer than the post-ocular region, the disc lightly impressed, with close, flat, superficial punctures, finely coriaceous. Antennæ considerably thickened towards apex, the 3rd

joint longer than 2nd, 4th to 10th gradually more transverse, the penultimate about three times as broad as long, 11th a little longer than the 9th and 10th together. Thorax slightly transverse (4 : 3.5), the sides sinuately retracted behind, the posterior angles rounded, along the middle with a fine impressed line, the sculpture much as on the head. Elytra broader and slightly longer than the thorax, the sculpture very similar. Abdomen finely and sparingly punctured, especially on the penultimate segments. The fore-parts finely and closely yellow-pubescent.

Sikkim : Gopaldhara, Rongbong Valley (*H. Stevens*).
Unique. British Museum.

2005. *Astilbus punctatissimus*. (Plate II, fig. 6.)

Myrmedonia punctatissima Kr.*, Linn. Ent. xi, 1857, p. 52.

Fore-parts dull; head black, thorax and elytra pitchy-black, the base of the latter reddish; abdomen shining, the first three visible segments brownish-yellow, more or less infuscate along the middle, 4th and 5th pitchy, the posterior margins yellowish, the 6th yellow. Antennæ black, the first two joints and base of 3rd reddish-yellow. Legs reddish-yellow. Length 5 mm.

Somewhat like *incola* in build and colour but with narrower thorax and coarser puncturation of the head, elytra and abdomen. Head as broad as the thorax, the eyes rather large but smaller than in *incola*, broadly and superficially impressed on the disc, between the insertion of the antennæ with a tubercle, deeply, coarsely and closely punctured all over in the ♀, less deeply and a little less closely in the ♂, and with a narrow median impunctate space and more coriaceous. Antennæ long and stout, the 3rd joint about a half longer than the 2nd, 4th to 7th all a little longer than broad, decreasing in length, 8th to 10th as long as broad, 11th as long as the 9th and 10th together. Thorax as long as broad, the sides gently rounded in front, almost straight and retracted behind to the obtuse posterior angles, along the middle broadly and slightly flattened, with the usual median sulcus and basal fovea, near the posterior angles very feebly, obliquely impressed, closely, coarsely and rugosely punctured, coriaceous. Elytra as long as but broader than the thorax, closely and rather more coarsely and rugosely punctured. Abdomen rather coarsely and closely punctured on the first two visible segments, more sparingly and more finely on the following, the last two practically impunctate, the 8th truncate. The whole insect practically glabrous.

Ceylon : Negombo; Kandy. India : Nilgiri Hills. Nilambur.

2006. *Astilbus planaticollis*.

Myrmedonia planaticollis Kr., Linn. Ent. xi, 1857, p. 51.

Fore-parts dull, abdomen shining. Head and abdomen pitchy-black, the sides and posterior margins of the segments rufescent, thorax and elytra pitchy-brown, the disc of the latter sometimes infusate. Antennæ red, the first three joints and legs reddish-yellow. Length 5 mm.

Head strongly transverse, as broad as the thorax, the eyes large and prominent, between the insertion of the antennæ with a shining tubercle, along the middle with obsolete impressed line, strongly coriaceous, the puncturation fine, sparing and indistinct, confused with the ground-sculpture. Antennæ moderate, the 3rd joint twice as long as the 2nd, 4th to 10th transverse, slightly increasing in width, the penultimate twice as broad as long, the 11th as long as the 9th and 10th together. Thorax a fourth broader than long, the sides rounded in front, slightly, sinuately retracted behind to the obtuse posterior angles, the anterior angles rounded, along the middle broadly and superficially impressed, the fundus with fine impressed line not reaching the anterior or posterior border, on each side superficially, obliquely impressed, on each side of the middle close to the anterior margin sometimes with a small round impression, the puncturation fine, moderately close, but confused with the strong coriaceous ground-sculpture. Elytra a good deal broader and slightly longer than the thorax and, like it, coriaceous, the puncturation fine, moderately close, more distinct and less confused with the ground-sculpture. Abdomen a little narrowed before the apex, very finely, moderately closely punctured on the first three visible segments, much more sparingly on the following, very finely coriaceous.

♂: 8th dorsal segment rounded and finely crenulate.

♀: 8th dorsal segment simply rounded.

Ceylon: Colombo. India: Nilgiri Hills; Madura. In termite's nests.

2007. *Astilbus flavus*, sp. n.

Dull, entirely yellow. Antennæ reddish-yellow. Legs yellow. Length 2.5 mm.

In build and lustre very like *planaticollis*, but much smaller and of an entirely yellow colour, the eyes smaller. Antennæ with the 3rd joint as long as the 2nd, 4th and 5th very slightly longer than broad, 6th to 9th as long as broad, 10th slightly longer than broad, 11th as long as the 10th. Head as broad as the thorax, coriaceous, finely and moderately closely punctured, much more distinctly than in *planaticollis*. Thorax a third broader than long, trapezoidal, the posterior angles

obtuse, with broad median and lateral impressions, but without median impressed line in the former, closely, moderately finely, somewhat roughly punctured, coriaceous. Elytra a little broader and a third longer than the thorax, the puncturation very similar. Abdomen parallel, very finely, roughly and closely punctured throughout, scarcely less closely on the penultimate segments. Pubescence throughout very fine, short and rather close.

Bihar: Ranchi, Nankum, 1928 (*Laidlaw*). At light. Unique. British Museum.

2008. *Astilbus rubricollis*, sp. n.

Head, elytra and abdomen shining, thorax dull. Head black, thorax yellowish-red, elytra smoky-brown, the base narrowly yellowish; abdomen yellow, the 7th segment infusate. Antennæ reddish, the first two joints and the last reddish-yellow. Legs reddish-yellow. Length 3.5 mm.

Head strongly transverse, as broad as the thorax, the eyes large and prominent, very finely, moderately closely punctured, very finely coriaceous. Antennæ rather long, a little thickened towards apex, the 3rd joint nearly twice as long as the 2nd. 4th to 10th longer than broad, decreasing in length, the 10th only slightly longer than broad, the 11th as long as the preceding two together. Thorax slightly transverse (5:4.5), the sides rounded in front, distinctly retracted and sinuate behind, the posterior angles obtuse, without sulcus or impressions, strongly shagreened and impunctate. Elytra broader and slightly longer than the thorax, not emarginate postero-externally, finely, moderately closely punctured, with only a trace of ground-sculpture. Abdomen practically glabrous and impunctate and without ground-sculpture except on the last two segments, the 7th being coarsely and closely punctured, the punctures more or less elongate at the base, the 8th with numerous small granules and fine coriaceous ground-sculpture, the posterior border feebly and broadly emarginate. Head and elytra with a fine pubescence; thorax with a few very short, scarcely perceptible hairs near the anterior angles and a black seta. The sculpture of the thorax is very like that of *opacicollis*, that of the 7th abdominal segment resembles that of the genus *Pheidologitonetes*, and the build and long posterior tarsi also. The specimen being unique, its position is doubtful.

Kumaun: Haldwani district. Unique. British Museum.

2009. *Astilbus trigonocephalus*, sp. n. (Plate II, fig. 7.)

Shining; head and thorax dark reddish-brown, elytra dark brown, the base narrowly reddish; abdomen with the

first visible segment yellow, the rest black. Antennæ yellowish-red, the 1st and 3rd to 6th joints infusate. Legs reddish-yellow, the femora infusate. Length 3.5 mm.

In colour and the strong setæ of the thorax and elytra similar to *Pheidologitonetes setifer*, but at once distinguished by the large triangular head, more transverse thorax, and the normal puncturation of the 7th abdominal segment. Head large, convex, broader than the thorax, the eyes rather small, the post-ocular region distinctly dilated, extremely finely and very sparingly punctured, without ground-sculpture, the inter-antennal tubercle obsolete, the sides setiferous. Antennæ rather long and slender, the 3rd joint distinctly longer than the 2nd, 4th to 10th all longer than broad, decreasing in length, cylindrical, the 11th not as long as the preceding two together. Thorax transverse (2.5 : 2), convex, trapezoidal, the sides distinctly retracted behind, the median impressed line very fine, evanescent in front, foveate at the middle of the base, very finely, moderately closely punctured, more sparingly towards the sides, these with four or five long black setæ; ground-sculpture absent. Elytra as long as the thorax but broader, very finely (but less finely than the thorax), moderately closely, asperately punctured, the sides with long black setæ. Abdomen a little narrowed at the base, more strongly towards the apex, the sides rounded and with long black setæ, very finely, moderately closely punctured throughout and with a few erect black setæ; 8th dorsal segment rounded behind. This species and *setifer* appear to connect the genus with *Orphnebius*.

Nilgiri Hills (*Andrewes*). With *Pheidole ? indica*. A single specimen.

2010. *Astilbus lineatocollis*.

Myrmedonia lineatocollis Kr.*, Arch. Naturg. xxv, 1859, p. 26.

Shining; head black; thorax and abdomen pitchy-brown, the raised margins of the latter more or less yellow; elytra brownish-yellow, lighter at the shoulders. Antennæ brown, the first three joints yellow. Legs reddish-yellow. Length 3 mm.

Head transversely suborbicular, a little broader than the thorax, very finely and very sparingly punctured. Antennæ long and slender, the 3rd joint a little longer than the 2nd, 4th to 8th a little longer than broad, gradually decreasing in length, 9th and 10th about as long as broad, 11th about as long as the 9th and 10th together. Thorax slightly transverse, widest in front, the sides rounded in front, straighter and slightly retracted behind, the posterior angles obtusely rounded, along the middle with deeply impressed line and

a fovea before the scutellum, extremely finely, sparingly punctured. Scutellum granular. Elytra scarcely longer but a good deal broader than the thorax, transverse, more closely and much less finely punctured. Abdomen a little narrowed before the apex and, except for a row of very fine punctures along the posterior margins, impunctate and glabrous. Pubescence on the fore-parts very sparing.

“Ost-Indien,” without further indication.

2011. *Astilbus obliquus*.

Astilbus obliquus Bernh.*, W. Z. B. lxvi, 1916, p. 427. (Fauvel, *in litt.*)

Shining; head, thorax and abdomen black, the posterior angles of the first three visible segments and often the posterior margins themselves reddish-yellow; elytra reddish-yellow, the sides blackish. Antennæ black, the 1st joint and sometimes the first three reddish. Legs reddish-yellow. Length 5 mm.

Head transverse, a little narrower than the thorax, the eyes large and prominent, the disc broadly superficially impressed, impunctate, the frontal tubercle smooth, elsewhere with moderately large, more or less umbilicate, moderately close punctures; ground-sculpture absent. Antennæ rather long and stout, the 3rd joint longer than the 2nd, 4th to 7th slightly longer than broad, decreasing in length, the 8th to 10th as long as broad or slightly transverse, the 11th as long as the preceding two together. Thorax slightly transverse, the sides rounded in front, straight and moderately retracted behind, the posterior angles obtuse, the anterior rounded; in the posterior two-thirds deeply and broadly impressed, and with a sharply impressed line along the middle ending in a fovea before the scutellum, more closely and more strongly punctured than the head, the punctures similar in character; ground-sculpture absent. Elytra a good deal broader and a little longer than the thorax, with similar strong but rather closer punctures; ground-sculpture absent. Abdomen slightly narrowed at base and apex, closely and rather strongly punctured in the transverse impressions, elsewhere finely asperately and closely punctured at the sides, its posterior margin broadly arcuately emarginate and indistinctly crenulate, the posterior angles dentiform. The whole insect practically glabrous. In the six specimens before me no difference is to be seen in the structure of the 8th dorsal segment or in the size of the thoracic impression.

Burma (*type*): Carin Asciiui Ghécu, alt. 1400-1500 m., iii.-iv. 8 (*Fea*). India: Dehra Dun.

2012. *Astilbus assamensis*, sp. n.

Shining, black, the thorax with slight metallic reflex; elytra brown, infusate externally. Antennæ black. Legs reddish-yellow, the apices of the femora narrowly infusate. Length 4.75 mm.

In build very like *obliquus* but with the head much more finely and much more sparingly punctured, without impression in either sex, the antennæ black but very similarly constructed, thorax slightly narrower and with metallic reflex, much less impressed in the middle, but with very similar puncturation but not quite so close, the elytra darker, more finely punctured, the abdomen practically impunctate.

♂: 8th dorsal segment gently rounded and with seven or eight teeth; 6th ventral segment a little produced and broadly rounded.

♀: 8th dorsal segment broadly, feebly emarginate.

Assam: Naga Hills, Laimatak. Burma: Ruby Mines.

2013. *Astilbus rufobrunneus*, sp. n.

Fore-parts light reddish-brown, the head shining, the thorax and elytra less so; abdomen shining, the first two visible segments and base of the 3rd yellow, their lateral margins with a black spot, the following segments black. Antennæ reddish-brown, the first two joints reddish-yellow. Legs reddish-yellow, the apical half of the middle and posterior femora usually infusate. Length 4.5 mm.

In build very similar to *obliquus*, but smaller, differently coloured, the thorax without broad impression, etc. Head sometimes with a broad superficial impression on the disc (? ♂), smooth along the middle, at the sides with a few small punctures; ground-sculpture absent; eyes large. Antennæ rather long and stout, the 3rd joint a good deal longer than the 2nd, 4th to 9th all longer than broad, gradually decreasing in length, the 10th about as long as broad, the 11th a little shorter than the preceding two together. Thorax less than a fourth broader than long, convex, with the usual median groove and fovea at the base, closely and coarsely punctured, much more finely and sparingly along the margins; ground-sculpture absent. Elytra as long as the thorax but a good deal broader, coarsely, closely and rugosely punctured. Abdomen practically impunctate and presenting no special characters in the specimens before me.

Chittagong: Sitapahar River, 11. i. 25 (*Beeson*). Nilgiri Hills (*Andrewes*).

2014. *Astilbus adjacens*, sp. n.

Moderately shining; head and thorax dark reddish-brown, elytra darker; abdomen with the first two visible segments and the posterior margins of the following two yellow, the rest black. Antennæ dark brown, the 1st joint brownish-yellow. Legs reddish-yellow, the tibiæ infusate. Length 4 mm.

Somewhat resembling *rufobrunneus*, but the fore-parts darker, the eyes smaller, thorax shorter, more transverse, with the median sulcus obsolete and limited to the base, sculpture of the thorax much less close, finer and distinctly granular, elytra distinctly impressed at the sides, asperately punctured. Head narrower than the thorax, the eyes moderate, disc impunctate, elsewhere with small, scattered, asperate punctures; ground-sculpture scarcely visible. Antennæ rather long and stout, the 3rd joint twice as long as the 2nd, 4th and 5th slightly longer than broad, 6th and 7th as long as broad, 8th to 10th slightly transverse, the 11th shorter than the preceding two together. Thorax a fourth broader than long, the sides rounded in front, strongly retracted behind, the posterior angles rounded, obsolete impressed in the middle behind, the sculpture consisting of moderately close, small granules; ground-sculpture absent. Elytra as long as but broader than the thorax, distinctly impressed laterally, closely, moderately finely, asperately punctured. Abdomen practically impunctate and glabrous.

♂: 8th dorsal segment with a few scattered granules, the posterior margin truncate, finely and closely denticulate on each side with a larger triangular tooth.

♀: unknown.

Assam: Naga Hills.

2015. *Astilbus nigrescens*.

Astilbus nigrescens Motsch.*, Bull. Soc. Nat. Mosc. xxxi, 1858, iii, p. 262.

Shining; head black, thorax and elytra pitchy-black, the humeral angles indistinctly reddish; abdomen with the first two visible segments and base of the 3rd reddish-yellow. Antennæ with the 1st two joints brownish-yellow, the 3rd to 7th black, the rest wanting. Anterior legs reddish-yellow, the apex of the femur infusate, other legs wanting. Length 3.5 mm.

Very near *borneensis* Bernh., similar in size, build and colour, except that the anterior femora are not so dark and the base of the abdomen more extensively reddish-yellow, the head has a few extremely fine punctures, the thorax much more finely and less deeply punctured, the elytra more finely

punctured. Head suborbicular, as wide as the thorax, the length of the eye a little more than that of the post-ocular region, smooth along the middle, at the sides with a few extremely fine and indistinct punctures. Antennæ with the 3rd joint about twice as long as the 2nd, 4th to 6th longer than broad, decreasing in length, 7th about as long as broad, the rest wanting. Thorax slightly broader than long, the sides rounded in front, retracted and slightly sinuate behind, the posterior angles rounded, along the middle with an impressed line reaching from the basal fovea almost to the anterior margin, the puncturation fine, close and superficial, obsolete towards the anterior angles. Elytra as long as but broader than the thorax, closely and roughly punctured. Abdomen practically impunctate.

"Ind. or.," without further indication. One example

2016. *Astilbus tuberculatus*.

Astilbus tuberculatus Bernh., W. Z. B. lxvi, 1916, p. 427.
(Fauvel, *in litt.*)

Shining black, the elytra yellowish-brown, the sides blackish. Antennæ reddish-brown, the first two joints and legs reddish-yellow. Length 5.5 mm.

♂: head transverse, a little narrower than the thorax, the disc impunctate, not impressed, at the sides with some moderate but superficial punctures; ground-sculpture absent. Antennæ scarcely differing from *obliquus*. Thorax convex, a little longer than broad, the sides rounded in front, nearly straightly retracted to the obtuse posterior angles, along the posterior two-thirds with a fine median sulcus ending in a fovea before the scutellum, across the middle with a superficial transverse impression, the sculpture behind this consisting of rather large, closely placed granules, in the impression itself with finer ones, elsewhere with fine, rather close asperate punctures; ground-sculpture absent. Elytra as long as but a good deal broader than the thorax, very closely covered with small granules. Abdomen with a few punctures in the transverse impressions, elsewhere very sparingly punctured; the 3rd and 7th segments each with a tubercle at the middle of the posterior margin, 8th with a few moderate tubercles, the posterior margin broadly and slightly emarginate and finely denticulate, the angles dentiform; 6th ventral segment a little produced and broadly rounded.

The above description is made from a specimen so named from Fauvel's collection, the locality label as below, and doubtless a co-type.

Burma: Carin Asciiui Ghécu, alt. 1400-1500 m., iii., iv. 88
(Fea).

2017. *Astilbus mixtus*, sp. n.

Shining, black, the elytra reddish-yellow, with a sutural triangular blackish marking extending from the base nearly to the posterior margin, the sides more or less broadly pitchy, the posterior margins of the abdominal segments narrowly and obscurely yellowish. Antennæ black, the first two joints reddish-yellow, the 1st sometimes with a black spot. Legs reddish-yellow. Length 5.5 mm.

Colour of *obliquus*, build more like *tuberculatus*, but with broader, flatter thorax. Head narrower than the thorax, the eyes rather large, with smooth tubercle between the insertion of the antennæ, in the ♂ broadly, superficially impressed at the base, the impression pubescent and finely and closely punctured, elsewhere finely, moderately closely, obsoletely punctured except in front, which is impunctate, in the ♀ without pubescent impression, finely, moderately closely, obsoletely punctured, smooth in front; ground-sculpture absent in both sexes. Antennæ rather long and stout, the 3rd joint nearly twice as long as the 2nd, 4th to 7th all a little longer than broad, decreasing in length, 8th to 10th as long as broad, 11th as long as the 9th and 10th together. Thorax a fourth broader than long, the sides rounded in front, almost straight and retracted behind, immediately before the base with a very small notch, in the ♂ less shining, broadly impressed along the middle, obtusely carinate on each side of the impression, its fundus with sharp impressed line, near the lateral margin superficially impressed, the sculpture close and granular, in the ♀ more shining, the median impression narrower and more superficial, its margins not carinate, the fundus with sharply impressed median line, the lateral impressions less distinct, closely, moderately finely, simply punctured; ground-sculpture absent in both sexes. Elytra distinctly broader but only slightly longer than the thorax, superficially impressed near the postero-external angles, closely and rather coarsely punctured. Abdomen moderately finely and moderately closely punctured on the 1st visible segment, more finely and sparingly on the 2nd, elsewhere very finely and very sparingly punctured.

♂: 3rd dorsal segment with a small tooth at the middle of the posterior margin; 8th broad, almost truncate and closely denticulate; 6th ventral segment a little produced and broadly rounded.

♀: 8th dorsal segment narrowed and truncate.

Dehra Dun. Rawalpindi.

2018. *Astilbus feæ*, sp. n.

Shining, black, the elytra reddish-yellow, the sutural and lateral regions blackish, the posterior margins of the first

two visible abdominal segments narrowly yellowish-red. Antennæ dark reddish-brown, the first two joints and legs reddish-yellow. Length 5.5 mm.

♀: in build and antennal structure exactly similar to *tuberculatus*, but at once distinguished by the different sculpture of the thorax and elytra. Head scarcely differing from *tuberculatus*, the thorax of the same form, with fovea before scutellum and impressed median line in the posterior half, the puncturation close, moderately fine and simple, much finer towards the anterior margin; ground-sculpture absent. Elytra more shining than in *tuberculatus*, not at all rugose, the punctures simple, close, and rather coarser than on the thorax. Abdomen very finely and very sparingly punctured.

♂: unknown.

Burma: Carin Asciiui Ghécu (*Fea*). A single specimen in my collection.

2019. *Astilbus impressicollis*.

Myrmedonia impressicollis Kr.*, Linn. Ent. xi, 1857, p. 53.

Myrmedonia sculpticollis Wasm.*, D. E. Z. 1899, p. 151.

Shining; head pitchy-black; thorax reddish-brown; elytra yellowish or yellowish-brown, more or less infuscate externally; abdomen black, the first two and last two visible segments with the posterior margins yellowish. Antennæ reddish-brown, the first three joints and legs reddish-yellow. Length 3 mm.

Head transverse, suborbicular, distinctly narrower than the thorax, the post-ocular region very slightly dilated, about as long as the eye, between the bases of the antennæ with a small boss, finely, not very closely punctured and without ground-sculpture. Antennæ moderate, a little thickened towards apex, the 3rd joint long, twice as long as the 2nd, 4th to 10th moderately transverse, increasing slightly in width, the 11th as long as the 9th and 10th together. Thorax transverse (5:3.5), the sides evenly rounded, rather strongly retracted behind, the base and posterior angles rounded, along the middle narrowly sulcate for nearly the whole extent in the ♂, for about the posterior two-thirds in the ♀, broadly impressed in the ♂ on the posterior half, in the ♀ with a much more limited impression, the impression in the ♂ with small, moderately close granules, elsewhere with fine, moderately close asperate punctures, much more sparing towards the sides and anterior angles, in the ♀ with superficial, somewhat umbilicate punctures on the disc, and finer, somewhat asperate and much more sparing ones elsewhere; ground-sculpture

absent. Elytra a little longer and distinctly broader than the thorax, transverse, closely, moderately finely, rugosely punctured and without ground-sculpture. Abdomen gradually and slightly narrowed towards apex, very finely and very sparingly punctured and without ground-sculpture.

♂: 8th dorsal segment truncate, in the middle closely and finely denticulate, on each side with a larger tooth separated by a distinct interval from the denticulate area, the upper surface with closely placed granules.

♀: 8th dorsal segment truncate in the middle, obliquely truncate at the sides.

Ceylon: Colombo. India: Ahmednagar (*Heim*). With *Odontotermes wallonensis* Wasm.

2020. *Astilbus flavicornis*.

Camacopalpus flavicornis Motsch.*, Bull. Soc. Nat. Mosc. xxxi. 1858, iii, p. 235; Cam., E. M. M. lxix, 1933, p. 219.

Shining; head and elytra brown, thorax and abdomen reddish-yellow. Antennæ reddish. Legs reddish-yellow. Length 3.2 mm.

Head as broad as the thorax, transverse, the eyes large, occupying nearly the whole side of the head, vertex with a broad shallow impression, between the insertion of the antennæ with a tubercle, coriaceous, at the sides with rather fine, moderately close puncturation. Antennæ with the 3rd joint a little longer than the 2nd, 4th about as long as broad, 5th to 10th transverse, slightly increasing in width, 11th conical, rather longer than the 9th and 10th together. Thorax a fourth broader than long, the sides feebly rounded in front, retracted behind in a nearly straight line to the obtuse posterior angles, adjacent to the side-margin rather broadly impressed along the whole length, at the middle of the base with a small transverse impression, and extending from it an impressed line to beyond the middle, sculpture rather fine, moderately close and asperate; ground-sculpture absent. Elytra a little longer and a little broader than the thorax, closely, finely and asperately punctured. Abdomen a little narrowed towards apex, practically impunctate and glabrous, very finely coriaceous.

♂ (?): 7th segment with four small tubercles placed quadrately; 8th with four small tubercles arranged transversely across the middle and with two others close to the posterior margin, which is broadly and slightly emarginate.

"Ind. or.," without further indication.

This species has a facies somewhat resembling *Zyras semiflavus* Bernh., in which the post-ocular region is not bordered below.

2021. *Astilbus bituberculatus*.

Camacopalpus bituberculatus Motsch.*, Bull. Soc. Nat. Mosc. xxxi, 1858, iii, p. 233, tab. 1, fig. r; Cam., E. M. M. lxix, 1933, p. 219.

Shining; head black or blackish with reddish tinge; thorax yellowish-red; elytra brownish-yellow, infuscate postero-externally; abdomen reddish-yellow, the 5th and 6th segments slightly infuscate. Antennæ blackish, the first three joints, palpi and legs reddish-yellow. Length 4 mm.

In colour very similar to *flavicornis* but larger, with the head feebly dilated behind the eyes, which are much smaller. Antennæ darker, longer and stouter, thorax broader, with broad impression along the middle, etc. Head transverse, nearly as broad as the thorax, feebly dilated behind the eyes, the posterior angles broadly rounded, the eyes occupying little more than half the side, so that the post-ocular region is distinct; vertex in the ♂ with a large shallow impression with a little setigerous tubercle on each side of it, the seta directed backwards and inwards, in the ♀ the vertex is convex and without setigerous tubercles; the disc impunctate, towards the sides very finely and rather sparingly punctured, finely coriaceous, between the antennæ with a tubercle. Antennæ with the 2nd joint about half as long as the 3rd, 4th as long as broad, 5th to 10th transverse, 11th as long as the 9th and 10th together. Thorax transverse (6:4.5), the sides almost straight, retracted behind, all the angles rounded, along the middle of the posterior two-thirds in the ♂ broadly impressed, the sides of the impression tuberculate behind, in the ♀ with large basal fovea, towards the sides with a more shallow oblique impression, puncturation rather fine, slightly asperate, not close, more sparing in the median impression and along the side-margins; ground-sculpture absent. Elytra a little longer and broader than the thorax, with close, rather fine asperate sculpture. Abdomen a little narrowed at apex, practically impunctate.

♂: 3rd segment bisinuate at the middle of the posterior margin, so that a small median lobe is formed; 4th with a small triangular tooth at the middle of the posterior margin (often absent); 7th with a strong median keel posteriorly; 8th broadly arcuately emarginate and obscurely crenulate, on each side with a little tooth.

In the other example, marked ♀, the 3rd segment is not bisinuate but has a little puncture on each side near the middle line, the tooth on the 4th segment is very indistinct, but the 7th has the median keel well developed, the 8th as above described but with a little pointed tubercle on each side near the middle line close to the posterior margin.

I believe this also to be a ♂ with poorly developed secondary characters.

Burma (*type*). This is the type-species of *Camacopalpus*.
India : Dehra Dun.

2022. *Astilbus ruficornis*, sp. n.

Shining ; head black, the inter-antennal tubercle yellow ; thorax dark red, elytra reddish-brown, abdomen with the 1st visible segment yellow, 2nd brownish-yellow, the following black. Antennæ yellowish-red. Legs reddish-yellow. Length 4 mm.

♀ : in build very like *bituberculatus*, except that the head is not dilated behind and is as broad as the thorax. Head very finely, moderately closely punctured, finely coriaceous. Antennæ with the 3rd joint a little longer than the 2nd, 4th slightly longer than broad, the following about as long as broad, the 11th as long as the 9th and 10th together. Thorax shaped as in *bituberculatus*, narrowly impressed along the middle of the posterior two-thirds, before the scutellum with a transverse fovea, the sides distinctly impressed along their whole extent, the puncturation moderately fine, rather close and asperate ; ground-sculpture absent. Elytra closely, moderately finely, roughly punctured. Abdomen with the first two visible segments very finely, moderately closely punctured, the 3rd much less, the following nearly impunctate.

Dehra Dun (*Beeson*), 12. viii. 23. A single specimen, apparently ♀.

2023. *Astilbus gracilicornis*.

Myrmedonia gracilicornis Bernh., D. E. Z. 1902, p. 20.

Yellow, shining, antennæ slender, thorax subquadrate, sparingly and very finely punctured like the elytra, abdomen almost impunctate. Length 3 mm. ($1\frac{1}{2}$ lin.).

Of uniform light yellow colour (perhaps immature ?), the fore-parts a little, the abdomen more strongly shining, very sparingly and extremely finely pubescent. Head narrower than the thorax, transverse, more than a half broader than long, extremely finely shagreened, with dull lustre, scarcely visibly, very sparingly punctured, the eyes moderate, the temples almost as long and not bordered below. Antennæ long and slender, the 3rd joint longer than the 2nd, 4th only slightly broader than the 3rd, as long as broad, the following gradually becoming shorter and broader, the penultimate only slightly transverse, the 11th shorter than the 9th and 10th together. Thorax narrower than the elytra, broader than long, straightly and slightly narrowed behind, the anterior angles almost rectangular, with rounded apex,

the posterior rounded, in the middle with distinct broad impression, between it and the side-margin with a rather deep, curved, longitudinal impression, the median impression enlarged both before the base and the anterior margin to form a fovea; the disc is finely and sparingly punctured, extremely finely shagreened. Elytra as long as the thorax, widened behind, finely and sparingly punctured, more shining than the thorax, abdomen slightly narrowed backwards, shining, in front extremely finely and sparingly, behind scarcely punctured, smooth.

Sexual characters unknown.

Ceylon: Anuradhapura. Unique (ex *Bernhauer*).

The absence of an infra-temporal border would place this species in the genus *Astilbus* as at present constituted.

2024. *Astilbus opacipennis*.

Myrmedonia opacipennis Bernh., D. E. Z. 1902, p. 19.

Reddish-testaceous, shining; elytra dull, the 5th to 7th abdominal segments very black, the 7th with the apex testaceous, head, thorax and abdomen nearly impunctate, elytra very closely, finely rugulose, thorax subcordate, with a fovea at the base. Length 3.8 mm. ($1\frac{3}{4}$ lin.).

An elegant species, easily distinguished by the colour and the dull elytra. Head transverse, scarcely twice as broad as long, reddish-yellow, very shining, sparingly, scarcely visibly punctured and exceedingly finely and sparingly pubescent. Eyes moderately large, placed on the upper surface of the head and entirely visible from above, the temples about half as long as their length seen from above, not bordered below. Antennæ rather long and slender, the 3rd joint not much longer than the 2nd, the 4th half as long but scarcely broader than the 3rd, as long as broad, the following gradually becoming shorter and broader, the penultimate only slightly transverse, the 11th asymmetrically pointed, as long as the preceding two together. Thorax a little broader than the head, transversely cordate, about a half broader than long, strongly narrowed behind, the base gently arcuately produced, bright yellow, very shining, extremely finely, scarcely visibly and very sparingly punctured, very sparingly, extremely finely pubescent, before the scutellum with a distinct fovea. Elytra distinctly shorter than the thorax, twice as broad as long, completely dull, extremely finely, closely and longitudinally rugose; the fine rugæ run obliquely from the shoulders to the suture, around the scutellum and the posterior angles, the rugæ are irregular. Abdomen very strongly shining, the bases of the first three visible dorsal segments strongly transversely impressed, entirely smooth and of bright yellow colour, the

5th to 7th deep black, the latter with the posterior margin narrowly yellow, the basal part also of the raised lateral margins of the individual segments with a black spot. Secondary sexual characters not apparent.

Ceylon: Nalanda. Unique (ex *Bernhauer*).

The absence of an infra-temporal ridge would exclude this species from the genus *Zyras*, and I place it in *Astilbus*, but from the position of the eyes etc. it would appear to constitute an undescribed genus.

2025. *Astilbus opacicollis*.

Myrmedonia opacicollis Cam., E. M. M. Ivi, 1920, p. 98.

Shining rufo-castaneous, the thorax opaque, impunctate, with the disc infuscate, the elytra obscurely infuscate; antennæ and legs reddish-testaceous. Length 3 mm.

A small robust form, with a dull, impunctate and densely coriaceous thorax (which has in certain lights a somewhat purplish "bloom") and very shining head, elytra, and abdomen, which are destitute of ground-sculpture. Head large, transverse, subtriangular, the eyes moderately large, the temples rounded and a little dilated behind, not bordered below; the upper surface with a few setiferous punctures, otherwise practically impunctate. Antennæ moderately long and stout, the 1st joint rather stout, grooved above throughout its length, the 2nd and 3rd shorter, subequal, the 4th a little longer than broad, the 5th to the 10th transverse, gradually increasing in breadth, the penultimate about twice as broad as long, the 11th elongate, gradually pointed, longer than the preceding two together. Thorax wider than the head, one-half broader than long, gently rounded at the sides, more narrowed behind than in front, the posterior angles depressed, obtuse, completely opaque (except the extreme anterior and lateral borders and anterior and posterior angles, which are shining); impunctate, coriaceous, the sides each with four setæ. Elytra as long as and a little broader than the thorax, transverse, very finely and very sparingly punctured and pubescent, not emarginate postero-externally. Abdomen parallel, the lateral margins moderately elevated; 7th segment studded with small granules, the rest, except for a few fine setæ, glabrous and impunctate. First joint of posterior tarsi shorter than the last, slightly longer than the 2nd.

Ceylon: Bogawantalawa, alt. 4900-5200 feet (*G. Lewis*). Unique.

This species will probably form a new genus; although with strong affinities to *Astilbus* and *Zyras*, the sulcate 1st antennal joint and the comparatively short 1st joint of the posterior tarsus differentiate it from either.

Genus **ORPHNEBIUS** Motsch.

Orphnebius Motsch., Bull. Soc. Nat. Mosc. xxxi, 1858, iii, p. 263; Sharp, B. C.-A. i, 2, 1882-87 (1883), p. 209; Fenyès, Gen. Ins. 173 B, 1920, p. 281; Scheerp., Kol. Rundsch. xv, 1929, p. 19; Bernh., Zool. Anzeig. lxxxii, 1929 (Wasmann Festband), pp. 143, 146.

Hypgroptera Motsch., Ét. Ent. viii, 1859, p. 86 (ex parte); Cam., E. M. M. lxix, 1933, p. 219.

Subgen. *Aulacothoracobi* Bernh., Zool. Anzeig. lxxxii, 1929, p. 147.

Subgen. *Megalocephalobius* Bernh., l. c. p. 146.

Subgen. *Mesocephalobius* Bernh., l. c. p. 146.

Subgen. *Microcephalobius* Bernh., l. c. p. 147.

Subgen. *Orphnebius*, s. str., Bernh., l. c. p. 147.

Subgen. *Stenaspidobius* Bernh., Rev. Zool. Bot. Afr. xviii, 1929, p. 228.

Subgen. *Thoracobi* Bernh., Zool. Anzeig. lxxxii, 1929 (Wasmann Festband), p. 147.

In facies very similar to *Tetrabothrus*. Head broad, transverse. Temples not bordered below. Buccal sinus only

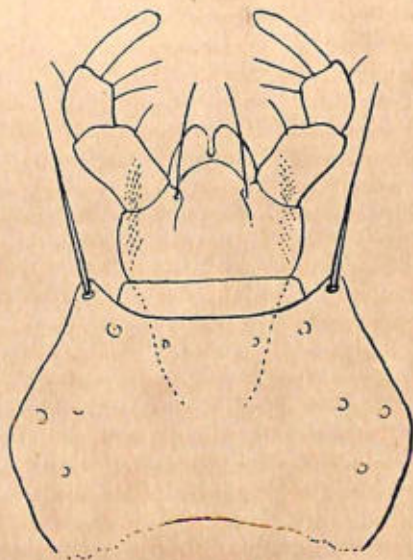


Fig. 121.—*Orphnebius hauseri*, labium.

narrowly separated from the eye in front, not reaching the level of its posterior border behind. Neck narrow, about a third as broad as the head. Gular sutures parallel. Antennæ usually with the penultimate joints transverse. Labrum transverse, membranous in front and rounded, in the middle of the anterior border with a small triangular emargination. Mandibles short, stout, curved and pointed, edentate.

Maxillary palpi with the 1st joint small, 2nd slightly curved and slightly thickened towards apex, 3rd as long as the 2nd but a good deal thicker at the apex, 4th subulate, half as long as the 3rd. Outer lobe of maxilla rather broad, extending beyond the apex of the inner, ciliate at apex; inner lobe narrow, pointed, with several fine curved spines below the apex, ciliate elsewhere. Mentum transverse, the sides rounded and dilated behind, narrowed towards the front, the anterior border almost truncate. Labial palpi short, 3-jointed, the 1st joint short, 2nd shorter and narrower, 3rd narrower than the 2nd and a little longer than the 1st. Tongue short and broad, subtriangular, scarcely as long as the 1st joint of the labial palpi, with a narrow triangular excision reaching nearly to the base and dividing it into two triangular lobes rounded at the apices. Paraglossæ feeble, extending to the base of the 1st joint of the labial palpi. Thorax somewhat variable in shape, the pronotal epipleura visible from the side, without median sulcus. Prosternum transverse, trapezoidal, without deflexed posterior part, truncate behind and without keel. Mesosternal process broad, truncate behind, extending about half the length of the coxæ, metasternal process broad and truncate, meeting the mesosternal process, the coxæ widely separated. Elytra not emarginate postero-externally. Abdomen more or less scaphoidal, only the 1st visible segment transversely impressed at the base. Legs moderate. Tibiæ ciliate. Tarsi 4, 5, 5; the anterior with the 1st joint a little shorter than the 2nd, 3rd as long as the 1st, 4th as long as the preceding three together; middle similarly constructed, but with the joints a little longer, the 4th as long as the 3rd, 5th shorter than the preceding three together; posterior with the 1st joint moderately long, a little longer than the 2nd, 3rd and 4th shorter, subequal, 5th as long as the 2nd. Claws simple, slightly curved. Differs from *Deroleptus* in the broader neck, different tarsi, the 1st joint of the posterior shorter, the antennæ usually stouter, and the shorter and stouter maxillary and labial palpi. The genus is divided into several subgenera characterized by the comparative breadth of the head and thorax. The characters given are taken from *O. hauseri*.

Only two of the subgenera are so far known in our Fauna, and are differentiated as follows:—

Head not or scarcely narrower than the thorax.....	[Bernh., p. 484. MESOCEPHALOBIVS
Head distinctly narrower than the thorax...	ORPHNEBIUS, s. str., [p. 483.

As this character is not particularly well defined I have not used it in the Key to the Species.

Key to the Species.

1. Antennæ with the penultimate joints strongly transverse..... 2.
Antennæ with the penultimate joints not or moderately transverse 3.
2. Ferruginous-red species, the 4th visible segment infuscate *lævigatus* Kr., p. 486.
Fore-parts black, abdomen red *rufiventris* Epp., p. 485.
3. Abdomen clear red or reddish-yellow, sometimes with the 4th or 4th and 5th visible segments infuscate 4.
Abdomen otherwise coloured, black or brown 10.
4. Fore-parts entirely black, abdomen entirely red 5.
Fore-parts otherwise 8.
5. Penultimate joints of antennæ distinctly transverse 6.
Penultimate joints of antennæ distinctly longer than broad..... 7.
6. Legs entirely yellowish-red; eyes very large, occupying nearly the whole side of the head *birmanus*, sp. n., p. 484.
Femora dark brown, eyes moderate... *hauseri* Epp., p. 483.
7. 11th joint of antennæ as long as the preceding three together; more robust species, elytra with very fine punctures. 11th joint of antennæ only as long as the preceding two together; narrower species, elytra with less fine punctures. *flaviventris* Champ., p. 484.
indicus, sp. n., p. 486.
8. Head and thorax black, elytra reddish, 3rd and 4th visible segments pitchy . *cingulatus* Cam., p. 489.
Head and thorax ferruginous-red or reddish-yellow 9.
9. Eyes very large; elytra with long black setæ at the sides *termitis* Motsch., p. 487.
Eyes moderate; elytra without black setæ *ferrugineus*, sp. n., p. 487.
10. Head and thorax black; legs pitchy-brown *bryanti* Cam., p. 489.
Head and thorax reddish-brown or reddish-yellow; legs reddish-yellow .. *siwalikensis*, sp. n., p. 488.

2026. *Orphnebius* (s. str.) *hauseri*. (Plate II, fig. 8.)*Orphnebius hauseri* Epp., W. E. Z. xiv, 1895, p. 54.

Shining; head, thorax and elytra black, abdomen red. Antennæ black, the first four joints red. Femora black, the tibiæ and tarsi red. Length 3.3 mm.

Head transversely suborbicular, distinctly narrower than the thorax, the eyes rather large but not prominent, about as long as the post-ocular region, with a few extremely fine scattered punctures at the sides, otherwise impunctate and without ground-sculpture. Antennæ moderate, the 3rd joint a little longer than the 2nd, 4th a little longer than broad, 5th to 10th gradually more transverse, the penultimate twice

as broad as long, the 11th laterally compressed, longer than the 9th and 10th together. Thorax transverse (6.5:5), convex, widest behind, the sides almost straight, a little retracted towards the front and with five setiferous punctures, otherwise practically impunctate and glabrous. Elytra a fifth longer and a good deal broader than the thorax, widest behind, convex, with a few very fine setiferous punctures. Abdomen as broad as the elytra, a little narrowed behind, the side-margins strongly raised, the 7th segment closely and coarsely punctured, the punctures more or less elongate, posteriorly with longitudinal rugæ, 8th with the posterior margin broadly rounded behind and with a row of small granules, elsewhere practically impunctate and glabrous, the sides with some black setæ.

Simla Hills. Chakrata and Mussooree districts. Darjeeling district: Ghum. W. Almora, Sunderdhunga. In company with *Myrmica smythiesi* Forel and often carried about by this insect.

2027. *Orphnebius (Mesocephalobius) flaviventris*.

Orphnebius flaviventris Champ., E. M. M. lvii, 1921, p. 179.

Shining; head, thorax and elytra black, abdomen yellowish-red. Antennæ black. Femora black, tibiæ brown, tarsi yellow. Length 3.5 mm.

Broader than *hauseri* and similarly coloured, except that the antennæ are black and the tibiæ brown. Head a little narrower than the thorax, with a few fine setiferous punctures. Antennæ long and slender, 3rd joint longer than 2nd, 4th to 10th all longer than broad, gradually decreasing in length, the 11th as long as the preceding three together. Thorax more transverse than in *hauseri*, with a few fine setiferous punctures. Elytra a little longer and a good deal broader than the thorax, with a few setiferous punctures as in *hauseri*. Abdomen parallel, practically impunctate, the raised lateral margins broad, the 7th segment very feebly striate behind, 8th broadly rounded, practically impunctate; sides with some black setæ. 1st joint of posterior tarsi scarcely longer than 2nd.

Kumaun: W. Almora, alt. 5500 feet (*H. G. Champion*).
Unique. British Museum.

2028. *Orphnebius (Mesocephalobius) birmanus*, sp. n.

Shining; head, thorax and elytra black, the latter sometimes obscurely reddish in the basal half, abdomen red. Antennæ black, the first four joints reddish-yellow. Legs reddish-yellow. Length 3.75 mm.

Except for the legs scarcely differs in colour from *hauseri*;

the antennæ are similarly constructed except that the 4th joint is shorter, scarcely longer than broad, but the head is broader, very little narrower than the thorax, almost impunctate, eyes much larger, longer than the post-ocular region. Thorax transverse (5.5 : 4.5), wider in front than behind, the sides almost straight and retracted from before backwards, all the angles broadly rounded and, except for four or five setiferous punctures at the sides, impunctate. Elytra distinctly broader and slightly longer than the thorax, with a few very fine setiferous punctures as in *hauseri*. Abdomen as broad as the elytra, gradually narrowed towards apex, the sides strongly elevated, the 7th segment much less coarsely, less closely, more obsoletely punctured than in *hauseri* and scarcely striate posteriorly, but with six distinct keels near the posterior margin, 8th segment less broadly rounded than in *hauseri*, at the middle of the posterior margin with two little tubercles and a few scattered ones elsewhere, the rest of the abdomen glabrous and impunctate.

Burma : Tenasserim, Tavoy (*Doherty*).

2029. **Orphnebius (Mesocephalobius) rufiventris.**

Myrmedonia rufiventris Epp., D. E. Z. 1895, p. 388.

Very shining, black, the abdomen red. Antennæ black, the first three joints and legs yellow, the femora darker. Length 3.75 mm.

Of short, robust build. Head broad, a little narrower than the thorax, transversely suborbicular, impunctate, the front convex. Antennæ stout, extending to the middle of the elytra, strongly thickened towards the apex and with rather long, sparing black hairs, the 3rd joint twice as long as the 2nd, 4th and 5th a little longer than broad, 6th transverse, 7th to 10th much more strongly, 11th almost longer than the preceding two together. Thorax more than twice as broad as long, shorter than the head, truncate in front, gently rounded behind, the sides strongly rounded, retracted behind, the anterior angles blunt and depressed, the posterior broadly rounded, convex, in the middle of the disc on each side with a puncture, along the anterior border with a few more. Elytra broader and longer than the thorax, wider behind, dehiscent at the sutural angle, with very sparing, scarcely visible punctures and fine depressed hairs. Abdomen broad, with strongly elevated side-margins, a little narrowed behind, somewhat concave above, the 7th segment entirely covered with close, fine, longitudinal striæ; 8th with two curved rows of fine sparing granules, one at the posterior margin, the other across the middle.

Burma : Pegu. Unique (ex *Eppelsheim*).

2030. *Orphnebius (Mesocephalobius) lævigatus*.

Myrmedonia lævigata Kr.*, Arch. Naturg. xxv, 1859, p. 26.

Shining, ferruginous-red, the 4th visible abdominal segment slightly infuscate, the last yellowish. Antennæ reddish, the first two joints and legs yellow. Length 3.75 mm.

Head as broad as the thorax, transverse, the neck about a third its width, the eyes very large and prominent, much longer than the post-ocular region, impunctate and glabrous and without ground-sculpture. Antennæ very short and clavate, the 3rd joint as long as the 2nd, 4th to 10th transverse, the 5th and following very strongly so, four times as broad as long, the 11th narrower than but about as long as the preceding two together. Thorax very slightly transverse, convex, the sides straight, retracted in front, all the angles rounded, without sculpture and almost glabrous. Elytra slightly longer and a good deal broader (5:3) than the thorax, transverse, wider behind, internal to the humeral angle with an impression, impunctate and glabrous. Abdomen scaphoidal, narrowed at base and apex, flat, the first three visible segments with normal, transverse, basal impressions, impunctate and glabrous. First joint of posterior tarsus a little longer than the 2nd.

Although much resembling *Tetrabothrus* in facies, and included in that genus in the Cat. Col. pars. 82, p. 688, the absence of deep excavations of the anterior abdominal segments characteristic of this genus excludes it.

"Ind. Port." (*Helfer*).

2031. *Orphnebius (Mesocephalobius) indicus*, sp. n.

Shining; head and thorax black, elytra pitchy-black; abdomen red. Antennæ with the first five joints shining, yellowish-red, the following dull reddish-brown. Legs yellowish-red. Length 3.5 mm.

Head strongly transverse, as broad as the thorax, the post-ocular region rounded and retracted to the neck, a little shorter than the length of the large eye; practically impunctate and without ground-sculpture. Antennæ with the 3rd joint slightly longer than the 2nd, 4th a little longer than broad, 5th and following laterally compressed, the 5th to 10th (seen on the flat slightly transverse) gradually increasing in breadth, the 11th as long as the preceding three together in the ♀, scarcely longer than the 10th in the ♂. Thorax convex, slightly transverse (4.5:4), widest behind at the broadly rounded posterior angles, the sides practically straight and a little retracted to the rounded anterior angles, practically without sculpture. Elytra a fourth longer and nearly twice as broad as the thorax, in the ♂ with a tubercle at the junction

of the anterior and middle thirds and nearer the suture than the lateral margin, rather broadly impressed postero-externally, along the suture on each side with a row of five or six small tubercles, elsewhere with very fine and very sparingly asperate punctures, in the ♀ convex, very finely and very sparingly punctured. Abdomen scaphoidal, practically impunctate except on the 7th segment, which is very coarsely and very closely punctured, the punctures more or less elongate; glabrous, the sides with some stiff black setæ, the postero-superior angles of the ventral segments somewhat prominent.

♂: 7th dorsal segment with a very strong median keel throughout; 8th broadly rounded and finely and closely denticulate.

Manipur (*Doherty*). British Museum.

2032. *Orphnebius (Mesocephalobius) ferrugineus*, sp. n.

Shining, light ferruginous-red, the elytra reddish-yellow. Antennæ reddish-brown, the first three and the last two joints yellowish-red. Legs reddish-yellow. Length 3.3 mm.

Head transversely subquadrate, nearly as broad as the thorax, eyes moderate, extremely finely and very sparingly punctured and without ground-sculpture. Antennæ moderate, rather stout, the 3rd joint a little longer than the 2nd, 4th slightly longer than broad, 5th as long as broad, 6th to 10th slightly transverse, differing but little amongst themselves, 11th a little shorter than the preceding three together. Thorax slightly transverse (4.5 : 4), the sides rounded in front, retracted and slightly sinuate behind, the posterior angles briefly rounded, practically impunctate except for four or five setiferous punctures at the sides; ground-sculpture absent. Elytra very slightly longer but distinctly broader than the thorax, extremely finely and very sparingly punctured, each puncture with a long yellow hair. Abdomen a little narrowed at base, more distinctly towards the apex, scarcely scaphoidal, the 7th segment coarsely and closely punctured, along the posterior part with fine rugæ; 8th truncate, very obscurely denticulate, elsewhere, except for a row of fine setiferous punctures at the posterior margins of the segments, impunctate and glabrous.

Ceylon. Unique. British Museum.

2033. *Orphnebius (Mesocephalobius) termitis*.

Hygroptera termitis Motsch., Ét. Ent. viii, 1859, p. 87, tab. 1, fig. 9; Cam., E. M. M. lxxix, 1933, p. 219.

Shining; head and thorax yellowish-red, elytra and abdomen yellow. Antennæ reddish-brown, the first four joints and legs reddish-yellow. Length 2.2 mm.

Smaller and of a more yellow colour than *ferrugineus*, with larger eyes and shorter antennæ, thorax more transverse, a third broader than long, more like that of *bryanti* in shape, the sides being strongly retracted behind; the eyes, however, are much larger than those of that species. Head transversely subquadrate, as broad as the thorax, the eyes large, much longer than the temples, almost impunctate and glabrous, and without ground-sculpture. Antennæ rather short, the 3rd joint a little longer than the 2nd, 4th small, about as long as broad, 5th slightly, 6th to 10th more strongly transverse, the penultimate about a half broader than long, the 11th as long as the 9th and 10th together. Thorax a third broader than long, the sides gently rounded, rather strongly retracted behind, the disc sometimes with a pair of small setiferous punctures behind the middle and four others on either side, otherwise glabrous and practically impunctate. Elytra as long as but a good deal broader than the thorax, very finely and very sparingly punctured, each puncture with a long yellow hair, the sides with two or three long black setæ. Abdomen a little narrowed at the base and apex, the sides gently rounded, the 7th segment coarsely and closely punctured on the basal, striate on the posterior half; the 8th broadly rounded; the other segments glabrous and impunctate, the sides with long yellow setæ.

Ceylon: Kandy (*Bryant*). The unique specimen is probably somewhat immature.

2034. *Orphnebius (Mesocephalobius) siwalikensis*, sp. n.

Shining; head reddish-brown, thorax yellowish-red; elytra yellow, a little infuscate postero-externally; abdomen brown, the posterior margins of the segments narrowly rufescent. Antennæ reddish-brown, the first three joints and the legs reddish-yellow. Length 3.3 mm.

Near *termitis*, but larger and with different antennæ, thorax shorter, more transverse (4.5:3), the elytra a third longer than the thorax and with a little tubercle externally just about the middle, abdomen gradually narrowed from base to apex, 7th segment coarsely and closely punctured in front, closely striate behind, the 8th with a few small granules, the posterior margin rounded and closely and finely denticulate. Head broad and subquadrate, nearly as broad as the thorax, the eyes large as in *flavescens*. Antennæ with the 3rd joint twice as long as the 2nd, 4th to 10th gradually more transverse, the penultimate twice as broad as long, the 11th as long as the 9th and 10th together. Puncturation extremely fine and sparing throughout and without ground-sculpture.

Siwaliks: Kheri Rau. Unique.

2035. *Orphnebius (Mesocephalobius) cingulatus*.

Orphnebius cingulatus Cam., E. M. M. lvi, 1920, p. 96.

Black, shining; disc of the elytra obscurely rufescent, abdomen red, the 5th and 6th segments pitchy; anterior pair of legs and first four joints of the antennæ reddish-testaceous, middle and posterior legs pitchy-testaceous. Length 2.3 mm.

Head large, transverse, as broad as the thorax, subquadrate, the posterior angles briefly rounded, the disc with a row of three moderately large but superficial punctures on either side, otherwise impunctate and glabrous and without ground-sculpture, the eyes large, not prominent. Antennæ with the 1st joint laterally compressed, the 2nd much shorter than the 3rd, the 4th as long as broad, the 5th to the 10th transverse, gradually increasing in breadth, the penultimate joints twice as broad as long, the 11th short, oval, as long as the preceding two together. Thorax one-third as broad again as long, the sides gently rounded, a little more retracted behind, the posterior angles obtuse; disc with a single moderately large puncture on either side and two or three others close together in front of and external to these, otherwise impunctate and glabrous. Elytra scarcely longer but much broader than the thorax, the disc obscurely reddish; extremely finely and very sparingly punctured and pubescent at the sides, the disc nearly impunctate but with a very fine ground-sculpture. Abdomen scaphoidal, the lateral margins strongly raised; 7th dorsal segment coarsely and rugosely punctured, except on the posterior third, which is longitudinally strigose, the other segments impunctate, smooth, shining and glabrous.

♂: supero-posterior angle of the 2nd ventral plate produced backwards parallel and external to the lateral margin of the abdomen to the level of the posterior margin of the 5th dorsal segment as a narrow, triangular, pointed plate; supero-posterior angles of the 3rd and 4th ventral segments a little prominent; 8th dorsal segment with a small blunt tooth on either side of the posterior margin, produced and much narrowed in the middle line, the apex rounded.

Ceylon: Kandy (*Bryant*).

2036. *Orphnebius (Mesocephalobius) bryanti*.

Orphnebius bryanti Cam., E. M. M. lvi, 1920, p. 97.

Shining, black, the elytra brownish-yellow, infusate postero-externally. Antennæ blackish, the 2nd and 3rd joints reddish. Legs pitchy-brown, the tarsi yellow. Length 2.75-3.5 mm.

Differs from *cingulatus* in the larger size, colour, smaller eyes, shorter thorax (3.5:4.75), with the sides more strongly retracted behind, the elytra more uniformly but very sparingly

punctured and without ground-sculpture. The abdomen with a row of six small setiferous granules near the posterior margin of the 6th segment, the sculpture of the 7th as in *cingulatus*.

♂: supero-posterior angle of the 2nd ventral segment only slightly prominent; 8th dorsal segment with the posterior margin gently rounded, scarcely produced in the middle, and with a row of eight tubercles parallel to it.

Ceylon: Kandy (*Bryant*).

Genus **DEROLEPTUS** Bernh.

Deroleptus Bernh., W. Z. B. lxxv, 1915, p. 150; id., Zool. Anzeiger, lxxxii, 1929 (Wasmann Festband), p. 143.
Orphnebiota Cam., E. M. M. lvi, 1920, p. 97.

Head broad, transverse; temples not bordered below. Neck narrow, only about a fourth or fifth as broad as the head. Maxillary palpi 4-jointed, the 1st joint small, the 2nd elongate, scarcely thickened towards apex, the 3rd as long as the preceding and but little thickened, the 4th subulate, one-half as long as the preceding. Labial palpi 3-jointed, the 1st joint rather short, the 2nd a little shorter and narrower than the 1st, the 3rd longer and narrower than the 2nd. Inner lobe of maxilla long and narrow, feebly pectinate internally in front, outer lobe long and narrow, densely ciliate. Thorax without median sulcus. Pronotal epipleura visible from the side. Mesosternum truncate posteriorly, extending but little between the middle coxæ, which are widely separated; metasternal process gradually narrowed, produced, the apex rounded, not meeting the mesosternum. Tarsi 4, 5, 5; the anterior pair with first three joints moderately stout, subequal, the fourth as long as the preceding three together; the middle pair with the first four joints elongate, gradually decreasing in length; the posterior pair elongate, with the 1st joint as long as the following two together, the 2nd, 3rd, and 4th gradually shorter. Elytra not sinuate posteriorly. Abdomen scaphoid, the sides strongly elevated. Wings present.

Closely allied to *Orphnebius*, but differs in the narrower neck, slender antennæ, longer palpi and longer tarsi, the 1st joint of the posterior pair as long as the two following together.

Key to the Species.

- | | |
|--|-------------------------------------|
| 1. Elytra covered with rather large granules. | <i>ceylonicus</i> , sp. n., p. 491. |
| Elytra finely and asperately punctured | 2. |
| 2. Black species | <i>niger</i> , sp. n., p. 492. |
| Ferruginous-red species, the elytra | [p. 491. |
| brownish-yellow | <i>rufocastaneus</i> Cam., |

2037. *Deroleptus rufocastaneus*.

Orphnebiota rufocastanea Cam., E. M. M. Ivi, 1920, p. 98.

Shining, reddish-chestnut, the elytra brownish-yellow, with the sides obscurely darker; first four joints of the antennæ and legs testaceous, the apices of the middle and posterior femora a little infusate. Length 3.75 mm.

Head transverse, nearly as broad as the thorax, very finely and very sparingly punctured; the eyes large, the temples gradually and broadly rounded. Antennæ elongate, the 2nd joint shorter than the 3rd, 4th to the 8th longer than broad, gradually decreasing in length, 9th and 10th about as long as broad, the 11th elongate, pointed, nearly as long as the preceding two together. Thorax as long as broad, rounded at the sides anteriorly, slightly narrowed and feebly sinuate in front of the obtuse posterior angles, impunctate, glabrous. Elytra as long as and considerably broader than the thorax, transverse, finely, not very closely and asperately punctured, finely pubescent, the ground-sculpture very fine and obsolete. Abdomen scaphoid, the lateral margins much elevated; 7th dorsal segment coarsely and rugosely striate for the anterior two-thirds, much more finely so posteriorly, and less shining also, the other segments impunctate, shining and glabrous.

♂: 7th dorsal segment with a small flat tubercle immediately in front of the posterior margin in the middle; 8th dorsal segment with a deep triangular excision; supero-posterior angles of the ventral segments prominent.

Ceylon: Kandy (*Bryant*). Unique.

2038. *Deroleptus ceylonicus*, sp. n. (Plate II, fig. 9.)

Shining, dark reddish-brown. Antennæ with the first three joints reddish-yellow, the following blackish with reddish-yellow bases, the 10th and 11th entirely reddish-yellow. Legs reddish, the apical half of the femora black, tarsi reddish-yellow. Length 4.5 mm.

♂: head suborbicular, slightly transverse, the eye a little shorter than the post-ocular region, practically impunctate and without ground-sculpture. Antennæ rather long and slender, setiferous, the 3rd joint nearly twice as long as the 2nd, 4th to 10th all longer than broad, decreasing in length, narrowed at the bases and so somewhat clavate, the 11th as long as the 10th. Thorax slightly longer than broad (5:4.5), convex, the sides strongly rounded in front and with a black seta, sinuately retracted behind, the posterior angles briefly rounded, with a few extremely fine, scarcely visible punctures and a little behind the middle on each side with a small

setiferous puncture. Elytra as long as but a good deal broader than the thorax, with a smooth depressed area postero-externally, elsewhere with not very close setiferous granules. Abdomen scaphoidal, practically glabrous and impunctate, the sides with black setæ, the 7th segment coarsely and closely striate and with a large flat keel along the middle; 8th with small scattered granules, the posterior margin with a blunt median tooth and on each side a smaller one separated from

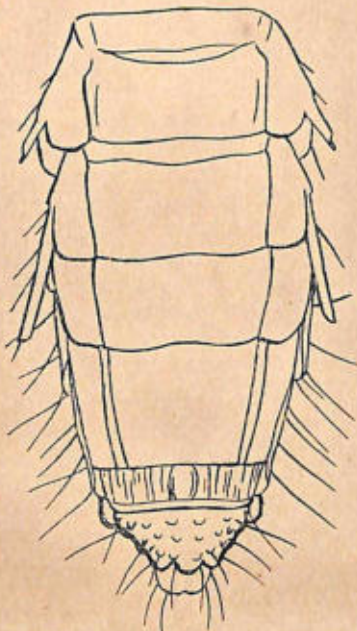


Fig. 122.—*Deroleptus ceylonicus*, ♂, abdomen.

it by a small arcuate emargination. The supero-posterior angles of the 1st and 2nd ventral segments produced upwards and backwards as flattened spiniform processes, the 2nd the longer, the edges of the 4th and 5th also a little produced backwards but not spiniform.

♀: unknown.

Ceylon: Kandy (*Bryant*).

2039. *Deroleptus niger*, sp. n.

Shining, black. Antennæ yellowish-red, the last three joints blackish. Legs reddish, the femora brown. Length 5.5–5.75 mm.

A robust species. ♂: head transverse, suborbicular, nearly as broad as the thorax, the eyes large, almost as long as the

post-ocular region, the punctures very small and very few. Antennæ with the 3rd joint nearly twice as long as the 2nd, 4th to 8th slightly longer than broad, slightly compressed, gradually decreasing in length, somewhat clavate, the 9th and 10th about as long as broad or slightly transverse, the 11th as long as the preceding two together. Thorax convex, as long as broad, the sides almost straight, slightly retracted behind, the posterior angles broadly rounded, on each side of the middle a little behind the centre with a small setiferous puncture, the puncturation extremely fine and extremely scanty. Elytra scarcely longer but a good deal broader than the thorax, postero-externally broadly impressed and practically impunctate, elsewhere with small, not very close, asperate and setiferous punctures. Abdomen scaphoidal, its lateral margins explanate, the 7th segment very closely and very coarsely punctured, at the posterior margin with a row of six or seven small granules, the 8th with numerous granules of varying size, its posterior margin deeply and broadly emarginate, the middle of the emargination with a strong blunt tooth, the abdomen otherwise glabrous and impunctate. The postero-superior angle of the 1st ventral plate somewhat prominent, that of the 2nd forming a bifid plate, its outer division longer and narrower than the inner, pointed and directed backwards, downwards and outwards, the inner division shorter and directed backwards and inwards; 3rd produced as a short spine upwards, backwards and outwards; 4th with the angle a little prominent, like the 1st.

Assam: Sudiya; Patkai Mountains (*Doherty*).

PHEIDOLOGITONETES, gen. n.

In facies somewhat resembling *Astilbus rufobrunnea*. Head transverse, eyes moderate, the post-ocular region very slightly dilated and rounded to the neck, which is much narrower than the head, temples not bordered below. Buccal sinus separated only by a narrow space from the eye in front. Gular sutures parallel, narrowly separated. Antennæ rather long and stout, the joints cylindrical. Labrum transverse, arcuately emarginate, the emargination filled in by membrane. Mandibles moderate, curved, pointed, edentate. Maxillary palpi 4-jointed, the 1st joint small, 2nd elongate, slightly thickened towards apex. 3rd longer and more thickened than the 2nd, 4th very small, subulate, scarcely a fourth as long as the 3rd. Outer lobe of maxilla narrow, pointed, extending beyond the inner, ciliate at apex; inner lobe broader, at the inner margin in front with a few fine close spines, elsewhere closely ciliate. Mentum slightly transverse, the sides rounded behind, a little retracted in front, the anterior border broadly and very deeply arcuately

emarginate, the anterior angles acute and prominent. Labial palpi 3-jointed, the 1st joint cylindrical, 2nd half as long as the 1st and but little narrower, cylindrical, 3rd narrower and a little shorter than the 2nd. Tongue much shorter than the 1st joint of the labial palpi, broad at the base, narrowed towards apex, and split into two very small triangular lobes. Paraglossæ fine, not extending much beyond the base of the labial palpi. Thorax with the pronotal epipleura visible from the side. Prosternum transverse, broadly rounded behind, more or less carinate and divided by a fine transverse arcuate line. Mesosternal process short and broad, broadly rounded behind, extending nearly half the length of the coxæ, the metasternal

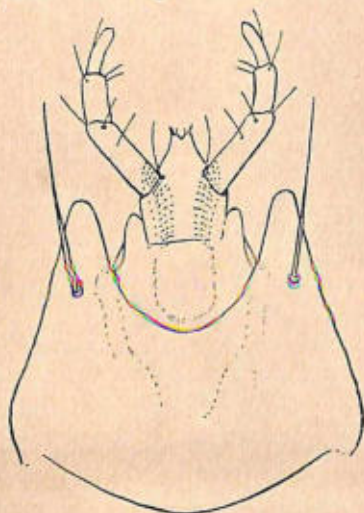


Fig. 123.—*Pheidologitonetes setifer*, labium.

process long, bluntly pointed, separated by a short intersternal piece from the mesosternal; coxæ widely separated. Elytra scarcely emarginate. Abdomen narrowed at the base, more strongly towards apex, scaphoidal, the first three visible segments transversely impressed at the base, the penultimate with close cribriform sculpture. Legs rather long. Tibiæ ciliate. Tarsi 4, 5, 5; the anterior with the 1st joint elongate, slightly longer than the 2nd, 3rd slightly shorter, 4th shorter than the preceding two together; middle with 1st joint elongate, a little longer than the 2nd and 3rd together, 3rd a little shorter than 2nd, 4th a little shorter than the 3rd, 5th shorter than the preceding two together; posterior with the 1st joint long, as long as the 2nd and 3rd together, 2nd to 4th gradually decreasing in length, 5th a little longer than the 4th. Claws slightly curved, simple.

2040. *Pheidologitonetes setifer*, sp. n. (Plate II, fig. 10.)

Shining; head and abdomen black, thorax and elytra dark ferruginous-red, the latter more or less extensively infuscate, sometimes (? immature) with the fore-parts entirely bright ferruginous-red and the abdomen with the first two visible segments more or less yellow. Antennæ yellowish-red. Legs yellowish-red, with the apical third of the femora infuscate. Length 4 mm.

Head transverse, as broad as the thorax, the eyes moderate, the post-ocular region rounded, very slightly dilated and retracted to the stout neck, convex, without inter-antennal tubercle but with two small setiferous punctures, smooth in front and along the middle, elsewhere extremely finely, sparingly punctured, and with a few long black setæ; ground-sculpture absent. Antennæ rather long, the 3rd joint twice as long as the 2nd, 4th and following all longer than broad, 5th to 10th scarcely differing amongst themselves, cylindrical, 11th as long as the 9th and 10th together. Thorax very slightly transverse, the sides rounded in front, almost straight and distinctly retracted to the briefly rounded posterior angles, convex, with fine median impressed line and basal fovea, very finely, closely punctured and without ground-sculpture, the sides with a few long black setæ. Elytra as long as but broader than the thorax, extremely finely and less closely punctured, at the sides with five or six long black setæ and one or two shorter ones on the disc; ground-sculpture absent. Abdomen a little narrowed at the base, more strongly towards apex, the sides rounded, the 7th segment rather coarsely and very closely punctured, cribriform, elsewhere except for about six setiferous punctures at the posterior margins of the segments practically impunctate and glabrous, the sides with numerous long black setæ; 8th dorsal segment rounded in all the specimens seen. Pubescence of the fore-parts very fine. In the sculpture of the 7th abdominal segment this species resembles many of the genus *Orphnebius*.

Nilgiri Hills (*Andrewes*). In company with *Pheidologiton affinis*, January 1906.

Genus **JACOBSONELLA** Silv.

Jacobsonella Silv., Boll. Labor. Zool. Scuola Agric. Portici, v, 1910, p. 59; Fenyès, Gen. Ins. 173 B, 1920, p. 276; Franssen, Tijdschr. Ent. lxxv, 1932, pp. 170-71 (figs.) (Supplement).

Fore-parts narrow, abdomen broader, either scaphoidal or greatly dilated, with the membranous parts much developed, the chitinous sometimes reduced to transverse median plates and lateral discs. Head a little longer than broad, narrower than the thorax, subparallel, the angles rounded, eyes rather

small, the temples not bordered below. Antennæ rather long, not much thickened towards apex, 11-jointed. Labrum more than twice as broad as long, the anterior border feebly rounded, the anterior angles rounded. Mandibles rather long, curved, pointed, edentate, produced beyond the labrum. Maxillæ long, the inner lobe a little shorter than the outer, the apex pointed and curved inwards, with a subapical row of stout setæ internally; outer lobe broader, its apex rounded and furnished with several setæ. Maxillary palpi rather long, 4-jointed, the 1st joint small, 2nd slightly curved and a little thickened towards apex, 3rd much longer and a little broader, scarcely thicker at the apex, 4th subulate, about a third as long as the preceding. Gular plate long, arcuately constricted in the middle, widened in front, with the sides rounded. Mentum transverse, trapezoidal, truncate in front. Labial palpi 3-jointed, rather long, the 1st and 2nd cylindrical, the 2nd a little shorter and narrower than the 1st, 3rd subulate, a little longer than the 1st. Tongue small, about as long as the 1st joint of the labial palpi, rounded in front and with a small excision in the middle; paraglossæ short. Thorax very slightly transverse, the pronotal epipleura visible from the side. Prosternum transverse, trapezoidal, the anterior and posterior parts indistinctly separated by a fine transverse keel. Mesosternum short, feebly obtusely produced behind in the middle and extending but little between the coxæ; metasternum with short pointed process, the middle coxal cavities large, the intersternal piece long and narrow, the middle coxæ contiguous. The exposed part of the scutellum small. Elytra short, transverse, broader than the thorax, wider behind. Wings present or absent. Abdomen scaphoidal or physogastrous. Legs rather long, coxæ long, femora sulcate in the apical half internally, tibiæ sparingly ciliate. Tarsi 4, 5, 5; the anterior with the first three joints short, gradually decreasing in length, 4th as long as the preceding three together, middle with 1st joint elongate, as long as the two following together, these subequal, 4th a little shorter, posterior with the 1st joint as long as the three following together, these gradually decreasing in length, 5th as long as the 3rd and 4th together. Claws curved and pointed, between their bases with a long seta. The species are found in the nests of termites.

2041. *Jacobsonella flavescens*, sp. n. (Plate II, fig. 11, ♂, fig. 12, ♀.)

Shining; head, thorax and abdomen pale ferruginous-red, elytra and sometimes the head pale yellow. Antennæ and legs yellow. Length 3 mm.

Differs from *termitobia* Silv. in the pale colour and more

transverse thorax. Head a little longer than broad, narrower than the thorax, subparallel, with a few fine setiferous punctures. Antennæ rather long, the 3rd joint longer than the 2nd, 4th to 10th all longer than broad, gradually decreasing in length, the 11th as long as the preceding two together. Thorax transverse (3.5 : 2.75), the sides very feebly rounded, equally but slightly retracted in front and behind, the angles rounded, with a few fine setiferous punctures. Elytra as long as but broader than the thorax, wider behind, with a few fine asperate setiferous punctures, in the ♀ pushed up into a nearly vertical position by the inflated abdomen. Abdomen in the ♂ scaphoidal, finely and moderately closely punctured on the first three visible segments, much more sparingly on the following, the 8th segment truncate, in the ♀ strongly dilated, oval, not much longer than broad, the side-margins of the first four visible segments explanate, disciform, surrounded by white conspicuous membrane, the rest of the abdomen as in the ♂ but with the intersegmental membranes white and distinctly visible, the posterior margin of the last segment very slightly emarginate.

Burma : Insein (*T. B. Fletcher*).

This species I formerly regarded as *termitobia* Silv. (Cat. Ind. Ins. part vi, 1925, Staphylinidæ, p. 94). Franssen (Tijdschr. Ent. lxxv, 1932, Suppl. p. 170) regards *termitobia* as representing two species, one with scaphoidal abdomen (*termitobia*), the physogastrous form being distinct (*oudemansi*). However this may be, it appears to me that *flavescens*, as described above, represents the sexes of a single species; they were taken in the same nest at the same time.

Genus ZYRAS Steph.

- Zyras* Steph., Ill. Brit. Ent. Mandib. v, 1832, p. 430; Blatchley, Col. Indiana, i, 1910, p. 358; Fenyès, Gen. Ins. 173 B, 1920, p. 293; Bernh., Arch. Naturg. Abt. A, xcii, 1926 (1928), pp. 19-22; Portevin, Encycl. Ent. A, xii, 1929, i, p. 254; Scheerp., Kol. Rundsch. xv, 1929, p. 19; id., Tierwelt Mitteleur. v, 2, 1930, p. 76.
- Myrmedonia* Er., Käf. Mark Brand. i, 1837-39, p. 286; id., Gen. Spec. Staph. 1839-40, p. 35; Lacord., Gen. Col. ii, 1845, p. 29; Redtb., Faun. Austr. ed. i, 1849, p. 648, ed. ii, 1858, p. 119, and ed. iii, 1874, p. 142; Kraatz, Naturg. Ins. Deutschl. Col. ii, 1856-58, p. 118; Jacq. du Val., Gen. Col. d'Eur. ii, 1857-59, p. 9; Fauv., Faun. Gallo-Rhén. iii, 1872, p. 653; Fowler, Col. Brit. Isl. ii, 1888, p. 55; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 116; Everts, Col. Neerl. i, 1898, p. 191; Johansen, Danmarks Rovbiller, 1914, p. 93; Cam., Trans. Ent. Soc. Lond. 1920 (1921), pp. 360, 397; Everts, Col. Neerl. iii, 1922, p. 91.
- Subgen. *Camacopalpus* Motsch., Bull. Soc. Nat. Mosc. (3) xxxi, 1858, p. 231 (ex parte).
- Subgen. *Crateodonia* Bernh., Arch. Naturg. Abt. A, xcii, 1926 (1928), pp. 22, 68.

- Subgen. *Glossacantha* Gemm. et Har., Cat. Col. ii, 1868, p. 519; Fauv., Rev. d'Ent. xiv, 1895, p. 12; Wasm., Ann. Mus. Civ. Gen. (2) xvi, 1896, p. 619; id., D. E. Z. 1899, p. 150; Fenyès, Gen. Ins. 173 B, 1920, p. 276; Bernh., Arch. Naturg. Abt. A, xcii, 1926 (1928), pp. 20, 36, 40 (*Acanthoglossa*); Motsch., Et. Ent. viii, 1859, p. 88 (præoc.).
- Subgen. *Pella* Steph., Ill. Brit. Ent. Mandib. v, 1832, p. 434; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 122; Reitt., Faun. Germ. ii, 1909, p. 42; Fenyès, Gen. Ins. 173 B, 1920, p. 296.
- Subgen. *Rhynchodonia* Wasm., Ann. Mus. Civ. Gen. (2) xvi, 1896, p. 620; Fenyès, Gen. Ins. 173 B, 1920, p. 295.
- Subgen. *Zyras*, s. str., Steph., Ill. Brit. Ent. Mandib. v, 1832, p. 430; Thoms., Skand. Col. ii, 1860, p. 258; Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. iii, 1873, p. 35; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 119; Reitt., Faun. Germ. ii, 1909, p. 42; Johansen, Danmarks Rovbiller, 1914, p. 94; Fenyès, Gen. Ins. 173 B, 1920, p. 296; Portevin, Encycl. Ent. A, xii, 1929, i, p. 254.

An extremely large and polymorphic group, very closely related to *Astilbus*, from which indeed it is doubtfully separable now that a wider knowledge of tropical forms is available. The post-ocular region is, however, more or less bordered below, and typically the 3rd joint of the labial palpi is as long or longer than the 2nd, whereas in *Astilbus* it is shorter; amongst the tropical forms considerable variation occurs in the relative proportions of these joints, and it can scarcely be regarded as a valuable character. Authors indeed appear often to have referred their species to either *Zyras* or *Astilbus*, according to which genus the general facies most corresponded. The species here included have an infra-orbital border at least behind.

Key to the Subgenera †.

- | | | |
|---|----|---------------------|
| 1. Antennæ with the 4th and following joints laterally compressed and more or less serrate, usually with long sparing pubescence, the 3rd joint much longer than the 2nd, which is very small | 2. | |
| Antennæ with the joints not laterally compressed or serrate | 5. | [p. 516. |
| 2. Sculpture of the fore-parts granular | | TAPRODONIA, nov., |
| Sculpture of the fore-parts otherwise | 3. | |
| 3. Thorax with broad continuous impression along the sides and base | | [p. 517. |
| Thorax without such impression; head much produced in front | 4. | TERMITELIA, nov., |
| 4. Thorax broadly flattened along the middle | | [p. 515. |
| Thorax not flattened | | CRATEODONIA Bernh., |
| 5. 7th to 11th joints of antennæ forming a stout club | | RHYNCHODONIA Wasm., |
| Antennæ not clavate | | [p. 499. |
| 6. 2nd joint of antennæ very short, much shorter than the 3rd | 6. | RHOPALODONIA, nov., |
| | | [p. 546. |
| | | [et Har., p. 518. |
| | | GLOSSACANTHA Gemm. |

† The subgenus of *Myrmedonia trisulcata* Wasm. (p. 547) is uncertain and is not included in the Key.

- 2nd joint of antennæ as long as or not much shorter than the 3rd 7.
7. Antennæ with long sparing hairs; shining species ZYRAS, s. str., p. 532.
- Antennæ with or without a short pubescence 8.
8. Sculpture of the fore-parts rugose; thorax as long as broad [p. 546.
- Sculpture of fore-parts not rugose; thorax strongly transverse ZYRASTILBUS, NOV.,
- PELLA Steph., p. 544.

Subgenus *RHYNCHODONIA* Wasm.

- Rhynchodonia* Wasm., Ann. Mus. Civ. Gen. (2) xvi, 1896, p. 620;
Fenyès, Gen. Ins. 173 B, 1920, p. 295; Bernh., Arch. Naturg.
Abt. A, xcii, 1926 (1928), p. 21, note.
- Camacopalpus* Motsch., Bull. Soc. Nat. Mosc. (3) xxxi, 1858,
p. 231 (ex parte).

Moderate to large subparallel species. The labrum and front of head considerably produced. Temples nearly completely bordered below. Antennæ with the 1st joint stout, deeply emarginate at the apex, 2nd very small, much shorter than the 3rd, 4th and following laterally compressed, more or less serrate and furnished with long sparing hairs. Thorax not flattened along the middle, the sides with or without an oblique impression.

Type, *feæ* Wasm.

Key to the Species on General Characters.

1. Thorax with an oblique impression adjacent to the lateral margin 2.
Thorax convex, without lateral impression 10.
2. Thorax closely and regularly punctured on the disc 3.
Thorax irregularly punctured, on each side of the middle with an irregular impunctate space *stevensi*, sp. n., p. 506.
[p. 502.
3. 4th to 10th joints of antennæ distinctly longer than broad *termitophilus* Wasm.,
4th to 10th joints of antennæ transverse 4.
4. Elytra reddish-yellow *siwalikensis*, sp. n., p. 513.
Elytra dark, often lighter at the base and shoulders 5.
5. Thorax red or brown 6.
Thorax reddish-yellow 9. [p. 503.
6. Thorax strongly transverse *termitarius* Wasm.,
Thorax moderately transverse 7.
7. Thorax red 8.
Thorax dark brown *agilis*, sp. n., p. 505.
8. Larger (9 mm.); thorax much more finely and sparingly punctured at the sides *mysorensis*, sp. n., p. 504.
Smaller (7-7.5 mm.); thorax closely and regularly punctured all over *bicolor* Epp., p. 504.

9. Thorax uniformly punctured..... *termiticolus* Gestro, p. 501.
 Thorax almost impunctate towards
 the anterior angles *nigriceps* Kr., p. 512.
10. Smaller (4-5 mm.); thorax and elytra
 nearly impunctate *fulvus* Motsch., p. 514.
 Larger (7-10 mm.); thorax and elytra
 distinctly punctured 11.
11. Abdomen scarcely perceptibly punctured
 on the anterior segments *bidentatus* Bernh., p. 512.
 Abdomen distinctly punctured on the
 anterior segments 12.
12. Elytra distinctly coriaceous in both
 sexes 13.
 Elytra not coriaceous 14.
13. Elytra strongly coriaceous, greasy lus-
 trous [Scheerp., p. 508.
motschulskyi Bernh. &
feæ Wasm., p. 506.
 [p. 509.]
 Elytra less strongly coriaceous, shining.
 14. Elytra very closely, subrugosely punctured.....
 Elytra less closely, not at all rugosely
 punctured *nigripennis* Bernh.,
15. Thorax less closely punctured, with
 larger impunctate spaces..... 15.
 Thorax more closely punctured, with
 smaller impunctate spaces 16.
 16. Head moderately finely, distinctly punctured..... 17.
 Head extremely finely, obsolete punctured.....
indorum Fauv., p. 507.
17. Thorax red, abdomen black; elytra
 less finely punctured *gestroi* Wasm., p. 505.
 Thorax and abdomen reddish-yellow;
 elytra more finely punctured *waageni* Epp., p. 511.
simulans, sp. n., p. 511.

Key based on the Male Characters.

1. 3rd segment of abdomen furnished
 with three spines 2.
 4th segment furnished with spines or
 lamella 4.
2. 4th segment with a median keel at the
 base broken by transverse grooves
 into five or six little tubercles *mysorensis*, sp. n., p. 504.
 4th segment with uninterrupted median
 keel 3.
3. Keel well developed; 7th with strong
 median keel, 8th bicarinate *termiticolus* Gestro, p. 502.
 Keel feeble; 7th with feeble median
 keel; 8th with tubercle at the middle
 of the posterior margin *sivalikensis*, sp. n., p. 514.
4. 4th segment produced backwards in the
 middle as a broad plate..... 5.
 4th segment furnished with spines 6. [Scheerp., p. 509.
motschulskyi Bernh. &
feæ Fauv., p. 506.
5. Elytra strongly coriaceous, dull
 Elytra feebly coriaceous, shining
 6. 4th segment with four spines, one of
 which arises from the lateral margin
 itself *indorum* Fauv., p. 507.
 4th segment with two spines 7.

7. Spines of the 4th segment arising from the lateral margin itself. *gestroi* Wasm., p. 505.
 Spines of the 4th segment arising from the posterior margin S.
8. Spines close together, only narrowly separated from each other *bidentatus* Bernh., p. 513.
 Spines distant from each other, arising near the lateral margin 9. [Scheerp., p. 509.
 9. Elytra strongly coriaceous *motschulskyi* Bernh. &
 10. Elytra not coriaceous 10.
 10. 5th segment with a tubercle at the middle of the base; thorax less closely punctured *waageni* Epp., p. 511.
 5th segment without tubercle; thorax very closely punctured *nigripennis* Bernh., [p. 509.

2042. **Zyras (Rhynchodonia) termiticolus.**

Myrmedonia termiticola Gestro, Ann. Mus. Civ. Gen. (2) vi, 1886, p. 110 (fig.).

Myrmedonia (Rhynchodonia) termitobia Wasm., Ann. Mus. Civ. Gen. (2) xvi, 1896, p. 622, and xviii, 1897, p. 30 (fig. 4).

♂: head greasy lustrous, pitchy-black, the front and mouth-parts yellowish-red, thorax, elytra and abdomen shining,

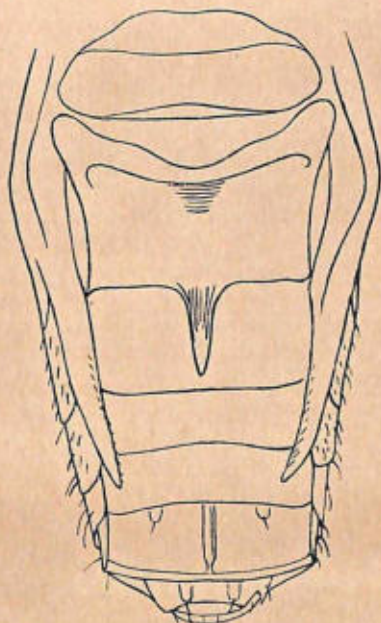


Fig. 124.—*Zyras (Rhynchodonia) termiticolus*, ♂, abdomen.

the thorax reddish-yellow, the elytra blackish, with the base and apex reddish-yellow, abdomen black, the lateral margins

and posterior margins of the last two segments reddish-yellow. Antennæ reddish-brown, the first three joints and legs reddish-yellow. Length 6-8 mm.

♂: head transverse, almost as broad as the thorax, the eyes large, much longer than the post-ocular region, between the insertion of the antennæ with a smooth tubercle, very finely, moderately closely punctured, distinctly coriaceous. Antennæ rather short, extending a little beyond the base of the thorax, the 2nd joint very small, much shorter than the 3rd, 4th and following laterally compressed, the 4th slightly longer than broad, 5th to 10th scarcely differing amongst themselves, about as long as broad and subtriangular when seen on the flat, 11th as long as the 9th and 10th together. Thorax slightly transverse (11:9), the sides slightly, almost straightly retracted behind, feebly rounded in front, the posterior angles rounded, before the base with a small fovea and a fine impressed line in the posterior half, towards the sides with an oblique impression, finely and moderately closely punctured and without ground-sculpture. Elytra broader but scarcely longer than the thorax, less finely and more closely punctured; ground-sculpture absent. Abdomen a little narrowed before the apex, the 1st visible segment finely and rather closely punctured, the middle of the posterior margin with a long strong spine, the side-margin itself prolonged as a longer spine directed backwards and slightly inwards, but sometimes rudimentary; 2nd with a few small punctures near the sides and sometimes with a median keel; 5th with a strong median keel; 6th lightly emarginate, with two parallel keels close together. Apart from the first two segments the rest of the abdomen is practically impunctate.

In the form described by Wasmann as *termitobia* the colour, except for the head, is entirely reddish-yellow, the size smaller (6 mm.), the lateral spines of the 1st visible segment scarcely developed and the 2nd without median keel. In a co-type before me the colour, apart from the head, is entirely reddish-yellow, the spines of the 1st visible segment strongly developed and the 2nd with a well-developed median keel concealed by the spine of the preceding segment; it is 7.5 mm. in length.

Burma: Bhamo (*Fea*), viii. 1885. With *Termes gestroi* Wasm.

2043. *Zyras* (*Rhynchodonia*) *termitophilus*.

Myrmedonia (*Rhynchodonia*) *termitophila* Wasm., Ann. Mus. Civ. Gen. (2) xviii, 1897, p. 28 (figs.).

Pitchy-black, shining, punctured; head black; antennæ, thorax, legs and base of the abdomen reddish-brown, near *termiticolus* Gestro, of the same size, colour, and sculpture,

but with the antennæ much more slender, more strongly serrate, red, not thickened towards the apex, but becoming thinner, joints 4 to 10 oblong-conical, a third longer than broad; thorax deeply longitudinally sulcate and near the side longitudinally impressed, more strongly punctured, the elytra more closely punctured. Length 8 mm.

♂: head shining; abdomen without sexual characters, the last dorsal segment emarginate at apex.

In spite of its great similarity to *termiticolus* it is distinguished from it by the much more slender antennæ, the 4th to 9th joints long and triangular, a third longer than broad, and by the deep median sulcus, which extends the whole length of the thorax, and the complete absence of ♂ characters on the abdominal tergites. In *termiticolus* the antennæ are much thicker, the 4th to 9th joints almost quadrate; the thorax has only an elongate fovea at the base in both sexes. From *fea*, which it also somewhat resembles in the structure of the antennæ and thorax, it is distinguished by the length of the antennæ, which extend beyond the base of the thorax, and the much more slender build.

Burma: Rangoon (*Fea*), 1887. A single specimen found in a series of *termiticolus*, but it is quite different in the antennal structure; also all the species of *termiticolus* come from Bhamo (ex *Wasmann*).

The shining head and absence of spines or tubercles etc. on the abdomen would appear to indicate that the above specimen is a ♀, which sex has often an emarginate last abdominal segment.

2044. *Zyras (Rhynchodonia) termitarius*.

Myrmedonia (Rhynchodonia) termitaria Wasm., Ann. Mus. Civ. Gen. (2) xviii, 1897, p. 30 (fig.).

Pitchy, shining, punctured, with the thorax and humeral angles of the elytra rufescent, antennæ and legs red. Very like *termiticolus* in colour and sculpture, but a little larger, the antennæ shorter, with the penultimate joints distinctly transverse, thorax much broader, more than a half broader than long, the posterior angles rounded, scarcely obtuse, abdomen more strongly but just as sparingly punctured. Length 8.5 mm.

♂: thorax more strongly punctured, longitudinally sulcate, the sides longitudinally impressed, last abdominal segment slightly emarginate, antennæ more strongly serrate.

♀: thorax more finely punctured, scarcely sulcate, convex, scarcely impressed at the sides, antennæ less strongly serrate.

One ♂, Burma, Teinzo (*L. Fea*), May 1886, and one ♀, Carin Cheba (*L. Fea*), v-xii. 1888, in the Mus. Civ. Gen. That

the above are distinct from *termiticolus*, the build of the thorax being different and ♂ sexual characters being absent, I have no doubt; whether the two above described ♂ and ♀ are really one species is only probable, the difference in the sculpture of the thorax and structure of the antennæ are such as are found between the males and females of many *Myrmedonias* of the same species; the ♀, however, is differently coloured, the thorax, shoulders and suture being of a brighter red than in the ♂ (ex *Wasmann*).

I should think it highly probable that the above represent two females of different species; the absence of any of the ♂ characters found in the subgenus *Rhynchodonia* would be quite unusual.

2045. *Zyras (Rhynchodonia) bicolor*.

Myrmedonia bicolor Epp., D. E. Z. 1895, p. 388.

♀: shining; head, elytra and abdomen black, thorax red. Antennæ reddish-brown. Legs reddish-yellow. Length 7-7.5 mm.

In size, build and antennal structure scarcely differing from *termiticolus*, but of different colour, the thorax regularly and more closely punctured, the median impressed line more distinct and longer, the elytra rather more coarsely and closely punctured. Head sparingly punctured, finely but distinctly coriaceous. Thorax closely and rather finely punctured, foveate at the base and with fine impressed median line extending nearly to the anterior margin, the lateral impression distinct, very finely and indistinctly coriaceous. Elytra less finely and more closely punctured than the thorax and without ground-sculpture. Abdomen finely and rather closely punctured on the first visible segment, much more finely on the 2nd and 3rd, the following almost impunctate.

♂: unknown.

Calcutta. Punjab: Palampur, Kangra Valley, alt. 4500 feet, vii. 1899 (*Dudgeon*).

2046. *Zyras (Rhynchodonia) mysorensis*, sp. n.

♂: shining; head and abdomen black, the latter with the lateral and posterior margins of the last three segments reddish; thorax red; elytra brown, the base and humeral angles reddish. Antennæ reddish, the first two joints and legs reddish-yellow. Length 9 mm.

In build and antennal structure very similar to *termiticolus*, but of different colour, the head more finely and more sparingly punctured and very feebly coriaceous, thorax with the median impressed line shorter and finer, the puncturation finer and less close, especially at the sides, the ground-sculpture very feeble, elytra more finely punctured, the abdomen practically

impunctate; 3rd segment produced backwards in the middle as a strong spine, the lateral margin itself produced into a more slender but equally long spine; 4th keeled along the middle, the keel interrupted by transverse grooves forming five or six small tubercles as in *serraticornis*; 7th with a fine median keel in the posterior half; 8th feebly emarginate, the angles dentiform, along the middle with a keel which projects a little beyond the posterior margin.

Bangalore. Unique. British Museum.

2047. *Zyras (Rhynchodonia) gestroi*.

Myrmedonia (Rhynchodonia) gestroi Wasm., Ann. Mus. Civ. Gen. (2) xvi, 1896, p. 622.

♂: head and abdomen black, the former dull, the latter shining, with the apex and side-margins pitchy, thorax and elytra shining reddish-brown. Length 9 mm.

Head narrower than the thorax, dull, densely alutaceous. Antennæ scarcely longer than the head and thorax, stout, compressed, somewhat serrate, distinctly widened towards apex, 2nd joint very small, 5th to 10th transverse, 11th ovate, obtusely pointed. Thorax subquadrate, moderately convex, the posterior angles obtuse, coarsely punctured, longitudinally sulcate. Elytra a little longer than the thorax, scarcely a half broader, strongly and closely punctured, yellow pubescent. Abdomen parallel, finely and rather densely punctured; 3rd [4th] segment with an erect spine on each side in the margin itself; 4th and 5th [5th and 6th] with the posterior margins finely granulate; 6th [7th] with a tubercle at the middle of the posterior margin; 7th [8th] with the posterior margin serrulate.

♀: unknown.

Allied to *termicolus* and *hoplonotus*; differs from both in the ♂ characters and the antennæ distinctly widened towards apex. The head is less elongate in front than in these species, the puncturation of the thorax is much coarser than in *termicolus*, that of the abdomen much finer.

Burma: Bhamo (Fea), viii. 1885. With *Termes gestroi* Wasm. (ex Wasmann).

Both *termicolus* and *hoplonotus* have an oblique impression on each side of the thorax near the lateral margin; this character not mentioned by Wasmann in his account of *termicolus*, although shown in the figure.

2048. *Zyras (Rhynchodonia) agilis*, sp. n.

♀: build and lustre of *bicolor* ♀, the antennæ similarly constructed, but with the thorax dark brown, more finely and more obsoletely punctured; the puncturation of the elytra

and abdomen scarcely differing from that species. Length 7.5 mm.

♂: unknown.

Kumaun: Haldwani, Seljam (*H. G. Champion*). Unique. British Museum.

2049. *Zyras (Rhynchodonia) feæ*.

Myrmedonia (Rhynchodonia) feæ Wasm., Ann. Mus. Civ. Gen. (2) xvi, 1896, p. 620 (figs.).

Head black, in the ♂ dull, in the ♀ shining; thorax, elytra and abdomen shining, the thorax red, the elytra and abdomen reddish-brown. Antennæ and legs reddish. Length 10–12 mm.

Head transverse, suborbicular, narrower than the thorax, the eyes large, much longer than the post-ocular region, extremely finely, rather sparingly punctured, in the ♂ strongly coriaceous and dull, in the ♀ less coriaceous and shining. Antennæ rather short, reaching about the middle of the thorax, the 2nd joint very small, 3rd elongate, 4th and following strongly compressed, the 4th to 9th seen on the flat triangular, a little longer than broad, differing but little amongst themselves, the 11th shorter than the preceding two together. Thorax very slightly transverse, convex, the sides rounded in front, retracted and slightly sinuate behind, the posterior angles obtuse, along the middle narrowly sulcate, moderately coarsely and moderately closely punctured, less closely towards the anterior angles and the base, finely coriaceous. Elytra broader and very slightly longer than the thorax, with similar but much closer puncturation and less coriaceous. Abdomen a little narrowed before the apex, the first three visible segments very finely and rather closely punctured, the following much more sparingly. The whole insect with a fine yellow pubescence.

♂: 4th segment produced backwards in the middle as a broad, somewhat elevated plate, its posterior border deeply arcuately emarginate in its whole breadth, so that its angles are dentiform; 7th with a strong median keel; 8th slightly arcuately emarginate.

Burma: Carin Cheba, alt. 900–1100 m., v.–xii. 1888 (*Fea*).

With *Termes feæ* Wasm. This species is the type of the subgenus *Rhynchodonia*.

2050. *Zyras (Rhynchodonia) stevensi*, sp. n.

♀: shining, dark reddish brown, the sides and posterior margins of the abdominal segments lighter. Antennæ reddish-brown. Legs reddish-yellow. Length 7.5 mm.

In size and build scarcely differing from *serraticornis*, but with shorter, less serrate antennæ and different sculpture. Head very finely rather sparingly punctured, very finely coriaceous. Antennæ rather short, the 4th to 10th joints distinctly transverse and but slightly serrate. Thorax with a fovea at the base and fine impressed median line extending nearly to the anterior border, the sides obliquely impressed, finely, not closely, and irregularly punctured, with small impunctate space on each side of the middle, very finely coriaceous. Elytra more coarsely punctured than in *serraticornis*, the ground-sculpture very feeble. Abdomen finely and rather closely punctured on the 1st visible segment, more sparingly on the 2nd, the following almost impunctate.

♂: unknown.

Darjeeling: Gopaldhara, alt. 4720 feet, 21. viii. 16 (*Stevens*). Unique. British Museum.

2051. *Zyras (Rhynchodonia) indorum*.

Zyras indorum Fauv.*, Rev. d'Ent. xxii, 1903, p. 162.

Head black, dull in the ♂, shining in the ♀, the rest shining, lighter or darker reddish-brown, the lateral and posterior margins of the abdominal segments lighter. Antennæ and legs reddish. Length 10 mm.

Head transverse, suborbicular, narrower than the thorax, the eyes large, longer than the post-ocular region, moderately finely and moderately closely punctured, in the ♂ strongly coriaceous, dull, in the ♀ shining and without ground-sculpture. Antennæ rather slender, reaching to the base of the thorax, the 2nd joint very small, 3rd three times as long, 4th to 10th laterally compressed, somewhat serrate, differing but little amongst themselves, scarcely longer than broad when seen on the flat, 11th a little longer than the 10th. Thorax slightly transverse (7:6), convex, the sides gently rounded in front, retracted and slightly sinuate behind, the posterior angles briefly rounded, along the middle sulcate, more deeply in the ♂ than in the ♀, moderately coarsely, closely punctured in the sulcus and immediate vicinity, more sparingly elsewhere, and with three irregular impunctate areas, one about the middle towards the side, another near the anterior angle, and another at the base; ground-sculpture absent in both sexes. Elytra broader but scarcely longer than the thorax, transverse, moderately coarsely and rather closely punctured; ground-sculpture absent. Abdomen a little narrowed before the apex, in the ♂ with the first two visible segments finely and rather closely punctured except at the sides, in the ♀ with the first four segments closely and finely punctured. The whole insect sparingly yellow pubescent.

♂: 4th abdominal segment with the posterior border on each side at the lateral margin with a strong spine directed backwards, outwards, and a little upwards, with the margin itself also produced into a spine, the middle of the posterior margin arcuately emarginate, sometimes with the segment raised along the middle and produced a little backwards and then arcuately emarginate; 5th broadly impressed at the base, in the middle with a semi-erect spine, sometimes reduced to a tubercle or ridge; 7th with a tubercle at the middle of the



Fig. 125.—*Zyras (Rhynchodonia) indorum*, ♂, abdomen.

posterior margin or carinate along the posterior half; 8th truncate. The development of these characters varies considerably in different specimens, the 4th segment sometimes being truncate between the spines and the 5th without basal impression or keel.

Coonoor. Kanara. Nilgiri Hills.

2052. *Zyras (Rhynchodonia) motschulskyi*.

Zyras motschulskyi Bernh. & Scheerp., Cat. Col. Pars 82, 1926, p. 702.

Zyras laminatus Motsch.*, Ét. Ent. viii, 1859 (Jan.), p. 87 (præoc.); Cam., E. M. M. lxix, 1933, p. 220.

Myrmedonia procera Kr.*, Arch. Naturg. xxv, 1859 (Sept.), p. 20.

Head black, reddish in front, in the ♂ dull, in the ♀ shining;

thorax red, in the ♂ dull, in the ♀ shining; elytra brownish-red, more shining in the ♂; abdomen shining dark reddish-brown, the last two segments lighter. Antennæ reddish, the first two joints reddish-yellow. Legs reddish. Length 9.5 mm.

In size and colour differing but little from *indorum* Fauv., but with longer and more slender antennæ, longer, rather more finely and more closely punctured thorax, more finely punctured and distinctly coriaceous elytra; also very like *feæ*, but with more finely punctured thorax and elytra, the latter coriaceous, the abdomen more strongly punctured. Head transverse, suborbicular, almost as wide as the thorax, the eyes large, much longer than the post-ocular region, with rather sparing, small, flat, obsolete punctures, in the ♂ strongly, in the ♀ feebly, coriaceous. Antennæ long and slender, reaching beyond the base of the thorax, more slender in the ♂, the 2nd joint very small, 3rd more than twice as long, 4th and following laterally compressed, obconical, the 4th and 5th a little longer than broad, 6th to 10th about as long as broad, slightly decreasing in width, 11th longer than the 10th. Thorax very slightly transverse, the sides rounded in front, a little retracted and slightly sinuate behind, the posterior angles rounded, narrowly sulcate throughout the middle in the ♂, in the posterior half only in the ♀, the sulcus deeper in the ♂, with small, irregularly scattered punctures, duller and distinctly coriaceous in the ♂, more shining and more feebly coriaceous in ♀. Elytra as long as but broader than the thorax, closely, moderately finely punctured, distinctly coriaceous in both sexes but more shining in the ♂. Abdomen a little narrowed before the apex, finely and densely punctured on the first four visible segments, the following with a few scattered punctures, distinctly coriaceous.

♂: 4th segment either produced backwards in the middle as a plate or with a strong, inwardly curved spine on each side near (but not on) the lateral margin; 7th with a tubercle at the middle of the posterior margin; 8th truncate and very indistinctly crenulate, on each side with a triangular tooth.

Ceylon: Madulsima. Motschulsky's type is a ♂ from Nuwera Eliya.

2053. *Zyras (Rhynchodonia) nigripennis*.

Zyras nigripennis Bernh., Col. Rundsch. iv, 1915, p. 59.

Head black, in the ♂ dull, in the ♀ moderately shining; thorax and elytra moderately shining, the former dark red, the latter black; abdomen rather more shining, black, with the base, elevated side and posterior margins of the segments reddish, sometimes entirely dark reddish-brown. Antennæ and legs yellowish-red. Length 7.5 mm.

In build scarcely differing from *motschulskyi*, but with entirely different sculpture. Head in the ♂ quite dull, only with a minute shining spot on the front in the middle, strongly coriaceous, with small, flat, obsolete, moderately close punctures, in the ♀ moderately shining, much less coriaceous, the puncturation more evident. Antennæ rather slender, a little thickened towards apex, the 3rd joint twice as long as 2nd, 4th to 10th laterally compressed, somewhat serrate, seen on the flat subtriangular and moderately transverse, the 11th as long as the preceding two together, laterally compressed.

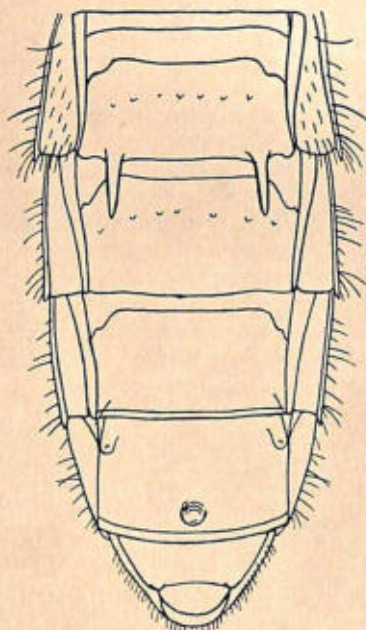


Fig. 126.—*Zyras (Rhynchodomia) nigripennis*, ♂, abdomen.

Thorax formed as in *motschulskyi*, very slightly transverse, convex, sulcate along the middle, coarsely and closely punctured, the ground-sculpture very feeble in both sexes. Elytra slightly longer than the thorax, as coarsely and yet more closely punctured. Abdomen closely punctured on the first five visible segments, the puncturation much coarser and rugose on the basal ones, gradually finer behind, the last with a few fine asperate punctures.

♂: 4th dorsal segment on each side near the lateral margin with the posterior border furnished with a long, stout spine directed backwards; 7th with a large tubercle at the middle

of the posterior margin; 8th slightly emarginate, the angles a little prominent.

♀: 8th dorsal segment slightly emarginate, the angles prominent.

Dehra Dun, 28. iii. 1912 (*Imms*), 28. ii. 35 (*J. C. M. Gardner*), 22. xi. 35 (*Balwant Singh*).

2054. *Zyras* (*Rhynchodonia*) *simulans*, sp. n.

♀: shining; head black, thorax and abdomen reddish-yellow, elytra brownish-yellow. Antennæ reddish, the first two joints and legs reddish-yellow. Length 9 mm.

Near *indorum* and *nigripennis*, the thorax not so broad as in *indorum*, more like that of *nigripennis*, its sculpture as coarse as in the former but distinctly closer, a little coarser and distinctly less close than in the latter, elytra more finely and more closely punctured than in *indorum*, more finely and less closely than in *nigripennis*, the puncturation of the head and abdomen scarcely differing from that of the latter species. The antennæ as in *indorum*.

♂: unknown.

Nilgiri Hills (*H. L. Andrewes*).

2055. *Zyras* (*Rhynchodonia*) *waageni*.

Myrmedonia waageni Epp. *, D. E. Z. 1895, p. 386.

Shining (except for the head in ♂); head, elytra and abdomen black, the latter with the lateral margins distinctly, the posterior narrowly and obscurely reddish. Antennæ and legs reddish-yellow. Length 7-8 mm.

Colour of *indorum* and *nigripennis*, the thorax a little narrower and the puncturation closer and less irregular than in the former, a little broader than in the latter, with the puncturation less close and more irregular, the abdominal puncturation as in *nigripennis*. Head rather sparingly, superficially punctured, without frontal tubercle, in the ♂ dull and strongly coriaceous, in the ♀ shining and very feebly coriaceous. Antennæ as in *nigripennis*. Thorax narrowly sulcate along the middle, rather coarsely and, on the disc, rather closely punctured, towards the sides and anterior angles more sparingly and irregularly; ground-sculpture absent. Elytra as long as the thorax, more finely and more closely punctured. Abdomen closely, moderately finely punctured on the first four visible segments, more sparingly on the following.

♂: 4th abdominal segment on each side near but not contiguous to the side-margin, with the posterior margin produced into a strong spine directed backwards and upwards,

sometimes with the posterior margin in the middle very slightly obtusely produced; 5th with a small tubercle in the middle of the base (usually concealed); 7th with a pointed tubercle at the middle of the posterior margin; 8th practically truncate, the angles a little prominent.

Pegu (*type*). Bengal: Kalimpong, Samsingh, alt. 1800 feet. The type is immature.

2056. **Zyras (Rhynchodonia) nigriceps.**

Myrmedonia nigriceps Kr.*, Arch. Naturg. xxv, 1859, p. 22.

♀: shining; head pitchy-black, thorax reddish-yellow, elytra and abdomen reddish-brown, all the margins of the former and the posterior and lateral margins of the segments of the latter lighter. Antennæ reddish, the first two joints and legs reddish-yellow. Length 8 mm.

In colour very like *obscura* F., but a little larger, the thorax not quite so transverse and obliquely impressed on each side, more finely and much more sparingly punctured, abdomen more finely and much more sparingly punctured, almost impunctate on the last four segments. Head almost as broad as the thorax, the eyes large, much longer than the post-ocular region, on the front with a median tubercle, behind it with a short, scarcely visible impressed line, finely, sparingly punctured, very feebly coriaceous. Antennæ with the 2nd joint very short, much shorter than the 3rd, 4th to 10th slightly transverse, laterally compressed but scarcely serrate, 11th as long as the preceding two together. Thorax a fourth broader than long, the sides rounded in front, retracted and a little sinuate behind, the angles rounded, before the scutellum with a fovea and a short, fine impressed line, at the sides broadly obliquely impressed, puncturation rather fine, almost absent towards the anterior angles, moderately close elsewhere. Elytra broader and about a fourth longer than the thorax, moderately finely and moderately closely punctured. Abdomen moderately finely and moderately closely punctured on the first two visible segments, more finely and much more sparingly on the third, almost impunctate on the following.

♂: unknown.

"Ind. Port." (*Helper*). Unique. Probably somewhat immature.

2057. **Zyras (Rhynchodonia) bidentatus.**

Zyras bidentatus Bernh., W. Z. B. lxiv, 1914, p. 108.

Colour, size and build of *obscurus*, very like *sauteri* Bernh. from Formosa, but larger, the head broader, nearly as broad

as the thorax, the antennæ rather strongly compressed laterally, the thorax more sparingly, the abdomen much more finely, scarcely visibly punctured; the ♂ characters somewhat similar. Length 8.5 mm.

♂: 4th segment more narrowly transversely excavated, in the middle not flat, but raised above the rest of the surface, the teeth on the posterior margin shorter and blunter and near together, only separated by a small emargination; 5th retracted and concealed by the 4th, so that its characters are obscure; 6th and 7th similar, somewhat concave; 8th emarginate in the middle, the angles blunt.

Burma: Pegu. Unique (after *Bernhauer*).

2058. *Zyras (Rhynchodonia) siwalikensis*, sp. n.

Head black, thorax yellowish-red, elytra reddish-yellow, abdomen reddish-brown; in the ♀ entirely shining, in the

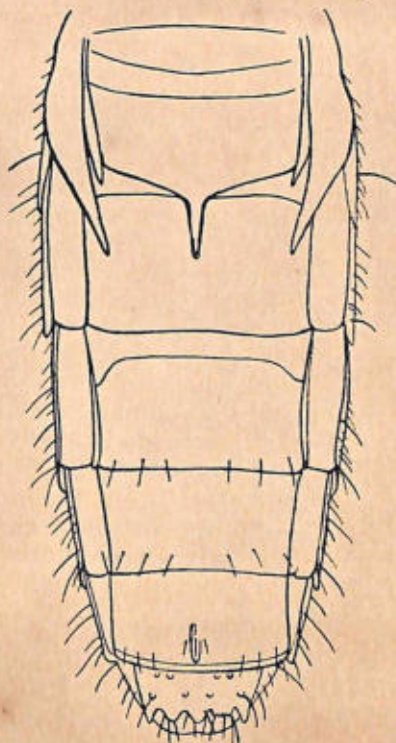


Fig. 127.—*Zyras (Rhynchodonia) siwalikensis*, ♂, abdomen.

♂ with the head dull. Antennæ reddish, the first two joints and legs reddish-yellow. Length 8 mm.

The ♀ of this species is extremely like *nigriceps* ♀, and only differs in the sides of the thorax being straighter behind, the impressed median line more marked and produced forwards nearly to the anterior border, and the elytra a little more finely and more closely punctured.

♂: head strongly coriaceous, greasy lustrous, with a few fine obsolete punctures, in all other respects the fore-parts are similar to those of the ♀; 3rd abdominal segment with a spine at the middle of the posterior margin, the lateral margin itself prolonged backwards and inwards as an equally long spine; 7th with a sharp median keel in the posterior half; 8th with the posterior margin furnished with five teeth, the centre one the broadest.

♀: 8th dorsal segment truncate and closely serrate, on each side with a larger triangular tooth.

Siwaliks: Nakraunda.

2059. *Zyras (Rhynchodonia) fulvus*.

Camacopalpus fulvus Motsch.*. Bull. Soc. Nat. Mosc. (3) xxxi, 1858, p. 231; Cam., E. M. M. lxi, 1933, p. 219.

Shining; head and thorax light chestnut-red, elytra and abdomen brownish-yellow. Antennæ reddish. Legs reddish-yellow. Length 4.5 mm.

Head transverse, as broad as the thorax, the eyes large, occupying the whole lateral aspect, practically impunctate and without ground-sculpture. Antennæ with 2nd joint much shorter than the 3rd, this clavate, 4th and following distinctly compressed, the 4th and 5th slightly longer than broad, the following, viewed on the flat, about as long as broad, 11th as long as the 9th and 10th together. Thorax transverse (5:4), trapezoidal, convex, the anterior angles deflexed and rounded, the sides retracted and almost straight behind, the posterior angles obtusely rounded, in the middle before the scutellum with a shallow indistinct impression, practically impunctate and without ground-sculpture. Elytra a little broader but scarcely longer than the thorax, towards the sides and on the reflexed margin itself with a few very fine punctures, otherwise without sculpture. Abdomen impunctate.

One specimen, doubtless ♀.

"Ind. or." without further indication.

Subgenus *CRATEODONIA* Bernh.

Crateodonia Bernh., Arch. Naturg. Abt. A, xcii, 1926 (1928), pp. 22, 68.

Characters of *Rhynchodonia*, but with the thorax flattened along the middle in addition to being sulcate, and also with the sides obliquely impressed as in some *Rhynchodonia*. The type of the subgenus is the African species *schoutedeni* Bernh. It is represented only by one species in our Fauna, *serraticornis* Kr.

2060. *Zyras* (*Crateodonia*) *serraticornis*.

Myrmedonia serraticornis Kr.*, Linn. Ent. xi, 1857, p. 48; id., Arch. Naturg. xxv, 1859, p. 20; Bernh., Arch. Naturg. Abt. A, xcii, 1926 (1928), p. 68.

Myrmedonia serricornis Walk., Ann. Mag. Nat. Hist. 1859, p. 52.

♂: head black, shining; thorax dark reddish-brown, the disc extensively infuscate, greasy lustrous; elytra dark reddish-brown, greasy lustrous; abdomen shining, black, the side-margins reddish. Antennæ reddish, the first three joints and the legs reddish-yellow. Length 7-7.5 mm.

♀: similarly coloured but with the head and thorax more shining. Head very slightly narrower than the thorax, the eyes large, much longer than the post-ocular region, the vertex broadly but slightly impressed, at least in the ♂, before the base with a pair of small punctures, impunctate along the middle, the sides extremely finely and sparingly punctured, distinctly coriaceous in the ♂, much less strongly in the ♀. Antennæ with the 2nd joint very small, much shorter than the 3rd, 4th and following laterally compressed, subtriangular, serrate, seen on the flat with the 4th joint a little longer than broad, 5th to 10th as long as broad, differing but little amongst themselves, the 11th as long as the preceding two together, in the ♀ with the antennæ a little shorter. Thorax very slightly transverse, the sides rounded for a short distance in front, practically straight and retracted to the rounded posterior angles, along the middle with a fine impressed line and small fovea at the base, the disc a little flattened, towards the sides lightly impressed, extremely finely, rather sparingly punctured, strongly coriaceous in the ♂, less strongly in the ♀. Elytra broader but very slightly longer than the thorax, moderately finely, deeply and rather closely punctured, distinctly coriaceous. Abdomen slightly narrowed towards the apex, in the ♂ with the 1st visible segment moderately finely but rather deeply punctured, the 2nd more finely and less deeply, the following almost impunctate, in the ♀ with the first two segments more finely and more sparingly punctured.

♂: 3rd segment sometimes with a little tooth or tubercle at the middle of the posterior margin, the lateral margin itself with a long sharp spine directed backwards and slightly inwards; 4th carinate along the middle, the keel divided transversely into six to eight little transverse ridges, gradually decreasing in width; 6th sometimes with a minute tubercle at the middle of the posterior margin; 7th with two small tubercles in the middle line, one behind the other; 8th truncate, the angles acute, along the middle with a keel.

Ceylon: Madulsima.

TAPRODONIA, subgen. n.

Head transversely suborbicular, not much produced in front, temples bordered behind. Antennæ with rather long sparing hairs, the 2nd joint much shorter than the 3rd, 4th and following somewhat compressed laterally, but less so than in *Rhynchodonia*, obconical. Thorax slightly transverse, with fine but deep impressed median line, the sides obliquely impressed. Sculpture of the fore-parts granular. Abdomen practically glabrous and impunctate.

2061. *Zyras (Taprodonia) nietneri*.

Myrmedonia nietneri Kr.*, Linn. Ent. xi, 1857, p. 52.

Shining; head and abdomen black, thorax and elytra pitchy-black, the latter sometimes obscurely reddish at the base. Antennæ yellowish-brown, the 1st joint pitchy, the 11th yellowish. Legs reddish-yellow. Length 4.5 mm.

Head as broad as the thorax, transversely suborbicular, the eyes large and prominent, convex, in the ♂ with median sulcus, rather closely covered with small asperate punctures except in front, which is smooth and with the usual inter-antennal tubercle; ground-sculpture absent. Antennæ moderate, the 3rd joint much longer than the 2nd, 4th to 10th gradually decreasing in length, the penultimate scarcely transverse, the 11th as long as the 9th and 10th together. Thorax slightly transverse (3:2.5), trapezoidal, the sides in front very slightly rounded, in the posterior half sinuately retracted to the rounded posterior angles, convex, finely sulcate along the middle and with median basal fovea, at the sides lightly, longitudinally impressed, in the ♂ closely, in the ♀ more sparingly covered with small asperate punctures; ground-sculpture absent. Elytra slightly longer and distinctly broader than the thorax, rather closely covered with similar asperate punctures and without ground-sculpture. Abdomen practically impunctate and glabrous, the fore-parts with an extremely fine and extremely scanty pubescence.

♂: 8th dorsal segment lightly arcuately emarginate.

Ceylon: Negambo. Kandy. With a Termite.

TERMITELIA, subgen. n.

Temples bordered behind. Antennæ with the 1st joint clavate, deeply emarginate at apex, the 2nd small, much shorter than the 3rd, the following laterally compressed and subserrate, furnished with rather short scanty hairs. Thorax transverse, the sides and base rather broadly and continuously impressed.

2062. *Zyras* (*Termitelia*) *insignis*, sp. n.

♂: head and elytra pitchy-black, moderately shining; thorax and abdomen yellowish-red, the former greasy lustrous,

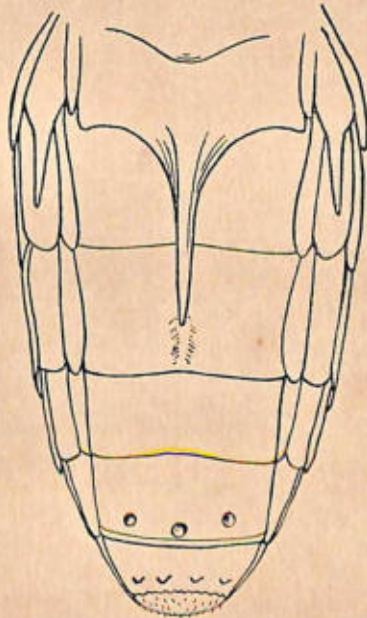


Fig. 128.—*Zyras* (*Termitelia*) *insignis*, ♂, abdomen.

the latter shining. Antennæ reddish-brown, the first two joints and legs reddish-yellow. Length 6.5 mm.

Head strongly transverse, a little narrower than the thorax, the eyes rather large, a little longer than the post-ocular region, very finely, moderately closely punctured, each puncture with a very short depressed hair, finely coriaceous. Antennæ with the 3rd joint much longer than the 2nd, 4th and following laterally compressed and subserrate, the 4th a little longer than broad, the 5th to 10th slightly transverse, 11th as long as the 9th and 10th together. Thorax transverse (10 : 7), the sides rounded in front, nearly straight and rather

strongly retracted behind, the posterior angles obtusely rounded, along the side-margins and base broadly and continuously impressed, so that the lateral margins and base appear elevated, before the scutellum with a short, scarcely perceptible impression, the puncturation and pubescence as on the head, but with the ground-sculpture stronger and less shining. Elytra broader and longer (9:7) than the thorax, not emarginate postero-externally, the lateral margin subcarinate in the posterior half, more closely and much less finely punctured than the thorax, the pubescence similar, the ground-sculpture finer, more like that on the head. Abdomen a little narrowed towards the apex, extremely finely, moderately closely punctured on the basal segments, much more sparingly on the following, and with a fine coriaceous ground-sculpture; 3rd segment with a long strong spine at the middle of the posterior margin, the lateral margins themselves produced backwards into a spine shorter than the median; 4th with a tubercle at the middle of the posterior margin; 5th keeled along the middle; 7th with three tubercles along the posterior margin; 8th with four tubercles along the posterior margin, which is finely but not closely denticulate.

Ceylon. Unique. British Museum.

Subgenus *GLOSSACANTHA* Gemm. et Har.

Glossacantha Gemm. et Har., Cat. Col. ii, 1868, p. 519; Fauv., Rev. d'Ent. xiv, 1895, p. 12; Wasm., Ann. Mus. Civ. Gen. (2) xvi, 1896, p. 619; id., D. E. Z. 1899, p. 150; Fenyès, Gen. Ins. 173 B, 1920, p. 276; Bernh., Arch. Naturg. Abt. A, xcii, 1926 (1928), pp. 20, 36, 40.

Acanthoglossa Motsch., Ét. Ent. viii, 1859, p. 88 (præoc.).

Temples only bordered behind. Antennæ with the 1st joint deeply emarginate at apex, 2nd very small, much shorter than the 3rd, the following not laterally compressed, the pubescence rather short and sparing, much shorter than in *Rhynchodonia*.

Type, *badius* Motsch.*=*affinis* Kr.*

Key based on general characters.

- | | |
|--|-------------------------------------|
| 1. Elytra reddish-yellow, with distinct curved black fascia | <i>fasciatus</i> , sp. n., p. 522. |
| Elytra otherwise | 2. |
| 2. Elytra uniformly coloured | 5. |
| Elytra with the base and shoulders more or less extensively lighter | 3. [p. 529.] |
| 3. Thorax yellowish-red | <i>malabarensis</i> , sp. n., |
| Thorax pitchy-black or brown | 4. |
| 4. Antennæ (except base) black; palpi reddish-yellow; elytra more finely punctured | <i>humerosus</i> Motsch., [p. 522.] |

- Antennæ reddish-brown; 3rd joint of palpi pitchy; elytra more coarsely punctured
5. Thorax distinctly impressed near lateral margin *sordidus* Kr., p. 521.
- Thorax not so impressed 6.
6. Thorax with fine but distinct ground-sculpture 10.
- Thorax without trace of ground-sculpture 7.
7. Thorax with fine median impressed line 9.
- Thorax without impressed median line 8.
8. Thorax moderately finely, closely punctured *hoplonotus* Kr., p. 524.
- Thorax finely, less closely punctured *fraternus*, sp. n., p. 530.
9. Thorax and elytra less finely and less closely punctured *kumaonensis*, sp. n., [p. 530.
- Thorax and elytra more finely and more closely punctured *heimi* Wasm., p. 527.
10. Thorax with a fine but distinct median sulcus throughout *peraffinis*, sp. n., p. 529.
- Thorax with median sulcus absent or limited to base 11.
11. Elytra reddish-brown or pitchy 13.
- Elytra yellow 12.
12. Antennæ with intermediate joints longer than broad *laidlawi*, sp. n., p. 526.
- Antennæ with intermediate joints distinctly transverse *forticornis* Fauv., p. 532.
13. Penultimate joints of antennæ not or scarcely transverse *armifrons* Epp., p. 523.
- Penultimate joints of antennæ distinctly transverse *badius* Motsch., p. 520.
14. Antennæ with the 11th joint as long as the preceding three together 14.
- Antennæ with the 11th joint shorter *excisus* Kr., p. 524.
15. Abdomen rather coarsely punctured, at least at the base 15.
- Abdomen extremely finely punctured 16.
16. Thorax and elytra reddish-yellow, the former slightly transverse *reversus*, sp. n., p. 530.
- Thorax red, elytra blackish, the former as long as broad *obscurus* F., p. 527.
- rubicollis* Kr., p. 522.

Key based on the ♂ characters.

1. Only the 8th abdominal segment modified 12.
- The 3rd segment also modified 2.
2. 3rd segment with two or three spines on the posterior border 3.
- 3rd segment otherwise 10. [p. 529.
3. 3rd segment with two spines *malabarensis*, sp. n.,
- 3rd segment with three spines 4.
4. 4th segment with a median keel sometimes broken up into a row of small tubercles 5.
- 4th segment without keel 7.

- | | |
|--|-------------------------------------|
| 5. Keel uninterrupted | 6. |
| Keel limited to the base and broken into a row of small tubercles | <i>reversus</i> , sp. n., p. 531. |
| 6. Keel extending to the posterior margin of the segment; thorax much less finely punctured; ground-sculpture stronger | <i>fraternus</i> , sp. n., p. 530. |
| Keel limited to the base; thorax very finely punctured, the ground-sculpture feeble | [p. 530. |
| 7. 7th segment with a tubercle | <i>kumaonensis</i> , sp. n., |
| 7th segment with three tubercles | 8. |
| 8. 4th and 5th segments broadly flattened along the middle | <i>laidlawi</i> , sp. n., p. 526. |
| 4th and 5th segments normal | <i>obscurus</i> F., p. 528. |
| 9. 8th segment tricarinate; head distinctly coriaceous | 9. |
| 8th segment quadricarinate; head feebly coriaceous | <i>heimi</i> Wasm., p. 527. |
| 10. 3rd segment with strong median spine.. | <i>peraffinis</i> , sp. n., p. 529. |
| 3rd segment with a lamella posteriorly.. | <i>forticornis</i> Fauv., p. 532. |
| 11. 4th segment with a little keel at the base broken into a row of four or five little tubercles | 11. |
| 4th segment with a dull, oval, coriaceous plaque in the middle | <i>hoplonotus</i> Kr., p. 526. |
| 12. 8th dorsal segment irregularly denticulate on the posterior margin | <i>armifrons</i> Epp., p. 524. |
| 8th dorsal segment finely and regularly denticulate | <i>badius</i> Motsch., p. 521. |
| 13. 11th joint of antennæ as long as the preceding three together | 13. |
| 11th joint of antennæ as long as the preceding two together | <i>excisus</i> Kr., p. 524. |
| | <i>rubricollis</i> Kr., p. 523. |

2063. *Zyras* (*Glossacantha*) *badius*.

Acanthoglossa badia Motsch.*, Ét. Ent. viii, 1859 p. 89 (Jan.),
tab. 1, fig. 5; Cam., E. M. M. lxxix, 1933, p. 220.

Myrmedonia affinis Kr.*, Arch. Naturg. xxv, 1859, p. 23 (Sept.).

Shining, dark reddish-brown, the abdomen black, the posterior margins of the segments narrowly reddish. Antennæ reddish-brown, the 2nd joint and apex of the last reddish-yellow. Legs reddish-yellow. Length 6-6.75 mm.

Head suborbicular, as broad as the thorax, the eyes large, much longer than the post-ocular region, the disc with a small smooth space, elsewhere moderately finely, rather closely punctured and without trace of ground-sculpture. Antennæ stout, extending a little beyond the base of the thorax, 2nd joint very small, 3rd elongate, 4th slightly longer than broad, 5th to 10th as long as broad, 11th a little longer than the preceding two together, stout and conical. Thorax as long as broad, convex, the sides rounded in front, almost straight and retracted behind, the posterior angles obtuse, without basal fovea, the median sulcus very indistinct, the puncturation closer and less fine than on the head; ground-

sculpture absent. Elytra broader and slightly longer than the thorax, more closely and more coarsely punctured and without ground-sculpture. Abdomen a little narrowed before the apex, the first two visible segments rather coarsely and moderately closely punctured, 3rd more finely and more sparingly, 4th to 6th with a few scattered punctures, the ground-sculpture very fine and only present on the last three segments.

♂: 8th dorsal segment a little narrowed, in the middle of the posterior margin with a narrow arcuate emargination variable in depth and on each side with closely placed sharp teeth varying in number and size; 6th ventral segment rounded and closely and finely denticulate.

♀: 8th dorsal segment almost truncate, in the middle with a small arcuate emargination, on each side irregularly denticulate; 6th ventral segment closely and finely denticulate.

Ceylon: Nuwera Eliya; Kandy.

Both the types of Motschoulsky and Kraatz are probably immature. Kraatz has overlooked the denticles on the 8th dorsal segment.

2064. *Zyras (Glossacantha) sordidus*.

Myrmedonia sordida Kr.*, Arch. Naturg. xxv, 1859, p. 23.

♂ (?): moderately shining, brown; thorax and elytra infusate, the base of the latter brownish-yellow, the posterior margins of the abdominal segments brownish-yellow. Antennæ brown, the 1st and 2nd joints reddish. Palpi reddish-yellow, the 3rd joint pitchy. Legs reddish-yellow. Length 5.5 mm.

Very similar to *badius* but a little smaller, less shining and differently coloured. Head as broad as the thorax, not very closely, moderately finely, superficially punctured. Antennæ longer than the head and thorax, the 2nd joint much shorter than the 3rd, 4th slightly longer than broad, the following scarcely broader but shorter, the 11th as long as the preceding two together. Thorax fully as long as broad, somewhat narrowed towards the base, the posterior angles nearly rectangular, somewhat convex, superficially sulcate in the middle behind, closely and deeply punctured. Elytra as long as but broader than the thorax, closely and strongly punctured (but not quite so strongly as in *badius*), and without ground-sculpture. Abdomen rather finely and sparingly punctured on the first two visible segments, the 4th and 6th practically impunctate, the latter obtusely angulate in the middle, feebly arcuately emarginate on each side.

Ceylon (*Nietner*). Unique.

The head and abdomen in the unique type are now wanting.

2065. *Zyras (Glossacantha) humerosus*.

Acanthoglossa humerosa Motsch.*, Ét. Ent. viii, 1859, p. 90;
Cam., E. M. M. lxix, 1933, p. 220.

Shining, pitchy-black, the base of the elytra and posterior margins of the abdominal segments yellowish-red. Antennæ black, the first three joints red. Legs reddish-yellow. Length 5 mm.

Build of *badius*, and apart from the size and colour differs in the following respects: the eyes are smaller and the post-ocular region correspondingly longer, the puncturation of the head finer, antennæ shorter but similarly constructed except that the 11th joint is only as long as the 9th and 10th together, the thorax along the posterior half of the middle has a distinct impressed line, the puncturation is closer, the elytra more finely and rather less closely punctured, the abdomen less closely punctured at the base.

♂ (?): 8th dorsal segment with the posterior margin bisinuate, so forming three broad subtriangular teeth; 6th ventral segment broadly rounded.

Ceylon: Nuwera Eliya. Two examples.

2066. *Zyras (Glossacantha) fasciatus*, sp. n.

Shining; head and abdomen black, thorax red, elytra reddish-yellow, with a curved black fascia extending from the scutellary region across the middle to the middle of the reflexed margin. Antennæ red, the first two joints and legs reddish-yellow. Length 6 mm.

Build of *badius* but rather narrower, with smaller eyes, shorter antennæ with the joints much more transverse, the 11th not longer than the preceding two together, the thorax differently punctured, the elytra less closely and the abdomen more finely punctured. Head rather coarsely, moderately closely punctured, without frontal tubercle or ground-sculpture. Thorax with moderately broad impunctate area along the middle, on either side moderately finely and irregularly punctured, the antero-external and basal regions impunctate, external to the median punctured area with an oval impunctate space, between this and the lateral margin with a few punctures; ground-sculpture absent. Elytra moderately coarsely, not very closely punctured and without ground-sculpture. Abdomen finely, moderately closely punctured throughout.

♂: unknown.

Burma: Ruby Mines. Unique. British Museum.

2067. *Zyras (Glossacantha) rubricollis*.

Myrmedonia rubricollis Kr., Linn. Ent. xi, 1857, p. 51.

Shining; head pitchy-black; thorax red; elytra blackish-

brown; abdomen black. Antennæ reddish-brown, the first two joints and legs reddish-yellow. Length 6-7 mm.

♂: extremely like *badius* but with the thorax shorter and broader, as long as broad, the median impressed line more evident and rather more finely punctured. Antennæ shorter, the penultimate joints more transverse, the 11th as long as the preceding two together. At once distinguished by the abdominal puncturation, which is much closer on the first three visible segments, whilst the 4th and 5th are finely and rather closely punctured, whereas in *badius* these segments are practically impunctate. The 8th (6th visible) segment a little narrowed, its posterior margin rounded, very finely and evenly denticulate, in the middle with a rather deep, narrow, arcuate excision.

Ceylon: Negambo; Kandy.

2068. *Zyras* (*Glossacantha*) *armifrons*.

Myrmedonia armifrons Epp., W. E. Z. ix, 1890, p. 274.

Shining (♂ and ♀), black, the thorax red. Antennæ brown, the first two joints red. Legs reddish-yellow. Length 8 mm.

In build and antennal structure scarcely differing from

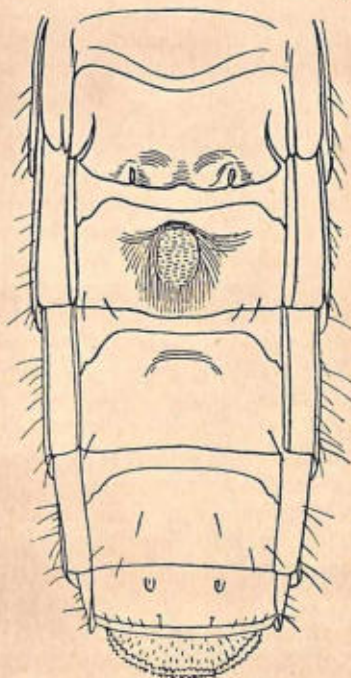


Fig. 129.—*Zyras* (*Glossacantha*) *armifrons*, ♂, abdomen.

rubricollis; the puncturation also is very similar, but the head is finely coriaceous and furnished with an inter-antennal tubercle in both sexes, larger and crateriform in the ♂. Thorax without basal fovea but with a fine impressed median line throughout, the puncturation as in *rubricollis* and without ground-sculpture. Elytra rather more coarsely punctured than in that species. Abdomen on the first three visible segments moderately finely and closely rugosely punctured, the 4th to 6th more sparingly.

♂: 3rd segment with the posterior border raised and with three arcuate emarginations, the lateral ones larger than the median; the border is thus trilobed, the lateral lobes rounded; 4th with an oval, densely and finely coriaceous dull median plaque extending nearly the whole length of the segment, the posterior margin feebly produced backwards in the middle; 7th with a rather large tubercle on each side near the base; 8th broadly rounded and finely and closely denticulate, its upper surface with fine asperate punctures; 6th ventral segment broadly rounded and closely denticulate.

♀: 8th dorsal segment broadly rounded, finely and closely denticulate.

Nagpore (*type*). Dehra Dun. Haldwani. Bombay.

Eppelsheim omitted to mention the peculiar coriaceous plaque on the 4th segment.

2069. *Zyras (Glossacantha) excisus*.

Myrmedonia excisa Kr.*, Linn. Ent. xi, 1857, p. 50.

Extremely like *badius*, of practically the same colour, but a little smaller (5.5 mm.) and with the antennæ distinctly shorter and stouter, the 4th to 10th joints distinctly transverse, the 11th as long as the preceding three together; the puncturation of the first two visible abdominal segments is rather closer.

♂: 8th dorsal segment rounded and closely denticulate, in the middle with a deep subtriangular emargination; 6th ventral segment rounded and finely serrated.

♀: 8th dorsal segment rounded and denticulate, in the middle with a rather broad arcuate emargination; 6th ventral segment rounded and finely serrated.

Ceylon: Wadduwa (*Kannegieter*).

Kraatz has failed to note the fine serrated edges of the 8th dorsal and 6th ventral segments.

2070. *Zyras (Glossacantha) hoplonotus*.

Myrmedonia hoplonota Kr.*, Linn. Ent. xi, 1857, p. 49.

Head black, in the ♂ greasy lustrous, in the ♀ more shining; thorax red, more shining in the ♀; elytra reddish-brown,

rather shining; abdomen black, shining, the side-margins reddish. Antennæ reddish-brown, the first two joints and legs reddish-yellow. Length 6.5 mm.

Head broad, transverse, almost as broad as the thorax, the eyes large, much longer than the post-ocular region, extremely finely, sparingly punctured, in the ♂ with a small median tubercle in front, distinctly coriaceous and less shining in the ♀ without tubercle or ground-sculpture and more shining. Antennæ extending to the base of the thorax, the 2nd joint very short, 3rd elongate, 4th to 10th distinctly

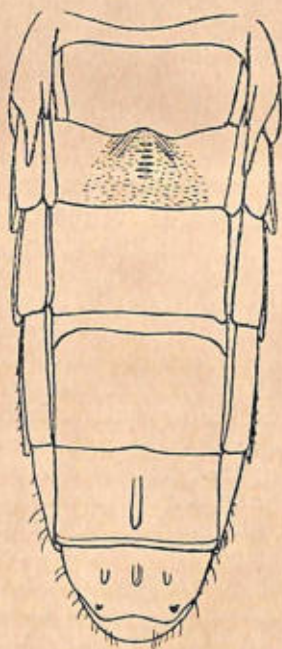


Fig. 130.—*Zyras (Glossacantha) hoplonotus*, ♂, abdomen.

transverse, 11th as long as the 9th and 10th together. Thorax a fourth broader than long, the sides rounded in front, practically straight and retracted behind, the posterior angles rounded; convex, before the scutellum with a small fovea, towards the sides lightly longitudinally impressed, extremely finely, rather sparingly punctured, distinctly coriaceous and less shining in the ♂, more shining and without ground-sculpture in the ♀. Elytra very slightly longer but distinctly broader than the thorax, finely, rather closely punctured, distinctly coriaceous in the ♂, less distinctly in the ♀. Abdomen a little narrowed before the apex, in the ♂ very finely and sparingly

punctured on the first three visible segments, in the ♀ less finely and more closely, the last three segments practically impunctate in both sexes.

♂: 3rd abdominal segment a little produced backwards in the middle and arcuately emarginate, the lateral margin itself produced backwards and inwards as a spine; 4th with a median longitudinal impression, its fundus with five or six very small, closely placed tubercles one behind the other as in *serraticornis*; 5th broadly, superficially flattened in the middle of the basal half; 7th with a fine keel along the middle; 8th feebly emarginate, finely carinate along the middle, on each side between it and the lateral margin with a fine and much shorter keel and near the posterior angles with a very small keel or tubercle.

Ceylon: Colombo.

2071. *Zyras* (*Glossacantha*) *laidlawi*, sp. n.

Head dark reddish-brown, dull in ♂, shining in ♀; thorax, elytra and abdomen shining, the thorax and abdomen yellowish-red, the elytra reddish-yellow. Antennæ reddish-brown, the first joint and legs reddish-yellow. Length 6.5-7 mm.

In build scarcely differing from *hoplonotus*, the antennæ thinner, the joints shorter and so more transverse, the puncturation of the fore-parts much stronger. Head moderately finely and moderately closely punctured, in the ♂ strongly coriaceous and with a V-shaped impression on the disc, obscurely raised along the front but without distinct tubercle, in the ♀ without ground-sculpture or impression. Thorax with small fovea at the middle of the base, the impressed median line fine and indistinct, the lateral impressions very superficial and obsolete, scarcely visible in the ♀, the puncturation rather finer but about as close as in *obscurus*, the ground-sculpture extremely fine and scarcely visible. Elytra more closely and more coarsely punctured than the thorax and without ground-sculpture. Abdomen except for a few fine scattered punctures on the first two visible segments practically impunctate.

♂: 3rd segment with a long backwardly directed spine at the middle of the posterior margin, the lateral margin itself prolonged into a slightly curved spine directed backwards and a little inwards and nearly as long as the median one; 7th with a group of three tubercles, the central one at the posterior margin, the lateral ones a little more remote; 8th truncate, in the middle of the posterior margin with a large tubercle, on each side with a stout tooth from which a keel extends forwards towards the base.

Ranchi: Nankum, 1928 (*Laidlaw*). British Museum.

2072. *Zyras (Glossacantha) heimi*.

Myrmedonia (Glossacantha) heimi Wasm., D. E. Z. 1899, p. 150.

Shining, the head less so in ♂ than in the ♀, black, thorax and elytra red, abdomen black, the posterior margins of the last four segments sometimes narrowly reddish-yellow. Antennæ reddish-brown. Legs reddish-yellow. Length 5-7 mm.

In build and antennal structure scarcely differing from *hoplonotus*, but with different sculpture and more brightly coloured. Head finely, rather sparingly punctured, in the ♂ with the disc lightly impressed and distinctly coriaceous, in the ♀ without trace of ground-sculpture and more shining. Thorax as in *hoplonotus*, at the sides lightly obliquely impressed, before the scutellum with a fovea, in the ♂ with a fine impressed median line also, the puncturation fine, moderately close on the disc, more sparing towards the sides, finer and less close than in *obscurus*, and rather finer in the ♀; ground-sculpture absent in both sexes. Elytra closely and less finely punctured than the thorax and without ground-sculpture. Abdomen with the first two visible segments in the ♂ finely and moderately closely punctured, in the ♀ with the first four segments punctured, elsewhere glabrous and practically impunctate.

♂: 3rd segment with the posterior margin produced backwards in the middle as a short sharp spine, the lateral margin itself produced backwards into a similar spine on each side; 7th with a little tubercle in the middle; 8th emarginate, the external angles prominent, along the middle and on each side with a keel.

Ahmednagar, Sangamner; Belgaum.

2073. *Zyras (Glossacantha) obscurus*.

Staphylinus obscurus F., Syst. Eleuth. ii, 1801, p. 595; Er., Gen. Spec. Staph. 1839-40, p. 41 (*Myrmedonia*); Fauv., Rev. d'Ent. xxii, 1903, p. 163.

Myrmedonia hauseri Epp., W. E. Z. ix, 1890, p. 275.

Myrmedonia semirufa Bernh., D. E. Z. 1902, p. 18.

Myrmedonia tricuspoidatus Kr., Linn. Ent. xi, 1857, p. 49.

Myrmedonia (Glossacantha) tridens Wasm., D. E. Z. xliii, 1899, p. 141.

Head black, dull in ♂, shining in ♀; thorax shining, yellowish-red; elytra shining reddish-yellow; abdomen shining pitchy-black, the posterior margins and often the elevated sides narrowly rufescent, sometimes with the first two visible segments reddish-brown. Antennæ reddish-brown, the first two joints and the legs reddish-yellow. Length 6-7 mm.

In build and antennal structure scarcely differing from *hoplonotus*, but much more coarsely punctured and with

lighter elytra. Head transverse, almost as broad as the thorax, the eyes large, much longer than the post-ocular region, in the ♂ dull, strongly coriaceous, at the sides finely and sparingly punctured, in the ♀ shining, without ground-sculpture, moderately finely and rather closely punctured all over. Antennæ extending to the base of the thorax, stout, 2nd joint scarcely half as long as the 3rd, 4th slightly, 5th to 10th more strongly transverse and differing but little from each other, about twice as broad as long, the 11th as long as the 9th and 10th together. Thorax slightly transverse (5.5 : 4.5), trapezoidal, the sides nearly straight behind, the

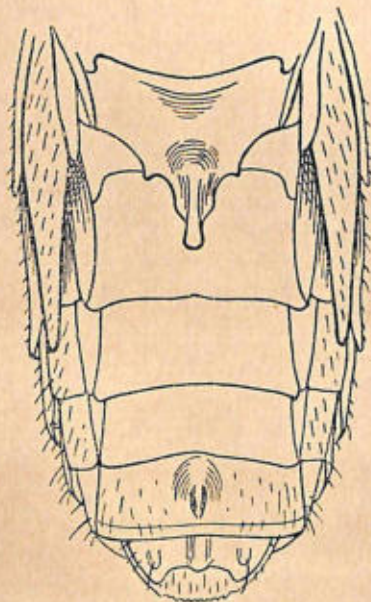


Fig. 131.—*Zyras (Glossacantha) obscurus*, ♂, abdomen.

posterior angles rounded, rather coarsely, moderately closely punctured and without ground-sculpture in either sex, in the ♂ with impressed line along the middle. Elytra slightly longer and distinctly broader than the thorax, more coarsely and more closely punctured; ground-sculpture absent. Abdomen a little narrowed before the apex, in the ♂ with the first three visible segments rather coarsely and rather sparingly punctured, the following practically impunctate, in the ♀ with the 4th and 5th segments sparingly but rather coarsely punctured also.

♂ : 3rd segment produced backwards in the middle as a long spine, the lateral margin itself produced backwards as a yet

longer one; 4th and 5th segments broadly flattened along the middle; 7th with a large tubercle near the middle of the posterior margin; 8th arcuately emarginate, in the middle with a large flat triangular tubercle produced a little beyond the posterior margin.

Ceylon: Negambo; Trincomalee. India: Coimbatore Ahmednagar; Genji, Mahé.

2074. *Zyras (Glossacantha) malabarensis*, sp. n.

♂: head and thorax moderately shining, the former black, the latter yellowish-red; elytra and abdomen shining reddish-yellow, the former with the disc extensively infusate. Antennæ reddish-brown, the first two joints and legs reddish-yellow. Length 6.5 mm.

In build very like *obscurus* but narrower, the antennæ similarly constructed but not so stout, the fore-parts less shining. Head finely, not very closely punctured, without frontal tubercle, less strongly coriaceous than *obscurus*. Thorax a little narrower, with the sides more retracted behind than in *obscurus*, with finer impressed median line, much more finely and obsoletely but about as closely punctured as in that species, very finely but distinctly coriaceous. Elytra as closely but more finely and less deeply punctured than in *obscurus*, indistinctly coriaceous. Abdomen extremely finely and sparingly punctured on the 3rd segment, almost impunctate on the following; 3rd segment on each side adjacent to the lateral margin with a long, curved, backwardly directed spine; 7th with a pointed tubercle in the middle near the posterior margin; 8th rounded and furnished with closely placed slender teeth, the external one on each side the largest, in the middle at the posterior margin with a large pointed tubercle, the rest of the surface with numerous small pointed granules; 6th ventral segment rounded and closely denticulate.

♀: unknown.

Malabar. Unique. British Museum.

2075. *Zyras (Glossacantha) peraffinis*, sp. n.

Like *heimi* in build and colour, but differing in the ♂ in the following respects: the head is rather broadly and distinctly impressed on the vertex, shining, and with scarcely perceptible ground-sculpture, the antennal joints rather less transverse, the thorax more distinctly impressed before the base, the oblique lateral impressions much more distinct, the puncturation finer and distinctly closer, the elytra a little more finely and closely punctured. The ♂ characters only differ in the

8th segment being without a central tubercle, but with two little keels close together instead. In the ♀ the median basal impression of the thorax is less distinct and the vertex of the head is not impressed.

Dehra Dun.

2076. *Zyras (Glossacantha) kumaonensis*, sp. n.

♂: size, colour, and build of *peraffinis*, the antennæ similarly constructed, but the head and thorax present a fine but distinct ground-sculpture, the thorax more finely punctured on the disc, more sparingly towards the sides, elytra less finely punctured, 3rd abdominal segment with three long spines, the lateral arising from the lateral margin itself, 4th with a fine median keel on the anterior half, 7th with a median keel on the posterior half, 8th with two parallel keels close to the middle behind and another at the lateral margin. Differs from *heimi* in the more finely punctured thorax and the ground-sculpture both on it and the elytra, the much longer spines of the 3rd segment, the keel at the base of the 4th, etc.

Kumaun: Haldwani (*H. G. Champion*). At a broken termitarium (? *T. obesus*). Unique. British Museum.

2077. *Zyras (Glossacantha) fraternus*, sp. n.

♂: in size, colour, build and antennal structure similar to *peraffinis*, but differing in the ♂ characters and in the following respects: the head is less shining and strongly coriaceous, the thorax as closely but much less finely punctured and distinctly coriaceous, the elytra obviously less finely punctured, the abdomen punctured as in *peraffinis*; 3rd segment with three long spines, the lateral ones arising from the side-margin itself and directed backwards and inwards; 4th with a fine keel along the whole of the middle line; 7th with a fine median keel along the posterior half; 8th with two fine keels united behind to form a U at the posterior border which is slightly emarginate.

♀: unknown.

Kumaun: Haldwani, iii. 1923 (*H. G. Champion*).

2078. *Zyras (Glossacantha) reversus*, sp. n.

Shining (♂ and ♀). Head black, thorax and elytra yellowish-red, abdomen reddish-brown, the last three segments pitchy-black. Antennæ red. Legs reddish-yellow. Length 6 mm.

Build of *heimi*, colour more like *obscurus*, antennæ shorter than in the former. Head finely coriaceous in both sexes, but more distinctly in the ♀, finely and sparingly punctured, the front obtusely raised in the middle. Antennæ with the

penultimate joints more than twice as broad as long. Thorax with a small impression before the scutellum, without median sulcus, the sides not impressed in the ♂, with a feeble impression in the ♀, finely, moderately closely punctured, the ground-sculpture more distinct in the ♀. Elytra more strongly and more closely punctured than the thorax, the fine coriaceous ground-sculpture more distinct in the ♀. Abdomen practically impunctate in the ♂, extremely finely punctured on the first three visible segments in the ♀.

♂: 3rd segment with three short equal spines, the external

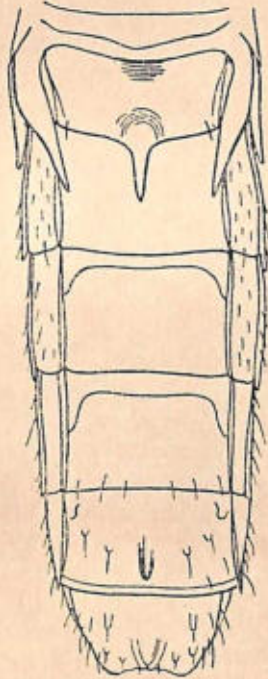


Fig. 132.—*Zyras (Glossacantha) reversus*, ♂, abdomen.

ones arising from the lateral margin itself; 4th with a short median basal keel, transversely interrupted so as to form a row of four or five tubercles as in *hoplonotus*; 7th with a fine keel behind along the middle, sometimes absent; 8th arcuately emarginate, the angles rounded, in the middle behind with a flat triangular elevation, the rounded apex of which projects a little beyond the posterior margin, near the lateral margin on each side with a small tubercle.

Dehra Dun.

Remarkable in the ♀ having a more distinct ground-sculpture than the ♂.

2079. *Zyras (Glossacantha) forticornis*.

Zyras forticornis Fauv., Rev. d'Ent. xxiii, 1904, p. 64.

Shining; head and abdomen black, the base of the latter often reddish-brown, thorax red, elytra dark reddish-brown. Antennæ reddish-brown, the first two joints and legs reddish-yellow. Length 7 mm.

Head transversely suborbicular, slightly narrower than the thorax, the eyes large, much longer than the post-ocular regions, the front with a small fovea in the ♂, very finely, rather closely punctured, finely but distinctly coriaceous in both sexes. Antennæ rather long and stout, the 2nd joint small, scarcely half as long as the 3rd, 4th to 9th longer than broad, decreasing in length, the 10th as long as broad, the 11th as long as the 9th and 10th together. Thorax very slightly transverse (5:4.75), convex, the sides rounded in front, retracted and a little sinuate behind, the posterior angles obtuse, narrowly sulcate along the whole of the middle line, rather closely, moderately coarsely punctured, finely coriaceous. Elytra as long as but broader than the thorax, more closely and less coarsely punctured, finely coriaceous. Abdomen a little narrowed before the apex, finely and closely punctured on the first two visible segments (less finely in the ♀), more sparingly on the 3rd, the following two practically impunctate, the last with a few small asperate punctures.

♂: 3rd abdominal segment with a strong tooth at the middle of the posterior margin; 8th slightly emarginate.

♀: 8th dorsal segment rounded and closely denticulate.
Nilgiri Hills.

Subgenus *ZYRAS*, s. str.

Zyras Steph., Ill. Brit. Ent. Mandib. v, 1932, p. 430; Thoms., Skand. Col. ii, 1860, p. 258; Muls. et Rey, Nat. Hist. Col. Fr. Brévip. Aléoch. iii, 1873, p. 35; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 119; Reitt., Faun. Germ. ii, 1909, p. 42; Johansen, Danmarks Rovbiller, 1914, p. 94; Fenyès, Gen. Ins. 173 B, 1920, p. 296; Portevin, Encycl. Ent. A, xii, 1929, i, p. 254.

Shining species, the head not greatly produced in front. Antennæ with the 2nd joint not or but little shorter than the 3rd, the following not laterally compressed and furnished with long sparse hairs.

Key to the Species.

1. Black, the fore-parts with strong greenish-blue reflex *nigroaeneus*, sp. n., p. 543.
- Otherwise coloured 2.
2. Entirely black species 3.
- Otherwise coloured 4.

3. Abdomen with long, close pubescence at the sides; antennæ entirely black *hirsutiventris* Kr., p. 542.
 Abdomen with long, scanty pubescence at the sides; antennæ with the 11th joint sometimes dark red *pindaræ* Champ., p. 542.
4. 8th or 7th and 8th abdominal segments bright red, the rest black 5.
 Abdomen otherwise 6.
 Only the 8th segment red *ruficauda*, sp. n., p. 543.
 The 7th and 8th segments red *kraatzi* Schub., p. 536.
6. Elytra black or pitchy 7.
 Elytra otherwise 11.
7. Thorax impressed at the sides *distinctus*, sp. n., p. 540.
 Thorax not impressed 8.
8. Base of abdomen only red, the rest black; elytra not asperate 9.
 Base and apex of abdomen yellowish-red; elytra asperately punctured [p. 536.
exasperatus Schub.,
ferrugineus, sp. n., p. 541.
9. Head ferruginous-red 10.
 Head black
10. Antennæ entirely black; elytra coarsely and rather sparingly punctured *optimus*, sp. n., p. 534.
 Antennæ brown, the last three joints reddish-yellow; elytra finely, rather closely punctured *geminus* Kr., p. 540.
11. Elytra entirely yellow or reddish-yellow 12.
 Elytra bicolorous 13.
12. Larger (6.5 mm.), closely pubescent; intermediate joints of antennæ transverse *hirtus* Kr., p. 535.
 Smaller (3.5 mm.), normally pubescent; intermediate joints of antennæ longer than broad *rufescens*, sp. n., p. 534.
13. Head and thorax ferruginous-red; elytra red, the postero-external region black *castaneus* Motsch., p. 539.
 Head and thorax black 14.
14. Elytra black, the scutellary and sutural regions with a narrow triangular red marking extending nearly to the apex *hastatus* Fauv., p. 539.
 Elytra otherwise 15.
15. Elytra black, with a transverse reddish-yellow humeral spot *perforatus* Champ., p. 535.
 Elytra yellow, with the postero-external region black or infuscate 16.
16. Abdomen black *proximus*, sp. n., p. 538.
 Abdomen bicolorous 17.
17. Abdomen with the first three visible segments red, the rest black; antennæ except base black *nilgiriensis*, sp. n., p. 537.
 Abdomen otherwise 18.
18. Abdomen red, the 3rd and 4th visible segments black; antennæ black *championi*, sp. n., p. 537.
 Abdomen black, the 1st visible segment and the last red; antennæ black, the last three joints pale yellow *gardneri*, sp. n., p. 538.

2080. *Zyras* (s. str.) *optimus*, sp. n. (Fauvel, *in litt.*).

Shining; head, elytra, 4th and 5th visible abdominal segments black; thorax, first three visible abdominal segments and the last red. Antennæ black, the last joint obscurely reddish. Legs reddish-yellow. Length 5.75 mm.

In build scarcely differing from *fulgidus* Gr., but differently coloured and with shorter antennæ. Head transverse, with a few small scattered punctures; ground-sculpture absent. Antennæ rather short, the 3rd joint a little longer than the 2nd, 4th slightly longer than broad, 5th as long as broad, 6th to 10th about a half broader than long, 11th as long as the preceding two together. Thorax transverse (9.5:8), before the scutellum foveate, on each side of the middle in the anterior half with a somewhat irregular row of five or six moderate punctures, towards the sides with seven or eight more, otherwise impunctate and without ground-sculpture, the sides with a few short setæ. Elytra coarsely and rather closely punctured. Abdomen with a few punctures in the basal impressions, otherwise glabrous and impunctate. Pubescence rather long, sparing on the head and thorax, closer on the elytra.

Nilgiri Hills (*H. L. Andrewes*). Unique. The author's collection.

2081. *Zyras* (s. str.) *rufescens*, sp. n.

Shining; head, thorax and abdomen yellowish-red, elytra yellow. Antennæ reddish-yellow, the 4th to 9th joints blackish. Legs reddish-yellow. Length 3.5 mm.

In build resembling *fulgidus* Gr., but much smaller, the eyes much larger, differently coloured, etc. Head transverse, only a little narrower than the thorax, the eyes large, much longer than the post-ocular region, practically impunctate and without ground-sculpture, but with a few long black setæ. Antennæ moderate, the 3rd joint a little longer than the 2nd, 4th to 9th a little longer than broad, decreasing in length, the 10th as long as broad, the 11th scarcely as long as the preceding two together. Thorax transverse (5.5:4), the sides rounded in front, retracted behind, the posterior angles rounded, convex, about the middle of the disc, with a pair of small, rather widely separated punctures, otherwise practically impunctate and without ground-sculpture, the sides with some long black setæ. Elytra broader and about a half longer than the thorax, extremely finely, very sparingly punctured and with scanty long yellow hairs. Abdomen a little narrowed before the apex, the 5th, 6th and 8th segments with long black setæ on their posterior margins, the sides also with similar setæ, practically impunctate.

Ceylon. Unique. British Museum.

2082. *Zyras* (s. str.) *hirtus*.

Myrmedonia hirta Kr.*, Arch. Naturg. xxv, 1859, p. 25, tab. 1, fig. 8.

Shining; head, thorax and abdomen ferruginous-red, the elytra yellowish-red. Antennæ red, the first two joints and the last yellowish-red. Legs reddish-yellow. Length 5.5 mm.

Readily recognized by the close yellow pubescence, especially noticeable at the sides of the abdomen, in build not unlike *fulgidus* Er. Head transverse, a good deal narrower than the thorax, eyes moderate, in front lightly transversely impressed, at the sides with a fine, sparing puncturation and long hairs; ground-sculpture absent. Antennæ with the 2nd joint moderate, the 3rd a little longer, 4th about as long as broad, 5th to 10th moderately transverse, 11th small, shorter than the preceding two together. Thorax a fourth broader than long, convex, the sides rounded in front, retracted and straighter behind, the anterior angles rounded, the posterior obtuse, before the scutellum with a fovea, very finely, sparingly punctured, pubescence long, and without ground-sculpture. Elytra a little broader and a fourth longer than the thorax, very finely, sparingly punctured, closely covered with long yellow hairs. Abdomen parallel, practically impunctate along the middle, towards the sides with moderately fine scattered punctures and long hairs, the sides with a long close, yellow pubescence.

Ceylon (*Nietner*). Unique.

2083. *Zyras* (s. str.) *perforatus*.

Myrmedonia (Zyras) perforata Champ.*, E. M. M. lvii, 1921, p. 178.

Very shining; head and thorax black; elytra black, with transverse reddish-yellow humeral marking; abdomen red, the 6th and 7th segments black. Antennæ black, the 1st, 2nd, base of the 3rd, and 11th joints orange-red. Legs reddish-yellow. Length 7.5 mm.

In build very similar to *haworthi* Steph., but with less transverse thorax. Head transverse, much narrower than the thorax, with fine scattered setiferous punctures and without ground-sculpture. Antennæ moderate, thickened towards apex, the 3rd joint a little longer than 2nd, 4th to 7th slightly longer than broad, decreasing in length, 8th as long as broad, 9th and 10th slightly transverse, 11th as long as the 9th and 10th together. Thorax distinctly transverse, convex, before the base in the middle with a large fovea, the sides rounded in front, retracted and slightly sinuate behind, with moderately fine, scattered, setiferous punctures.

Elytra as long as but a good deal broader than the thorax, with small scattered punctures and fine sparing pubescence, without long setæ at the sides. Abdomen a little narrowed towards apex, at the bases of the segments with a few small punctures, otherwise glabrous and practically impunctate, the sides with some fine setæ.

Kumaun, Swal River, ii. 1919 (*H. G. Champion*) (type). Naini Tal.

The small form treated as a variety by Champion is quite distinct, as will be seen from the description of *championi* (p. 537).

2084. *Zyras* (s. str.) *kraatzi*.

Zyras kraatzi Schub.*, D. E. Z. 1908, p. 609.

Myrmedonia (Zyras) ignicauda Champ.*, E. M. M. lxiii, 1927, p. 245.

Very shining, black, the 7th and 8th abdominal segments bright red. Antennæ black, the 1st, 2nd and 11th joints reddish. Legs reddish-yellow. Length 5-5.75 mm.

In build very like *perforatus*, but with smaller, more orbicular head. Head small, slightly transverse, a good deal narrower than the thorax, the eyes moderate, at the sides with a few small setiferous punctures, without ground-sculpture. Antennæ thickened towards apex, the 3rd joint a little longer than 2nd, 4th, and 5th slightly longer than broad, 6th to 7th as long as broad, 8th to 10th slightly transverse, the 11th as long as the preceding two together. Thorax slightly transverse, convex, the sides rounded, a little retracted behind, before the scutellum with a large fovea, almost smooth along the middle, elsewhere with a few small scattered punctures; ground-sculpture absent. Elytra as long as but a good deal broader than the thorax, slightly widened behind, with a few small scattered punctures except along the posterior margin and a small space behind near the side which are impunctate. Abdomen a little narrowed behind, in the basal impressions with a few small punctures, otherwise practically impunctate and glabrous. 8th dorsal segment rounded behind.

Kulu (*Rost*). Chakrata district: Jaunsar, viii. 1919 (*H. G. Champion*).

2085. *Zyras* (s. str.) *exasperatus*.

Zyras exasperatus Schub.*, D. E. Z. 1908, p. 610.

Shining; head and elytra dark brown, the latter obscurely reddish at the base, thorax reddish-brown; abdomen with the 1st visible segment reddish, 2nd to 4th pitchy, 5th and 6th red. Antennæ black, the 11th joint red. Legs reddish-yellow. Length 5.5 mm.

Near *kraatzi*, but a little less robust, the colour brighter. Antennæ longer, thorax less transverse, the elytra with distinctly asperate punctures. Head transversely sub-orbicular, narrower than the thorax, impunctate along the middle, elsewhere with a few small scattered punctures. Antennæ with the 2nd and 3rd joints of equal length, 4th to 7th a little longer than broad, gradually decreasing in length, 8th as long as broad, 9th and 10th a little transverse, 11th as long as the preceding two together. Thorax slightly transverse, convex, the sides rounded in front, retracted and straighter behind, before the scutellum with a large rounded fovea, its fundus with two or three fine punctures, elsewhere with scattered small or very small punctures. Elytra as long as but broader than the thorax, with coarse, moderately close, distinctly asperate punctures in the basal half, towards the apex more finely and much more sparingly punctured, almost impunctate behind. Abdomen a little narrowed before the apex, practically impunctate, but the 7th segment with four small quadrately placed asperate punctures, the 8th with a few similar ones irregularly placed, its posterior border with a shallow arcuate emargination. Pubescence throughout rather long and scanty.

Kulu, alt. about 3000 m. (*Rost*).

2086. *Zyras* (s. str.) *championi*, sp. n.

Closely allied to *perforatus*, but differing from it in the colour-pattern of the elytra and abdomen, the former more closely punctured; the elytra are bright reddish-yellow with a large black sharply defined marking occupying the region from the middle of the external margin to the sutural angle; the abdomen is red, with the 5th (except for a small red spot adjacent to the side-margin in front) and 6th segments black, whereas in *perforatus* the 6th and 7th segments are black. The antennæ entirely black. Length 6 mm.

Simla Hills: Theog, alt. 7000 feet. Kumaun: Naini Tal.

2087. *Zyras* (s. str.) *nilgiriensis*, sp. n.

Shining; head and thorax black, elytra yellowish-red, with the postero-external region from the middle of the outer margin to the apex of the suture indeterminately blackish. Abdomen with the first three visible segments red, the following black. Antennæ black, the first two joints reddish. Anterior femora entirely, middle and posterior with the apical half only, black, tibiæ and tarsi reddish-yellow. Length 6 mm.

Robust. Thorax less convex and slightly broader than in *championi*, the sculpture entirely different, the black elytral

marking much less definite, the abdomen with different colour-pattern. Head broad, transverse, narrower than the thorax, almost impunctate, finely pubescent. Antennæ as in *perforatus*. Thorax transverse (9.5 : 8), the sides retracted and a little sinuate behind, before the scutellum with a fovea, extremely finely, moderately closely punctured, and with long, rather close yellowish pubescence. Elytra as long as but broader than the thorax, the puncturation and pubescence very similar. Abdomen with the first three visible segments practically impunctate, 4th and 5th closely, moderately finely punctured except behind, the 6th more sparingly; the pubescence long.

Nilgiri Hills (*A. K. Wells-Dowding*). Unique. The author's collection.

2088. *Zyras* (s. str.) *gardneri*, sp. n. (Plate III, fig. 1.)

Shining; head and thorax black, elytra yellowish-red, the postero-external angles infusate; abdomen with the 1st visible segment and apex of the last red, the following black, the transverse basal impressions of the 2nd and 3rd red. Antennæ black, the last three joints pale yellow. Legs reddish-yellow. Length 7 mm.

In build scarcely differing from *nilgiriensis*, but with the thorax less finely but about as closely punctured, the pubescence very similar. Elytra much less finely and more closely punctured, the pubescence shorter, the 6th and 7th segments of the abdomen less punctured. Antennæ a little longer, the 4th and 5th joints longer. In other respects like *nilgiriensis*.

Darjeeling, alt. 6000 feet, ix. 29 (*J. C. M. Gardner*). Unique. The author's collection.

2089. *Zyras* (s. str.) *proximus*, sp. n.

Shining; head, thorax and abdomen black; elytra yellowish-red, with the postero-external region from the middle of the outer margin to the apex of the suture indeterminate black. Antennæ black. Legs reddish-yellow. Length 4.5 mm.

Of the same build as *championi*, but smaller, the colour of the fore-parts as in *nilgiriensis*, but with black abdomen and different sculpture, the antennæ as in the latter species but with the 11th joint almost as long as the preceding three together. Head with a few small punctures at the sides. Thorax with the usual basal fovea and towards the middle of the sides with another, smooth along the middle, and on each side with a very irregular row of about seven or eight

small punctures, towards the sides with four or five others irregularly placed; the elytra much less finely and more closely punctured than in *nilgiriensis*. Abdomen except for a few punctures in the basal impressions glabrous and impunctate. Pubescence much shorter and more sparing than in *nilgiriensis*, more like that of *championi*.

Nilgiri Hills (*Wells-Dowding*). Unique. The author's collection.

2090. *Zyras* (s. str.) *hastatus*.

Zyras hastatus Fauv.*, Rev. d'Ent. xxiii, 1904, p. 64.

Shining; head and last three abdominal segments black, thorax and first three visible segments red; elytra black, the scutellary and sutural regions nearly to the apex narrowly and triangularly red. Antennæ black, the first three joints and the last obscurely reddish. Legs reddish-yellow. Length 3.75 mm.

Head broad, transversely subquadrate, a little narrower than the thorax, sparingly and finely punctured at the sides; ground-sculpture absent. Antennæ a little thickened towards apex, the 3rd joint scarcely longer than 2nd, 4th slightly longer than broad, 5th and 6th as long as broad, 7th to 10th transverse, the penultimate a half broader than long, the 11th as long as the preceding four together. Thorax transverse (6.5 : 5.5), convex, the sides straightly retracted behind, foveate before the scutellum, very sparingly and irregularly punctured, the punctures varying from fine to moderate; ground-sculpture absent. Elytra a little longer and distinctly broader than the thorax, moderately coarsely and moderately closely punctured. Abdomen with some punctures in the basal impressions, elsewhere impunctate and glabrous. Pubescence throughout rather long, more evident on the elytra.

Belgaum.

2091. *Zyras* (s. str.) *castaneus*.

Hygroptera castanea Motsch.*, Ét. Ent. viii, 1859, p. 86; Cam., E. M. M. lxix, 1933, p. 219.

Shining, ferruginous-red, the postero-lateral region of the elytra black. Antennæ black, the first three joints reddish-yellow. Legs reddish-yellow, the anterior and middle femora infusate. Length 4 mm.

Larger and more robust than *hastatus* and differently coloured. Head transversely suborbicular, a little narrower than the thorax, the eyes rather large but not prominent, practically impunctate and without ground-sculpture, with a few stiff hairs. Antennæ moderate, the 3rd joint a little

longer than 2nd, 4th and 5th scarcely differing, about as long as broad, 6th to 10th slightly transverse, scarcely increasing in width, the 11th elongate, as long as the preceding three together. Thorax convex, slightly transverse, the sides gently rounded, more retracted behind, the posterior angles rounded, before the scutellum with a small fovea, practically impunctate, but with a few stiff hairs. Elytra about as long as but a good deal broader than the thorax, rather finely, sparingly punctured and pubescent. Abdomen gradually and slightly narrowed from base to apex, the basal impressions of the first two visible segments each with a transverse row of very fine punctures, otherwise practically impunctate and glabrous.

Ceylon: Mt. Patannas.

2092. *Zyras* (s. str.) *geminus*.

Myrmedonia gemina Kr.*, Arch. Naturg. xxv, 1859, p. 27.

Shining; head, elytra and last three abdominal segments black; thorax and first three segments red. Antennæ yellowish-brown or blackish, the last three joints yellow. Legs reddish-yellow, the apices of the femora a little infusate. Length 4 mm.

Somewhat resembling *collaris* Payk., but with broader head and larger eyes, longer and thinner antennæ, etc. Head transversely subquadrate, the eyes large, narrower than the thorax, very finely and very sparingly punctured. Antennæ rather long, thickened towards apex, 3rd joint a little longer than the 2nd, 4th to 7th all a little longer than broad, decreasing in length, 8th to 10th a little transverse, 11th as long as the 9th and 10th together. Thorax transverse (7:6), the sides behind retracted and a little sinuate, foveate before the base, smooth along the middle, elsewhere finely and sparingly punctured and pubescent. Elytra as long as but broader than the thorax, finely and moderately closely punctured, and with long pubescence. Abdomen with a few punctures in the basal impressions, the 6th and 7th rather closely and moderately finely punctured at their bases.

Ceylon. India: Mysore; Anantapur. Also in Sumatra and Java.

2093. *Zyras* (s. str.) *distinctus*, sp. n.

Shining; head and thorax reddish-brown, more or less extensively infusate; elytra pitchy-black; abdomen lighter, chestnut-brown, with the 6th and 7th segments darker. Antennæ dark brown, the first two joints and the 11th reddish.

1 egg reddish-yellow, the apices of the femora a little infuscate. Length 6.75 mm.

Of the build of *geminus*, but much larger and differently coloured, the antennæ longer. Head broad, transversely suborbicular, narrower than the thorax, the eye about as long as the post-ocular region, with a few very small scattered punctures at the sides and some long hairs. Antennæ rather long, a little thickened towards the apex, the 3rd joint a little longer than the 2nd, 4th to 7th longer than broad, decreasing in length, 8th to 10th about as long as broad, 11th scarcely as long as the 9th and 10th together. Thorax transverse (8 : 7), the sides rounded in front, retracted and sinuate behind, the posterior angles rounded, deeply foveate before the scutellum, broadly impressed on each side behind, smooth along the middle and before the base, the impressions finely and closely punctured, elsewhere with a few fine scattered punctures, the pubescence sparing, the sides with some long black setæ. Elytra as long as but broader than the thorax, rather closely, moderately coarsely punctured, finely pubescent, the sides setiferous. Abdomen a little narrowed before the apex, with a few punctures in the basal impressions and along the posterior margins of the segments, otherwise glabrous and impunctate, the sides with tufts of setæ.

Chakrata district : Manjgaon, alt. 6500 feet.

2094. *Zyras* (s. str.) *ferrugineus*, sp. n.

Shining, ferruginous-red, the elytra and 5th to 8th abdominal segments black. Antennæ with the first five joints reddish-yellow, the rest black. Femora reddish-yellow, the apices infuscate, tibiæ pitchy, tarsi reddish-yellow. Length 4.5 mm.

Head transverse, suborbicular, narrower than the thorax, the eye about as long as the post-ocular region, extremely finely, sparingly punctured and finely pubescent; ground-sculpture absent. Antennæ rather long, a little thickened towards apex, 3rd joint distinctly longer than the 2nd, 4th to 8th all longer than broad, decreasing in length, 9th and 10th as long as broad, 11th as long as the 9th and 10th together. Thorax transverse (7.2 : 6), convex, the sides rounded in front, retracted but not sinuate behind, without trace of basal fovea, the sculpture and pubescence as on the head. Elytra scarcely longer but broader than the thorax, finely, moderately closely punctured and pubescent, without lateral setæ. Abdomen a little narrowed before the apex, very finely and very sparingly punctured, a little more closely on the penultimate segments.

Burma : Ruby Mines (*Doherty*). Unique. British Museum.

2095. *Zyras* (s. str.) *hirsutiventris*.

Myrmedonia (*Zyras*) *hirsutiventris* Champ.*, E. M. M. lxiii, 1927, p. 245.

Shining, black. Antennæ black; palpi pitchy. Legs reddish-yellow, the apical half of the femora blackish. Length 6.5 mm.

Robust. Head rather small, transverse, narrower than the thorax, the eyes moderate, almost as long as the post-ocular region, almost smooth on the disc, at the sides very finely and sparingly punctured, the pubescence stiff, black and sparing. Antennæ moderate, thickened towards apex, with long, scanty hairs, 3rd joint slightly longer than 2nd, 4th to 6th slightly longer than broad, decreasing in length, 7th as long as broad, 8th to 10th about a half broader than long, 11th small, shorter than the preceding two together. Thorax slightly transverse, convex, the sides rounded in front, sinuately retracted behind, the posterior angles briefly rounded, before the scutellum with a fovea, almost smooth along the middle, very finely and very sparingly punctured elsewhere, finely pubescent and, like the head, without ground-sculpture, the sides with black setæ. Elytra as long as but a good deal broader than the thorax, as finely but much more closely punctured, finely pubescent. Abdomen a little narrowed towards apex, very finely and very sparingly punctured, more closely at the bases of the 6th and 7th segments, sparingly pubescent, the sides with rather long, close setæ; 8th segment gently rounded. The yellow terminal segment referred to by Champion is the 9th and usually concealed, all the six visible segments being black.

Central Almora: Kumaun, vii. 1920 (*H. G. Champion*).
Unique.

2096. *Zyras* (s. str.) *pindaræ*.

Myrmedonia (*Zyras*) *pindaræ* Champ.*, E. M. M. lvii, 1921, p. 179.

Robust, shining, black. Antennæ black, the 11th joint sometimes dull reddish. Femora black, tibiæ and tarsi brownish-yellow. Length 6.5 mm.

In size and build much resembling *hirsutiventris*, but with the sides of the thorax a little more retracted behind and not sinuate, the whole insect less pubescent. The 6th joint of the antennæ is as long as broad, 7th to 10th less transverse than in *hirsutiventris*, the 11th as long as the preceding two together; sculpture of the thorax different, narrowly smooth along the middle, and on each side with an irregular row of small, close punctures, towards the sides sparingly and irregularly punctured. Elytra moderately finely and moderately

closely punctured. Abdomen practically glabrous and impunctate. Pubescence throughout rather sparing, the sides with longer hairs.

Kumaun, Pindar Valley, alt. 8000-11,000 feet, vii. 1920 (*H. G. Champion*).

2097. *Zyras* (s. str.) *ruficauda*, sp. n.

Shining, black, the 8th segment of the abdomen red. Antennæ black, the first two joints pitchy, the 11th reddish. Femora pitchy, tibiæ and tarsi reddish-yellow. Length 9 mm.

Head rather small, narrower than the thorax, with a few small, scattered punctures. Antennæ moderate, a little thickened towards the apex, 3rd joint longer than 2nd, 4th to 6th slightly longer than broad, 7th and 8th as long as broad, 9th and 10th transverse, 11th as long as the 9th and 10th together. Thorax as long as broad, convex, the sides rounded in front, retracted and distinctly sinuate behind, the posterior angles briefly rounded, before the scutellum with a large fovea, smooth along the middle, elsewhere with small scattered punctures, each with a stiff hair; ground-sculpture absent, sides with two or three setæ. Scutellum coarsely punctured at the base, smooth at apex. Elytra as long as but a little broader than the thorax, finely, moderately closely punctured, each puncture with a stiff hair. Abdomen a little narrowed before the apex, almost impunctate and glabrous.

Ghum district: Tiger Hill, alt. 8000-10,000 feet.

2098. *Zyras* (s. str.) *nigroæneus*, sp. n.

Shining, black, the fore-parts with strong greenish-blue reflex. Abdomen black. Antennæ black, the first two joints and base of the third reddish-yellow. Femora pitchy-black, tibiæ and tarsi pale yellow. Length 6 mm.

Head nearly orbicular, narrower than the thorax, the eye about as long as the post-ocular region, with a few small scattered punctures at the sides; ground-sculpture absent. Antennæ moderate, a little thickened towards apex, the 3rd joint a little longer than the 2nd, 4th to 6th slightly longer than broad, decreasing in length, 7th as long as broad, 8th to 10th transverse, 11th as long as the 9th and 10th together. Thorax transverse (6.5:6), the sides rounded and rather more retracted in front, the posterior angles broadly rounded, before the scutellum with a large fovea, smooth along the middle, elsewhere sparingly and irregularly punctured, the punctures rather small and each with a yellow hair, each side with three black setæ, two in front and one behind. Scutellum coarsely punctured. Elytra slightly longer and distinctly broader than the thorax, by no means closely punctured.

the punctures like those of the thorax, each with a yellow hair. Abdomen a little narrowed before the apex, practically glabrous and impunctate, the sides without setæ.

Simla Hills : Narkanda, alt. 9230 feet.

Subgenus *PELLA* Steph.

Pella Steph., Ill. Brit. Ent. Mandib. v, 1832, p. 430; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 122; Reitt., Faun. Germ. ii, 1909, p. 42; Fenyès, Gen. Ins. 173 B, 1920, p. 296.

Antennæ with 2nd joint of moderate length, as long or not much shorter than the 3rd, the following not compressed laterally and without or with a short scanty pubescence, the 11th joint not longer than the preceding three together. Anterior abdominal segments simple in the ♂.

Key to the Species.

- | | |
|---|-------------------------------------|
| 1. Dark species | 2. |
| Brightly coloured species, shining | <i>coloratus</i> , sp. n., p. 545. |
| 2. Shining black, the fore-parts without
ground-sculpture | <i>kuluensis</i> , sp. n., p. 545. |
| Greasy lustrous, pitchy-black, the fore-
parts strongly coriaceous | <i>ceylonicus</i> , sp. n., p. 544. |

2099. *Zyras (Pella) ceylonicus*, sp. n.

Head, thorax and elytra pitchy-black, greasy lustrous, the elytra with the base, shoulders, sutural and posterior margins narrowly and indeterminately reddish-yellow; abdomen shining black. Antennæ and legs brown. Length 5.5 mm.

In build somewhat resembling *funestus* Gr., but with the fore-parts less shining, the antennæ much shorter and thicker. Head transverse, suborbicular, a good deal narrower than the thorax, the eyes moderate, about as long as the post-ocular region, very finely, not very closely punctured, strongly coriaceous. Antennæ stout, the 3rd joint about twice as long as the 2nd, 4th to 10th gradually more transverse, the penultimate three times as broad as long, the 11th as long as the 9th and 10th together. Thorax transverse (4:3.5), the sides almost straight, strongly retracted backwards, the posterior angles rounded with the base, before the scutellum with a minute fovea and sometimes with a short impressed line posteriorly along the middle, scarcely perceptibly impressed towards the sides, the sculpture as on the head. Elytra as long as but a little broader than the thorax, finely and closely punctured, less strongly coriaceous. Abdomen parallel, extremely finely, sparingly punctured on the basal segments, much more sparingly on the following, the last truncate

and with a few asperate punctures; 6th ventral segment broadly rounded.

Ceylon: Kandy.

The sex of the two specimens before me is uncertain.

2100. *Zyras (Pella) kuluensis*, sp. n.

Black, shining, the base of the thorax very narrowly reddish-yellow. Antennæ brown, the first two joints red. Femora pitchy, tibiæ and tarsi red. Length 5 mm.

In size and build somewhat resembling *similis* Märk. Head a good deal narrower than the thorax, the eyes moderate, a little longer than the post-ocular region, very finely, moderately closely punctured and without ground-sculpture. Antennæ rather short, the 3rd joint a little longer than the 2nd, 4th slightly, 5th to 10th more strongly transverse, the penultimate three times broader than long, the 11th fully as long as the preceding three together. Thorax transverse, (3.75 : 2.75), convex, the sides evenly rounded with the base, the sculpture as on the head. Elytra a little longer and broader than the thorax, less finely and more closely punctured. Abdomen parallel, and except for some very fine punctures along the posterior margins of the segments practically impunctate. The fore-parts with a fine, scanty, yellowish pubescence.

♂ (?): 8th dorsal segment rounded, in the middle with six or seven small teeth, on each side with two larger ones, the surface with small, scattered, asperate punctures.

Kulu: Naggur, alt. 5000 feet (*H. G. Champion*). Unique. British Museum.

2101. *Zyras (Pella?) coloratus*, sp. n. (Plate III, fig. 2.)

Shining; head and elytra dark reddish-brown, thorax and first two visible segments of the abdomen bright reddish-yellow, the rest of the abdomen black. Antennæ red. Legs reddish-yellow. Length 4 mm.

Head a little narrower than the thorax, eyes moderate, about as long as the post-ocular region, smooth along the middle, the disc with a little impression, the puncturation rather coarse, umbilicate and moderately close; ground-sculpture absent. Antennæ short and stout, the 3rd joint a little longer than the 2nd, 4th to 10th gradually more transverse, the penultimate three times broader than long, 11th slightly longer than the 9th and 10th together. Thorax transverse (5.5 : 4.5), convex, the sides rounded in front, retracted and almost straight behind, the posterior angles rounded, before the scutellum with a fovea, along the middle narrowly impunctate, elsewhere with a similar but closer puncturation than on the head; ground-sculpture absent. Elytra broader

and about a fourth longer than the thorax, the puncturation similar but closer. Abdomen parallel, very finely and very sparingly punctured on the anterior segments, less finely and more closely on the last two.

Sexual differences unknown.

Dehra Dun.

ZYRASTILBUS, subgen. n.

Facies recalling *Astilbus canaliculatus* F. Head rounded, temples finely bordered below. Antennæ with the 2nd and 3rd joints of equal length, the following furnished with a short, rather close pubescence. Fore-parts dull, rugosely punctured. Thorax as long as broad.

2102. *Zyras (Zyrastilbus) almorensis*, sp. n. (Plate III, fig. 3.)

Entirely black, the fore-parts dull, the abdomen shining. Antennæ black, the 2nd joint reddish, the 11th reddish-yellow. Femora pitchy-black, tibiæ and tarsi reddish-yellow. Length 4 mm.

In facies, except for the broader thorax, somewhat like *Astilbus canaliculatus* F. Head slightly transverse, sub-orbicular, narrower than the thorax, eyes rather small, shorter than the post-ocular region, very closely rugosely punctured except the front, which is a little shining and with larger umbilicate punctures. Antennæ with the 3rd joint as long as the 2nd, 4th to 10th gradually more transverse, the penultimate twice as broad as long, the 11th as long as the 9th and 10th together. Thorax as long as broad, convex, the sides rounded in front, rather strongly retracted and a little sinuate behind, the posterior angles obtusely rounded, before the scutellum with a small superficial impression, very closely rugosely punctured. Elytra as long as but a little broader than the thorax, feebly emarginate postero-externally, very closely and rugosely punctured. Abdomen parallel, finely, moderately closely punctured and pubescent throughout.

W. Almora : Kumaun (*H. G. Champion*). British Museum.

RHOPALODONIA, subgen. n.

Antennæ clavate, the 7th to 11th joints forming a club; 3rd abdominal segment modified in the ♂.

2103. *Zyras (Rhopalodonia) clavicornis*.

Myrmedonia clavicornis Kr.*, Arch. Naturg. xxv, 1859, p. 24, tab. I, fig. 7.

Moderately shining, ferruginous-red, the elytra scarcely

infusate postero-externally. Antennæ brown, the first three joints reddish. Legs reddish-yellow. Length 4.75 mm.

In the build of the fore-parts somewhat like *rigidus* Er. Head transversely suborbicular, narrower than the thorax, the eyes moderate, very finely, obsoletely and rather sparingly punctured and without ground-sculpture. Antennæ short and stout, the 3rd joint a little longer than the 2nd, 4th to 6th transverse, scarcely differing amongst themselves, 7th to 10th distinctly broader but differing but little from one another, the 11th stout, as long as the preceding two together. Thorax a third broader than long, the sides rounded in front, straighter and retracted behind, the posterior angles rounded, convex, along the middle narrowly sulcate, the groove extending nearly to the anterior and posterior margins, the disc closely, moderately finely granular, towards the sides more finely and more sparingly; ground-sculpture absent. Elytra a little longer and broader than the thorax, closely, moderately finely punctured. Abdomen parallel, the 1st visible segment with a few obsolete punctures, the following with a few asperate punctures placed transversely. The fore-parts with a fine, moderately close, yellow pubescence, the abdomen nearly glabrous.

♂: 3rd segment with a small tooth at the middle of the posterior margin; 7th with a fine short median keel near the base; 8th truncate.

Ceylon (*Nietner*). Unique.

Species of doubtful systematic position.

2104. *Zyras trisulcatus*.

Myrmedonia trisulcata Wasm., Ann. Mus. Civ. Gen. (2) xvi, 1896, p. 623.

"Pitchy-black; mouth-parts, coxæ and legs, base and ventral surface of the abdomen testaceous. Head as broad as the thorax, somewhat shining, very finely alutaceous, eyes large, prominent. Antennæ longer than the head and thorax, the 3rd joint twice as long as broad, much longer than the 2nd, 4th a little longer than broad, 5th to 10th gradually becoming shorter but scarcely broader, 9th and 10th distinctly transverse, 11th ovate, acuminate. Thorax shining, sparingly and very finely granulate, transversely quadrate, a half broader than long, trisulcate, the lateral sulci near the reflexed margin and entire, the median abbreviated near the base, the posterior angles obtuse, the posterior margin rounded. Elytra longer and more than a half broader than the thorax, densely and roughly granular, scarcely shining. Abdomen distinctly narrowed towards the apex, depressed, the lateral margins considerably elevated. Length 3.5 mm.

“♂: head lightly depressed in front; 3rd dorsal segment of the abdomen with a short tooth at the middle of the posterior margin; 4th subcarinate behind in the middle; 6th with strongly elevated median keel. Of entirely different build from the preceding [*termitobia*], in the broad, coarsely granular elytra and the narrowed, almost excavated abdomen resembles *camura* Er. and *granulata* Wasm., in the form of the thorax somewhat like *frontalis* Er. and *impressicollis* Kr. At first sight looks like an *Astilbus*, but I take it for a *Myrmedonia* on account of the ♂ characters.

“Burma, Carin Cheba, alt. 900–1100 m., v., xii. 1888 (*Fca*). In nests of *Termes feæ* Wasm. One specimen in the Museo Civico of Genoa” (ex *Wasmann*).

ACANTHASTILBUS, gen. n.

Somewhat resembling *Porus* in build, but at once distinguished by the long antennæ, all the joints being cylindrical, and the much longer legs, the tibiæ and tarsi much longer and not compressed laterally. From *Astilbus* it differs in build and the anterior and middle tibiæ furnished with spines; in other respects, so far as can be seen without dissection, the characters are those of *Astilbus*.

2105. *Acanthastilbus andrewesianus*, sp. n.

Shining; head black, thorax and elytra dark reddish-brown, abdomen lighter. Antennæ red. Legs reddish-yellow. Length 7 mm.

Head suborbicular, almost as broad as the thorax, the eyes moderate, not prominent, impunctate along the middle, very finely, sparingly punctured elsewhere; ground-sculpture absent. Antennæ long, a little thickened towards the apex, the 1st joint long, sulcate for the apical half, 3rd a little longer than the 2nd, 4th to 10th longer than broad, decreasing in length, the 11th as long as the 10th. Thorax as long as broad, the sides almost straight, retracted behind, the posterior angles rounded, along the middle throughout with a fine sulcus, the puncturation fine, umbilicate, rather close along the middle, much more sparing at the sides, an almost impunctate space between these two areas; ground-sculpture absent. Elytra as long as but a little broader than the thorax, finely, moderately closely punctured and without ground-sculpture. Abdomen a little narrowed before the apex, rather sparingly punctured, especially on the 5th and 6th segments, the 7th with some larger, elongate punctures at the base, 8th segment truncate, finely and closely crenulate, on each side with a small tooth.

Nilgiri Hills (*H. L. Andrewes*). Unique. The author's collection.

Genus **PORUS** Westw.

Porus Westw., in Royle, Ill. Bot. Himal. Mts. i, Introd. 1839, p. 55; Er., Gen. Spec. Staph. 1839-1840, p. 36; Kraatz, Linn. Ent. xi, 1857, p. 21; Fauv., Rev. d'Ent. viii, 1889, pp. 35, 285; id., xiv, 1895, p. 10; Fenyes, Gen. Ins. 173 v, 1920, p. 283.

Elongate, parallel species. Head nearly as broad as the thorax, the neck stout, eyes rather large, not prominent, temples bordered behind. Antennæ short and stout, the joints strongly compressed laterally. Labrum transverse, truncate. Mandibles rather prominent, slender, pointed, the right with a small tooth about the middle. Maxillary palpi 4-jointed, in construction similar to *Zyras*. Maxillæ with the inner lobe short and broad, densely ciliate internally, the outer much longer, narrow, ciliate at apex. Mentum transverse, trapezoidal, truncate in front. Tongue short and broad, with deep rectangular excision in the anterior margin. Labial palpi rather long, the 1st joint elongate, 2nd about half as long, scarcely narrower, 3rd much narrower and a little shorter than the 2nd. Paraglossæ feeble. Pronotal epipleura visible from the side. Mesosternal process short, truncate, extending about a third of the length of the coxæ; metasternal process narrow and elongate, separated by a short intersternal piece from the mesosternum, coxæ moderately separated. Elytra not emarginate postero-externally. Abdomen parallel, normally margined at the sides, only the 1st visible segment transversely impressed at the base. Legs moderate, femora flattened internally, scarcely sulcate, tibiæ laterally compressed, strongly spinose. Tarsi 4, 5, 5; spinose, rather short; the anterior with the first three joints gradually decreasing in length, middle and posterior with the first four joints decreasing in length, the posterior with the 1st joint scarcely as long as the 2nd and 3rd together. Distinguished at once from *Zyras* by the shorter legs and the tibiæ and tarsi being strongly spinose, the tooth of the right mandible and truncate labrum.

2106. **Porus ochraceus.**

Porus ochraceus Westw., in Royle, Ill. Bot. Himalay. Mts. i, Introd. 1839, p. 55, tab. 9, fig. 10; Er., Gen. Spec. Staph. 1839-40, p. 43; Fauv., Rev. d'Ent. xviii, 1899, p. 35.

Shining, reddish-yellow. Antennæ red. Legs yellowish-red. Length 7.5 mm.

Parallel; head transverse, a little narrower than the thorax, with moderately coarse, not very close punctures, the front impunctate; ground-sculpture absent. Antennæ short and stout, the 3rd joint shorter than the 2nd, 4th to 10th strongly

transverse, the penultimate joints (seen on the flat) three times broader than long, the 11th as long as the 9th and 10th together. Thorax transverse (5.5:4.5), the sides gently rounded, a little retracted behind, the posterior angles rounded with the base, more finely and more sparingly punctured than the head and without ground-sculpture. Elytra a little longer and broader than the thorax, more coarsely and more closely punctured than the head. Abdomen rather finely, moderately closely punctured, the punctures on the last two segments somewhat asperate, the last one broadly rounded. The whole insect with sparing yellow pubescence.

Nepal. Assam. Bengal. Also in the Sudan.

Genus **PSEUDOPORUS** Wasm.

Pseudoporus Wasm., D. E. Z., 1893, p. 206; Fenyès, Gen. Ins. 173 B, 1920, p. 284.

Somewhat resembling *Porus* in facies. Elongate, subparallel. Head rounded and slightly widened behind, eyes very small and placed anteriorly; post-ocular region not bordered below. Antennæ long, 11-jointed, 1st joint elongate, sulcate above for most of its length. Labrum longer than broad, oblong, the anterior margin rounded, in the middle with a small triangular emargination. Maxillary palpi elongate, the 3rd joint a little thickened towards apex, the 4th minute, subulate. Outer lobe of maxilla long and narrow, longer than the inner, ciliate. Pronotal epipleura visible from the side. Middle coxæ distinctly separated. Femora sulcate; tibiæ spinose, the posterior more finely. Tarsi 4, 5, 5; the anterior with the first three joints short, subequal, 4th as long as the preceding three together; middle with the 1st joint nearly as long as the following two together, these rather short, the 4th shorter; posterior similarly constructed but with all the joints longer. Claws simple, lightly curved. Elytra scarcely emarginate. Abdomen very slightly narrowed before the apex, the side-margins narrow and flattened.

2107. *Pseudoporus furcifer*.

Pseudoporus furcifer Wasm.*, D. E. Z. 1893, p. 206, tab. v, fig. 3.

♂: elongate, subparallel, reddish-brown; head, elytra and abdomen more shining than the thorax. Antennæ reddish-brown. Legs reddish-yellow. Length 6 mm.

Head nearly as broad as the thorax, convex, transverse, the eyes very small and situated anteriorly, the post-ocular region rounded and dilated, very finely, obsoletely, moderately closely punctured, finely coriaceous. Antennæ long, the 1st joint elongate, thickened towards apex, sulcate, 2nd

shorter than the 3rd, 4th to 10th all longer than broad, gradually decreasing in length, the 10th only slightly longer than broad, 11th as long as the 10th. Thorax slightly transverse (5.2 : 4.5), the sides feebly rounded in front, straighter and retracted behind, the posterior angles briefly rounded, along the middle broadly impressed throughout, the fundus with a fine impressed line, about the middle of the disc on each side with a small shining tubercle, the puncturation very obsolete, scarcely visible, confused with the strong coriaceous ground-sculpture. Elytra as broad as but a little shorter than the thorax, closely, moderately finely, roughly punctured, finely coriaceous. Abdomen a little narrowed before the apex, the 1st visible segment finely and rather closely punctured, 2nd much more sparingly, the following almost impunctate; 2nd visible segment on each side with a long and very stout spine extending to the level of the posterior margin of the 3rd segment, which is impressed at the middle of the base; 5th with a median spine posteriorly which projects a little beyond the posterior margin and without membranous border; 6th truncate. Pubescence of the fore-parts very fine and very short, abdomen practically glabrous.

♀: unknown.

Darjeeling (*Christie*).

Genus **DORATOPORUS** Wasm.

Doratoporus Wasm., D. E. Z. 1893, p. 207; Fenyés, Gen. Ins. 173 B, 1920, p. 267.

Narrow, elongate, parallel, convex, nearly glabrous. Head globular, eyes flat, much shorter than the post-ocular region which is not bordered below. Antennæ 11-jointed, the 1st joint long and sulcate in the apical half. Labrum transverse, membranous, rounded in front and with a small triangular emargination in the middle. Mandibles long, stout, falciform, edentate. Maxillary palpi very long, 3rd joint much longer than the 2nd, slightly thickened towards apex, 4th minute, subulate. Maxilla long and narrow. Thorax with the pronotal epipleura plainly visible from the side. Tibiæ somewhat compressed, the anterior and middle spinose, the posterior without spines. Tarsi 4, 5, 5; the anterior with the first three joints rather short, subequal, the 4th as long as the preceding three together; middle with the first four joints gradually decreasing in length; posterior similarly constructed, the 1st joint a little longer than the 2nd, as long as the 5th. Abdomen with the first two segments transversely impressed at base, the side-margins narrow and flattened. Apparently allied to *Porus* Westw.

2108. *Doratorporus mendax*.

Doratorporus mendax Wasm.*, D. E. Z. 1893, p. 207, tab. v, fig. 4.

♂: shining; head black, thorax and elytra dark, abdomen lighter reddish-brown. Antennæ reddish-brown, the first two joints and legs reddish-yellow. Length 8 mm, breadth 1.5 mm.

Head globular, a little narrower than the thorax, the eyes rather small, flat, much shorter than the post-ocular region, extremely finely, sparingly, scarcely perceptibly punctured, towards the front with a very fine coriaceous ground-sculpture which elsewhere is much interrupted and vermicular or absent in places, practically glabrous. Antennæ with the 1st joint long, as long as the 2nd and 3rd together, sulcate in the apical half, 2nd and 3rd long, equal, 4th to 7th about as long as broad, 8th to 10th shorter, slightly transverse, 11th absent in the unique example. Thorax convex, as long as broad, the sides feebly rounded in front, straight and retracted behind, the posterior angles rounded with the base, on the middle of the disc with four small quadrately placed punctures, external to them on each side with another, extremely finely, scarcely perceptibly, moderately closely punctured; ground-sculpture absent; glabrous. Elytra slightly longer and slightly broader than the thorax, parallel, obliquely truncate to the suture and without postero-external emargination; along the suture with four very small punctures, near the lateral margin with two others, the disc itself with another, otherwise practically impunctate, towards the base and apex with a very fine coriaceous ground-sculpture, scarcely perceptible or entirely absent elsewhere, almost glabrous, only with a few very short hairs. Abdomen parallel, practically impunctate and glabrous, the segments elongate, the 3rd on each side adjacent to the lateral margin with a long, stout spine which extends back nearly to the level of the posterior margin of the following segment; 4th transversely impressed near the base, elsewhere globularly inflated and convex throughout; 5th with very large convex tuberosity at the base, the posterior margin broadly and feebly arcuately emarginate; 6th with a small boss at the middle of the base; 7th with a strong keel along the middle of the posterior half; 8th rounded behind and with a row of small sharp tubercles just before the posterior margin (the rest of the segment concealed).

♀: unknown.

Darjeeling (*Christie*). Wasmann collection.

PEDINOPLEURUS Cam.

Pedinopleurus Cam., Rev. Franç. d'Ent. vi, 1939, p. 24; Bernh., in litt.

Broad robust species. Head a good deal narrower than the thorax, transverse, the eyes large, the post-ocular region rounded and retracted to the stout neck, not bordered below. Buccal sinus narrowly separated from the eye in front, extending slightly beyond the level of its posterior margin behind. Antennæ with the 4th and following joints laterally compressed, with scanty, rather long hairs. Mouth-parts not produced. Labrum transverse, the anterior margin

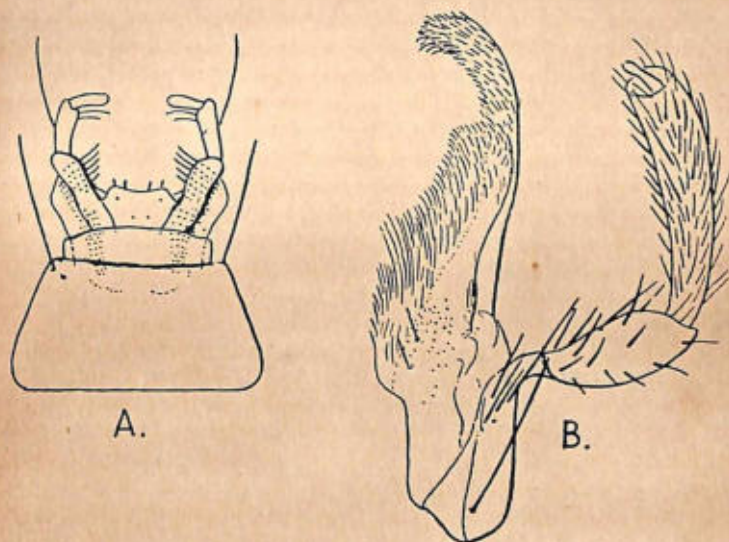


Fig. 133.—*Pedinopleurus indicus*. A, labium; B, maxilla.

broadly arcuately emarginate. Mandibles not prominent, rather stout, curved and pointed, the right with an obtuse tooth about the middle. Maxillary palpi elongate, very like those of *Zyras*, the 1st joint small, 2nd curved, slightly thickened towards apex, 3rd elongate, fully twice as long as the preceding, scarcely thickened, 4th very small, subulate. Outer lobe of maxilla long and narrow, much longer than the inner, ciliate at apex; inner lobe broad, membranous and closely ciliate internally. Mentum very slightly transverse, the sides rounded behind, straight and retracted in front, the anterior margin truncate. Labial palpi rather long, the 2nd joint a little shorter than the 1st, 3rd narrower and a little shorter than the 2nd. Tongue very short and broad, its anterior

border emarginate. Paraglossæ broad and well developed, extending to the level of the apex of the 1st joint of the labial palpi. Thorax strongly transverse, the pronotal epipleura not visible from the side, fused with the under surface. Prosternum transverse, convex, gently rounded behind, articulated at some distance from the anterior angles of the thorax. Mesosternum short, truncate behind, extending about a third of the length of the coxæ; metasternal process elongate, rounded at apex and separated by a short intersternal piece from the mesosternum, the coxæ rather widely separated. Legs moderate, the femora compressed and sulcate along the posterior margin; tibiæ compressed, finely spinose. Tarsi 4, 5, 5, finely spinose; the anterior with the first three joints rather short, subequal, the 4th as long as the preceding three together; middle with the first four joints subequal, moderate in length, the 5th as long as the 3rd and 4th together; posterior with the 1st joint a little longer than the 2nd, 3rd and 4th shorter, subequal, 5th as long as the 3rd and 4th together. Claws slender, slightly curved. Elytra slightly emarginate postero-externally. Abdomen broad, somewhat scaphoidal, the first two visible segments transversely impressed at base. This genus would appear to connect *Zyras* and *Myrmechusa* and is doubtless termitophilous.

Type, *chapmani* Cam., from Tong-king.

Key to the Species.

Colour chestnut-red; fore-parts with fine ground-sculpture, setæ shorter, pubescence absent	<i>indicus</i> , sp. n., p. 554.
Colour yellow; fore-parts without ground-sculpture; setæ longer, pubescence fine and yellow	<i>birmanus</i> , sp. n., p. 555.

2109. *Pedinopleurus indicus*, sp. n.

Shining; the head dark chestnut-brown, the rest chestnut-red. Antennæ red. Legs reddish-yellow. Length 8 mm.

In build much resembling *Zyras gravidula* Per., broad and robust, moderately convex, the head broad, transverse, much narrower than the thorax, the eyes large, the disc broadly and extensively impressed in both sexes, but more deeply in the ♂, with a few small punctures each with a short erect hair, the ground-sculpture fine, close, and wavy. Antennæ moderate, the 1st joint clavate, 2nd half as long as the 3rd, 4th and following laterally compressed, the 4th slightly longer than broad, 5th to 10th (seen on the flat) as long as broad, the 11th nearly as long as the preceding three together. Thorax transverse (9.5:5.5), truncate in front, the sides evenly rounded, the posterior angles broadly rounded with the

slightly bisinuate base, the anterior angles rounded, the disc convex in the ♂, broadly impressed along the middle, in the ♀ with a fine impressed line, towards the sides broadly impressed throughout, the sculpture as on the head. Elytra slightly longer than the thorax, a little widened behind, at the base narrower than the thorax, behind a little wider, the sculpture similar. Abdomen oval, very sparingly asperately punctured, the punctures each with a short stiff seta, finely coriaceous. Except for the short setæ the species is without pubescence.

♂: 5th segment very broadly and very slightly emarginate; 8th with large transverse tubercle at the middle of the posterior margin.

Madras: Travancore, Cocanada.

2110. *Pedinopleurus birmanus*, sp. n.

In size and build similar to *indicus*, but the head yellowish-red, the rest yellow, the elytra with a longitudinal impression adjacent to the posterior half of the lateral margin; the setæ throughout are distinctly longer, and there is, moreover, a fine yellow scanty pubescence, whilst ground-sculpture is absent except on the abdomen. The antennæ are similarly constructed.

♂: unknown.

Burma: Insein, 2. i. 28 (*D. J. Atkinson*). Unique. The author's collection.

Tribe 12. HOPLANDRIINI Fenyes.

Hoplandriini Fenyes, Gen. Ins. 173 B, 1920, p. 306.

Characterized by the tarsal formula 4, 5, 5, the maxillary palpi of five and the labial of four joints. Some of the genera recall the facies of *Aleochara* and others *Atheta*, s. str., *Taxicera*, etc. The genus *Hoplandria* Kr. does not, so far as I know, occur in the Oriental region, the species from there being referable to *Pseudoplandria* Fenyes, the anterior tarsi being 5-jointed.

Key to the Genera.

- Pronotal epipleura not visible from the side; mesonotum carinate; facies of *Aleochara* . . . TINOTUS Sharp, p. 556.
 Pronotal epipleura distinctly visible from the side; mesosternum not carinate; facies of *Taxicera* ATACTA, nov., p. 560.

Genus **TINOTUS** Sharp.

- Tinotus* Sharp, B. C.-A. i, 2, 1882-87 (1883), p. 170; Blatchley, Col. Indiana, i, 1910, p. 345; Fenyès, Gen. Ins. 173 B, 1920, p. 311; Notman, Bull. Amer. Mus. Nat. Hist. xlii, 1920, p. 719; Scheerp., Kol. Rundsch. xv, 1929, p. 20; id., Tierwelt Mitteleur. v, 2, 1930, p. 76.
Exaleochara Keys, E. M. M. xliii, 1907, p. 102; Fowler & Donisthorpe, Col. Brit. Isl. vi, 1913, p. 40; Fenyès, Gen. Ins. 173 B, 1920, p. 306; Notman, Bull. Amer. Mus. Nat. Hist. xlii, 1920, p. 720.

Facies of a small *Aleochara*. Head suborbicular, more or less inserted in the thorax, eyes moderate, the post-ocular region entirely bordered below. Antennæ 11-jointed. Gular

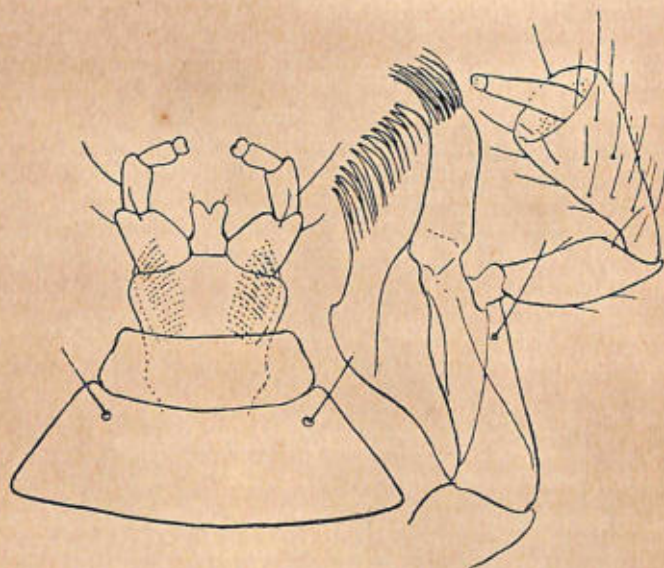


Fig. 134.—*Tinotus indicus*, labium and maxilla.

sutures parallel, widely separated. Labrum transverse, feebly, broadly emarginate, the emargination closed by a feebly bisinuate membrane. Mandibles rather short, stout, curved and pointed, the right with a feeble tooth about the middle. Maxillary palpi 5-jointed, the 1st joint small, 2nd elongate, slightly curved, and a little thickened towards the apex, 3rd distinctly longer and more thickened apically, 4th subulate, about half as long as the 3rd, 5th minute, narrower than the 4th, about as long as broad. Outer lobe of the maxilla extending a little beyond the inner, moderately broad, the apex ciliate; inner lobe broader than the outer, membranous internally, the apex pointed and incurved, with a few fine

spines internally, elsewhere ciliate. Mentum strongly transverse, trapezoidal, broadly feebly emarginate in front. Tongue rather broad, about as long as the 1st joint of the labial palpi, split to the middle into two small, subtriangular, diverging lobes. Labial palpi 4-jointed, the first three joints of equal length, but decreasing in width, 4th minute, narrower than the 3rd, about as long as broad. Thorax transverse, convex, the pronotal epipleura not visible from the side. Prosternum very short. Mesosternum and its process strongly keeled along the middle, extending nearly the whole length of the coxæ, truncate behind. Metasternal process very short truncate, meeting the mesosternum, the coxæ rather widely separated. Elytra emarginate postero-externally. Abdomen a little narrowed before the apex, the first three visible segments transversely impressed at their bases. Legs moderate, the anterior and middle tibiæ finely spinose. Tarsi 4, 5, 5; the anterior with the first three joints short, subequal, the 4th fully as long as the preceding three together; middle with the first four joints rather short, subequal, the 5th as long as the 2nd to 4th together; posterior with the 1st joint as long as the following two together, 2nd to 4th gradually decreasing in length, the 5th as long as the 3rd and 4th together. Claws simple, lightly curved. The genus is distributed also in the Palearctic, Nearctic, Neotropical and Palæotropical regions.

Key to the Species.

- | | | |
|---|----|-------------------------------------|
| 1. Black or pitchy species | 2. | |
| Otherwise coloured | 4. | |
| 2. Abdomen with the basal impressions finely longitudinally striate | | <i>indicus</i> , sp. n., p. 557. |
| Abdomen normally punctured | 3. | |
| 3. Larger (1.5-3 mm.) and blacker, more closely punctured | | [p. 559. |
| Smaller (1-1.3 mm.), more pitchy, less closely punctured | | <i>kashmiricus</i> , sp. n., |
| 4. Entirely light castaneous red | | <i>minutissimus</i> Kr., p. 559. |
| Black, the elytra and last two abdominal segments red | | <i>castaneus</i> , sp. n., p. 559. |
| | | <i>rufipennis</i> , sp. n., p. 558. |

2111. *Tinotus indicus*, sp. n.

Shining, black, the elytra pitchy-black. Antennæ black, the first two joints and legs reddish-yellow. Length 1.5-3 mm.

In build, average size and structure of the antennæ scarcely differing from *morion* Gr., but more shining, the ground-sculpture of the thorax much less distinct, the sculpture of the abdomen different, otherwise the puncturation scarcely differs. Also extremely like *japonicus* Cam., but the elytra

less strongly punctured. Head much narrower than the thorax, slightly widened behind the eyes, finely, moderately closely punctured, the ground-sculpture extremely fine. Antennæ with the 3rd joint a little longer than the 2nd, 4th as long as broad or slightly transverse, 5th to 10th slightly increasing in width, the penultimate twice as broad as long, the 11th as long as the 9th and 10th together. Thorax transverse (4.5:3.3), convex, the sides gently rounded, a little more retracted in front, the posterior angles obtuse, more finely and rather more closely punctured than the head, very finely coriaceous. Elytra scarcely longer but distinctly broader than the thorax, distinctly emarginate postero-externally, rather strongly, moderately closely, asperately punctured and with a fine ground-sculpture. Abdomen a little narrowed towards the apex, the bases of the segments finely, closely, longitudinally striate, elsewhere finely and sparingly punctured, more closely on the last two segments. Pubescence throughout fine and short.

Dehra Dun. Chakrata, Simla and Ghum districts. In dung.

2112. *Tinotus rufipennis*, sp. n.

Rather shining; head and thorax black, the margins of the latter very narrowly and obscurely reddish; elytra red, sometimes infuscate externally; abdomen black, the posterior margins of the first four visible segments narrowly red, the 5th (except base) and whole of the 6th red. Antennæ black, the first two joints reddish-yellow. Femora brown, tibiæ red, tarsi yellow. Palpi with the 3rd joint infuscate. Length 3.5-4 mm.

Build of *indicus*, but larger, differently coloured, the antennæ longer and thinner. Head finely, moderately closely punctured, very finely coriaceous. Antennæ with the 3rd joint longer than the 2nd, 4th a little longer than broad, 5th as long as broad, 6th to 10th gradually more transverse, 11th as long as the 9th and 10th together. Thorax with sculpture as on the head, in the ♂ with a pair of small, more shining tubercles on the middle of the disc, the surface between them flattened, behind this flattened area with a small flat elevation. Elytra finely, not very closely punctured, finely coriaceous. Abdomen with the bases of the segments very finely and closely longitudinally striate, elsewhere very finely and very sparingly punctured. Pubescence throughout yellow, fine, short and depressed.

♂: 8th dorsal segment truncate: 6th ventral segment produced, slightly narrowed and rounded behind.

Chakrata district: Manjgaon, alt. 6500 feet.

2113. *Tinotus kashmiricus*, sp. n.

Build and size of *indicus* but blacker, less shining, the ground-sculpture of the thorax much more distinct, the puncturation coarser, as is also that of the elytra, pubescence much coarser, stiff and semi-erect, especially visible at the sides of the elytra, abdomen closely punctured throughout, more sparingly on the last two segments. Antennæ with the basal joints darker, black or pitchy, legs more infusate.

Kashmir: Gulmarg. Simla Hills: Matiana.

2114. *Tinotus castaneus*, sp. n.

Shining, light chestnut-red, the head a little darker. Antennæ reddish-brown, the first three joints and legs reddish-yellow. Length 2.75 mm.

In size, build and antennal structure differing but little from *indicus*, but at once recognized by the colour; the puncturation of the head is finer and more superficial than in that species, with the ground-sculpture less distinct; the thorax is as closely but more finely punctured than in that species, the ground-sculpture similar; the elytra have an asperate puncturation as in *indicus*, but the punctures not so close and the ground-sculpture rather stronger; the abdomen has the sculpture as in *indicus*.

Chakrata district: Manjgaon, alt. 6500 feet.

2115. *Tinotus minutissimus*.

Aleochara minutissima Kr.*, Arch. Naturg. xxv, 1859, p. 19.

Shining, black, the thorax pitchy, the elytra brownish-yellow, the posterior margins of the abdominal segments narrowly reddish. Antennæ black, the first three joints brownish-yellow. Legs reddish-yellow. Length 1-1.3 mm.

Head nearly a third narrower than the thorax, eyes rather large, the post-ocular region a little widened, with a few flat obsolete punctures, very finely coriaceous. Antennæ with the 3rd joint as long as the 2nd, 4th to 10th gradually more transverse, the penultimate about three times broader than long, the 11th as long as the 9th and 10th together. Thorax transverse (3:2), the sides gently rounded, the posterior angles obtuse, the sculpture much as on the head. Elytra as long as and slightly broader than the thorax, slightly emarginate postero-externally, rather close and for a small species rather coarsely and asperately punctured. Abdomen a little narrowed before the apex, finely, moderately closely punctured on the basal segments, more sparingly behind. Pubescence throughout fine and sparing.

Ceylon. Also in Penang.

ATACTA, gen. n.

In build somewhat resembling *Taxicera*, but with different mouth-parts. Parallel, head narrower than the thorax, eyes moderate, temples finely bordered below, the border evanescent in front. Labrum transverse, in the middle with a small projection with rounded apex. Mandibles rather long, curved, pointed, edentate. Outer lobe of maxilla longer than the inner, densely ciliate at apex; the inner pointed, with six or seven spines along the inner margin anteriorly, more finely spined behind. Maxillary palpi 5-jointed, the 1st joint very small, 2nd much longer, moderately thickened towards apex, 3rd a little longer and slightly more thickened, 4th subulate, nearly half as long as the 3rd, 5th slightly narrower than the 4th and a little longer than broad, truncate

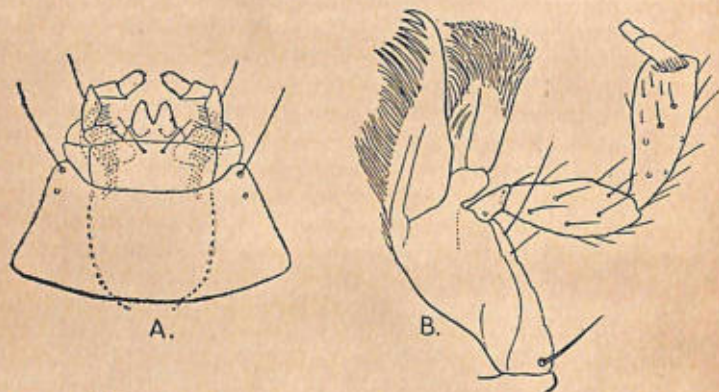


Fig. 135.—*Atacta floralis*. A, labium; B, maxilla.

at apex. Mentum transverse, trapezoidal, broadly and feebly emarginate in front. Labial palpi 4-jointed, the 1st joint short, stout, cylindrical, 2nd much narrower and slightly shorter, 3rd shorter than the 2nd, 4th conical, as long as, at the base, as broad as the preceding. Tongue broad, as long as the 1st joint of the labial palpi, a little narrowed towards the front and acutely emarginate for nearly half its length. Paraglossæ fine, not extending beyond the apex of the tongue. Thorax transverse, the pronotal epipleura visible from the side. Mesosternum simple, its process short, extending about half the length of the coxæ, its apex narrowly rounded, the coxæ contiguous behind. Elytra not emarginate postero-externally. Abdomen parallel, the first four visible segments transversely impressed at their bases. Legs moderate, anterior and middle

tibiæ strongly spinose, the posterior with closely placed setæ, scarcely spinulose. Tarsi 4, 5, 5; the anterior with the first three joints short and subequal, the 4th a little longer than the preceding three together; middle with the first four joints rather short, subequal, the 5th as long as the preceding three together; posterior with the 1st joint distinctly longer than the 2nd, the 2nd to 4th gradually decreasing in length, 5th a little longer than the 3rd and 4th together. Claws simple, lightly curved.

Type, *floralis* Bernh.

2116. *Atacta floralis*. (Plate III, fig. 5.)

Atheta (Taxicera) floralis Bernh., Col. Rundsch. v, 1915, p. 31.

Parallel, moderately shining, the head black or pitchy, thorax yellowish-red; elytra brownish-yellow; abdomen with the first two or three visible segments yellow, the following pitchy. Antennæ black, the first three joints and legs reddish-yellow. Length 2.8-3.5 mm.

Head in both sexes a little narrower than the thorax, but broader in the ♂ than in the ♀ and with the disc broadly impressed in its whole length; puncturation close, moderately fine, the ground-sculpture very feeble. Antennæ rather slender, the 3rd joint as long as the 2nd, the 4th to 10th gradually more transverse, the penultimate joints nearly twice as broad as long, the 11th about as long as the preceding two together. Thorax transverse (5:4), the sides gently rounded in front, straighter and retracted behind, the posterior angles rounded, in the ♂ broadly impressed along the middle in the whole length, the sides with several long setæ, in the ♀ convex, with a fovea before the scutellum, the lateral setæ shorter and weaker, the puncturation much like that on the head except in the ♂, where the impressed area is almost impunctate; ground-sculpture very feeble. Elytra a little broader and a fourth longer than the thorax, rather closely and more finely punctured than the head, the ground-sculpture feeble, the sides in the ♂ with three setæ. Abdomen parallel, very finely and very sparingly punctured, the sides with long setæ in the ♂. Pubescence of the fore-parts fine, moderately close, very sparing on the abdomen.

♂: 8th dorsal segment broadly, arcuately emarginate, on each side with a little tooth; 6th ventral segment produced, slightly narrowed and broadly truncate.

Burma: Tenasserim, Meetan, iv. 1887 (*Fea*).

Tribe 13. PHLÆOPORINI, nom. n.

- Aleocharini* Ganglb. (ex parte), Käf. Mitt.-Eur. ii, 1895, p. 21
Bernh., W. Z. B. ii, 1901, p. 431; Casey, Trans. Acad. Sci.
St. Louis, xvi, 1906, p. 127; Reitter, Faun. Germ. ii, 1909, p. 17;
Blatchley, Col. Indiana, i, 1910, p. 360; Cam., Trans. Ent. Soc.
Lond. 1920 (1921), pp. 349, 361; Portevin, Encycl. Ent. A.
xii, 1929, 1, p. 227; Scheerp., Tierwelt Mitteleur. v, 2, 1930,
p. 76.
Aleocharina Sharp, B. C.-A. i, 2, 1882-87 (1883), p. 146; Johansen,
Danmarks Rovbiller, 1914, p. 14.
Aléochaires Muls. et Rey (ex parte), Nat. Hist. Col. Fr. Brévip.
Aléoch. ii, 1874, p. 1.
Dinardaires Muls. et Rey, l. c. i, 1873, pp. 6, 17.
Oxypodini Fenyès, Gen. Ins. 173 B, 1920, p. 315 (præoc.).

This tribe consists of genera of variable facies, but distinguished by the tarsal formula of 5, 5, 5, the maxillary palpi of four and the labial of three joints. The name *Oxypodini*, used by Fenyès to designate this, was preoccupied by Bernhauer in 1901.

Key to the Genera.

- | | |
|---|---------------------------|
| 1. 1st joint of antennæ with the apical third sulcate | [p. 573. |
| 1st joint of antennæ normally emarginate at apex | AMAROCHARA Thoms., |
| 2. Temples not bordered below | 2. |
| Temples at least bordered behind ... | 3. |
| 3. Claws normally curved; thorax strongly transverse; abdomen pointed | 4. |
| Claws angulate near the base; thorax scarcely transverse; abdomen parallel | DINUSA Sauley, p. 580. |
| 4. Pronotal epipleura not visible from the side | PARAPIMELA, nov., p. 571. |
| Pronotal epipleura visible from the side | 5. |
| 5. Tongue narrow, undivided; abdomen normally punctured | 7. |
| Tongue bilobed | MICROGLOTTA Kr., p. 621. |
| 6. 1st joint of posterior tarsi short, not or scarcely longer than the 2nd; abdomen normally punctured and pubescent | 6. |
| 1st joint of posterior tarsi as long or longer than the 2nd and 3rd together; abdomen usually densely punctured and pubescent | IRMARIA Cam., p. 592. |
| 7. Mesosternum keeled; 1st joint of posterior tarsi as long as the 2nd and 3rd together | [p. 594. |
| Mesosternum not keeled | OXYPODA Mannerh., |
| 8. 1st joint of posterior tarsi as long as the three following together | OCALEA Er., p. 575. |
| 1st joint of posterior tarsi at most as long as the 2nd and 3rd together. | 8. |
| 9. First three abdominal sternites distinctly constricted at base; tongue narrow and divided | CHILOPORA Kr., p. 567. |
| | 9. |
| | 10. |

- First three abdominal sternites not constricted; tongue emarginate at apex 12.
10. Temples finely bordered, at least behind; tongue divided to the middle into two narrow lobes. PHLÆOPORA Er., p. 563.
Temples strongly and entirely bordered; tongue split at apex only 11. [p. 617.]
11. First three visible tergites transversely impressed STICHOGLOSSA Fairm.,
First four visible tergites transversely impressed ISCHNOGLOSSA Kr., p. 619.
12. Labrum more or less emarginate; mandibles short, the right with a small tooth 13.
Labrum slightly produced in the middle; mandibles long and slender, each with a sharp slender tooth. PSEUDOCYUSA, nov., p. 590
13. 1st joint of posterior tarsi distinctly longer than the 2nd; first three visible tergites distinctly impressed; labial palpi with the 2nd joint much shorter than the 1st, this distinctly longer than broad. [Muls. et Rey, p. 585.]
OCYUSA subgen. COUSYA
1st joint of posterior tarsi not longer than the 2nd; first two visible tergites impressed; labial palpi with the 2nd joint about as long as the 1st, this scarcely longer than broad. [p. 581.]
PSEUDOMEOTICA, nov.,

Genus **PHLÆOPORA** Er.

Phlæopora Er., Käf. Mark Brand. i, 1837-39, p. 311; id., Gen. Spec. Staph. 1839-40, p. 76; Redtb., Faun. Austr. ed. i, 1849, p. 656, ed. ii, 1858, p. 151, and ed. iii, 1874, p. 175; Lacord., Gen. Col. ii, 1854, p. 38; Kraatz, Naturg. Ins. Deutschl. Col. ii, 1856-58, p. 334; Thoms., Skand. Col. ii, 1860, p. 288; Fauv., Bull. Soc. Linn. Norm. x, 1864-65, p. 272, tab. 4, figs. 13-18; Muls. et Rey, Hist. Nat. Col. Fr. Brév. Aléoch. ii, 1874, p. 435; Oliff, Proc. Linn. Soc. N. S. Wales, (2) i, 1886, p. 445; Fowler, Col. Brit. Isl. ii, 1888, p. 42; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 102; Everts, Col. Neerl. i, 1898, p. 188; Bernh., W. Z. B. ii, 1901, p. 435; lii, 1902, p. 275; Reitt., Faun. Germ. ii, 1909, p. 21; Blatchley, Col. Indiana, i, 1910, p. 360; Johansen, Danmarks Rovbiller, 1914, p. 85; Fenyès, Gen. Ins. 173 B, 1920, p. 322; Everts, Col. Neerl. iii, 1922, pp. 88, 89; Portevin, Encycl. Ent. A, xii, 1929, i, p. 233; Scheerp., Tierwelt Mitteleur. v, 2, 1930, p. 77.

BIOLOGY.—Perris, Ann. Soc. Ent. Fr. 1853, p. 557, tab. 17, figs. 1-8; id., Hist. Ins. Pin. Marit. 1863, p. 35, tab. 1, figs. 1-8; Kraatz, Naturg. Ins. Deutschl. ii, 1856-58, p. 335; Rupertsberger, Biol. Lit. Käf. Eur. 1880, p. 116; Ganglb. Käf. Mitt.-Eur. ii, 1895, p. 103; Xambeu, Échange, xxv, 1909, p. 7.

Parallel species. Head subquadrate, exserted, neck rather broad, eyes rather large, temples finely bordered, at least behind. Labrum strongly transverse, the anterior margin gently rounded. Mandibles rather small, curved and pointed, the right with a little tooth at the middle of the inner margin.

Maxillary palpi with small 1st joint, 2nd slightly thickened towards apex, 3rd a little longer and slightly more thickened apically, 4th subulate, about a third as long as the 3rd. Outer lobe of maxilla broader than the inner, ciliate at apex; inner pointed, finely spinose along the inner margin. Mentum short, transverse, trapezoidal, the anterior margin feebly emarginate. Labial palpi rather short, the 1st joint cylindrical, 2nd much narrower and about half as long, 3rd narrower than the 2nd and about twice as long. Tongue about as long as the 1st joint of the labial palpi, divided to about the middle into two narrow lobes. Thorax moderately or scarcely transverse, the pronotal epipleura visible from the side. Prosternum with the posterior deflexed part more or less carinate and pointed behind. Mesosternal process acute, extending beyond the middle of the coxæ and meeting the metasternal process, coxæ narrowly separated. Elytra rather strongly emarginate postero-externally. Abdomen parallel, the first three visible tergites deeply transversely impressed at their bases, the 2nd and 3rd sternites also transversely impressed. Legs rather short, tibiæ ciliate. Tarsi 5, 5, 5; the anterior with the first four joints short and subequal; middle longer, the first four joints rather short and subequal; posterior with the 1st joint a little longer than the 2nd, 2nd to 4th gradually decreasing in length. Claws simple.

The species are subcortical and are widely distributed.

Key to the Species.

- | | |
|---|---|
| 1. Elytra black, the posterior part more or less extensively red | <i>montana</i> , sp. n., p. 565. |
| Elytra more or less yellow or smoky-brown | 2. |
| 2. Thorax as long as broad; elytra smoky-brown | <i>himalayica</i> , sp. n., p. 564. |
| Thorax slightly transverse; elytra yellow or brownish-yellow | 3. |
| 3. Fore-parts more finely and more sparingly punctured; elytra yellow | <i>ceylanensis</i> Kr., p. 566. |
| Fore-parts less finely and more closely punctured; elytra brownish-yellow ... | [p. 566.
<i>granulicanda</i> , sp. n., |

2117. *Phlæopora himalayica*, sp. n.

Fore-parts greasy lustrous; head black, thorax and abdomen pitchy, the posterior margins of the segments narrowly rufescent; elytra smoky-brown. Antennæ reddish-brown, the first three joints and legs reddish-yellow. Length 3-3.5 mm.

In colour and lustre very like *testacea* Mannerh., but with the thorax less transverse, with straighter sides, the sculpture throughout is very similar and the antennæ similarly constructed. Head quadrate, narrower than the thorax, very

finely, rather closely punctured, finely but distinctly coriaceous. Antennæ with the 3rd joint a little shorter than the 2nd, 4th slightly, 5th to 10th more strongly transverse, the penultimate about twice as broad as long, the 11th as long as the 9th and 10th together. Thorax as long as broad, the sides almost straight and but little retracted behind, less finely but as closely punctured as the head, finely coriaceous. Elytra broader and slightly longer than the thorax, as closely but less finely punctured. Abdomen rather shining, finely and closely punctured, less closely on the last two segments. The whole insect finely and moderately closely yellow pubescent.

♂: 8th dorsal segment truncate: 6th ventral segment triangularly produced, the apex rounded.

Simla Hills: Gahan, alt. 7000 feet. Kashmir: Gulmarg, alt. 8000 feet.

2118. *Phlœopora montana*, sp. n.

Parallel, shining, black, the posterior part of the elytra more or less extensively reddish. Antennæ black, the first two or three joints reddish. Legs reddish-yellow. Length 2.75-3 mm.

In build, colour and lustre very like *latens* Er., but the antennæ are a little longer, not so stout, the penultimate joints less transverse, the puncturation of the thorax not quite so fine, that of the elytra rather finer and closer, the abdomen less finely punctured. Head subquadrate, the posterior angles rounded, as broad as the thorax, the vertex sometimes with a small impression, very finely, not very closely punctured, feebly coriaceous. Antennæ with the 3rd joint as long as the 2nd, 4th as long as broad or slightly transverse, 5th to 10th gradually more transverse, the penultimate scarcely twice as broad as long, the 11th as long as the 9th and 10th together. Thorax as long as broad, the sides gently rounded in front, straight and retracted behind, the posterior angles obtuse, very finely but more distinctly and closely punctured than the head, the ground-sculpture similar. Elytra broader and slightly longer than the thorax, finely, rather closely punctured. Abdomen closely, finely and rather roughly punctured. Pubescence throughout fine, moderately close.

♂: 7th and 8th segments with small, moderately close granules, the 8th with a small arcuate emargination.

♀: 8th dorsal segment rounded.

Chakrata district: Mundali (ex *Betula utilis*): Konain; Kanasar. Simla Hills; Theog (ex *Pinus excelsa*).

2119. *Phlæopora ceylanensis*.

Phlæopora ceylanensis Kr.*, Arch. Naturg. xxv, 1859, p. 41.

Parallel, shining; head black, thorax and abdomen pitchy-black; elytra reddish-yellow, infusate around the scutellum. Antennæ reddish-brown, the first three joints and legs reddish-yellow. Length 2.5 mm.

In size, build, colour and lustre scarcely differing from *angustiformis* Baudi, but with the antennæ more slender, the penultimate joints less transverse, the puncturation of the thorax, elytra and abdomen finer; the ground-sculpture of the head, thorax and elytra is similar, but the abdomen with a fine ground-sculpture also, which is not present in *angustiformis*. Head subquadrate, as broad as the thorax, eyes moderate, the disc with a small median longitudinal impression, very finely, not very closely punctured, finely coriaceous. Antennæ with the 3rd joint a little shorter than the 2nd, 4th about as long as broad, 5th to 10th transverse, the penultimate scarcely twice as broad as long, the 11th as long as the 9th and 10th together. Thorax very slightly transverse, the sides rounded in front, straight and retracted behind, the posterior angles obtuse, before the scutellum with a small transverse fovea, along the middle in front sometimes with a fine impressed line, very finely, moderately closely punctured, finely coriaceous. Elytra broader and slightly longer than the thorax, very finely, rather closely punctured, very finely coriaceous. Abdomen closely, finely, somewhat asperately punctured, much less closely on the last two segments, finely coriaceous. Pubescence throughout fine, moderately close.

♂: 8th dorsal segment with several small granules, its posterior margin rounded and slightly thickened.

Ceylon: Bogawantalawa, alt. 4900-5200 feet (*Lewis*).

2120. *Phlæopora granulicauda*, sp. n.

Moderately shining, black, the abdomen pitchy, the elytra brownish-yellow, scarcely infusate at the scutellary region. Antennæ reddish. Legs reddish-yellow. Length 2.75-3 mm.

In build, lustre and antennal structure scarcely differing from *ceylanensis*, but the whole insect is more closely and less finely punctured and the elytra more obscurely coloured. The ♂ characters are similar in the two species.

Siwaliks: Asarori.

Genus **CHILOPORA** Kr.

Chilopora Kr., Naturg. Ins. Deutschl. Col. ii, 1856-58, p. 146; Redtb., Faun. Austr. ed. ii, 1858, p. 159 (note); ed. iii, 1874, p. 147; Muls. et Rey, Nat. Hist. Col. Fr. Brévip. Aléoch. ii, 1874, p. 505; Fowler, Col. Brit. Isl. ii, 1888, p. 50; Ganglb., Kaf. Mitt.-Eur. ii, 1895, p. 94; Everts, Col. Neerl. i, 1898, p. 184; Bernh., W. Z. B. li, 1901, p. 435; lii, 1902, p. 257; Reitt. Faun. Germ. ii, 1909, p. 21; Johansen, Danmarks Rovbiller, 1914, p. 75; Fenyés, Gen. Ins. 173 B, 1920, p. 331; Everts, Col. Neerl. iii, 1922, p. 87; Portevin, Encycl. Ent. A, xii, 1929, i, p. 232; Scheerp., Tierwelt Mitteleur, v, 2, 1930, p. 77. Subgen. *Tetralaucopora* Bernh., Kol. Rundsch. xiv, 1928, p. 20.

Rather slender, subparallel species with rather slender legs. Head suborbicular, exserted, neck moderate. Eyes moderate, the temples bordered below. Labrum transverse, truncate in front, the anterior angles rounded. Mandibles moderate, curved, pointed, the right with a small sharp tooth. Outer lobe of maxilla ciliate at apex, the inner pointed and furnished with closely placed slender spines. Maxillary palpi with small 1st joint, 2nd slightly curved and a little thickened towards apex, 3rd a little longer and a little thicker apically, 4th subulate, scarcely half as long as the 3rd. Mentum transverse, trapezoidal, truncate in front. Labial palpi with the 1st joint stout, cylindrical, 2nd much narrower and about half as long, 3rd much narrower than the 2nd and about as long as the 1st. Tongue small, about as long as the 1st joint of the labial palpi, a little widened towards the front, split nearly to the middle, the two lobes obliquely truncate and furnished with a small teat-shaped appendage. Paraglossæ scarcely extending beyond the base of the tongue. Thorax as long as broad or slightly transverse, the pronotal epipleura visible from the side. Prosternum rounded behind. Mesosternal process acute, extending beyond the middle of the coxæ and separated from the metasternum by a short intersternal piece, the coxæ narrowly separated. Elytra emarginate postero-externally. Abdomen almost parallel, the first three visible segments transversely impressed at their bases (*Chilopora*, s. str.) or the first four similarly impressed (*Tetralaucopora*), the first three sternites lightly, transversely impressed at their bases also. Legs rather long, the tibiæ finely ciliate. Tarsi 5, 5, 5; the anterior with the first four joints short and subequal, the 5th as long as all the preceding together; middle with the 1st joint as long as the 2nd and 3rd together, 2nd to 4th gradually decreasing in length; posterior with the 1st joint almost as long as the following three together, the 5th a little shorter than the 1st. Claws slightly curved, simple. The species are found in damp places.

Key to the Subgenera.

- First three visible tergites transversely impressed CHILOPORA, s. str., p. 568.
 First four tergites transversely impressed .. TETRALAUCOPORA
 [Bernh., p. 570.]

Key to the Species of Chilopora, s. str.

1. Black, the fore-parts with greenish-blue reflex *subcyanea*, sp. n., p. 570.
 Otherwise coloured 2.
2. Elytra yellow, infusate at the scutellum and postero-externally; antennæ entirely reddish-yellow *indica* Cam., p. 568.
 Elytra brown, yellowish-brown or blackish; antennæ, except base, blackish... 3.
3. Abdomen with the impressions distinctly more coarsely punctured than elsewhere *ripicola*, sp. n., p. 569.
 Abdomen finely and uniformly punctured. 4.
4. Penultimate joints of antennæ slightly transverse *germana*, sp. n., p. 569.
 Penultimate joints of antennæ as long as broad, the 10th joint longer than the 9th *fuscobrunnea*, sp. n., [p. 570.]

2121. Chilopora (s. str.) indica.

Chilopora indica Cam., Rec. Indian Mus. xxv, 1933, p. 375 (fig. 1).

Black, greasy lustrous, densely and finely punctured and pubescent; elytra yellow, scutellary region and the sides near the posterior angles of the elytra slightly infusate, the posterior margin of the abdominal segments narrowly and obscurely reddish. Antennæ reddish-yellow. Legs yellow. Length 3.75 mm.

In size and build scarcely differing from *longitarsis* Er., but differently coloured, and the sculpture throughout equally dense but finer. Head narrower than the thorax, the post-ocular region rounded and gradually retracted behind, densely and finely punctured and with a fine coriaceous ground-sculpture. Antennæ rather long; 3rd joint a little longer than 2nd; 4th a little longer than broad; 5th to 10th of equal length, but gradually increasing in width, transverse; 11th as long as the preceding two together. Thorax slightly longer than broad, sides rounded in front, slightly retracted behind, posterior angles obtuse; in the middle of posterior half with an obsolete impression; sculpture, etc., as on head. Elytra (measured from the base) about a third longer and a good deal broader than thorax, extremely finely and very closely punctured. Abdomen extremely finely and very densely punctured and pubescent throughout.

Punjab; Khewra, Salt Range, Sta. 5. Under stones in

slightly moist soil. '9. iv. 31. Four specimens (*Hem Singh Pruthi*). Types in the Indian Museum, Calcutta (No. $\frac{2718}{44}$) and one specimen in the author's collection.

2122. *Chilopora* (s. str.) *ripicola*, sp. n.

Moderately shining; head, thorax, and abdomen black, the posterior margins of the segments very narrowly reddish, thorax sometimes pitchy; elytra smoky-brown. Antennæ blackish, the first two joints and legs reddish-yellow. Length 3.3 mm.

Of the lustre of *longitarsis* Er., but smaller, the elytra lighter, the antennæ thinner, puncturation throughout not so fine. Head suborbicular, narrower than the thorax, the eyes rather large, extremely finely, rather closely punctured and without ground-sculpture. Antennæ with the 3rd joint as long as the 2nd, 4th to 6th a little longer than broad, 7th to 9th slightly transverse, 10th a little longer, about as long as broad, 11th elongate, longer than the preceding two together. Thorax very slightly transverse, the sides rounded in front, retracted and slightly sinuate behind, the posterior angles obtuse, before the scutellum with a small impression, sometimes slightly impressed along the posterior half, the puncturation as close but not so fine as on the head; ground-sculpture absent. Elytra broader and longer (5 : 3.5) than the thorax, a little more closely and not quite so finely punctured. Abdomen very slightly narrowed at apex, at the bases of the segments closely and moderately finely punctured, elsewhere much more finely. The whole insect rather closely covered with a fine greyish pubescence.

Mussooree district: Dhobi Ghat; Mossy Falls. Tehri Garwhal, Aglar River. W. Almora, Kumaun; Khaula. On stream banks.

2123. *Chilopora* (s. str.) *germana*, sp. n.

Moderately shining, black, the elytra dark brown. Antennæ blackish, the first two joints and legs reddish-yellow. Length 3.3-3.5 mm.

Very near *ripicola*, but with smaller head, the thorax narrower and longer, as long as broad, more finely and more closely punctured and with a fine but distinct ground-sculpture; elytra a fourth longer than the thorax, more finely punctured than in *ripicola*; the abdomen is much more finely and closely punctured than in that species, the basal impressions not more coarsely punctured than the rest of the surface. The head is very finely coriaceous and extremely finely punctured. The antennæ as in *ripicola*.

Dehra Dun. W. Almora, Kumaun.

2124. *Chilopora* (s. str.) *subcayanea*, sp. n.

Fore-parts black, shining, with distinct greenish-blue reflex; abdomen pitchy-black. Antennæ blackish, the first two joints brownish-yellow. Legs reddish-yellow. Length 3.75 mm.

Slightly larger than *germana*, but of similar build, the thorax as long as broad, the antennæ longer, the penultimate joints fully as long as broad; head less finely punctured; thorax distinctly impressed along the middle of the posterior half, the puncturation close, much coarser than in *germana* and asperate; ground-sculpture absent. Elytra fully a fourth longer than the thorax, closely, finely and roughly punctured. Abdomen coarsely punctured in the impressions, very finely and closely elsewhere. The whole insect covered with a rather close, fine, greyish pubescence.

W. Almora: Sunderdhunga Valley, alt. 8000-12,000 feet. (*H. G. Champion.*) Unique. British Museum.

2125. *Chilopora* (s. str.) *fuscobrunnea*, sp. n.

Head and thorax slightly shining, elytra and abdomen scarcely so. Head black; thorax dark brown; elytra yellowish-brown, the posterior margin narrowly and obscurely lighter; abdomen pitchy-black, the posterior margin of the 7th segment and whole of the 8th yellowish. Antennæ black, the first two joints reddish-yellow. Legs brownish, the bases of the tibiæ and the tarsi yellow. Length 3.3 mm.

In build very similar to *germana*, but differently coloured, different antennæ, and smaller eyes. Head small, suborbicular, eyes small, finely and rather closely punctured, feebly coriaceous. Antennæ with the 3rd joint scarcely shorter than the 2nd, 4th to 6th slightly longer than broad, decreasing in length, 7th to 10th as long as broad, the 10th larger than the 9th, 11th shorter than the preceding two together. Thorax very slightly transverse, convex, the sides gently rounded, the posterior angles obtuse, the sculpture as on the head. Elytra broader and slightly longer than the thorax, less finely, more closely, rather roughly punctured. Abdomen slightly narrowed before the apex, closely and finely punctured and pubescent throughout.

Ghum district.

2126. *Chilopora* (*Tetralaucopora*) *championi*, sp. n.

Moderately shining; head black; thorax bright red; elytra yellowish-red, slightly infuscate externally; abdomen pitchy-black, the posterior margins of the segments narrowly rufescent. Antennæ red, the first three joints and legs reddish-yellow. Length 3.5 mm.

Build of *germana*, but different in all other respects. Head

extremely finely, rather sparingly punctured and without ground-sculpture. Antennæ with the penultimate joints slightly transverse, the 11th longer than the 9th and 10th together. Thorax as long as broad, the sides a little sinuate behind, before the scutellum with a fovea, finely moderately closely punctured, more finely and more sparingly towards the sides, and without ground-sculpture. Elytra broader and a fourth longer than the thorax, very finely, rather closely punctured. Abdomen coarsely and closely punctured in the impressions, extremely finely and by no means closely elsewhere. Pubescence yellow.

W. Almora, Kumaun (*H. G. Champion*). British Museum.

PARAPIMELA, gen. n.

Parallel, subdepressed, somewhat resembling *Atheta*, subgenus *Traumæcia*, in facies. Head suborbicular, eyes rather large. Temples not bordered below. Mandibles rather stout, curved, pointed, edentate. Maxillary palpi with the 3rd joint longer and at the apex stouter than the 2nd, 4th subulate, scarcely a fourth as long as the 3rd. Outer lobe of maxilla extending a little beyond the inner, ciliate at apex, the inner pointed and with seven or eight moderately long, curved spines along the inner margin at the apex, the basal part ciliate. Mentum transverse, trapezoidal, truncate in front. Labial palpi 3-jointed, the 1st joint cylindrical, 2nd shorter and a little narrower, 3rd narrower and a little longer than the 2nd, but shorter than the 1st. Tongue oblong, about as long as the 1st joint of the labial palpi, divided at the apex into two rounded lobes. Thorax not or but slightly transverse, the pronotal epipleura visible from the side. Mesosternum simple, its process acute and extending about half the length of the coxæ, these very narrowly separated. Elytra not emarginate postero-externally. Abdomen parallel, the first four visible tergites transversely impressed at their bases, the 5th longer than the 4th, the 1st in the ♂ with a median tubercle. Legs moderate, tibiæ ciliate, tarsi short, 5-jointed, the anterior with the first two joints very short, subequal, 3rd and 4th stouter, subequal, 5th about as long as the 3rd and 4th together, tumid; middle with the first four joints short, subequal, 5th a little longer than the 4th, tumid; posterior with the first three joints rather short, subequal, 4th and 5th a little shorter, subequal, the 5th tumid. All the claws sharply angulate at the base. Differs from *Apimela* Muls. et Rey in the larger eyes, the 4th visible tergite transversely impressed and the first of them furnished in the ♂ with a median tubercle. The species are found on the shingly banks of swiftly flowing streams.

Type, *indica*.

Key to the Species.

- | | | |
|--|----|-------------------------------------|
| 1. Elytra clear yellow; head a little narrower than the thorax | 2. | |
| Elytra yellowish-brown; head as broad as thorax | | <i>assamensis</i> , sp. n., p. 573. |
| 2. Larger (3-3.5 mm.) and more robust.... | | <i>indica</i> , sp. n., p. 572. |
| Smaller (2.5 mm.) and narrower | | <i>persimilis</i> , sp. n., p. 572. |

2127. *Parapimela indica*, sp. n. (Plate III, fig. 6.)

Shining; head black, thorax and abdomen reddish-brown, the last segment of the latter reddish-yellow, elytra yellow. Antennæ black, the first three joints and legs reddish-yellow. Length 3-3.5 mm.

Parallel, subdepressed; head a little narrower than the thorax, subquadrate, the posterior angles rounded, the eyes rather large, the disc with a small median impression, finely, rather closely, obsoletely punctured and without ground-sculpture. Antennæ with the 3rd joint as long as the 2nd, 4th to 7th slightly longer than broad, equal in length but increasing in width, 8th to 10th about as long as broad, the 11th as long as the 9th and 10th together. Thorax slightly longer than broad (4:3.75), the sides rounded in front, straightly retracted behind, the posterior angles obtuse, before the scutellum sometimes with an impression, on the disc finely and closely punctured like the head, towards the anterior angles much more finely and much more sparingly punctured, sometimes with four quadrately placed, obsolete punctures. Elytra longer (5:4) and broader (5:3.75) than the thorax, extremely finely, rather closely but obsoletely punctured. Abdomen parallel, almost impunctate in the impressions, finely and moderately closely punctured elsewhere on the first four visible segments, very sparingly on the following. Pubescence fine, short and yellow, rather close on the fore-parts, much more scanty on the abdomen.

♂: 3rd segment obtusely produced backwards in the middle, and along the centre obtusely carinate; 7th and 8th segments with a few scattered granules, the posterior margin of the latter truncate.

Mussooree district: Municipal Gardens; Mossy Falls. Simla Hills and Chakrata districts, alt. 6000-8000 feet. Haldwani district, Kumaun (*H. G. Champion*).

2128. *Parapimela persimilis*, sp. n.

Extremely like *indica* but smaller (2.5 mm.) and distinctly narrower, the antennæ similarly constructed but thinner, the sculpture scarcely differing. The ♂ characters are also

the same, except that the 7th and 8th segments have only a few fine asperate punctures. Perhaps only a small race of *indica*, which is found at higher altitudes.

Dehra Dun. Siwaliks: Lachiwala.

2129. *Parapimela assamensis*, sp. n.

Shining; head black, thorax and abdomen reddish-brown, elytra yellowish-brown. Antennæ black, the first three joints and legs reddish-yellow. Length 3.5 mm.

Very like *indica*, but at once distinguished by the darker elytra, moreover the head is broader, as broad as the thorax, the eyes larger, the antennæ stouter, the 4th joint as long as broad, the 5th to 10th a little longer than broad, decreasing in length, the penultimate only slightly so. The sculpture scarcely differs in the two species.

♂: unknown.

Assam: Naga Hills, alt. 9000 feet.

Genus **AMAROCHARA** Thoms.

Amarochara Thoms., Cefv. Vet.-Akad. Förh. 1858, p. 32; Skand. Col. ii, 1860, p. 303; Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 524; Fowler, Col. Brit. Isl. ii, 1888, p. 45 (ex parte); Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 99; Everts, Col. Neerl. i, 1898, p. 186; Bernh., W. Z. B. li, 1901, p. 435; lii, 1902, p. 249 (Beiheft); Reitt., Faun. Germ. ii, 1909, p. 19; Blatchley, Col. Indiana, i, 1910, p. 361; Johansen, Danmarks Rovbiller, 1914, p. 81; Fenyès, Gen. Ins. 173 B, 1920, p. 325; Portevin, Encycl. Ent. A, xii, 1929, i, p. 230; Scheerpp., Tierwelt Mitteleur. v, 2, 1930, p. 77.

Nasirema Cas., Ann. New York Acad. vii, 1893, p. 307; Fenyès, Gen. Ins. 173 B, 1920, p. 338.

Subgen. *Lasiochara* Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 100; Bernh., W. Z. B. lii, 1902, p. 251 (Beiheft); Reitt., Faun. Germ. ii, 1909, p. 19; Fenyès, Gen. Ins. 173 B, 1920, p. 326; Portevin, Encycl. Ent. A, xii, 1929, i, p. 230.

Readily distinguished by the stout antennæ, the first joint of which has the apical fourth or fifth distinctly emarginate for the reception of the base of the 2nd joint. Head suborbicular, neck moderate, the temples bordered below (*Lasiochara*, *Mniobates*), immarginate (*Amarochara*, s. str.). Labrum transverse, the anterior angles rounded, arcuately emarginate in front, the emargination closed by a membrane. Mandibles rather long, narrow, acute, without distinct tooth, but both more or less bi-emarginate internally. Maxillary palpi with small 1st joint, 2nd curved and slightly thickened towards apex, 3rd longer, moderately or strongly thickened apically, 4th subulate, about half as long as the 3rd. Outer lobe of maxilla broad, ciliate at apex; inner lobe narrow, acute and incurved at apex, with about five or six spines. Mentum

transverse, trapezoidal, the anterior border slightly emarginate. Labial palpi 3-jointed, 1st joint moderate, cylindrical, 2nd short, much narrower than the 1st, 3rd much longer and narrower than the 2nd. Tongue narrow, almost as long as the 1st joint of the labial palpi, split nearly to the base into two narrow parallel lobes. Thorax with pronotal epipleura visible from the side. Mesosternal process broad, truncate behind, extending fully half the length of the coxæ and separated by a short intersternal piece from the long metasternal process, the coxæ rather widely separated. Elytra not or but slightly emarginate postero-externally. Abdomen more or less parallel, the first three visible segments transversely impressed at their base (*Amarochara*, s. str., *Lasiochara* Ganglb., the first four in *Mniobates* Muls. et Rey). Legs moderate; tibiæ ciliate. Tarsi 5, 5, 5; the anterior with the first four joints short and subequal, the 5th as long as all the preceding together; middle with 1st joint a little longer than 2nd, 2nd to 4th short, subequal; posterior with the 1st joint a little longer than the 2nd and 3rd together, 2nd to 4th rather short, subequal, 5th about as long as the 1st. Claws slender, lightly curved. The species are found in damp places and often in association with ants. Only one subgenus is so far found in our Fauna, *Lasiochara* Ganglb., which is distinguished by the margined temples and the first three visible tergites only with transverse basal impression.

Key to the Species.

- | | |
|---|---------------------------------------|
| 1. Abdomen closely, uniformly punctured;
first two joints of antennæ yellowish... | <i>sororcula</i> , sp. n., p. 575. |
| Abdomen obviously more coarsely and
closely punctured at the bases of the
segments | 2. |
| 2. Elytra brown; antennæ entirely black,
the 3rd joint as long as 2nd | <i>simlaensis</i> , sp. n., p. 574. |
| Elytra yellowish; antennæ with the first
two joints brownish-yellow, the 3rd
joint shorter than 2nd | <i>heterogaster</i> , sp. n., p. 575. |

2130. *Amarochara* (*Lasiochara*) *simlaensis*, sp. n.

Shining, black, the posterior margins of the abdominal segments narrowly and obscurely reddish; elytra brown. Antennæ black. Legs reddish-yellow. Length 2.75 mm.

In lustre, colour and sculpture very like *umbrosa* Er., but larger and more robust, with broader head and stouter but similarly constructed antennæ. Head suborbicular, narrower than the thorax, the eyes rather large, a little shorter than the post-ocular region, extremely finely, sparingly punctured, indistinctly coriaceous. Antennæ long and stout, the 3rd joint as long as the 2nd, 4th to 10th transverse, the 6th to 10th scarcely differing amongst themselves. Thorax

slightly transverse (3.5 : 3), the sides gently rounded in front, straight and retracted behind to the obtuse posterior angles, very finely, moderately closely punctured, the ground-sculpture scarcely visible. Elytra a little longer and a little broader than the thorax, as finely but rather more closely punctured, somewhat transversely rugulose. Abdomen parallel, moderately finely, closely punctured especially at the bases of the segments, the last two more finely and sparingly. Pubescence throughout very fine and yellow.

Simla Hills : Fagu, alt. 8000 feet.

2131. *Amarochara (Lasiochara) heterogaster*, sp. n.

Of the size, colour and lustre of *sororcula*, but with the head more retracted behind the eyes, less orbicular, the antennæ thicker, as in *simlaensis*, but with the first two joints brownish-yellow; the elytra are less finely and less closely punctured than in *sororcula*, whilst the puncturation of the abdomen is very similar to that of *simlaensis*, being evidently coarser and closer at the bases of the segments than elsewhere. Length 2.3 mm.

Ghum district : Rongdong Valley, alt. 8000 feet.

2132. *Amarochara (Lasiochara) sororeula*, sp. n.

Smaller and narrower than *simlaensis*, the thorax reddish-brown, the elytra of a lighter brownish-yellow colour, the antennæ not so stout, but similarly constructed, and with the first two joints brownish-yellow, the thorax and elytra rather more finely punctured, the abdomen much more finely, uniformly punctured, the punctures not coarser and closer at the bases of the segments as in *simlaensis*. Length 2.3 mm.

Dehra Dun.

Genus **OCALEA** Er.

- Ocalea* Er., Käf. Mark Brand. i, 1837-39, p. 298; id., Gen. Spec. Staph. 1839-40, p. 60; Redtb., Faun. Austr. ed. i, 1849, p. 652, ed. ii, 1858, p. 148, and ed. iii, 1874, p. 132; Lacord., Gen. Col. vii, 1854, p. 36; Kraatz, Naturg. Ins. Deutschl. ii, 1856-58, p. 49; Jacq. du Val, Gen. Col. d'Eur. ii, 1857-59, p. 15; Thoms., Skand. Col. iii, 1861, p. 41; Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 458; Fowler, Col. Brit. Isl. ii, 1888, p. 43; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 90; Everts, Col. Neerl. i, 1898, p. 183; Bernh., W. Z. B. li, 1901, p. 435, lii, 1902, p. 237 (Beiheft); Reitt., Faun. Germ. ii, 1909, p. 19; Johansen, Danmarks Rovbiller, 1914, p. 72, figs. 23, 24; Fenyés, Gen. Ins. 173 B, 1920, p. 340; Portevin, Encycl. Ent. A, xii, 1929, i, p. 229; Scheerp., Tierwelt Mitteleur. v, 2, 1930, p. 78.
- Isoglossa* Casey, Ann. New York Acad. Sci. vii, 1893, p. 304; id., Mem. Col. ii, 1911, p. 54.

Moderately large species, some resembling the subgenera *Aloconota* and *Metaxya*, but with the abdomen very sparingly

punctured. Head prominent, more or less suborbicular, the neck moderate, the post-ocular region distinctly and entirely bordered below (*Ocalea*, s. str.) or only bordered behind (*Tetrocalea*, nov.). Antennæ rather long and slender. Labrum short, strongly transverse, the anterior border gently rounded or truncate. Mandibles rather stout, pointed, the right with a little tooth at the middle of the inner border. Maxillary palpi with small 1st joint, 2nd elongate, slightly thickened towards apex, 3rd not or but slightly longer than the 2nd but thicker at the apex, 4th subulate, fully a third as long as the preceding. Outer lobe of maxilla shorter and broader than the inner, truncate and ciliate at apex; inner lobe pointed and furnished with rather long closely placed spines below the apex. Mentum transverse, trapezoidal, broadly and feebly arcuately emarginate in front. Labial palpi 3-jointed, the 1st joint thicker and about twice as long as the 2nd, 3rd about half as long again as the preceding and narrower. Tongue narrow, extending somewhat beyond the level of the apex of the 1st joint of the labial palpi and split for nearly half its length. Thorax slightly transverse, the pronotal epipleura visible from the side. Prosternum with the posterior deflexed part keeled along the middle. Mesosternum acute, extending beyond the middle of the coxæ, keeled, the keel sometimes obsolete towards the base, the coxæ narrowly separated. Elytra emarginate postero-externally. Abdomen parallel or a little narrowed before the apex, the first three visible tergites transversely impressed at base (*Ocalea*, s. str.) or the first four (*Tetrocalea*, nov.), the first three sternites transversely constricted at base. Legs long and slender; tibiæ ciliate. Tarsi 5, 5, 5; the anterior with the first four joints rather short, subequal, the 5th as long as the 2nd to 4th together; middle with the 1st joint longer than the 2nd, 2nd to 4th subequal, 5th as long as the preceding three together; posterior with the 1st joint fully as long as the 2nd and 3rd together, 2nd to 4th subequal, 5th almost as long as the 1st. Claws slender, lightly curved. The species are found near water and are recorded from most parts of the world except tropical and southern Africa.

The two subgenera are distinguished as follows:—

First three visible tergites transversely impressed at base; post-ocular region entirely bordered below.....	<i>OCALEA</i> , s. str., p. 577.
First four visible tergites transversely impressed; post-ocular region only bordered behind.....	[p. 579. <i>TETROCALEA</i> , nov.,

Key to the Species of Ocalea (s. str.) Er.

1. Brightly coloured species with red antennæ..... *badia* Er., p. 577.
Black species, sometimes with slight brassy reflex; antennæ except base black..... 2.
2. Penultimate joints of antennæ a little longer than broad..... *championi*, sp. n., p. 579.
Penultimate joints as long as broad or slightly transverse..... 3.
3. Head with a small tubercle on the disc; elytra with fine asperate puncturation. Head without tubercle..... *simlaensis*, sp. n., p. 578.
4.
4. Elytra and abdomen with slight brassy reflex; elytra with fine rough puncturation..... *submetallica*, sp. n., p. 579.
Elytra and abdomen without metallic reflex; elytra with fine simple puncturation..... *himalayica*, sp. n., p. 578.

2133. *Ocalea (s. str.) badia.*

Ocalea badia Er., Käf. Mark Brand. i, 1837-39, p. 300; id., Gen. Spec. Staph. 1839-40, p. 61; Redtb., Faun. Austriaca, ed. i, 1849, p. 652, ed. ii, 1858, p. 149, and ed. iii, 1874, p. 133; Kr., Naturg. Ins. Deutschl. Col. ii, 1856-58, p. 52; Jacq. du Val, Gen. Col. d'Eur. ii, 1857-59, tab. 2, fig. 8; Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 473; Fowler, Col. Brit. Isl. ii, 1888, p. 45, tab. 40, fig. 5; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 92; Everts, Col. Neerl. i, 1898, p. 114; Bernh., W. Z. B. lii, 1902, p. 239 (Beiheft); Reitter, Faun. Germ. ii, 1909, p. 19, tab. 42, fig. 7; Johansen, Danmarks Rovbiller, 1914, p. 73; Everts, Col. Neerl. iii, 1922, pp. 86, 87; Portevin, Encycl. Ent. A, xii, 1929, i, p. 230, fig. 250.

Ocalea agilis Sahlb., Act. Soc. Fn. Flor. Fenn. i, 1876, p. 124.

Ocalea dubia Motsch., Bull. Soc. Nat. Mosc. xxxiii, 1860, ii, p. 586; Hochh., Bull. Soc. Nat. Mosc. xxxiv, 1861, ii, p. 7.

Ocalea indica Kr.*, Arch. Naturg. xxv, 1859, p. 12; Fauv., Rev. d'Ent. xvii, 1898, p. 91.

Ocalea intermedia Heer, Faun. Helv. i, 1838-42, p. 349.

Ocalea parvula Baudi, Berl. Ent. Zeitschr. xiii, 1869, p. 369; Muls. et Rey, Ann. Soc. Linn. Lyon, xxi, 1874, p. 314; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 92.

Ocalea proluxa Gyll., Ins. Suec. i, 4, 1827, p. 484; Thoms., Skand. Coll. 1861, p. 42.

Shining; head black or reddish-brown; thorax reddish-brown; elytra brownish-yellow; abdomen pitchy, the posterior margins of the segments and apex reddish-yellow. Antennæ red. Legs reddish-yellow. Length 3.5-4.5 mm.

Head suborbicular, narrower than the thorax, with small, obsolete, rather sparing punctures, finely coriaceous. Antennæ with the 3rd joint as long as 2nd, 4th to 7th longer than broad, decreasing in length, 8th to 10th as long as broad, 11th shorter than the preceding two together. Thorax very slightly transverse, convex, the sides rounded in front, straight and

retracted behind, the posterior angles obtuse, before the scutellum with a small impression, on the disc rather closely covered with flat superficial punctures, elsewhere more finely and more sparingly punctured, the ground-sculpture as on the head. Elytra broader and slightly longer than the thorax, more deeply and not very closely punctured, the ground-sculpture scarcely visible. Abdomen very finely and very sparingly punctured, the pubescence long, sparing and yellow, closer on the fore-parts.

"Ind. Port." (*Helper*).

According to Fauvel this record is incorrect. The species is found in Europe, Asia Minor, and northern Africa.

2134. *Ocalea* (s. str.) *simlaensis*, sp. n.

Shining, black. Antennæ black, the 1st or 1st and 2nd joints and the legs reddish-yellow. Length 3.75-4 mm.

In size and build very similar to *badia* Er. but differently coloured, elytra more finely and closely punctured, etc. Head suborbicular, narrower than the thorax, the eyes moderate, the post-ocular region rounded and retracted to the neck, on the middle of the disc with a small tubercle, moderately finely, rather sparingly and obsoletely punctured and without ground-sculpture. Antennæ with the 3rd joint a little longer than 2nd, 4th to 7th longer than broad, decreasing in length, 8th to 10th as long as broad or very slightly transverse, 11th shorter than the preceding two together. Thorax slightly transverse (5 : 4.5), the sides rounded in front, retracted and sinuate behind, the posterior angles obtuse, before the scutellum with a rather large impression and a short median impressed line continuous with it, the puncturation on the disc moderately fine, superficial and rather close, towards the sides finer and much more sparing; ground-sculpture absent. Elytra broader and longer (6 : 4.5) than the thorax, finely, closely and roughly punctured and with a very fine coriaceous ground-sculpture. Abdomen a little narrowed before the apex, very finely and very sparingly punctured, very sparingly pubescent.

Simla and Chakrata districts.

2135. *Ocalea* (s. str.) *himalayica*, sp. n.

Very like *simlaensis*, and only differing in the following respects: the head is without a tubercle, and both it and the thorax have a very fine ground-sculpture, the elytra are pitchy-black and the puncturation, which is fine and rather close, is not at all asperate, and ground-sculpture is absent; the abdomen is not quite so sparingly punctured.

Simla and Chakrata districts. Kashmir: Gulmarg. Punjab: Naggar. N.W. Frontier, Hazara, Upper Kagan Valley, Naddi, alt. 8000 feet.

2136. *Ocalea* (s. str.) **championi**, sp. n.

Black, the fore-parts moderately, the abdomen more shining. Antennæ black, the 1st joint pitchy. Legs brownish-red. Length 4.5 mm.

Larger and more robust than *himalayica*, but similarly built, the fore-parts less shining, the antennæ thinner, the penultimate joints a little longer than broad, the legs darker, puncturation of the head finer, the ground-sculpture very fine, thorax and elytra more finely and more closely punctured and without ground-sculpture, abdomen less sparingly punctured.

Burphu, Gori Valley, alt. 11,500 feet (*H. G. Champion*). Unique. British Museum.

2137. *Ocalea* (s. str.) **submetallica**, sp. n.

Very similar to *simlaensis*, but the head without tubercle, the elytra and abdomen with slight brassy reflex, the antennæ a little shorter, the 6th to 10th joints slightly transverse, the elytra more finely and more closely asperately punctured, the abdomen not quite so sparingly punctured.

Ghum district.

2138. *Ocalea* (*Tetrocalea*) **rufobrunnea**, sp. n. (Plate III, fig. 7.)

Shining, reddish-brown, the head sometimes black. Antennæ black, the first two or three joints and the legs reddish-yellow. Length 4 mm.

Head suborbicular, very slightly narrower than the thorax, with moderately large, deep and moderately close punctures; ground-sculpture absent. Antennæ with all the joints longer than broad, decreasing in length, the penultimate only slightly longer than broad, the 11th shorter than the preceding two together. Thorax very slightly longer than broad, the sides rounded in front, sinuate and retracted behind, before the scutellum with a small fovea and short impressed line, the puncturation on the middle similar to that of the head but closer, elsewhere with finer and much less close puncturation; ground-sculpture absent. Elytra broader and a fifth longer than the thorax, impressed at the base between the shoulders and scutellum, the puncturation rather close, finer than on the thorax, and feebly asperate. Abdomen parallel, a little

narrowed at the apex, more shining than the fore-parts, almost impunctate, the first four visible segments deeply transversely impressed at their base, in the middle of each impression with a short keel; pubescence long and very sparing, closer on the fore-parts.

Ghum district.

Genus **DINUSA** Saulcy.

Dinusa Saulcy, Ann. Soc. Ent. Fr. (4) iv, 1864, p. 433; Abeille de Perrin, Miscell. Ent. iv, 1896, p. 129; Bernh., W. Z. B. li, 1901, p. 433, lii, 1902, p. 100 (Beiheft); Fenyés, Gen. Ins. 173 B, 1920, p. 386.

Convex species, broad in front and strongly narrowed behind. Head small, much narrower than the thorax and somewhat retracted therein, not constricted behind. Eyes moderate, flat, the temples not bordered below. Antennæ 11-jointed, variable in length, usually more or less compressed laterally, especially the last joint. Labrum transverse, the angles rounded. Mandibles short and stout, pointed, the right with a distinct tooth at the middle of the inner border, the left angulate at the middle internally. Maxillary palpi long, the 3rd joint slender, only slightly thickened towards the apex, much longer than the 2nd, 4th very narrow, parallel, cylindrical, a quarter of the length of the 3rd. Outer lobe of maxilla densely ciliate at apex; inner lobe with long, slender, closely placed spines along the inner margin towards apex, less close behind, ciliate towards base. Mentum transverse, trapezoidal, feebly arcuately emarginate in front. Labial palpi 3-jointed, the 1st joint rather stout, as long as the 2nd and 3rd together, 2nd much narrower and about a third as long as the 1st, 3rd narrower and about twice as long as the 2nd. Tongue rather narrow, much shorter than the 1st joint of the labial palpi, split to beyond the middle. Thorax strongly transverse, convex, as broad or broader behind than the elytra, the pronotal epipleura not visible from the side. Prosternum short, not carinate. Mesosternum acute, extending nearly the whole length of the coxæ, narrowly separated from the metasternum; coxæ narrowly separated. Elytra not longer than the thorax, distinctly emarginate postero-externally. Abdomen short, strongly pointed, the segments without transverse basal impression. Legs slender, rather long, the tibiæ ciliate. Tarsi 5, 5, 5; the anterior with the first four joints rather short, subequal, 5th almost as long as the preceding four together; middle with 1st joint longer than 2nd, 2nd to 4th rather short, subequal, 5th longer than the 1st; posterior with the 1st joint almost as long as the following three together, 5th almost as long as the 1st. The genus is associated with ants.

2139. *Dinusa heimi*.

Dinusa heimi Wasm., Zeitschr. Wiss. Zool. ci, 1912, p. 97.

Length 2.2 mm. (somewhat contracted 2 mm.).

Shining brown, the antennæ and legs of similar colour, only the head and indeterminate triangular scutellary marking blackish. Very broad, strongly convex, pointed behind, finely, rather closely covered with a long yellow pubescence, the pubescence on the abdomen thicker, yellow. Antennæ moderately long, extending to the middle of the elytra, the 1st and last joints stouter, 2nd joint narrower than the 1st but distinctly thicker than the 3rd, a little longer than broad, the following a little longer than broad and gradually increasing in breadth to the thickest, 11th joint, which is long and conical, as long as the preceding three together. Head and thorax very finely and sparingly punctured. The strongly convex thorax is about three times as broad as long, towards the base strongly widened almost in a straight line, the posterior angles rounded, not prominent, the posterior border straight. Elytra finely but more coarsely and closely punctured than the thorax. The abdomen is moderately thickly punctured, the penultimate segment also coarsely and closely punctured. Easily distinguished from all the known species by the structure of the antennæ and the thick puncturation of the terminal segments of the abdomen.

Found with *Triglyphothrix walshi* For.

Wallon, Ahmednagar district (*Heim*). Unique (ex *Wasmann*).

PSEUDOMEOTICA, gen. n.

In facies very like *Meotica* Muls. et Rey, but distinguished by the post-ocular region being finely and completely bordered below, different mouth-parts, and only the first two visible tergites impressed at base. Narrow, parallel, subdepressed, head large, suborbicular, slightly widened behind the small eyes, the post-ocular region finely and entirely bordered below, the neck moderate. Labrum transverse, arcuately emarginate in the middle, the emargination filled in by a membrane rounded in front and with a small median notch. Mandibles short and stout, pointed, the right with a small tooth at the middle of the inner border, the left edentate. Maxillary palpi with small 1st joint, 3rd longer and much thicker at apex than the 2nd (as in *Meotica*), 4th subulate, nearly half as long as the preceding. Outer lobe of maxilla shortly ciliate at apex, the inner pointed and with five or six rather short spines along the inner border at the apex. Mentum transverse, trapezoidal, truncate in front. Labial palpi with the 1st joint short and stout, 2nd narrower and slightly

shorter, 3rd narrower and longer than the 2nd, a little thickened towards the apex. Tongue short and broad, scarcely as long as the 1st joint of the labial palpi, rounded in front and with a small arcuate emargination in the middle. Thorax transverse, the pronotal epipleura visible from the side. Mesosternum acute, extending half the length of the coxæ, these very narrowly separated behind. Elytra not emarginate postero-externally. Abdomen parallel, only the first two

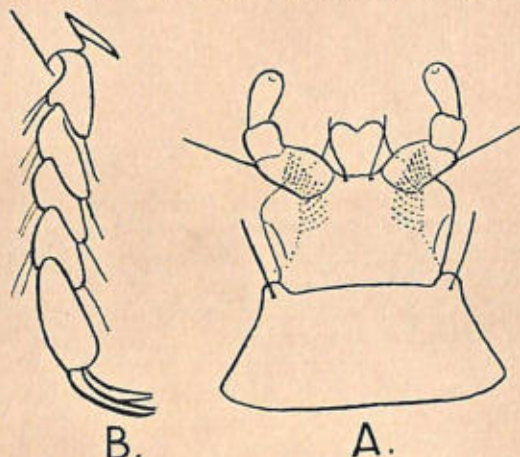


Fig. 136.—*Pseudomeotica colorata*. A, labium; B, anterior tarsus.

visible tergites transversely impressed. Legs rather short, tibiæ ciliate. Tarsi 5, 5, 5; the anterior and middle with the first four joints short and subequal, the posterior with the first four joints a little longer, subequal. Claws slender, lightly curved. The species are found on stream banks.

Type, *colorata*.

Key to the Species.

- Reddish-brown or pitchy-brown species *lineola* Kr., p. 582.
 Yellowish-red species, the head, elytra and
 6th and 7th abdominal segments darker . . . *colorata*, sp. n., p. 583.

2140. *Pseudomeotica lineola*.

Oxypoda lineola Kr.*, Arch. Naturg. xxv, 1859, p. 27.

Homalola exigua Kr., l. c. p. 36.

Atheta (Dratica) picea Cam., Trans. Ent. Soc. Lond. 1920, p. 256

Greasy lustrous, reddish-brown or pitchy-brown, the head and 6th and 7th segments blackish, the elytra obscurely lighter at the base. Antennæ blackish, the first two joints, mouth-parts and legs reddish-yellow. Length 1-1.4 mm.

Head transverse, a little narrower than the thorax, the temples very slightly dilated, the eyes moderate, their diameter

less than the length of the post-ocular region, exceedingly finely and rather closely punctured and finely pubescent, very finely coriaceous. Antennæ moderately long and stout, the first two joints subequal, the 3rd shorter than the 2nd, the 4th to the 10th transverse, gradually increasing in width, the penultimate two and a half times as broad as long, the 11th stout, longer than the preceding two together, rounded at the apex. Thorax a little transverse and of the shape of that of *Meotica indocilis* Heer, exceedingly finely and closely punctured and pubescent. Elytra scarcely longer but a little broader than the thorax, slightly transverse, exceedingly finely and closely punctured and pubescent, not sinuated. Abdomen parallel, exceedingly finely and moderately closely punctured and pubescent, less so on the 7th segment.

Ceylon. Also in Singapore.

2141. *Pseudomeotica colorata*, sp. n. (Pl. III, fig. 8.)

Narrow, linear, somewhat shining; head black, thorax and abdomen yellowish-red, the 6th and 7th segments infuscate; elytra smoky-brown, narrowly and obscurely lighter at the base. Antennæ blackish, the first three joints and legs reddish-yellow. Length 1.4 mm.

In build and antennal structure very like *lineola*, but more brightly coloured and with rather smaller eyes. Head nearly as broad as the thorax, rounded and a little dilated behind the eyes, the disc sometimes with a small median impression, the puncturation close, not quite so fine as in *lineola*, very finely coriaceous. Thorax slightly transverse, the sides gently rounded in front, straighter and a little retracted behind, the sculpture very like that of the head. Elytra a little broader and slightly longer than the thorax, the puncturation as fine but rather closer. Abdomen parallel, a little narrowed at the apex, extremely finely, rather closely punctured, less closely on the 7th segment. The whole insect with a very fine, rather close, yellow pubescence.

Sivaliks: Mohan Rau, Kheri Rau. Dehra Dun: Nim Nadi. Kumaun: Haldwani district.

Genus *OCYUSA* Kr.

- Ocyusa* Kr., Naturg. Ins. Deutschl. Col. ii, 1856-58, p. 156; Redtb., Faun. Austr. ed. ii, 1858, p. 147 (note), ed. iii, 1874, p. 150; Thoms., Skand. Col. iii, 1861, p. 10; Muls. et Rey. Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 447 (ex parte); Fowler, Col. Brit. Isl. ii, 1888, p. 40; Ganglb., Kaf. Mitt.-Eur. ii, 1895, p. 84; Bernh., W. Z. B. li, 1901, p. 434, lii, 1902, p. 221 (Beiheft); Newbery, E. M. M. xl, 1904, p. 251; Reitt., Faun. Germ. ii, 1909, p. 29; Fowler & Donisthorpe, Col. Brit. Isl. vi, 1913, pp. 42, 43; Johansen, Danmarks Rovbiller, 1914, p. 69; Fenyés, Gen. Ins. 173 B, 1920, p. 353; Portevin, Encycl.

Ent. A, xii, 1929, i, p. 241; Scheerp., Tierwelt Mitteleur. v, 2, 1930, p. 79.

Subgen. *Cousya* Muls. et Rey. Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 420; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 84; Bernh., W. Z. B. lii, 1902, p. 225 (Beiheft); Fenyès, Gen. Ins. 173 B, 1920, p. 354; Scheerp., Sitz.-Ber. Akad. Wiss. Wien, Abt. i, xli, 1931, p. 450.

This genus comprises species of various facies, some resembling *Calodera* Mannerh. and having the mesosternum carinate, others *Atheta* Thoms. and *Oxypoda* Mannerh., with simple mesosternum. The only Indian species are referable to the subgenus *Cousya* Muls. et Rey, and these resemble *Atheta* in facies. Head narrower than the thorax, suborbicular,

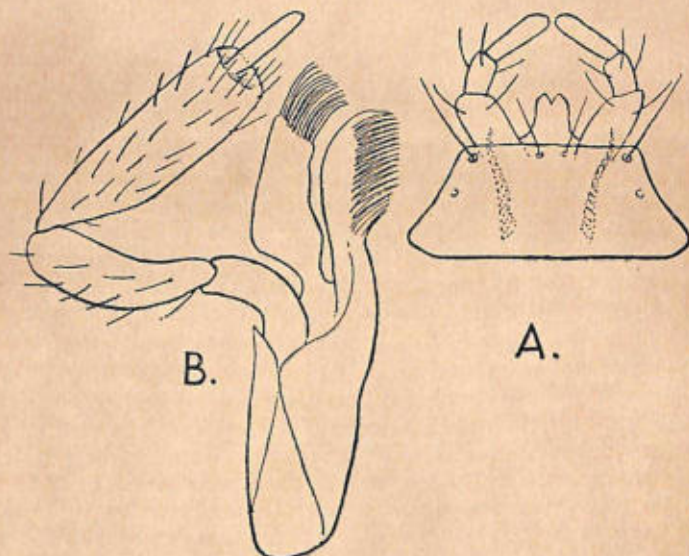


Fig. 137.—*Ocyusa beesoni*. A, labium; B, maxilla.

neck moderate, temples finely bordered. Antennæ with the penultimate joints transverse. Labrum transverse, feebly, broadly emarginate in front, the emargination filled in by a membrane. Mandibles rather stout, pointed, the right with a small tooth at the middle of the inner border, the left edentate. Maxillary palpi with small 1st joint, 2nd elongate, a little thickened towards apex, 3rd longer than the 2nd and more thickened at apex, 4th subulate, about a third as long as the preceding. Outer lobe of maxilla obliquely truncate and ciliate at apex; inner acute, along the inner margin with fine closely placed, slender spines. Mentum transverse, trapezoidal, feebly, broadly emarginate in front. Labial palpi 3-jointed, rather slender, the 1st joint cylindrical,

about twice as long as broad, 2nd narrower and much shorter, 3rd narrower than the 2nd and about as long as the 1st, truncate. Tongue small, shorter than the 1st joint of the labial palpi, with a small triangular excision in the middle of the rounded anterior margin. Thorax slightly transverse, the pronotal epipleura visible from the side. Mesosternum acute, simple, extending a little beyond the middle of the coxæ, these very narrowly separated. Elytra emarginate postero-externally. Abdomen parallel, a little narrowed before the apex, the first three or four visible tergites transversely impressed at their base. Legs rather slender, tibiae finely pubescent. Tarsi 5, 5, 5; the anterior with the first four joints short and subequal; middle longer than the anterior, the first four joints rather short, subequal; posterior with the 1st joint distinctly longer than the 2nd, 2nd to 4th subequal, 5th as long as the 1st. Claws simple, lightly curved. The species are found in various damp localities.

Key to the Species.

- | | | |
|---|----|-------------------------------------|
| 1. Black species, the elytra at most brownish. Otherwise coloured, the elytra at least reddish- or brownish-yellow | 2. | |
| 2. First four visible tergites transversely impressed | 5. | [p. 586. |
| Only the first three visible tergites transversely impressed | | <i>quadrisulcata</i> Bernh., |
| 3. Abdomen a little widened behind. | 3. | |
| Abdomen not widened behind | 4. | <i>ajmonis</i> Bernh., p. 586. |
| 4. Puncturation of abdomen moderately fine and deep | | |
| Puncturation of abdomen fine, superficial | | <i>goriensis</i> , sp. n., p. 585. |
| 5. Entirely reddish-yellow | | <i>himalayica</i> , sp. n., p. 587. |
| Otherwise coloured | 6. | <i>indica</i> Cam., p. 589. |
| 6. Thorax strongly transverse, this and base and apex of abdomen bright reddish-yellow | | |
| Thorax less transverse | 7. | <i>læta</i> , sp. n., p. 587. |
| 7. Thorax reddish-yellow; abdomen pitchy. Thorax lighter or darker reddish-brown . . | 8. | <i>muspicola</i> , sp. n., p. 589. |
| 8. Penultimate joints of antennæ three times broader than long. | | |
| Penultimate joints of antennæ about a half broader than long. | | [p. 590. |
| 9. Less shining, ground-sculpture distinct, more closely and less finely punctured. More shining; ground-sculpture absent, less closely and more finely punctured . | 9. | <i>crassicornis</i> , sp. n., |
| | | <i>beesoni</i> , sp. n., p. 588. |
| | | <i>colorata</i> , sp. n., p. 588. |

2142. *Ocyusa (Cousya) goriensis*, sp. n.

Shining, black. Antennæ black, the 1st joint and legs reddish-brown, tarsi lighter. Length 3 mm.

In build somewhat like *nigrata* Fairm. but larger and more robust, with the puncturation of the head and thorax much less distinct, less developed 11th antennal joint etc. Head suborbicular, a little narrower than the thorax, the eyes distinctly shorter than the post-ocular region, with small, very obsolete, flat, moderately close punctures and feeble ground-sculpture. Antennæ with the 2nd and 3rd joints of equal length, 4th as long as broad, 5th to 10th transverse, the penultimate about twice as broad as long, the 11th as long as the 9th and 10th together. Thorax scarcely a third broader than long, convex, the sides feebly rounded, a little retracted behind, the posterior angles rounded, the sculpture scarcely differing from that of the head. Elytra a little broader but scarcely longer than the thorax, moderately finely, closely, subasperately punctured. Abdomen moderately finely and rather closely punctured throughout. The whole insect with a fine greyish pubescence.

Gori Valley: Milam, Burphu, alt. 11,500 feet (*H. G. Champion*).

2143. *Ocyusa (Cousya) ajmonis*.

Ocyusa (Cousya) ajmonis Bernh., Att. Mus. Civ. Stor. Nat. Trieste, xii, 1934, p. 88.

Very near *laticollis* Thoms., but readily distinguished by the dark colour of the antennæ and legs, broader, shorter head, broader, shorter thorax, which is less narrowed in front, and much shorter elytra. Black, the antennæ and legs pitchy-black. Head not longer than broad, the antennæ rather short, the penultimate joints about a half broader than long. Thorax in front only moderately narrowed, a good deal broader than long. Elytra only a little longer than the thorax and in the strong and close puncturation scarcely differing from *laticollis*. The abdomen is somewhat widened behind, very closely, behind less closely, punctured. Length 2.8-3 mm.

Chota Deosai, alt. 3850 metres (ex *Bernhauer*).

2144. *Ocyusa (Cousya) quadrisulcata*.

Ocyusa (Cousya) quadrisulcata Bernh., Att. Mus. Civ. Stor. Nat. Trieste, xii, 1934, p. 87.

This species is very distinct from its allies in the 6th tergite being as deeply transversely impressed as the preceding. From *araxis* Bernh., to which it is nearest, it is distinguished as follows: smaller and narrower, more parallel, the thorax broader relatively to the elytra, only a little narrower than these, shorter, less narrowed in front, without trace of median impression, the puncturation less distinct; elytra not so

long, scarcely more than a fourth longer than the thorax, rather more closely punctured; antennæ distinctly shorter, the 4th joint strongly transverse, the penultimate nearly twice as broad as long. Length 2.2-2.5 mm. The colour is black, the elytra often brownish, the legs reddish- to pitchy-brown.

Kashmir: Balturo; Mundu, alt. 4300 metres; Urdukas, alt. 4000 metres; Lopsang Bransa, alt. 4500 metres; Liligo, alt. 3800 metres; Biah-Tal; Pajù, alt. 3500 metres (ex *Bernhauer*).

2145. *Ocyusa (Cousya) himalayica*, sp. n.

Moderately shining, black, the elytra pitchy-black. Antennæ black, the first two joints brown. Legs brownish-yellow. Length 2.5-2.75 mm.

In build very similar to *Atheta meridionalis* Rey. Head suborbicular, narrower than the thorax, with flat, rather close, superficial punctures and a fine but distinct ground-sculpture. Antennæ rather slender, 3rd joint as long as the 2nd, 4th about as long as broad, 5th to 10th gradually more transverse, the penultimate moderately so, the 11th as long as the preceding two together. Thorax transverse (3.5:3), the sides rounded in front, more retracted and straighter behind, the posterior angles obtusely rounded, before the scutellum with a small impression, the puncturation similar in character to that of the head but finer, the ground-sculpture similar. Elytra broader and a third longer than the thorax, closely, much more deeply and less finely punctured and with fine coriaceous ground-sculpture. Abdomen a little narrowed before the apex, finely and rather closely and obsolete punctured, a little more sparingly behind. The pubescence throughout fine and greyish.

Chakrata and Mussooree districts, alt. 6000-8000 feet.

2146. *Ocyusa (Cousya) læta*, sp. n.

Rather shining; head black; thorax reddish-yellow; elytra yellow, the scutellary and postero-external region more or less infuscate; abdomen with the first two visible tergites and the apex reddish-yellow, the others black with rufescent posterior margins. Antennæ black, the first three joints and legs reddish-yellow. Length 3 mm.

This species has the broad thorax of *Mniusa*, but the tooth of the mandible is small as in *Cousya*. Head broad but narrower than the thorax, the eyes rather large, the puncturation flat, superficial and rather close, the ground-sculpture fine. Antennæ with the 3rd joint as long as the

2nd, 4th small, transverse, 5th to 10th gradually more strongly so, the penultimate about a half broader than long. Thorax transverse (4.25 : 3.25), the sides very gently rounded and a little retracted in front, before the scutellum with a small transverse impression, the posterior angles obtusely rounded, the puncturation finer and closer than on the head, subasperate, but the ground-sculpture similar. Elytra broader and longer (4 : 3.25) than the thorax, less finely, more closely and roughly punctured. Abdomen a little narrowed before the apex, finely and rather closely punctured on the first three visible tergites, more sparingly behind. Pubescence of the fore-parts fine, short and suberect, longer and depressed on the abdomen.

Mussooree district : Keyarkuli ; Mossy Falls ; Aglar Rivèr.

2147. *Ocyusa (Cousya) besoni*, sp. n.

Amarochara indica Bernh., in litt.

Moderately shining; head and abdomen black, the last segment reddish-yellow; thorax reddish-brown; elytra yellowish-red, more or less infuscate externally. Antennæ black, the first two joints yellowish-brown. Legs reddish-yellow. Length 2.5-2.75 mm.

Head a little narrower than the thorax, eyes moderate, finely and rather closely punctured, finely coriaceous. Antennæ stout, the 3rd joint a little shorter than the 2nd, 4th small, transverse, 5th to 9th more strongly so, differing but little amongst themselves, 10th a little longer than the 9th and so less transverse. 11th stout, as long as the preceding two together. Thorax very slightly transverse, the sides gently rounded, a little retracted behind, before the scutellum with a fovea, the sculpture as on the head. Elytra slightly broader and slightly longer than the thorax, finely, closely, somewhat roughly punctured. Abdomen parallel, moderately finely and closely punctured, more sparingly on the last two segments.

This species has the 1st joint of the posterior tarsi longer than is usual in the genus, it is as long as the 2nd and 3rd together; the structure of the tongue and mesosternum agree with *Ocyusa*, and the 1st joint of the antennæ is only normally emarginate at the apex.

Dehra Dun. W. Almora, Kumaun.

2148. *Ocyusa (Cousya) colorata*, sp. n.

Shining; head black, thorax brownish-red; elytra brownish-yellow; abdomen pitchy-black, the first two visible segments

with the posterior margins broadly, the following narrowly rufescent. Antennæ reddish-brown, the first two joints and legs reddish-yellow. Length 2.75 mm.

Size and build of *beesoni*, but more brightly coloured and more shining, the antennæ thicker, the 4th to 10th joints more transverse, the 11th stout, longer than the 9th and 10th together; head and thorax distinctly more finely and not quite so closely punctured and without ground-sculpture, the elytra also more finely, less closely and less roughly punctured; abdomen more finely punctured.

Dehra Dun.

2149. *Ocyusa (Cousya) indica*.

Apimela indica Cam., E. M. M. lvi, 1920, p. 99.

Elongate, parallel, depressed, shining reddish-yellow, the head reddish. Antennæ reddish, the first three joints and legs reddish-yellow. Length 2.2 mm.

Originally described as an *Apimela*, this species must be removed from that genus, the type of which it somewhat resembles in facies, as the temples are bordered below and the claws not angulate near the base. Head round, narrower than the thorax, slightly widened behind, the eyes small, their length much shorter than the post-ocular region, the disc with a small impression, rather closely covered with very small, flat, obsolete punctures and without ground-sculpture. Antennæ with the 3rd joint a little shorter than the 2nd, 4th to 10th gradually more transverse, the penultimate twice as broad as long, the 11th stout, as long as the 9th and 10th together. Thorax slightly transverse, the sides gently rounded in front, retracted and almost straight behind to the obtuse posterior angles, very finely, closely and indistinctly punctured; ground-sculpture absent. Elytra slightly longer and broader than the thorax, as finely but rather more closely punctured. Abdomen parallel, the first three visible segments very finely, moderately closely punctured, the following much more sparingly. Pubescence yellow, fine, short and rather close on the fore-parts, longer and more sparing on the abdomen.

Ceylon: Bogawantalawa, alt. 4800-5200 feet (*Lewis*).
British Museum.

2150. *Ocyusa (Cousya) muscicola*, sp. n.

Moderately shining; head black; thorax reddish-yellow; elytra brownish-yellow; abdomen pitchy, the posterior margins of the segments more or less broadly flavescent.

Antennæ blackish, the first three joints and legs reddish-yellow. Length 2 mm.

Head rather small, suborbicular, the vertex sometimes with a fovea, finely and moderately closely punctured except along the middle; ground-sculpture feeble. Antennæ with the 3rd joint a little shorter than the 2nd, 4th slightly, 5th to 10th gradually more transverse, the penultimate about twice as broad as long, the 11th a little longer than the 9th and 10th together. Thorax transverse (3:2.5), the sides evenly and very slightly rounded, sometimes with a small feeble impression before the scutellum, finely, rather closely punctured, the ground-sculpture feeble. Elytra broader and slightly longer than the thorax, finely and closely punctured. Abdomen a little narrowed before the apex, very finely and closely punctured throughout, the ground-sculpture reticulate.

Ghum district.

2151. *Ocyusa (Cousya) crassicornis*, sp. n.

Moderately shining; head black, thorax brown, elytra and abdomen brownish-yellow, the 4th to 7th segments infusate. Antennæ black, the 1st joint brownish-yellow. Legs reddish-yellow. Length 2.5 mm.

Head nearly as broad as the thorax, eyes moderate, post-ocular region distinctly rounded and dilated, closely covered with small, flat, somewhat obsolete punctures except in front, which is almost smooth; ground-sculpture feeble. Antennæ short and stout, the 3rd joint a little shorter than the 2nd, 4th to 10th gradually more transverse, the penultimate about three times broader than long, the 11th as long as the preceding two together. Thorax transverse (3:2.5), formed as in *Pseudocyusa kashmirica*, very finely, moderately closely punctured and without ground-sculpture. Elytra a little longer and broader than the thorax, more closely and more finely punctured. Abdomen a little narrowed before the apex, extremely finely, rather closely punctured on the first three visible segments, gradually more sparingly on the following, the ground-sculpture reticulate.

Ghum district: Mangpu.

PSEUDOCYUSA, gen. n.

Related to *Ocyusa* but differing in the form of the labrum and the slender mandibles, both of which are furnished with a sharp, slender tooth behind the middle. Facies somewhat like *Atheta depressicollis* Fauv. but with shorter elytra. Head with stout neck, eyes moderate, the temples strongly and completely bordered below. Labrum transverse, the anterior

angles rounded, slightly but distinctly produced and rounded in the middle. Mandibles long and slender, pointed, each with a slender sharp tooth behind the middle. Maxillary palpi with the 2nd joint a little thickened towards the apex, 3rd as long as but a little thicker at the apex than the preceding, 4th narrow, subulate, scarcely half as long as the 3rd. Maxilla with the outer lobe rather narrow, ciliate internally and at the apex; inner lobe narrower, pointed, with five or six fine spines at apex and four or five rather longer and stouter ones below. Mentum transverse, trapezoidal, truncate in front. Labial palpi with 1st joint moderate, 2nd very short, narrower, 3rd nearly as long but much narrower than the 1st. Tongue

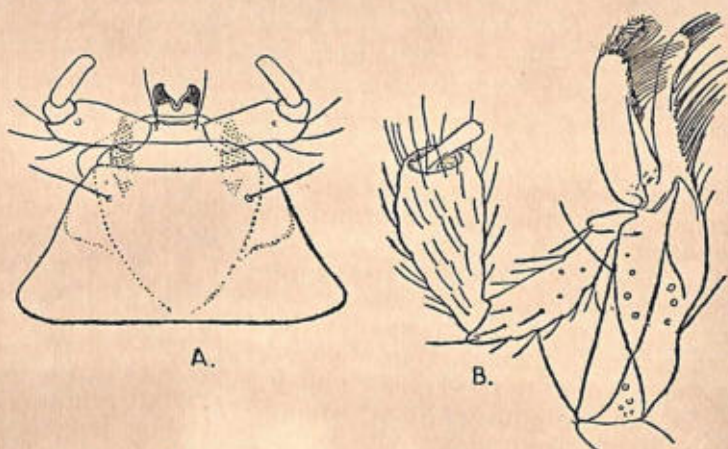


Fig. 138.—*Pseudocyusa kashmirica*. A, labium; B, maxilla.

short, almost square, shorter than the 1st joint of the labial palpi, triangularly emarginate to the middle, and more chitinized than is usual in the subfamily. Thorax slightly transverse, the pronotal epipleura visible from the side. Mesosternum simple, acutely pointed, extending about half the length of the middle coxæ, the intersternal piece long and narrow, the coxæ contiguous. Elytra moderately emarginate postero-externally. Abdomen a little narrowed before the apex, the first three visible tergites narrowly transversely impressed at the base. Legs moderate; tibiæ ciliate. Tarsi 5, 5, 5; the anterior and middle with the first four joints rather short and subequal, the posterior with the 1st joint as long as the 2nd and 3rd together, 2nd to 4th subequal, 5th as long as the 1st. Claws lightly curved.

Type, *kashmirica*.

2152. *Pseudocysa kashmirica*, sp. n.

Black, moderately shining. Antennæ black. Legs brownish-yellow. Length 2.75 mm.

Head rather broad, narrower than the thorax, suborbicular, a little widened behind the moderate eyes, very finely, moderately closely punctured, finely coriaceous. Antennæ with the 3rd joint as long as the 2nd, 4th square or slightly transverse, 5th to 10th gradually more transverse, the penultimate about a half broader than long, 11th as long as the 9th and 10th together. Thorax transverse (3.5:3), the sides gently rounded, retracted behind, the posterior angles rounded, along the middle with a superficial impression posteriorly, sometimes extending nearly to the anterior border, the sculpture as on the head. Elytra a little longer and a little broader than the thorax, very finely and closely punctured, finely coriaceous. Abdomen a little narrowed before the apex, very finely, closely punctured and pubescent throughout. The fore-parts with a fine, greyish, moderately close pubescence.

Kashmir : Gulmarg ; Khelanmarg, alt. 8000-10,000 feet.

Genus *IRMARIA* Cam.

Irmaria Cam., Ann. Mus. Civ. Gen. lii, 1925, p. 48.

Facies somewhat resembling *Myrmedonia laticollis* Märk. Antennæ loosely jointed and furnished with long hairs; temples strongly bordered below; maxillary palpi 4-jointed,

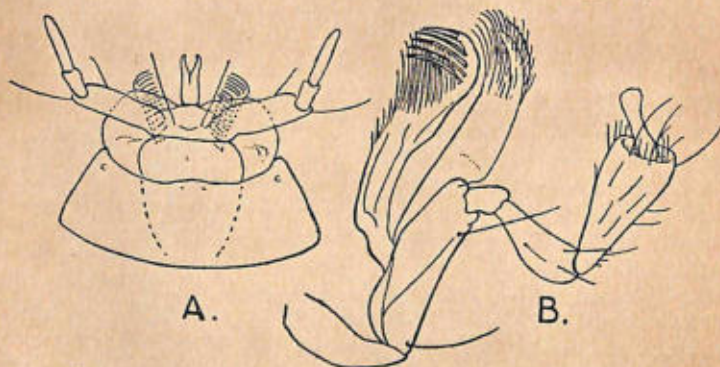


Fig. 139.—*Irmaria assamensis*. A, labium; B, maxilla.

the 1st joint very small, 2nd elongate, curved and thickened towards the apex, 3rd a little longer and thicker apically than the 2nd, 4th subulate, quite half as long as the 3rd; inner lobe of maxilla with three or four spines on the inner margin towards the apex, the rest ciliate; outer lobe simply ciliate; mandibles

slender, curved and pointed, the right with an obscure blunt tooth. Tongue oblong, shorter than the 1st joint of the labial palpi and split to the middle into two parallel teat-shaped lobes; labial palpi distinctly 3-jointed, 1st joint moderately long, 2nd much shorter, scarcely half as long as 1st and a little narrower, 3rd about as long as 1st but narrower than 2nd, cylindrical. Thorax strongly transverse, the sides evenly rounded, the epipleura not visible when viewed from the side; mesosternum pointed, extending about half the length of the intermediate coxæ, metasternal process short, scarcely extending between the coxæ, intersternal piece long and narrow, the intermediate coxæ narrowly separated; tibiæ ciliate. Tarsi 5, 5, 5; the anterior with the first four joints short and subequal, 5th as long as the preceding three together; middle tarsi with the first four joints short (but longer than those of the anterior), subequal; posterior tarsi with the first three joints subequal, of moderate length, 4th shorter, 5th about as long as the preceding three together. Elytra not sinuate within the postero-external angle. Abdomen parallel, the first three visible tergites transversely impressed at the bases.

Type, *nigra*, from Sumatra.

Key to the Species.

- Sculpture of the fore-parts close, flat and superficial; ground-sculpture distinct.... *assamensis*, sp. n., p. 594.
 Sculpture of the fore-parts less close, fine and simple; ground-sculpture absent at least on the head and thorax..... *parva* Cam., p. 593.

2153. *Irmaria parva*.

Irmaria parva Cam., Tijdschr. Entom. lxxvi, 1933, p. 23.

Shining, black, the abdomen pitchy-black, with the posterior margins of the segments narrowly and obscurely rufescent. Antennæ reddish-yellow, the last joint infusate. Legs reddish-yellow. Length 2 mm.

In facies something like *Zyras laticollis* Märk., but very much smaller. Subconvex, the head broad but narrower than the thorax, the eyes rather large, the disc impressed in the middle; puncturation very fine, rather sparing; ground-sculpture absent. Antennæ rather short, the 3rd joint a little shorter than the 2nd, 4th small, transverse, 5th to 10th gradually more strongly, the penultimate about three times broader than long, the 11th as long as the 9th and 10th together; all the joints with long hairs. Thorax transverse (3.75 : 2.5), convex, the sides gently rounded, a little more retracted in front, the posterior angles obtusely rounded, the sculpture

as on the head. Elytra a little longer (3:2.5) and broader than the thorax, less finely and more closely punctured, the ground-sculpture feeble. Abdomen parallel, the 8th segment a good deal narrower than the 7th, very finely, sparingly punctured, the punctures asperate, the pubescence long and sparing, somewhat closer on the fore-parts.

Assam. Also in Sumatra in the fungus *Dictyophora phalloidea*.

2154. *Irmaria assamensis*, sp. n.

In build, colour, and antennal structure scarcely differing from *parva*, but on the average larger (2-3.5 mm.) and at once distinguished by the sculpture, which on the fore-parts consists of a flat, superficial, rather close puncturation and a distinct coriaceous ground-sculpture; the puncturation of the abdomen is fine and sparing as in *parva*.

Assam: Patkai Mountains.

Genus **OXYPODA** Mannerh.

Oxyпода Mannerh., Mém. Acad. St. Petersb. i, 1830, p. 483; Er., Käf. Mark Brand. i, 1837-39, p. 342; id., Gen. Spec. Staph. 1839-40, p. 141; Redtb., Faun. Austr. ed. i, 1849, p. 664, ed. ii, 1858, p. 142, and ed. iii, 1874, p. 150; Lacord., Gen. Col. ii, 1859, p. 35; Kraatz, Naturg. Ins. Deutschl. Col. ii, 1856-58, p. 158; Jacq. du Val, Gen. Col. d'Eur. ii, 1857-59, p. 13; Thoms., Skand. Col. iii, 1861, p. 17; Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 225; Fowler, Col. Brit. Isl. ii, 1888, p. 25; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 57; Everts, Col. Neerl. i, 1898, p. 174; Bernh., W. Z. B. li, 1901, p. 434; lii, 1902, p. 128 (Suppl.); Reitter, Faun. Germ. ii, 1909, p. 31; Blatchley, Col. Indiana, i, 1910, p. 361; Johansen, Danmarks Rovbiller, 1914, p. 46, fig. 18; Fenyés, Gen. Ins. 173 B, 1920, p. 363; Portevin, Encycl. Ent. A, xii, 1929, i, p. 242; Scheerp., Tierwelt Mitteleur. v, 2, 1930, p. 79; Donisthorpe, E. M. M. lxxviii, 1932, p. 5.

BIOLOGY.—Rey, Ann. Soc. Linn. Lyon, (2) xxxiii, 1886, p. 159; id., Ess. d'études cert. Larv. Col. 1887, p. 29; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 58; Xambeu, Échange, ix, 1893, p. 80; id., Rev. d'Ent. xvii, 1898, p. 26; id., Échange, xxv, 1909, p. 10; Wasm., D. E. Z. 1894, p. 273; Rupertsb., Biol. Lit. Käf. Eur. 1894, p. 116; Poppius, Meddel. Soc. Faun. Flor. Fenn. xxxiv, 1908, pp. 113, 206.

Of somewhat variable build, but usually with convex thorax and sericeous abdominal pubescence, and for the most part resembling certain *Atheta*. Head inserted in the thorax, more or less suborbicular, the eyes variable in size, the temples sharply bordered below. Antennæ 11-jointed, variable in structure. Labrum transverse, the anterior angles rounded, truncate or feebly emarginate, the anterior border narrowly membranous. Mandibles stout, curved and pointed, the

right with a small tooth at the middle of the inner border, the left edentate. Maxillæ with the outer lobe broader and shorter than the inner, densely ciliate at the apex, the inner pointed, with slender, closely placed spines along the distal half of the inner border. Maxillary palpi 4-jointed, the 1st joint very small, 2nd moderate, a little thickened towards apex, 3rd either a little longer than the 2nd and more strongly thickened apically or much longer and very slightly thickened, 4th subulate, not more than half the length of the 3rd. Mentum transverse, trapezoidal, truncate or feebly and broadly emarginate in front. Labial palpi 3-jointed, the 1st joint rather short and stout, 2nd much narrower and about half as long, 3rd narrower and much longer than the 2nd, sometimes a little widened towards apex. Tongue rather narrow, about as long as the 1st joint of the labial palpi and divided nearly to the middle into two narrow lobes. Thorax more or less transverse, the sides more or less rounded and more retracted in front, the pronotal epipleura in most not visible from the side. Prosternum short, the posterior deflexed part carinate along the middle and pointed. Mesosternum simple, its process acutely pointed and extending nearly the whole length of the coxæ, there very narrowly separated or contiguous behind. Elytra variable, shorter or as long or longer than the thorax, distinctly and usually strongly emarginate postero-externally. Abdomen either nearly parallel or strongly narrowed towards the apex or intermediate, the first two or three visible tergites transversely impressed at their bases, usually very finely and densely punctured with sericeous pubescence, sometimes more sparingly and with normal pubescence. Legs moderate, rather slender, tibiæ ciliate, without long setæ. Tarsi 5, 5, 5; the anterior and middle somewhat variable, the posterior with the 1st joint as long as the 2nd and 3rd together, sometimes as long as the 2nd to 4th together.

The genus is widely distributed throughout the world and found usually in damp places, moss, fallen leaves, fungus, etc., but a few are myrmecophilous; it is divided into several subgenera, some of which, as in *Atheta*, are by no means clearly defined, and only some of them are so far known in India.

Key to the Subgenera.

1. Antennæ rather long and slender, the 3rd joint fully as long as the 2nd, the penultimate joints not or but slightly transverse 2.
- Antennæ shorter and less slender, the 3rd joint usually shorter than the 2nd, the penultimate distinctly or strongly transverse 3.

2. 3rd joint of maxillary palpi normally thickened towards the apex, not much longer than the 1st antennal joint; abdomen distinctly acuminate [et Rey, p. 596.
OXYPODA (s. str.), Muls.
- 3rd joint of maxillary palpi scarcely thickened towards apex, slender, twice as long as the 1st antennal joint; abdomen only slightly narrowed before the apex [p. 597.
PAROXYPODA Ganglb.,
BESSOPORA Thoms.,
3. Elytra shorter than the thorax 4. [p. 616.
 Elytra at least as long as the thorax ...
4. Thorax broader than the elytra, these as long or slightly longer *SPHENOMA* Mannerh.,
 Thorax at most as broad as the elytra .. 5. [p. 614.
5. 3rd joint of the maxillary palpi of normal length, distinctly thickened at apex ... 6.
 3rd joint of maxillary palpi elongate, about twice as long as the 1st antennal joint, scarcely thickened towards apex. 7.
6. Abdomen more or less narrowed behind, the penultimate joints of antennæ moderately transverse or as long as broad .. [p. 598.
 Abdomen almost parallel, the penultimate joints of antennæ strongly transverse *PODOXYA* Muls. et Rey,
DEMOSOMA Thoms., [p. 615.
7. Elytra as long or slightly longer than the thorax [p. 609.
 Elytra distinctly longer than the thorax. *BÆOGLENA* Thoms.,
MYCETODREPA Thoms., [p. 611.

Subgenus *OXYPODA* (s. str.) Muls. et Rey.

Oxyopda Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 228; Fowler, Col. Brit. Isl. ii, 1888, p. 26; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 61; Bernh., W. Z. B. lii, 1902, p. 143 (Suppl.); Reitter., Faun. Germ. ii, 1909, p. 32; Johansen, Danmarks Rovbiller, 1914, p. 49; Fenyès, Gen. Ins. 173 B, 1920, p. 365; Portevin, Encycl. Ent. A, xii, 1929, i, p. 243.

Rather large species with slender antennæ, the penultimate joints not or but slightly transverse, the 3rd joint as long or longer than the 2nd. Maxillary palpi with the 3rd joint of normal length and distinctly thickened towards apex. Elytra at least as long as the thorax. Abdomen narrowed towards apex. Only one species in our Fauna is at present referable to this subgenus.

2155. *Oxyopda* (s. str.) *himalayica*, sp. n.

Only slightly shining; head black, thorax pitchy-brown, the posterior angles and more or less of the adjacent sides and base yellowish-red: elytra pitchy-brown with a more or less extensive oblique reddish-yellow fascia from the humeral angles to the posterior margin at the suture, the posterior margin itself narrowly reddish-yellow, or entirely brownish-yellow, the darker markings scarcely indicated.

Abdomen pitchy-black, the posterior margins of the segments distinctly reddish-yellow. Antennæ black, the first two or three joints and the legs reddish-yellow. Length 4.5 mm.

Very near *longipes* Muls. et Rey, but differs in the more brightly coloured thorax and abdomen and more transverse penultimate antennal joints, the puncturation of the elytra is also a little finer. Head narrower than the thorax, finely and closely punctured, finely coriaceous. Antennæ with the 3rd joint longer than the 2nd, 4th and 5th slightly longer than broad, 6th as long as broad, 7th to 10th slightly transverse, 11th as long as the 9th and 10th together. Thorax transverse (6 : 4.5), convex, the sides gently rounded, more retracted in front, the posterior angles obtuse, the base near them feebly emarginate, before the scutellum with a small round impression, the sculpture as on the head. Elytra broader and longer (6 : 4.5) than the thorax, finely and closely punctured. Abdomen gradually narrowed from base to apex, very finely and very closely punctured and pubescent, sericeous. 1st joint of the posterior tarsi as long as the following two together.

Chakrata and Mussooree districts; alt. 6000-8000 feet. W. Almora, Upper Gumti Valley. Simla Hills; Kotkai, alt. 5500 feet (*Beeson*). Punjab, Jibhi, Seraj, alt. 6000 feet; Jhatingri, Mandi, alt. 6000 feet (*H. G. Champion*).

Subgenus *PAROXYPODA* Ganglb.

Paroxypoda Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 64; Bernh., W. Z. B. iii, 1902, p. 149 (Suppl.); Fenyés, Gen. Ins. 173 B, 1920, p. 366; Portevin, Encycl. Ent. A, xii, 1929, i, p. 245.

Antennæ long and slender, the penultimate joints longer than broad. Maxillary palpi with the 3rd joint elongate, scarcely thickened towards apex. Abdomen almost parallel.

2156. *Oxyroda* (*Paroxypoda*) *morosa*, sp. n.

Only slightly shining, black, elytra brownish-black. Antennæ black, the first two joints yellowish-brown. Legs reddish, tarsi reddish-yellow. Length 4.5 mm.

Colour and lustre of *lugubris* Kr. but narrower, the antennæ as slender but shorter, the sculpture of the fore-parts scarcely different, but that of the abdomen not quite so fine and close. Parallel, the abdomen only slightly narrowed before the apex. Head a good deal narrower than the thorax, finely, closely and superficially punctured, finely coriaceous. Antennæ with the 3rd joint as long as 2nd, 4th to 10th longer than broad, decreasing in length, the penultimate joints only very slightly so, the 11th shorter than the 9th and 10th together. Thorax

transverse (6:5), convex, a little narrowed in front, the posterior angles rounded, before the scutellum with a feeble impression, as finely and closely but more deeply punctured than the head. Elytra as broad as the thorax and very slightly longer, finely and more closely punctured, the puncturation rougher. Abdomen only slightly narrowed before the apex, finely and densely punctured and pubescent throughout, sericeous. 1st joint of the posterior tarsi fully as long as the following three together.

N. Kumaun; Laptel, alt. 15,000 feet (*H. G. Champion*).
Unique. British Museum.

Subgenus *PODOXYA* Muls. et Rey.

Podoxya Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii. 1874, pp. 229, 297; Fowler, Col. Brit. Isl. ii, 1888, p. 29; Ganglb., Kaf. Mitt.-Eur. ii. 1895, p. 64; Bernh., W. Z. B. lii, 1902, p. 152 (Suppl.); Reitter, Faun. Germ. ii, 1909, pp. 33, 35; Johansen, Danmarks Rovbiller, 1914, p. 54; Fenyès, Gen. Ins. 173 B, 1920, p. 367; Portevin, Encycl. Ent. A, xii, 1929, i, p. 245; Scheerp., Sitz.-Ber. Akad. Wiss. Wien, Abt. i, cxl, 1931, p. 455.

Antennæ thickened towards apex, the penultimate joints at most as long as broad, the 3rd joint usually shorter than the 2nd. Maxillary palpi with normal 3rd joint. Elytra at least as long as the thorax, abdomen sometimes parallel, sometimes more or less narrowed towards the apex.

Key to the Species.

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|--|---------------------------------------|
| 1. Abdomen extremely finely and densely punctured and pubescent, sericeous .. | 2. |
| Abdomen very finely, rather closely punctured and pubescent, not sericeous. | 14. |
| 2. Posterior margins of the tergites furnished with several long black setæ; penultimate joints of antennæ scarcely transverse | 3. |
| Posterior margins of the segments without long setæ, usually with a fringe of closely placed hairs | 4. |
| 3. Pubescence of the fore-parts depressed . | <i>heterogaster</i> , sp. n., p. 607. |
| Pubescence of the fore-parts short, erect. | <i>simlaensis</i> , sp. n., p. 602. |
| 4. Entirely black species, at most with the posterior margins of the tergites narrowly rufescent | 5. |
| Not entirely black, the elytra at least yellowish-brown | 8. |
| 5. Penultimate joints of antennæ slightly transverse | 6. |
| Penultimate joints of antennæ strongly transverse | 7. |
| 6. More robust, less shining, the head and thorax distinctly coriaceous | <i>nigra</i> , sp. n., p. 600. |
| Narrower, more shining, head and thorax with only feeble ground-sculpture.... | <i>uniformis</i> , sp. n., p. 601. |

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| 7. Antennæ reddish-brown, the base reddish-yellow; abdomen less closely punctured | <i>nigrita</i> , sp. n., p. 602. |
| Antennæ black; abdomen more closely punctured | [nov., p. 603. |
| 8. Antennæ black, the base usually reddish-yellow | <i>subsericea</i> v. <i>kashmirica</i> , |
| Antennæ yellowish-red | 9. |
| 9. Thorax with short, semi-erect pubescence | <i>tenuis</i> , sp. n., p. 605. |
| Thorax with depressed pubescence | 10. |
| 10. Antennæ entirely black; fore-parts closely and roughly punctured | 11. |
| Antennæ with reddish-yellow base; fore-parts more finely, less roughly punctured | <i>masuriana</i> , sp. n., p. 602. |
| 11. 11th joint of antennæ as long as the preceding three together; thorax yellowish-red | <i>decipiens</i> , sp. n., p. 605. |
| 11th joint not longer than the preceding two together | <i>atriceps</i> G. & H., p. 608. |
| 12. Thorax convex, without trace of impressed median line | 12. |
| Thorax flatter, with distinct median impressed line | 13. |
| 13. Larger (3.75 mm.) and more robust, darker; 4th and 5th joints of antennæ longer than broad | <i>subsericea</i> , sp. n., p. 603. |
| Smaller (2.75 mm.), narrower, brighter; 4th and 5th joints of antennæ transverse | <i>montivaga</i> , sp. n., p. 600. |
| 14. Black species, the posterior margins of the tergites at most rufescent | <i>beesoni</i> , sp. n., p. 604. |
| More brightly coloured species | 15. |
| 15. Antennæ reddish | 17. |
| Antennæ, except base, black | 16. |
| 16. Larger (3.75 mm.); antennæ thick, the 11th joint longer than the 9th and 10th together, the 10th less transverse than the 9th | <i>atrata</i> , sp. n., p. 603. |
| Smaller (2.75-3 mm.); antennæ thinner, 11th joint not longer than the 9th and 10th together, the 10th subequal to the 9th | <i>nigrolucens</i> , sp. n., p. 601. |
| 17. Antennæ with the 4th joint longer than broad, the penultimate joints only slightly transverse | <i>proxima</i> , sp. n., p. 603. |
| Antennæ with 4th joint at most as long as broad, the penultimate joints distinctly transverse | 18. |
| 18. Posterior margins of the tergites with long black setæ; darker | 19. |
| Posterior margins of tergites without such setæ; more brightly coloured .. | <i>dohertyi</i> , sp. n., p. 606. |
| 19. Abdomen black, the posterior margins of the tergites rufescent | <i>mixta</i> , sp. n., p. 608. |
| Abdomen yellow | 20. |
| 20. Head broader, more than half the breadth of the thorax; penultimate joints of antennæ about a half broader than long; more brightly coloured .. | 21. |
| | <i>vivida</i> , sp. n., p. 604. |

- Head narrow, only slightly more than half the breadth of the thorax; penultimate joints of antennæ twice as broad as long; colour darker [p. 607.
subconformis, sp. n.,
21. Antennæ longer, the 4th joint as long as broad, 11th as long as the preceding three together *flavescens*, sp. n., p. 607.
- Antennæ shorter, the 4th joint distinctly transverse, the 11th short and stout *fraterna*, sp. n., p. 606.

2157. *Oxypoda (Podoxya) nigra*, sp. n.

Black, not very shining. Antennæ brown, the first two joints and legs reddish-yellow. Length 4-4.5 mm.

In general facies and antennal structure very like *funebri* Kr., but with rougher, less fine puncturation of the fore-parts and finer, denser puncturation of the abdomen, the 1st joint of the posterior tarsi much longer. Head round, the eyes rather small, very finely, rather closely, superficially punctured, distinctly coriaceous. Antennæ with the 3rd joint as long as the 2nd, 4th to 7th longer than broad, decreasing in length, 8th to 10th not or but slightly transverse, 11th as long as the 9th and 10th together. Thorax transverse (6:4.5), convex, as broad as the elytra at the base, finely, closely and roughly punctured, the ground-sculpture as on the head. Elytra slightly longer than the thorax, the sculpture similar. Abdomen gradually and slightly narrowed from base to apex, extremely finely and densely punctured and pubescent, sericeous. 1st joint of the posterior tarsi very long, longer than the following three together.

Simla Hills: Gahan, Theog, Kotgarh, alt. 7000 feet.

2158. *Oxypoda (Podoxya) montivaga*, sp. n.

Greasy lustrous; head black; thorax and abdomen pitchy-black, the posterior margins of the first five visible segments narrowly rufescent, the 6th more broadly; elytra either smoky-brown, with the humeral angles and posterior margin narrowly and obscurely lighter, or yellowish-brown, with the disc extensively infusate. Antennæ black, the first two or three joints reddish. Legs reddish-yellow. Length 3.75 mm.

In build, colour, lustre and antennal structure very similar to *vicina* Kr., but with the antennæ shorter and less stout, the head much more superficially punctured, the sculpture and pubescence elsewhere scarcely differing. Head sub-orbicular, closely, finely and superficially punctured, finely coriaceous. Antennæ with the 3rd joint slightly longer than the 2nd, 4th and 5th very slightly longer than broad, 6th to 10th slightly transverse, 11th scarcely as long as the 9th and 10th together. Thorax transverse (5.5:4.3), convex,

the sides rounded, more retracted in front, the posterior angles rounded, finely, very closely, more deeply punctured than the head, the ground-sculpture similar. Elytra at base as broad as the base of the thorax but a little longer, very finely, closely and roughly punctured. Abdomen gradually narrowed to the apex, extremely finely and densely punctured and pubescent, sericeous.

Chakrata district; Binal Gad, Konain, Deoban, alt. 7000-9330 feet. W. Almora, Kumaun. Punjab, Jalori Pass, alt. 10,800 feet.

2159. *Oxypoda (Podoxya) uniformis*, sp. n.

Only slightly shining, black, the posterior margins of the abdominal segments narrowly and obscurely rufescent. Antennæ black, the first two joints brownish-yellow. Legs reddish-yellow, the femora a little infuscate. Length 4 mm. (abdomen well extended).

Very similar to *montivaga* but blacker, rather more shining, the antennæ longer and thinner, the penultimate joints very slightly transverse, the head similarly punctured, but with the ground-sculpture less distinct. Antennæ with the 3rd joint as long as 2nd, 4th and 5th slightly longer than broad, 6th and 7th as long as broad, 8th to 10th very slightly transverse, 11th as long as the 9th and 10th together. Thorax less transverse (5:4) than in *montivaga*, closely and finely but less superficially punctured, and with indistinct ground-sculpture. Elytra very slightly longer than the thorax, the sculpture as in *montivaga*. Abdomen narrowed from base to apex, extremely finely and densely punctured and pubescent throughout, sericeous. Pubescence of fore-parts fine and depressed.

Kashmir: Gulmarg, alt. 8000-9000 feet.

2160. *Oxypoda (Podoxya) nigrolucens*, sp. n.

Rather shining, black, the elytra brownish-black. Antennæ reddish-brown, the first two joints and legs reddish-yellow. Length 3.75 mm.

In build very similar to *montivaga*, but blacker and much more shining, the antennæ much stouter, the thorax a little more narrowed in front, very similarly punctured but without ground-sculpture, elytra less finely punctured, abdomen much less finely punctured, more sparingly on the last two segments, the pubescence less close, not sericeous. Antennæ stout, the 3rd joint as long as the 2nd, 4th to 9th gradually more transverse, the 9th about a half broader than long, the 10th longer than the 9th, only slightly transverse, 11th distinctly longer than the 9th and 10th together.

Ghum: Tiger Hill.

2161. *Oxypoda (Podoxya) simlaensis*, sp. n.

Moderately shining; head black; thorax dark brown; elytra yellowish-brown; abdomen pitchy-black, the posterior margins of the first five visible segments narrowly, the 6th broadly rufescent. Antennæ reddish-brown, the 1st joint and the legs reddish-yellow. Length 3 mm.

In the comparatively narrow thorax resembles *induta* Rey, but differs from that species by the much longer and thinner antennæ, shorter elytra, coarser and rougher puncturation of the fore-parts, and finer puncturation of the abdomen. Head suborbicular, much narrower than the thorax, closely, finely but roughly punctured and without ground-sculpture, the pubescence short and partly erect. Antennæ slender, the 3rd joint as long as the 2nd, 4th to 7th as long as broad, subequal, 8th to 10th very slightly transverse, 11th as long as the preceding two together. Thorax transverse (4.5 : 3.5) the sides gently rounded, distinctly retracted in front, the posterior angles rounded, the puncturation and pubescence as on the head but closer. Elytra as long as the thorax and at the base scarcely narrower, the sculpture similar but with the pubescence depressed. Abdomen narrowed from base to apex, extremely finely and closely punctured and pubescent, sericeous.

Simla Hills : Gahan ; Theog, alt. 7000-7600 feet.

2162. *Oxypoda (Podoxya) masuriana*, sp. n.

In build and colour scarcely differing from *umbrata* Gyllh., but more shining, the head finely, closely and roughly punctured, the antennæ entirely black and obviously thinner, the penultimate joints less transverse, thorax and elytra more coarsely and more roughly punctured, with semi-erect pubescence, the abdomen as densely but rather more finely punctured than in that species, the pubescence sericeous as in the allied form. From *subsericea* it differs in being more shining, the antennæ more slender, with less transverse penultimate joints, the much more coarsely and roughly punctured fore-parts. Length 2.75 mm.

Mussooree district : Arni Gad. Kumaun ; Ranikhet.

2163. *Oxypoda (Podoxya) nigrita*, sp. n.

Greasy lustrous, entirely black; antennæ reddish-brown, the first two joints and legs yellowish-red. Length 2.75-3 mm.

Near *umbrata* Gyllh. but rather narrower, blacker and more shining; antennæ shorter and stouter, the penultimate joints more transverse, puncturation of the thorax finer, closer and not rough, abdomen a little less densely punctured and

pubescent. Head extremely finely, rather closely, superficially punctured, very finely coriaceous. Antennæ short and stout, the 3rd joint scarcely shorter than the 2nd, 4th slightly, 5th to 10th gradually more transverse, the penultimate strong so. Thorax transverse (4.5 : 3.5), convex, the posterior angles rounded, more closely and more deeply punctured than the head, the ground-sculpture similar. Elytra at the base as broad as the base of the thorax and but little longer, very finely, closely and roughly punctured. Abdomen slightly narrowed towards apex, very finely, closely punctured and pubescent, sericeous.

Simla Hills, alt. 7000-7900 feet. Chakrata district; Khedar Khud, Deoban, alt. 7500-7900 feet. Punjab; Jalori Pass, alt. 10,800 feet; Jibhi, Seraj, alt. 6000 feet. Kashmir; Gulmarg, alt. 8000-10,000 feet. Kumaun: Upper Gumti Valley.

2164. *Oxypoda (Podoxya) proxima*, sp. n.

Exactly similar in size, build and antennal structure to *nigrita*, but not so black, the posterior margins of the abdominal segments narrowly but distinctly rufescent, the puncturation throughout less fine, less close and rougher, the abdominal pubescence less close, not sericeous, the antennæ reddish.

Kashmir: Gulmarg. Kumaun: Naini Tal; Dudhatoli. Punjab: Jalori Pass, alt. 10,800 feet.

2165. *Oxypoda (Podoxya) atrata*, sp. n.

Extremely like *nigrita*, and only differs from that species in the following respects: the 10th joint of the antennæ is a little longer than the 9th and so less transverse, the puncturation throughout distinctly coarser, that of the abdomen is less close also, especially on the 7th segment, and its pubescence is not sericeous, and so more shining than in the allied species.

Chakrata district: Korawa Khud, Kanasar, Khedar Khud, alt. 7000-9000 feet. Simla Hills, Narkanda, alt. 9230 feet.

2166. *Oxypoda (Podoxya) subsericea*, sp. n.

Greasy lustrous; head black, thorax darker or lighter reddish-brown; abdomen pitchy, the posterior margins of the first two visible segments more or less distinctly rufescent, the last two segments more broadly; elytra brownish-yellow more or less infuscate externally. Antennæ black, the first two or three joints and the legs reddish-yellow. Length 2-2.5 mm.

Var. *kashmirica*, nov. Entirely black, the femora and tibiæ sometimes infuscate.

Of exactly the build of *sericea* Heer, but on the average a little larger, the antennæ stouter, the elytra and thorax more brightly coloured, these more finely punctured, the head more finely and not roughly punctured. Head suborbicular, narrower than the thorax, very finely, moderately closely, not roughly punctured, finely coriaceous. Antennæ with the 3rd joint slightly shorter than the 2nd, 4th to 10th gradually more transverse, the penultimate about twice as broad as long, 11th as long as the 9th and 10th together. Thorax rather more than a third broader than long, the sides gently rounded, more retracted in front, the posterior angles rounded, before the scutellum with a feeble impression, along the middle with a distinct impressed line, very finely, closely and roughly punctured. Elytra at base as broad as the base of the thorax and a third longer, the sculpture similar but closer. Abdomen narrowed towards the apex, densely and finely punctured and pubescent, sericeous. The pubescence on the fore-parts depressed. 1st joint of the posterior tarsi as long as the following three together.

Dehra Dun. Bombay: Kanara. Mussooree, Chakrata and Simla Hills. Kashmir, Gulmarg.

2167. *Oxypoda (Podoxya) beelsoni*, sp. n.

A little shining; head black, thorax darker, elytra lighter reddish-brown; abdomen brown, the posterior margins of the segments distinctly rufescent. Antennæ blackish, the first three joints and legs reddish-yellow. Length 2.75 mm.

Size and build of *subsericea*, the antennæ similarly constructed, but at once distinguished by the brighter coloration and clear reddish-yellow basal joints of the antennæ; the puncturation on the fore-parts is coarser and rougher, on the abdomen not quite so fine though equally close, with sericeous pubescence. Extremely like the lighter forms of *umbrata* Gyllh., but with smaller, rounder head and with the fore-parts more finely punctured.

Chakrata district: Dodora Khud; Konain; alt. 8000 feet. Simla Hills: Gahan; Kotgarh, alt. 7000 feet.

2168. *Oxypoda (Podoxya) vivida*, sp. n.

Moderately shining; head black; thorax light reddish-brown; elytra bright yellowish-red; abdomen pitchy, the posterior margins of the first four visible segments narrowly and distinctly, the posterior half of the 5th and whole of the 6th yellowish-red. Antennæ reddish-brown, the first three joints and legs reddish-yellow. Length 2.5 mm.

Size and build of *subsericea*, but at once distinguished by the brighter colour, differently formed antennæ, much more coarsely punctured thorax and elytra, and much less densely

punctured abdomen. Head finely, closely and somewhat roughly punctured and without ground-sculpture. Antennæ with the 3rd joint a little shorter than the 2nd, 4th to 9th gradually more transverse, the 9th scarcely a half broader than long, the 10th longer and very slightly transverse, the 11th as long as the 9th and 10th together. Thorax convex, transverse (4.5 : 3), narrowed towards the front, finely, closely and roughly punctured and without ground-sculpture. Elytra a third longer than the thorax, less finely, more closely and more roughly punctured. Abdomen narrowed towards the apex, finely, moderately closely punctured on the first four visible segments, much more sparingly on the last two, the pubescence not sericeous. The pubescence of the fore-parts fine, yellow and depressed.

Chakrata district : Khedar Khud, alt. 7500 feet.

2169. *Oxypoda (Podoxya) decipiens*, sp. n.

Greasy lustrous ; head black ; thorax smoky-brown, the margins narrowly lighter ; elytra brownish-yellow ; abdomen pitchy-black, the last segment and posterior margins of the others reddish-yellow. Antennæ black, the first two or three joints and the legs reddish-yellow. Length 2-2.5 mm.

Size and build of *subsericea* ; differs in the colour of the thorax and elytra, longer and thinner antennæ, the 4th joint a little longer than broad, the penultimate less transverse, about a half broader than long ; thorax without median impressed line or fovea before the scutellum, the puncturation not quite so fine, the pubescence short and semi-erect, elytra less finely punctured.

Chakrata district : Bodyar. Mussooree district : Mossy and Woodstock Falls, alt. 6000-8300 feet.

2170. *Oxypoda (Podoxya) tenuis*, sp. n.

Slightly shining ; head lighter or darker brown ; thorax light chestnut-brown ; elytra yellow ; abdomen brown, the apex and posterior margins of the segments reddish-yellow. Antennæ yellowish-red, the penultimate joints sometimes a little infuscate, the first two or three joints and legs reddish-yellow. Length 2.5 mm. (abdomen extended).

Much narrower than *sericea* Heer, the thorax less narrowed in front, the abdomen more pointed ; very like *præcox* Er. in build, but with longer elytra. Head round, closely, very finely and obsoletely punctured and without ground-sculpture. Antennæ with the 3rd joint shorter than the 2nd, 4th scarcely, 5th to 10th more transverse, the penultimate about twice as broad as long, the 11th as long as the 9th and 10th together. Thorax transverse (3.5 : 2.5), the sides gently rounded, a little

retracted in front, the posterior angles rounded, very finely, closely, somewhat roughly punctured and without ground-sculpture. Elytra longer (3:2.5) than the thorax, as closely but less finely and more roughly punctured. Abdomen distinctly narrowed from base to apex, extremely finely and closely punctured and pubescent throughout, sericeous. The pubescence of the fore-parts fine, yellow and depressed.

Chakrata district : Bangar ; Manjgaon, alt. 6000-6500 feet.

2171. *Oxypoda (Podoxya) fraterna*, sp. n.

Somewhat shining, yellow, the head infusate. Antennæ and legs reddish-yellow, the former a little infusate towards apex. Length 2.5 mm. (abdomen extended).

Of the build of *tenuis* but narrower, the colour yellow, the antennæ much shorter, the 4th to 10th joints transverse, the penultimate about twice as broad as long, puncturation of the thorax as fine but not quite so close, the ground-sculpture very similar ; elytra a little less finely and a little less closely punctured than in *tenuis* ; abdomen less finely punctured, the pubescence not sericeous, in other respects resembling *tenuis*.

Chakrata district : Bangar, alt. 6000 feet.

2172. *Oxypoda (Podoxya) dohertyi*, sp. n.

Rather shining ; head black ; thorax and elytra darker or lighter reddish-brown ; abdomen brown, the apex and posterior margins of the segments rufescent. Antennæ reddish, the first two or three joints and legs reddish-yellow. Length 2.75 mm.

In colour and build very like *subnitida* Rey, but with shorter elytra and the penultimate joints of antennæ as long as broad, the puncturation of the fore-parts coarse and rough. Head suborbicular, a good deal narrower than the thorax, closely, finely and roughly punctured and without ground-sculpture. Antennæ rather long, the 3rd joint as long as the 2nd, 4th to 7th very slightly longer than broad, 8th to 10th as long as broad. Thorax transverse (5.5:3.75), convex, the sides rounded, more retracted in front, the posterior angles rounded, closely, rather finely, roughly punctured ; ground-sculpture absent, the pubescence yellow and depressed but also with a few short, semi-erect black hairs. Elytra as long as but broader than the thorax, the sculpture similar. Abdomen a little narrowed before the apex, very finely and closely punctured and pubescent throughout but not sericeous, the sides and posterior margins of the segments with some long black setæ.

Manipur (*Doherty*). United Provinces : Naini Tal (*H. G. Champion*).

2173. *Oxypoda (Podoxya) heterogaster*, sp. n.

In build, colour and sculpture of the fore-parts exactly similar to *dohertyi*, but at once distinguished by the much more finely and densely punctured abdomen and distinctly sericeous pubescence; the black setæ at the posterior margins of the segments are also present and the antennæ are similar. Length 3 mm.

Mussooree district: Municipal Gardens.

2174. *Oxypoda (Podoxya) subconformis*, sp. n.

Rather shining; head black; thorax chestnut-red; elytra either reddish-brown with the humeral angles, reflexed sides and posterior margin (very narrowly) yellowish-red or entirely yellowish-red. Abdomen brown, the apex and posterior margins of the segments reddish-yellow. Antennæ reddish, the first two joints and legs reddish-yellow. Length 2.5 mm.

In build scarcely differing from *fusina* Rey, but with the 3rd joint of the maxillary palpi of normal build, the antennæ stouter, etc. Head narrow, only slightly more than half the breadth of the thorax, finely and superficially punctured, the ground-sculpture scarcely visible. Antennæ short and stout, the 3rd joint shorter than the 2nd, 4th to 10th gradually more transverse, the penultimate twice as broad as long, 11th as long as the 9th and 10th together. Thorax transverse (4.3:3.5), convex, the sides strongly retracted in front, the posterior angles briefly rounded, moderately closely, finely and rather indistinctly punctured; ground-sculpture absent. Elytra as long as the thorax and at the base as broad as that of the thorax, as closely but more distinctly punctured. Abdomen distinctly acuminate, finely and closely punctured, more sparingly on the last two segments, the pubescence not sericeous. Pubescence of the fore-parts yellow and depressed.

Ghum district. In moss.

2175. *Oxypoda (Podoxya) flavescens*, sp. n.

Moderately shining, reddish-yellow. Antennæ reddish, the base and legs reddish-yellow. Length 2.5 mm.

A very slender species with pointed abdomen, only about half the breadth of *subconformis* but similar in build and sculpture; the antennæ are more slender, the 4th joint as long as broad, but otherwise similarly formed but with the 11th joint as long as the preceding three together.

Ghum district. In fungus.

2176. *Oxypoda (Podoxya) atriceps*.

Oxypoda atriceps Gemm. et Har., Cat. Col. Eur. ii, 1868, p. 526.

Oxypoda atricapilla Motsch. *, Bull. Mosc. 1858, iii, p. 244 (præc.); Cam., E. M. M. lxix, 1933, p. 220.

Moderately shining; head black; thorax, first three visible segments of the abdomen, posterior half of the 5th and whole of the 6th yellowish-red, the rest black; elytra yellow, very obscurely infuscate postero-externally. Antennæ black, the first three joints and legs reddish-yellow. Length 3.5 mm.

In colour scarcely differing from *alternans* Gr., but the elytra are much less distinctly infuscate, the antennæ longer and stouter, the thorax less transverse, punctuation of the fore-parts less fine and rougher. Head closely, finely and roughly punctured. Antennæ moderate, the 3rd joint a little shorter than the 2nd, 4th to 10th transverse, gradually increasing in width, the 11th as long as the preceding three together. Thorax a little transverse, the posterior angles obtuse, along the middle with a broad feeble impression, rather finely, closely and roughly punctured. Elytra a third longer than the thorax, similarly but rather more closely punctured. Abdomen gradually narrowed from base to apex, very finely and very closely punctured and pubescent throughout, sericeous.

"Ind. or." One example.

2177. *Oxypoda (Podoxya) mixta*, sp. n.

A little shining; head black; thorax and elytra yellowish-red, the latter scarcely infuscate postero-externally; abdomen brown, the apex and posterior margins of the segments distinctly rufescent. Antennæ black, the first four joints and legs reddish-yellow. Length 3.3 mm.

Except for the rather longer elytra this species is exactly of the build of *alternans* Gr., and also somewhat similar in colour, but the 3rd joint of the maxillary palpi is not elongate and is distinctly thickened towards the apex; the antennæ also are longer and more slender. Head round, a good deal narrower than the thorax, finely, rather closely, somewhat roughly punctured and without ground-sculpture. Antennæ rather long and slender, the 3rd joint fully as long as the 2nd, 4th a little longer than broad, 5th as long as broad, 6th to 10th differing but little amongst themselves, slightly transverse, 11th as long as the 9th and 10th together. Thorax transverse (5.3 : 4.5), the sides gently rounded, moderately retracted in front, the posterior angles obtusely rounded, before the scutellum with a small impression, finely, rather closely and roughly punctured and without ground-sculpture. Elytra longer (6 : 4.5) and broader than the thorax, more

closely and rather more finely and roughly punctured. Abdomen slightly narrowed before the apex, very finely, rather closely punctured and pubescent throughout, not sericeous. Pubescence of the fore-parts fine, yellow and depressed.

Ghum district.

Subgenus *BÆOGLENA* Thoms.

Bæoglana Thoms., Skand. Col. ix, 1867, p. 248; Fowler, Col. Brit. Isl. ii, 1888, p. 29; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 69; Bernh., W. Z. B. lli, 1902, p. 178 (Supp.); Johansen, Danmarks Rovbiller, 1914, p. 58; Fenyes, Gen. Ins. 173 B, 1920, p. 369.

Head narrow, ovate, eyes small. Maxillary palpi with the 3rd joint very elongate, about twice as long as the 1st joint of the antennæ and scarcely thickened towards the apex. Antennæ with the 3rd joint shorter than 2nd, the penultimate strongly transverse. Thorax at most as wide as the elytra, these as long or slightly longer. Abdomen narrowed to the apex.

Key to the Species.

- | | |
|---|---------------------------------------|
| 1. Abdomen extremely finely and densely punctured, sericeous..... | 2. |
| Abdomen finely, moderately closely punctured, not sericeous..... | <i>gracilentata</i> , sp. n., p. 610. |
| 2. Pubescence of the fore-parts close, semi-erect..... | [p. 610. |
| Pubescence of the fore-parts depressed.. | <i>rufoferruginea</i> , sp. n., |
| 3. Antennæ dark, with 11th joint reddish-yellow..... | 3. |
| Antennæ with the last joint concolorous. | <i>muscicola</i> , sp. n., p. 611. |
| 4. More robust; antennæ very stout, reddish-brown..... | 4. |
| Narrower; antennæ slender, blackish... | <i>brunnea</i> , sp. n., p. 609. |
| | <i>sororecula</i> , sp. n., p. 610. |

2178. *Oxypoda* (*Bæoglana*) *brunnea*, sp. n.

Only a little shining, ferruginous-red, the elytra, the apex of the abdomen and posterior margins of the segments reddish-yellow. Antennæ reddish-brown, the first three joints and legs reddish-yellow. Length 3.75 mm. (abdomen extended).

In colour and build much resembling *nova* Bernh. but larger, the antennæ much stouter, puncturation of the fore-parts not so fine. Head oval, narrow, only slightly more than half the width of the thorax, eyes small, finely, rather closely, superficially punctured, finely coriaceous. Antennæ stout, the 3rd joint shorter than the 2nd, 4th about as long as broad, 5th to 10th gradually more transverse, the penultimate twice as broad as long, the 11th stout, as long as the 9th and 10th together. Thorax transverse (5.5 : 4), strongly narrowed in front, convex, the posterior angles obtuse, as broad as the base of the elytra, finely, closely and roughly punctured,

finely coriaceous. Elytra very slightly longer than the thorax, as closely but less finely punctured. Abdomen strongly narrowed from base to apex, very finely and closely punctured and pubescent throughout, sericeous, the posterior margins of the segments without setæ. Pubescence of the fore-parts fine and depressed.

Chakrata district : Patra Khud, alt. 8000 feet.

2179. *Oxypoda* (*Bæoglena*) *sororcula*, sp. n.

In build, colour and lustre similar to *brunnea*, but much smaller (2.75 mm.), the antennæ darker, much more slender, but of similar structure, puncturation of the fore-parts equally close and rough but distinctly finer, the ground-sculpture less evident, puncturation of the abdomen similar, the pubescence sericeous.

Chakrata district : Kanasar, alt. 7050 feet ; Binal Gad, alt. 7000-8000 feet.

2180. *Oxypoda* (*Bæoglena*) *rufoferruginea*, sp. n.

Rather shining, entirely ferruginous-red. Antennæ and legs yellowish-red. Length 2.75 mm.

More shining and of darker colour than *nova* Bernh., and with shorter antennæ and less pointed abdomen, the pubescence of the fore-parts, moreover, is semi-erect. Head narrow, with a fine, rather close, rough puncturation and very fine ground-sculpture. Antennæ short and stout, the 3rd joint shorter than the 2nd, 4th slightly, 5th to 10th more strongly transverse, the penultimate fully twice as broad as long, the 11th as long as the preceding two together. Thorax slightly transverse, strongly narrowed in front, the sculpture as on the head. Elytra as long as the thorax and at the shoulders as broad as its base, the puncturation less fine and rougher. Abdomen a little narrowed before the apex, very finely and closely punctured throughout, the pubescence depressed, yellow, not sericeous. Pubescence of the fore-parts rather close, yellow and semi-erect.

Simla Hills : Kotgarh, alt. 7000 feet. In fungus.

2181. *Oxypoda* (*Bæoglena*) *gracilentia*, sp. n.

Shining ; head black ; thorax and elytra yellowish-red ; abdomen blackish, the apex and posterior margins of the segments broadly rufescent. Antennæ and legs reddish-yellow. Length 3.5 mm. (abdomen extended).

Of the narrow elongate build of *lurida* Woll., the abdomen a good deal longer than the fore-parts but much more shining, the antennæ much stouter, etc. Head suborbicular, narrower than the thorax, finely, rather closely punctured and without

ground-sculpture. Antennæ short and stout, the 3rd joint as long as the 2nd, 4th to 10th transverse, the penultimate joints twice as broad as long, the 11th as long as the 9th and 10th together. Thorax scarcely a third broader than long, narrowed in front, finely, rather closely, somewhat roughly punctured; ground-sculpture absent. Elytra very slightly longer than the thorax, less finely and more roughly punctured. Abdomen narrowed from base to apex, very finely, moderately closely punctured, more sparingly behind, the pubescence not at all sericeous. 1st joint of the posterior tarsi as long as the following two together. In the lustre and comparatively sparingly punctured abdomen the species differs from *Oxypoda*, but agrees in such characters as can be seen without dissection. Ghum district.

2182. *Oxypoda* (*Bæoglana*) *musciola*, sp. n.

Moderately shining; head black; thorax dark chestnut-brown, the base and sides narrowly lighter; elytra yellowish-red; abdomen dark brown, the apex and posterior margins of the segments yellowish-red. Antennæ brown, the first two or three joints and the last reddish-yellow. Legs reddish-yellow. Length 3.2 mm. (abdomen extended).

Except that the head is narrower scarcely differing in build from *recondita* Kr. Head a good deal narrower than the thorax, finely, closely but not deeply punctured and without ground-sculpture. Antennæ more slender than in *recondita*, the 3rd joint shorter than the 2nd, 4th about as long as broad, 5th to 10th transverse, differing but little amongst themselves, about a half broader than long, the 11th as long as the 9th and 10th together. Thorax about a half broader than long, the sides rounded, moderately retracted in front, the posterior angles rounded, finely and closely punctured and without ground-sculpture. Elytra as long as the thorax, very finely, yet more closely punctured. Abdomen narrowed from base to apex, very finely and closely punctured and pubescent throughout, sericeous. Pubescence of the fore-parts fine, yellow and depressed.

Ghum district. In moss.

Subgenus *MYCETODREPA* Thoms.

Mycetodrepa Thoms., Skand. Col. iii, 1861, p. 28; Fowler, Col. Brit. Isl. ii, 1888, p. 28; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 182; Bernh., W. Z. B. lii, 1902, p. 182 (Supp.); Reitter, Faun. Germ. ii, 1909, p. 34; Johansen, Danmarks Rovbiller, 1914, p. 59; Fenyés, Gen. Ins. 173 B, 1920, p. 370; Portevin, Encycl. Ent. A, xii, 1929, i, p. 247.

Head transversely suborbicular. Antennæ with the penultimate joints more or less transverse. Maxillary palpi with

the 3rd joint elongate, scarcely thickened apically, about twice as long as the 1st joint of the antennæ. Thorax normal, narrower than the elytra, these distinctly longer. Abdomen more or less narrowed towards apex.

Key to the Species.

- | | |
|--|-------------------------------------|
| 1. Thorax black | <i>marginalis</i> , sp. n., p. 613. |
| Thorax yellowish-red or lighter or darker brown | 2. |
| 2. Elytra uniformly brownish-yellow or reddish-yellow | 3. |
| Elytra yellowish-red, the postero-external region broadly black | <i>almorensis</i> , sp. n., p. 612. |
| 3. Abdomen densely punctured and pubescent, sericeous | <i>gardneri</i> , sp. n., p. 613. |
| Abdomen less densely punctured and pubescent, not sericeous | 4. |
| 4. Head reddish, penultimate joints of antennæ scarcely transverse | <i>amabilis</i> , sp. n., p. 613. |
| Head black, penultimate joints of antennæ distinctly transverse | <i>propinqua</i> , sp. n., p. 614. |

2183. *Oxypoda* (*Mycetodrepa*) *almorensis*, sp. n.

Moderately shining; head black; thorax lighter or darker chestnut-red; elytra yellowish-red, the postero-external region from just behind the shoulders to the apex of the suture black; abdomen with the first two visible segments, the posterior margin of the 5th broadly, and the whole of the 6th reddish-yellow, the rest black. Antennæ black, the first three joints and the last reddish-yellow. Legs reddish-yellow. Length 3 mm.

In build and lustre similar to *alternans* Gr., the antennal structure differing but little, but the thorax is more finely and the abdomen less finely and less closely punctured. Head transverse, suborbicular, narrower than the thorax, finely and moderately closely punctured, the ground-sculpture feeble. Antennæ with the 3rd joint as long as the 2nd, 4th scarcely, 5th to 10th more strongly transverse, the penultimate about twice as broad as long, the 11th as long as the 9th and 10th together. Thorax transverse (5:3.5), the sides rounded, retracted in front, the posterior angles obtuse, before the scutellum with a fovea, finely, rather closely punctured, the ground-sculpture very fine. Elytra broader and longer (5:3.5) than the thorax, less finely, more closely and roughly punctured. Abdomen a little narrowed before the apex, finely, rather closely punctured and pubescent, a little more sparingly behind, not sericeous. Pubescence of the fore-parts fine and depressed.

W. Almora: Kali Valley, alt. 9000 feet. Ghum district: alt. 8000-9000 feet.

2184. *Oxyroda (Mycetodrepa) gardneri*, sp. n.

Only slightly shining; head black; thorax light chestnut-brown; elytra brownish-yellow; abdomen yellowish-red, the 3rd to 5th visible segments blackish. Antennæ dark brown, the first two joints and legs reddish-yellow. Length 2.75 mm.

Build of *formosa* Gr. but smaller and a little narrower, less brightly coloured, the antennæ thinner, puncturation of thorax and elytra a little finer and closer, that of the abdomen much finer and closer, the pubescence sericeous. Head suborbicular, narrower than the thorax, very finely, rather closely, superficially punctured, finely coriaceous. Antennæ rather slender, the 3rd joint shorter than the 2nd, 4th as long as broad, 5th to 10th transverse, the penultimate about twice as broad as long, the 11th as long as the 9th and 10th together. Thorax transverse (4:3), moderately narrowed in front, very finely, closely and somewhat roughly punctured, finely coriaceous. Elytra broader and a third longer than the thorax, as finely but more closely and more roughly punctured. Abdomen a little narrowed before the apex, extremely finely and densely punctured and pubescent, sericeous. Pubescence of the fore-parts fine and depressed.

Dehra Dun.

2185. *Oxyroda (Mycetodrepa) marginalis*, sp. n.

Moderately shining, black, the elytra with the base, suture, and apical margin reddish-yellow, the posterior margins of the abdominal segments narrowly and obscurely reddish. Antennæ black, the first two or three joints and sometimes more or less of the last reddish-yellow. Legs reddish-yellow. Length 2.75-3 mm.

In build resembling *formosa* Kr. Narrower than *almorensis* and differently coloured, the antennæ not quite so stout but similarly constructed, thorax more finely and more closely punctured, less transverse (4:3), elytra a little more finely punctured. Abdomen as in *almorensis*, not sericeous.

Chakrata district: alt. 7000-9000 feet. Mussooree, alt. 6000 feet. Punjab: Naggar, alt. 5000 feet: Bhabhu Pass, alt. 9000 feet.

2186. *Oxyroda (Mycetodrepa) amabilis*, sp. n.

Only slightly shining; head reddish-brown; thorax and elytra reddish-yellow; abdomen red, the 4th and 5th visible segments black, with reddish posterior margins. Antennæ and legs yellowish-red. Length 3 mm.

A little larger than *gardneri* and of brighter colour, the thorax less narrowed in front, antennæ longer, the penultimate joints only slightly transverse, puncturation of abdomen

much less fine and much less close, the pubescence not sericeous. Head finely, rather closely but superficially punctured, very finely coriaceous. Antennæ moderate, the 3rd joint shorter than the 2nd, 4th to 10th transverse, the penultimate only slightly broader than long, the 11th as long as the 9th and 10th together. Thorax a third broader than long, the sides evenly rounded, scarcely more retracted in front than behind, very finely, closely and roughly punctured, very finely coriaceous. Elytra broader and a third longer than the thorax, similarly but more roughly punctured. Abdomen only slightly narrowed behind, finely and closely punctured, the pubescence not sericeous.

Kumaun; W. Almora (*H. G. Champion*). Unique. British Museum.

2187. *Oxygoda (Mycetodrepa) propinqua*, sp. n.

A little shining; head black; thorax red; elytra brownish-yellow, more or less extensively infuscate; abdomen red, the 3rd to 5th visible segments black, with their posterior margins red. Antennæ red, the first two or three joints and legs reddish-yellow. Length 3 mm.

In build similar to *amabilis*, but more shining, the colour different, the antennæ much shorter, the penultimate joints fully a half broader than long, the thorax and elytra less closely punctured and without ground-sculpture; the abdomen is much less finely punctured and rather more sparingly on the last two segments, the pubescence not at all sericeous.

Dehra Dun.

Subgenus *SPHENOMA* Mannerh.

Sphenoma Mannerh., Mem. Acad. Sci. St. Petersburg. i, 1830, p. 482; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 71; Johansen, Danmarks Rovbiller, 1914, p. 60; Fenyès, Gen. Ins. 173 B, 1920, p. 370.

Sphenomma Bernh., W. Z. B. lii, 1902, p. 184 (Suppl.); Reitter, Faun. Germ. ii, 1909, p. 34.

Thlibobtera Thoms., Skand. Col. iii, 1861, p. 34.

Head transversely suborbicular. Antennæ more or less thickened towards the apex. Maxillary palpi with normal 3rd joint. Thorax convex, near the base wider than the elytra at the shoulders, these not or but slightly longer. Abdomen variable, more or less parallel or narrowed towards the apex.

Key to the Species.

- Larger (3 mm.); abdomen very finely and densely punctured and pubescent, sericeous.....
 Smaller (2 mm.); abdomen less finely and less closely punctured and pubescent, not sericeous.....

connexa, sp. n., p. 615.

parva, sp. n., p. 615.

2188. *Oxyroda (Sphenoma) connexa*, sp. n.

Moderately shining; head black, thorax and elytra reddish-brown, the reflexed margin of the latter infuscate; abdomen pitchy-black, the last segment and the posterior margin of the others yellowish-red. Antennæ blackish, the first three joints and the last reddish-yellow. Legs reddish-yellow. Length 3 mm.

Much resembles *muscolola* in build and colour, but with the 3rd joint of the maxillary palpi of normal form and the elytra much less finely punctured. Head narrow, oval, eyes small, closely, finely, superficially punctured, the ground-sculpture scarcely visible. Antennæ moderate, the 3rd joint only a little shorter than the 2nd, 4th as long as broad, 5th to 10th transverse, the penultimate about half as broad again as long, the 11th as long as the 9th and 10th together. Thorax transverse (4.3 : 3.5), convex, the sides rounded, moderately retracted in front, very finely, closely punctured and without ground-sculpture. Elytra as long as the thorax and at the base a little narrower, transverse (4.5 : 3.5), as closely but less finely and more roughly punctured. Abdomen narrowed from base to apex, very finely and closely punctured and pubescent, sericeous. The pubescence on the fore-parts fine, yellow and depressed.

Ghum district : Mangpu.

2189. *Oxyroda (Sphenoma) parva*, sp. n.

In build and colour very like *connexa*, but much smaller (2 mm.) and with the posterior margin of the elytra narrowly and distinctly reddish-yellow. Antennæ similarly coloured but much shorter, the 4th to 10th joints more transverse, the penultimate twice as broad as long; puncturation of the head and thorax finer, that of the abdomen distinctly less fine and less close, the pubescence coarser and not sericeous; the elytra scarcely as long as the thorax.

Ghum district : Rongdong Valley. In fungus.

Subgenus *DEMOSOMA* Thoms.

Demosoma Thoms., Skand. Col. iii, 1861, p. 32; Fowler, Col. Brit. Is. ii, 1888, p. 34; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 73; Bernh., W. Z. B. lii, 1902, p. 193 (Suppl.); Johansen, Danmarks Rovbiller, 1914, p. 63; Fenyés, Gen. Ins. 173 B, 1920, p. 371; Portevin, Encycl. Ent. A, xii, 1929, i, p. 248.

More or less parallel species. Head transversely suborbicular. Antennæ with the 3rd joint shorter than the 2nd, the penultimate distinctly transverse. Maxillary palpi with normal 3rd joint. Thorax narrower than the elytra, these at least as long. Abdomen scarcely narrowed before the apex.

Only one species is at present known from our Fauna.

2190. *Oxypoda* (*Demosoma*) *rubra*, sp. n.

Rather shining, bright yellowish-red, the head and 6th tergite more or less infuscate. Antennæ and legs reddish-yellow. Length 2.5 mm.

In build scarcely differing from *hæmorrhœa* Mannerh., but slightly narrower, the antennæ very similarly constructed. Narrow, parallel, the head suborbicular, narrower than the thorax, the eyes small, very finely, rather closely punctured, with feeble ground-sculpture. Antennæ rather short, the 3rd joint shorter than the 2nd, 4th to 10th transverse, the penultimate about twice as broad as long, the 11th stout, about as long as the 9th and 10th together. Thorax transverse (3.3 : 2.75), the sides gently rounded, more retracted in front, the posterior angles rounded, the puncturation as close but not quite so fine as on the head, the ground-sculpture feeble. Elytra as long and as broad as the thorax, more coarsely punctured, more or less transversely rugulose. Abdomen only slightly narrowed before the apex, finely, rather closely punctured, a little more sparingly on the last two segments, the ground-sculpture reticulate, the pubescence not sericeous. Pubescence of the fore-parts fine, yellow and depressed.

Simla Hills : Fagu, Narkanda. Chakrata district ; Kanasar, alt. 7050-9230 feet.

Subgenus *BESSOPORA* Thoms.

Bessopora Thoms., Skand. Col. iii, 1861, p. 30 ; Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 360 ; Fowler, Col. Brit. Isl. ii, 1888, p. 36 ; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 76 ; Bernh., W. Z. B. lii, 1902, p. 204 (Suppl.) ; Reitter, Faun. Germ. ii, 1909, p. 36 ; Johansen, Danmarks Rovbiller, 1914, p. 66 ; Fenyès, Gen. Ins. 173 B, 1920, p. 372 ; Portevin, Encycl. Ent. A, xii, 1929, i, p. 248.

Rather parallel species. Head small, ovate. Antennæ with the 3rd joint shorter than the 2nd, the penultimate distinctly transverse. Maxillary palpi with normal 3rd joint. Thorax as wide or wider than the base of the elytra, these shorter. Abdomen not or but little narrowed before the apex.

Key to the Species.

Pubescence of fore-parts semi-erect ;	
abdomen less densely punctured	<i>modesta</i> , sp. n., p. 616.
Pubescence of fore-parts depressed ;	
abdomen densely punctured	<i>consimilis</i> , sp. n., p. 617.

2191. *Oxypoda* (*Bessopora*) *modesta*, sp. n.

Moderately shining, dark chestnut-brown, the elytra somewhat infuscate, the posterior margins of the abdominal

segments narrowly rufescent. Antennæ red, the first two or three joints and legs reddish-yellow. Length 3 mm.

Very like *parvipennis* Fauv. in general facies, but of darker colour, the antennæ thinner, the puncturation of the abdomen much coarser and less close. Head transverse, suborbicular, narrower than the thorax, the eyes very small, very finely, rather closely and roughly punctured, the ground-sculpture scarcely visible. Antennæ rather slender, the 3rd joint shorter than the 2nd, 4th as long as broad, 5th to 10th transverse, the penultimate about twice as broad as long, the 11th as long as the 9th and 10th together. Thorax transverse (4:3:3), convex, the sides gently rounded, moderately retracted in front, very finely, closely and roughly punctured and without ground-sculpture. Elytra a little shorter than the thorax and at the base narrower, posteriorly as broad, as closely but less finely punctured. Abdomen a little narrowed before the apex, very finely and closely punctured, scarcely sericeous. The pubescence of the fore-parts fine, yellow and semi-erect.

Simla Hills : Gahan, alt. 7000 feet. Ghum.

2192. *Oxypoda (Bessopora) consimilis*, sp. n.

Build colour and size of *modesta*, but less shining, the elytra less infuscate, the apex of the abdomen more broadly reddish; antennæ distinctly thicker but similarly constructed, puncturation throughout not quite so fine, the pubescence of the fore-parts depressed, that of the abdomen sericeous.

Chakrata district : Patra Khud, alt. 8000 feet.

Genus **STICHOGLOSSA** Fairm. et Laboulb.

Stichoglossa Fairm. et Laboulb., Faun. Ent. Fr. 1854, i, 1854, p. 442; Kraatz, Berl. Ent. Zeitschr. x, 1866, p. 416; Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 396; Bernh., W. Z. B. li, 1901, p. 433, and lii, 1902, p. 121 (Suppl.); Johansen, Danmarks Rovbiller, 1914, p. 43; Fenyès, Gen. Ins. 173 B, 1920, p. 379; Everts, Col. Neerl. iii, 1922, p. 86; Portevin, Encycl. Ent. A, xii, 1929, i, p. 242; Scheerp., Tierwelt Mitteleur, v, 2, 1930, p. 79.

Subgen. *Stichoglossa* (s. str.) Fairm. et Laboulb., Faun. Ent. Fr. 1854, i, p. 442; Redtb., Faun. Austr. iii, 1874, p. 133; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 88; Bernh., W. Z. B. lii, 1902, p. 122 (Suppl.); Johansen, Danmarks Rovbiller, 1914, p. 43; Fenyès, Gen. Ins. 173 B, 1920, p. 379; Everts, Col. Neerl. iii, 1922, p. 86; Scheerp., Tierwelt Mitteleur, v, 2, 1930, p. 79.

Stenoglossa Kr., Naturg. Ins. Deutschl. Col. ii, 1856-58, p. 55; Redtb., Faun. Austr. ed. ii, 1858, p. 149 (note); Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 399; Reitt., Faun. Germ. ii, 1909, p. 30; Portevin, Encycl. Ent. A, xii, 1929, i, p. 242.

The only species in our Fauna is referable to *Stichoglossa*, s. str.; this group consists of more or less robust parallel

species recalling the genus *Silusa*. Head suborbicular, distinctly narrower than the thorax, the temples strongly and entirely bordered below. Labrum transverse, truncate or feebly bisinuate in front, the angles rounded. Mandibles rather short, pointed, the right with a small, sharp tooth about the middle of the inner border. Maxillæ with the outer lobe broader and shorter than the inner, truncate and ciliate at apex; inner lobe narrow, pointed, its inner margin distally furnished with long slender teeth. Maxillary palpi with elongate 2nd joint, curved and thickened towards apex, 3rd longer than the 2nd and thickened apically, 4th subulate, fully half as long as the 3rd. Mentum transverse, trapezoidal, broadly emarginate in front. Labial palpi 3-jointed, rather long, the 1st joint moderate, the 2nd a little narrower but not much shorter, 3rd narrower and about as long as the 1st. Tongue long and narrow, about as long as the 1st joint of the labial palpi and split at the apex. Thorax transverse, the pronotal epipleura visible from the side. Mesosternal process acute, extending beyond the middle of the coxæ, these very narrowly separated. Elytra longer than the thorax, distinctly emarginate postero-externally. Abdomen parallel, only a little narrowed before the apex, the first three visible tergites transversely impressed at their bases. Tibiæ ciliate. Tarsi 5, 5, 5; the anterior with the first four joints short and subequal, middle with the first four joints rather short and subequal, posterior with the 1st joint longer than the 2nd, but shorter than the last. Claws simple, lightly curved.

2193. *Stichoglossa* (s. str.) *lateralis*, sp. n.

Rather shining, black, the elytra yellow, with the scutellary region, posterior two-thirds of the reflexed lateral margins, and postero-external angles infuscate, the posterior margin of the tergites narrowly rufescent. Antennæ black, the first two joints and legs reddish-yellow. Length 3.75-4 mm.

Head transversely suborbicular, narrower than the thorax, the eyes rather large, rather closely covered with flat, obsolete punctures, the ground-sculpture feeble. Antennæ with the 3rd joint as long as the 2nd, 4th and 5th slightly longer than broad, 6th to 10th gradually more transverse, the penultimate nearly twice as broad as long, the 11th conical, longer than the preceding two together, and with a transverse constriction about the middle. Thorax transverse (6:4.25), convex, the sides and posterior angles gently rounded, before the scutellum with a small transverse impression, the sculpture as on the head. Elytra a little broader and longer (6:4.25) than the thorax, moderately finely, closely punctured and somewhat rugulose. Abdomen a little narrowed before the

apex, moderately finely, closely and asperately punctured, more sparingly on the last two segments. Pubescence throughout long and not very close.

♂: 7th segment with a strong median keel in the posterior half; 8th closely covered with elongate granules, its posterior margin broadly rounded and furnished with seven or eight small sharp teeth.

Siwaliks: Lachiwala. Mussooree; Mossy Falls. Under bark.

Genus ISCHNOGLOSSA Kr.

Ischnoglossa Kr., Naturg. Ins. Deutschl. Col. ii, 1856-58, p. 56; Redtb., Faun. Austr. ed. ii, 1858, p. 145 (note), and ed. iii, 1874, p. 133; Thoms., Skand. Col. ii, 1860, p. 273; Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 399; Fowler, Col. Brit. Isl. ii, 1888, p. 39; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 89; Everts, Col. Neerl. i, 1898, p. 183; Bernh., W. Z. B. iii, 1902, p. 125 (Suppl.); Reitt., Faun. Germ. ii, 1909, p. 31; Johansen, Danmarks Rovbiller, 1914, p. 44; Fenyes, Gen. Ins. 173 B, 1920, p. 380; Everts, Col. Neerl. iii, 1922, p. 86; Portevin, Encycl. Ent. A, xii, 1929, i. p. 242; Scheerp., Tierwelt Mitteleur. v, 2, 1930, p. 79.

Rather parallel species. Head suborbicular, narrower than the thorax, neck moderate, eyes small, not prominent, temples strongly and entirely bordered below. Labrum transverse, truncate in front, the anterior angles rounded. Mandibles moderate, curved, pointed, the right with a small tooth. Maxillæ with the outer lobe shorter and broader than the outer, truncate and ciliate at the apex; inner lobe narrow and pointed, its inner margin distally furnished with numerous closely placed spines. Maxillary palpi with small 1st joint, 2nd elongate, curved, and a little thickened at the apex, 3rd longer than the preceding and similarly thickened, 4th subulate and of varying length. Mentum transverse, trapezoidal, broadly but not deeply emarginate in front. Labial palpi 3-jointed, the 1st joint stout, 2nd narrower and shorter, 3rd narrower than the 2nd, about as long as the 1st. Tongue narrow, about as long as the 1st joint of the labial palpi and split at the apex. Paraglossæ fine, not extending beyond the level of the base of the tongue. Thorax transverse, the pronotal epipleura visible from the side. Mesosternum simple, its process acute and extending beyond the middle of the coxæ, these narrowly separated. Elytra broader than the thorax, moderately emarginate postero-externally. Abdomen parallel, the first four visible tergites transversely impressed at their bases. Tibiæ ciliate. Tarsi 5, 5, 5; the anterior with the first four joints short and subequal, the 5th as long as all the preceding together; middle with the first two joints short and subequal, 3rd and 4th a little longer,

subequal; posterior with the 1st joint longer than the 2nd but shorter than the last, 2nd to 4th subequal. Claws simple, lightly curved.

The only species so far known is found under the bark of trees in the Palearctic region.

Key to the Species.

Larger (5 mm.) and more robust; 4th and 5th joints of antennæ longer than broad; ground-sculpture and puncturation of head and thorax more distinct	<i>indica</i> , sp. n., p. 620.
Smaller (3.5 mm.); 4th and 5th joints of antennæ transverse; ground-sculpture and puncturation of head and thorax more obsolete	<i>kashmirica</i> , sp. n., p. 620.

2194. *Ischnoglossa indica*, sp. n.

Rather shining, black, the posterior margins of the tergites very narrowly and obscurely rufescent. Antennæ black, the first two joints and legs reddish-yellow, the femora a little infusate. Length 5 mm.

Head suborbicular, more than half the width of the thorax, eyes moderate, with close, flat, moderately fine, superficial punctures, finely but distinctly coriaceous. Antennæ with the 3rd joint a little longer than the 2nd, 4th slightly longer than broad, 5th and 6th about as long as broad, 7th to 10th slightly transverse. Thorax transverse (6:4.5), the sides gently rounded, a little retracted in front, the posterior angles rounded, before the scutellum with a small transverse impression, the puncturation similar to that of the head but closer, the ground-sculpture similar. Elytra broader and longer (5.5:4.5) than the thorax, closely, moderately finely, asperately punctured. Abdomen a little narrowed before the apex, rather closely, moderately finely, asperately punctured on the first four visible tergites, more sparingly on the following. Pubescence long, moderately close; semi-erect on the fore-parts.

♂: sculpture on the posterior half of the 7th segment consisting of small, rather close, elongate granules; 8th with rather larger but similar ones, its posterior border truncate and furnished with seven or eight small, sharp teeth.

Chakrata district: Kanasar, alt. 7050 feet. Simla Hills; Matiana, alt. 7900 feet. Under bark.

2195. *Ischnoglossa kashmirica*, sp. n.

Colour and lustre of *indica*; differs from it in the smaller size (3.5 mm.), the antennæ shorter, the 4th and 5th joints

transverse, but otherwise similarly constructed, the two basal joints brownish-yellow, the sculpture of the head and thorax of similar character but more obsolete, the ground-sculpture much less distinct; the elytra and abdomen are punctured as in *indica*, but the granules on the 7th and 8th segments in the ♂ are smaller, the teeth on the posterior margin of the latter smaller.

Kashmir: Gulmarg, alt. 8000 feet.

Genus MICROGLOTTA Kr.

Microglotta Kr., Berl. Ent. Zeitschr. vi, 1862, p. 300; Fenyès, Gen. Ins. 173 B, 1920, p. 391; Scheerp., Tierwelt Mitteleur. v, 2, 1930, p. 80.

Haploglossa Kr., Naturg. Ins. Deutschl. Col. ii, 1856-58, p. 78; id., Linn. Ent. xii, 1857, p. 16; Redtb., Faun. Austr. ed. ii, 1858, p. 158, and ed. iii, 1874, p. 136; Jacq. du Val, Gen. Col. d'Eur. ii, 1857-59, p. 12 (ex parte); Thoms., Skand. Col. ii, 1860, p. 281.

Microglossa Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 201 (ex parte); Fowler, Col. Brit. Isl. ii, 1888, p. 22; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 52; Everts, Col. Neerl. i, 1898, p. 173; Bernh., W. Z. B. li, 1901, p. 433, and lii, 1902, p. 106 (Suppl.); Reitt., Faun. Germ. ii, 1909, p. 28; Johansen, Danmarks Rovbiller, 1914, p. 35, fig. 15; Portevin, Encycl. Ent. A, xii, 1929, i, p. 240.

BIOLOGY.—Falcov, Bull. Soc. Ent. Fr. 1919, pp. 296-301.

Build of *Aleochara* Gr., but with different mouth-parts and only the anterior and middle tibiæ spinose, whereas in almost all the *Aleochara* all the tibiæ are furnished with spines. Head more or less hexagonal, the neck stout and concealed by the thorax, eyes rather large, temples strongly and entirely bordered below. Labrum transverse, broadly and slightly emarginate in front, the emargination filled in by a membrane. Mandibles stout, curved, pointed, the right with a small tooth at the middle of the inner border. Maxillæ with the outer lobe shorter and broader than the inner, truncate and ciliate at apex; the inner pointed, the apical half along the inner border furnished with long, slightly curved and closely placed spines. Mentum transverse, trapezoidal, the anterior border broadly and slightly emarginate. Labial palpi 3-jointed, short, the 1st joint only slightly longer than broad, 2nd shorter and narrower, 3rd narrower and slightly longer than the 2nd. Tongue small, narrow, and undivided, teat-shaped, about as long as the 1st joint of the labial palpi. Thorax transverse, as broad or nearly as broad as the base of the elytra, the pronotal epipleura not visible from the side. Mesosternum simple, its process acute and extending nearly the whole length of the coxæ and separated by a short intersternal piece from the rectangular apex of the metasternum; the coxæ narrowly separated. Elytra a little longer than the

thorax, emarginate postero-externally. Abdomen nearly parallel, the first three visible tergites transversely impressed at their bases. Legs rather short, the anterior and middle tibiæ furnished with spines externally, the posterior simply ciliate. Tarsi 5, 5, 5; the anterior with the first four joints short, subequal, the 5th as long as the preceding four together; middle with the first four joints rather short and subequal; posterior with the 1st joint as long as the 2nd and 3rd together, 2nd to 4th subequal, 5th longer than the 1st. Claws simple, lightly curved. The species appear to be found with ants or in the nests of birds and small mammals, and are distributed in the Palæartic and Nearctic regions, only one being recorded from Mexico.

2196. *Microglotta indica*, sp. n.

Shining, black, the posterior margins of the tergites narrowly and obscurely reddish. Antennæ black, the first two joints reddish-yellow, the 11th obscurely reddish. Legs brownish-yellow, the tarsi lighter. Length 4.5 mm.

In build scarcely differing from *nidicola* Fairm., but larger and shining, differently coloured, etc. Head rather coarsely and closely punctured, the punctures feebly umbilicate; ground-sculpture absent, the eyes large. Antennæ short, the 3rd joint as long as the 2nd, 4th about as long as broad, 5th to 10th gradually more transverse, the penultimate fully twice as broad as long, the 11th short and conical. Thorax transverse (6:4.5), the sides gently rounded, only slightly retracted in front, the posterior angles rounded, the puncturation closer than on the head but otherwise similar, ground-sculpture absent. Elytra a little broader and a little longer than the thorax, more closely and more coarsely punctured. Abdomen a little narrowed before the apex, closely but less coarsely punctured than the elytra, the punctures on the penultimate segment subasperate, on the last distinctly asperate, the ground-sculpture on these segments much more distinct than on the others (? ♂). Pubescence throughout long and rather scanty.

Mussooree district: Arni Gad.

Tribe 14. ALEOCHARINI Fenyès.

Aleocharini Fenyès, Gen. Ins. 173 B, 1920, p. 394.

Characterized by the 5-jointed maxillary and the 2-, 3-, or 4-jointed labial palpi. All the tarsi 5-jointed. In all the genera so far known in our Fauna the labial palpi are 4-jointed.

Key to the Genera.

1. 1st joint of antennæ sulcate for the apical third 2.
1st joint of antennæ normally emarginate at apex 3.
2. Thorax strongly transverse; postero-external angles of elytra broadly rounded. Facies of *Gyrophæna* or *Zyras laticollis* Märk. TETRASTICTA Kr., p. 659.
Thorax very slightly transverse; postero-external angles of elytra rectangular. Facies of *Atheta* [p. 662.
PARALEOCHARA Cam.,
3. Pronotal epipleura visible from the side . 4.
Pronotal epipleura not visible from the side 7.
4. Mesosternum keeled at base, its process narrow [p. 655.
MYCETOCHARA, nov.,
5. Mesosternal process pointed; tarsal claws angulate near base 5.
Mesosternal process broad and truncate; tarsal claws normally curved [p. 675.
GONIONYCHA, nov.,
6. Mesosternal process very short, extending but slightly between the coxæ 6.
Mesosternal process extending more than half the length of the coxæ CREOCHARA, nov., p. 653.
MASEOCHARA Shp., p. 657.
7. Tongue short and broad, bilobed 8.
Tongue long and slender, its apex with two small teat-shaped appendages [Fenyès, p. 664.
PSEUDOPLANDRIA
8. First two or three abdominal sternites transversely constricted; antennæ rather slender [Rey, p. 651.
RHEOCHARA Muls. et
Sternites not constricted; antennæ rather stout ALEOCHARA Gr., p. 623.

Genus ALEOCHARA Gr.

Aleochara Gr., Col. Micr. Brunsw. 1802, p. 67; Mannerh., Mém. Acad. St. Petersb. i, 1830, p. 480; Er., Käf. Mark Brand. i, 1837-39, p. 353; id., Gen. Spec. Staph. 1839-40, p. 158; Redtb., Faun. Austr. ed. i, 1849, p. 668, ed. ii, 1858, p. 154, and ed. iii, 1874, p. 136; Lacord., Gen. Col. ii, 1854, pp. 40, 59; Kraatz, Naturg. Ins. Deutschl. Col. ii, 1856-58, p. 82; Jacq. du Val, Gen. Col. d'Eur. ii, 1857-59, p. 12; Kraatz, Berl. Ent. Zeitsch. 1859, p. 10; Fauv., Bull. Soc. Linn. Norm. x, 1864-65 (1866), p. 285; Harold, Berl. Ent. Zeitsch. 1884, p. 124; Fauv., Rev. d'Ent. iii, 1884, pp. 76, 304; Olliff, Proc. Linn. Soc. N. S. Wales, (2) i, 1886, p. 455; Fowler, Col. Brit. Isl. ii, 1888, p. 10; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 25; Everts, Col. Neerl. i, 1898, p. 165; Bernh., W. Z. B. li, 1901, p. 436 (Supp.); Reitter, Faun. Germ. ii, 1909, p. 22; Blatchley, Col. Indiana, i, 1910, p. 363; Johansen, Danmarks Rovbiller, 1914, p. 15; Dubois, Echange, 1916, p. 22; Fenyès, Gen. Ins. 173 B, 1920, p. 396; Cam., Trans. Ent. Soc. Lond. 1920, pp. 361, 397; Krasa, Casopis Spol. Ent. xix, 1922, pp. 80-82; Everts, Col. Neerl. iii, 1922, pp. 74, 75; Portevin, Encycl. Ent. A, xii, 1929, i, p. 234, fig. 245; Scheerp., Tierwelt Mitteleur. v, 2, 1930, p. 80.

Mecorhopalus Solier, in Gay, Hist. Chile, Zool. iv, 1849, p. 347.

Polystoma Des Gozis, Recherch. l'esp. typ. 1886, p. 12.

BIOLOGY.—Westwood, Zool. Journ. iii, 1827-28, tab. 2, fig. 3, A, B, C; id., Introd. Class. Ins. 1839, i, p. 166, fig. 16; Sprague, Amer. Ent. Bot. ii, 1870, pp. 302, 370; Coquillet, Ins. Life, iii, 1891, p. 318; Riley, Proc. Ent. Soc. Washington, ii, 1893, pp. 405-410; Slingerland, Bull. Cornell Univ. Agric. Exper. Stat. Ithaca, 1894, pp. 481-577; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 26; id., W. Z. B. xvii, 1897, p. 567; Xamheu, Ann. Soc. Linn. Lyon, xlv, 1898, p. 184; id., Rev. d'Ent. xiv, 1900, p. 22; id., Ann. Soc. Linn. Lyon, xlvi, 1902, p. 95; id., Échange, xxv, 1909, p. 11; Bickhardt, Ent. Blätt. Berlin, viii, 1912, p. 187; Wadsworth, Journ. Econ. Biol. x, 1915, pp. 1-27, tab. i, ii; Gibson & Treherne, Dept. Agric. Bull. 12, Ottawa, 1916; Scott, E. M. M. lii, 1916, p. 206, lvi, 1920, p. 148; Lesne et Mercier, Ann. Soc. Ent. Fr. xci, 1922, pp. 51-58; Kemner, Ent. Tidskr. xvii, 1926, pp. 133-170, tab. 6-10.

A large genus which, except for the maritime species, none of which so far is known in our Fauna, is of rather characteristic build, narrower in front, rather convex and robust, with distinctly transverse thorax and with fine or moderately fine pubescence, usually depressed but sometimes semi-erect. Head narrower than the thorax, the neck stout and concealed by it, the eyes variable in size, not prominent in any of our subgenera, the antennæ variable, sometimes short and stout, sometimes long and slender, usually, however, intermediate. Labrum transverse, truncate or more or less bisinuate in front. Mandibles stout, not prominent, pointed and usually edentate. Maxillæ with the outer lobe broader than the inner, truncate and densely ciliate at the apex; the inner narrow, pointed, the inner border distally furnished with long, slender, slightly curved and closely placed spines. Maxillary palpi 5-jointed, the 1st joint very small, 2nd elongate and a little thickened towards the apex, 3rd usually about as long as the 2nd and more thickened apically, sometimes short and stout and more thickened (*Homæochara*), 4th subulate, usually about half as long as the 3rd, 5th very small and subquadrate. Mentum transverse, trapezoidal, broadly but not deeply emarginate in front. Labial palpi 4-jointed, the 1st joint stout, rather long, 2nd narrower and usually shorter, 3rd distinctly narrower and usually shorter than the preceding, 4th very small, subquadrate. Tongue broad and short, divided by an acute excision into two diverging lobes. Paraglossæ not extending beyond the apex of the tongue. Thorax transverse, convex, the pronotal epipleura not visible from the side. Elytra a little broader than the thorax, sometimes shorter but usually about as long, rarely longer, more or less emarginate or completely rounded postero-externally. Abdomen parallel or more or less narrowed behind, the first three visible tergites transversely impressed at their bases, the sternites not impressed. Meso

sternum simple or entirely or partly carinate, its apex broadly rounded or more or less truncate, or narrow and bluntly pointed. Legs usually moderate, sometimes rather long, the anterior and middle tibiae usually more or less spinose, the posterior sometimes also, but more finely. Tarsi all 5-jointed; the anterior with the first four joints short and subequal; the middle with the first four joints rather short; posterior sometimes as long as the tibia, usually shorter, the 1st joint fully as long as the 2nd and 3rd together, the 2nd to 4th subequal, of moderate length. Claws simple, lightly curved. The relative length of the posterior tarsus to the tibia has been used as a subgeneric character, but it appears to me to be only a specific one. The species are found in carcasses, dung, decaying fungi, and in the nests of burrowing mammals, and some are known to be parasitic on the puparia of certain flies, others have their habitat in decaying seaweed, but none of these has so far been recorded from our coasts. *Aleochara tuberiventris* Kr., a species of doubtful systematic position, is omitted from the key.

Key to the Subgenera.

- | | | |
|---|----|-----------------------------|
| 1. Mesosternum keeled throughout | 2. | |
| Mesosternum simple or incompletely keeled | 6. | |
| 2. Thorax on each side of the smooth median zone with an irregular row of punctures | | [Rey, p. 649. |
| Thorax without such punctures | 3. | COPROCHARA Muls. et |
| 3. Abdomen very densely punctured, at least on the anterior segments | 4. | |
| Abdomen only moderately closely punctured | | [Rey, p. 642. |
| 4. Abdomen narrowed from base to apex | 5. | POLYCHARA Muls. et |
| Abdomen more or less parallel | | ISOCHARA Bernh., p. 636. |
| 5. Elytra emarginate postero-externally | | [Rey, p. 632. |
| Elytra not emarginate | | XENOCHARA Muls. et |
| 6. 3rd joint of the maxillary palpi short, strongly thickened towards apex; keel of mesosternum interrupted for a short space in the middle | | BARYODMA Thoms., [p. 634. |
| 3rd joint of the maxillary palpi normal; mesosternum either without keel or only keeled at the base | | [Rey, p. 640. |
| 7. Mesosternum keeled at the base | 7. | HOMEOCHARA Muls. et |
| Mesosternum without keel | 8. | |
| 8. Mesosternal process broad, more or less truncate or broadly rounded behind | | MESOCHARA, nov., p. 642. |
| Mesosternal process narrow and more or less pointed | 9. | ALEOCHARA, s. str., p. 626. |
| 9. Penultimate joints of antennae very strongly transverse, about three times as broad as long | | |
| Penultimate joints of antennae moderately transverse | | [et Rey, p. 629. |
| | | HETEROCHARA Muls. |
| | | EURYODMA Reitt., p. 631 |

Subgenus *ALEOCHARA* (s. str.) Muls. et Rey.

Aleochara (s. str.), Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 14; Fowler, Col. Brit. Isl. ii, 1888, p. 11; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 29; Bernh., W. Z. B. li, 1901, p. 448 (Supp.); Reitter, Faun. Germ. ii, 1909, p. 23; Johansen, Danmarks Rovbiller, 1914, p. 18; Fenyès, Gen. Ins. 173 B, 1920, p. 399; Portevin, Encycl. Ent. A, xii, 1929, i, p. 235.

Rather robust species, the antennæ stout, fusiform, the penultimate joints strongly transverse, eyes large, not prominent. Thorax transverse, convex, the pronotal epipleura not visible from the side. Mesosternum not keeled, its process rather broad, more or less truncate and extending nearly the whole length of the coxæ, which are rather widely separated. Elytra not emarginate postero-externally. Abdomen parallel, at most a little narrowed before the apex, the first three visible tergites transversely impressed. Anterior and middle tibiæ strongly, the posterior more finely spinose; posterior tarsi moderate, shorter than the tibia.

Key to the Species.

- | | | |
|--|----|--------------------------------------|
| 1. Entirely black species..... | 2. | |
| Not entirely black | 3. | |
| 2. Base of thorax obliquely impressed on each side; abdomen nearly impunctate along the middle; more shining species | | <i>nigrolucens</i> , sp. n., p. 628. |
| Base of thorax not impressed; abdomen uniformly punctured; less shining species | | <i>nigra</i> Kr., p. 626. |
| 3. Abdomen black, concolorous | 4. | |
| Abdomen black, with the last segment red | | <i>postica</i> Walk., p. 627. |
| 4. Elytra bright yellowish-red, sometimes with black lateral marking | | <i>croceipennis</i> Motsch., p. 629. |
| Elytra more obscurely coloured | 5. | |
| 5. Abdomen closely punctured | | <i>andrewesi</i> Fauv., p. 627. |
| Abdomen sparingly punctured | | <i>hindustana</i> Motsch., p. 628. |

2197. *Aleochara* (s. str.) *nigra*.

Aleochara nigra Kr.*, Arch. Naturg. xxv, 1859, p. 13.

Moderately shining, entirely black. Antennæ black, the first two joints sometimes brown. Legs brown, the tarsi reddish. Length 5-7 mm.

Of the size, build and colour of *lata* Gr., but not so shining, the head and thorax less finely and more deeply punctured, the elytra more finely, the abdomen more closely punctured. Broad and robust, head suborbicular, moderately finely, rather sparingly and deeply punctured, the punctures umbilicate, the ground-sculpture extremely fine, the eyes large. Antennæ

short and stout, the 3rd joint longer than the 2nd, 4th small, transverse, 5th to 10th about three times broader than long, 11th as long as the 9th and 10th together. Thorax transverse (7 : 5), the sides rounded, more retracted in front, the posterior angles rounded, before the scutellum somewhat flattened, the puncturation moderately fine, closer than on the head, finer towards the sides, the ground-sculpture scarcely visible. Elytra slightly broader and a little shorter than the thorax, more closely punctured. Abdomen parallel, a little narrowed before the apex, the first three visible segments more finely and more sparingly punctured than the following, which are distinctly less finely and more closely punctured. Pubescence of the fore-parts fine and short, that of the abdomen longer and more sparing.

♂ : 8th dorsal segment broadly and very feebly emarginate.

Ceylon : Wadduwa. India : Dehra Dun. Chakrata district : Kathian, alt. 6960 feet. Burma : Ruby Mines. Also in the Malay Peninsula and Sumatra.

2198. *Aleochara* (s. str.) *andrewesi*.

Aleochara andrewesi Fauv., Rev. d'Ent. xxiii, 1904, p. 66.

Moderately shining, black, the elytra dark reddish-brown, broadly blackish externally. Antennæ black, the first two joints pitchy. Legs yellowish-red, the femora brown. Length 3.5-5 mm.

Build of *nigra*, but smaller and with differently coloured elytra, the antennæ similarly constructed but not so stout, the puncturation finer, not so close on the last two segments of the abdomen. Differs from *postica* in the colour, more rounded sides of the thorax, finer puncturation of the fore-parts, coarser puncturation of the abdomen, which is, however, less close on the last two segments.

♂ : 8th dorsal segment broadly and feebly emarginate, not crenulate.

Nilgiri Hills : Coonoor, alt. 1500-2000 metres.

2199. *Aleochara* (s. str.) *postica*.

Aleochara postica Walk.*, Ann. Mag. Nat. Hist. (3) ii, 1858, p. 205.

Aleochara hæmatopyga Kr.*, Arch. Naturg. xxv, 1859, p. 15 ; Everts, Col. Neerl. i, 1898, p. 168.

Shining, black, the last dorsal segment, mesosternum and posterior margins of the sternites red. Antennæ black, the first two joints and legs yellowish-red, the anterior angles of the thorax often indeterminately reddish. Length 4-6.5 mm.

In build and antennal structure scarcely differing from *curtula* Goeze. Rather narrower and more parallel than *nigra*, more shining, the antennæ similar in structure, the puncturation of the head, thorax and elytra very similar, the thorax usually with four quadrately placed punctures on the disc, the puncturation of the abdomen a little finer but otherwise similar to that species.

In both sexes the posterior margin of the 8th dorsal segment is feebly rounded and very finely and indistinctly crenulate.

Ceylon: Wadduwa.

2200. *Aleochara* (s. str.) *hindustana*.

Aleochara hindustana Motsch.*. Bull. Soc. Nat. Mosc. xxxi, 1858, iii, p. 237; Cam., E. M. M. lxix, 1933, p. 220.

Shining; head and thorax black, elytra and abdomen dark brown. Antennæ with the first three joints reddish-yellow, the 4th to 7th black, the rest absent. Legs reddish-yellow. Length 4.5 mm.

Build of *postica*, but differs in the colour, less fine and much less close puncturation of the head and thorax, the less close, less rough sculpture of the elytra, and the much more sparingly punctured abdomen. The 4th to 7th joints of the antennæ are strongly transverse.

♀ (?): 8th dorsal segment rounded behind.

"Ind. or.," without further indication. Two examples.

2201. *Aleochara* (s. str.) *nigrolucens*, sp. n.

Shining, very black. Antennæ and legs black, the tarsi reddish. Length 6-8 mm.

Much more shining and blacker than *nigra*, the antennæ a little longer and less stout, the 4th joint as long as broad, the penultimate less transverse; head with very similar puncturation but without trace of ground-sculpture. Thorax not quite so transverse, on each side of the middle at the base with an impression and with a smooth ridge immediately in front and parallel to the posterior border, so that the postero-external region appears to be superficially and obliquely impressed; puncturation moderately fine and much less close than in *nigra* and with a narrow impunctate median line; elytra much less closely punctured than in that species; abdomen almost smooth along the middle, the puncturation much finer and much less close except at the bases of the last two segments, where it is equally close; pubescence much more sparing, almost absent on the abdomen.

♂ (?): 8th dorsal segment very slightly emarginate and furnished with eight or nine short blunt teeth.

Ghum district.

2202. *Aleochara* (s. str.) *croceipennis*.

Aleochara croceipennis Motsch., Bull. Soc. Nat. Mosc. xxxi, 1858, iii, p. 238; Cam., Trans. Ent. Soc. Lond. 1920 (1921), p. 398.

Aleochara sanguinipennis Kr., Arch. Naturg. xxv, 1859, p. 17.

Var. *maculipennis* Kr., l. c. p. 17.

Shining, black, the sides of the thorax sometimes obscurely reddish; elytra bright yellowish-red. Antennæ black, the first three joints reddish-yellow, the apex of the 11th sometimes obscurely lighter. Legs reddish-yellow. Length 3.75-4.5 mm.

Var. *maculipennis*. Elytra externally with a more or less distinct black spot.

In build very like *crassicornis* Lac., but with more brightly coloured elytra, the antennæ thicker, the puncturation of the abdomen closer and more uniform. Head moderately finely, rather closely and distinctly punctured and without ground-sculpture. Antennæ with the 3rd joint slightly longer than the 2nd, 4th slightly, 5th to 10th much more strongly transverse, more than twice as broad as long, the 11th longer than the preceding two together. Thorax transverse (9.5:7), the sculpture as on the head. Elytra a little shorter and at the base narrower than the thorax, moderately finely, closely punctured. Abdomen a little narrowed before the apex, closely punctured, rather more finely but scarcely less closely towards the apex. Pubescence throughout fine, short and yellow.

♂: 8th dorsal segment very feebly, broadly emarginate, very finely and closely denticulate.

Ceylon. India: Dehra Dun. Also in the Malay Peninsula, Sumatra, Java, Philippines, and Hong-kong.

Subgenus *HETEROCHARA* Muls. et Rey.

Heterochara Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 15; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 31; Bernh., W. Z. B. li, 1901, p. 451 (Suppl.); Reitter, Faun. Germ. ii, 1909, p. 24; Fenyès, Gen. Ins. 173 B, 1920, p. 401; Scheerp., Kol. Rundsch. x, 1923, p. 159; id., Neue Beitr. syst. Insektenk. iv, 1929, p. 140; Portevin, Encycl. Ent. A, xii, 1929, i, p. 236.

Antennæ strongly clavate, the penultimate joints three times as broad as long. Pronotal epipleura not visible from the side. Mesosternum not keeled, acutely pointed, extending nearly the whole length of the coxæ, these narrowly separated. Elytra not emarginate postero-externally. Abdomen nearly parallel, very little narrowed before the apex, the first two visible tergites transversely impressed. Tibiæ more or less finely spinose, the posterior tarsi shorter than the tibiæ.

Key to the Species.

- More robust; head, thorax and abdomen
black; elytra red *clavicornis* Redtb., p. 630.
Narrower; thorax and abdomen reddish-
brown; elytra reddish-yellow, broadly
blackish externally *brunneiventris* Kr., p. 630.

2203. *Aleochara* (*Heterochara*) *clavicornis*.

- Aleochara clavicornis* Redtb., Faun. Austr. ed. i, 1849, p. 822,
ed. iii, 1874, p. 138; Kraatz, Naturg. Ins. Deutschl. Col. ii,
1856-58, p. 108; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 31;
Bernh., W. Z. B. li, 1901, p. 455 (Suppl.); Reitt., Faun.
Germ. ii, 1909, p. 24; Everts, Col. Neerl. iii, 1922, p. 73;
Scheerp., Kol. Rundsch. x, 1923, pp. 158, 160, fig. 2; id., Neue
Beitr. Syst. Insektenk. iv, 1929, p. 142; Koch, Pub. Mus.
Ent. Pietro Rossi, xiv, 1936, p. 118.
Aleochara carinata Sauley, Ann. Soc. Ent. Fr. (4) iv, 1864, p. 634.
Aleochara crassicornis Muls. et Rey, Hist. Nat. Col. Fr.
Brévip. Aléoch. ii, 1874, p. 36.
Aleochara grenieri Fairm., Ann. Soc. Ent. Fr. (3) vii, 1859, p. 38.
Aleochara solida Hochh., Bull. Soc. Nat. Mosc. i, 1849, p. 71.
Aleochara spissicornis Redtb., Faun. Austr. ed. ii, 1858, p. 155.

Shining, black, the elytra red. Antennæ black, the first
three or four joints and legs reddish-yellow. Length 2.5-
3.5 mm.

A small but robust species. Head narrower than the thorax
(4.5 : 7), very finely, rather sparingly punctured and without
ground-sculpture. Antennæ short and stout, the first three
joints slender, the 3rd as long as the 2nd, 4th to 10th transverse,
the 4th a good deal narrower than the 5th, the penultimate
three times as broad as long. Thorax transverse (7 : 5),
convex, the puncturation as fine but rather closer than on
the head; ground-sculpture absent. Elytra as long as but
slightly broader than the thorax, not emarginate postero-
externally, finely, not very closely, asperately punctured.
Abdomen gradually and slightly narrowed from base to apex,
on the first three visible segments finely and not very closely
punctured, on the following distinctly less finely and more
closely. Pubescence throughout fine, yellow, not very close.

♂: 7th segment with a sharp median keel pointed behind in
the posterior half; 8th arcuately emarginate and furnished
with six or seven sharp teeth.

Pondicherry (*Maindron*). Also in S. Europe, North,
East, and South Africa, Caucasus, and Syria.

2204. *Aleochara* (*Heterochara*) *brunneiventris*.

Aleochara brunneiventris Kr., Arch. Naturg. xxv, 1859, p. 14

Shining; head black, thorax and abdomen reddish-brown,
elytra reddish-yellow, the external region broadly blackish.

Antennæ blackish, the first four joints and legs reddish-yellow. Length 3-4 mm.

In build and antennal structure very similar to *bellonata* Krasa, the abdominal sculpture very similar in character but not so close. Head suborbicular, much narrower than the thorax, extremely finely and very sparingly punctured, the ground-sculpture scarcely visible. Antennæ short and stout, the 3rd joint as long as the 2nd, 4th to 10th transverse, the penultimate three times as broad as long. Thorax transverse (5:3.75), the sides rounded, more retracted in front, the posterior angles rounded, very finely, sparingly punctured, on the disc with four larger quadrately placed punctures: ground-sculpture wanting. Elytra slightly longer and behind a little broader than the thorax, moderately finely, rather closely punctured. Abdomen a little narrowed before the apex, the first two visible segments almost impunctate at their bases, at the posterior margin with fine asperate punctures, the following moderately finely, moderately closely and asperately punctured except at their bases which are practically impunctate. Pubescence throughout yellow and sparing.

♂: 8th dorsal segment truncate and with six to eight small blunt teeth.

Ceylon. India: Nilgiri Hills.

Subgenus *EURYODMA* Reitt.

Euryodma Reitt., Faun. Germ. ii, 1909, p. 24; Fenyes, Gen. Ins. 173 B, 1920, p. 402; Portevin, Encycl. Ent. A, xii, 1929, i, p. 236.

Eyes moderate. Antennæ with the penultimate joints moderately transverse. Pronotal epipleura not visible from the side. Elytra not emarginate postero-externally. Abdomen a little narrowed towards the apex, the first three visible tergites transversely impressed. Mesosternum not carinate, narrowly truncate at apex. Posterior tarsi as long as the tibiæ.

2205. *Aleochara (Euryodma) castanea*.

Aleochara castanea Motsch.*, Bull. Soc. Nat. Mosc. xxxi, 1858, iii, p. 239; Cam., E. M. M. lxix, 1933, p. 220.

Shining; head black, thorax, elytra, and abdomen dark brown, the suture of the elytra narrowly and obscurely reddish, the last abdominal segment entirely, the posterior margins of the others narrowly reddish. Antennæ with the first three joints reddish-yellow, the following reddish. Legs reddish-yellow. Length 3.75 mm.

Very similar to *brevipennis* Gr. in build, but narrower, the head and thorax more finely and more closely punctured, the abdomen much more finely and much more closely

punctured throughout, equally closely on the posterior segments as on the anterior, as in *trivialis*, but rather finer than in that species; antennæ thinner and head and thorax more finely and more closely punctured. Head very finely and closely punctured. Antennæ a little shorter than in *brevipennis*, the 4th and following joints transverse, the 11th as long as the 9th and 10th together. Thorax closely and finely punctured. Elytra as long as and slightly broader than the thorax, not emarginate, rather strongly, closely and roughly punctured, as in *brevipennis*. Abdomen gradually and slightly narrowed to the apex, moderately finely and densely punctured throughout, the 8th tergite truncate.

"Ind. or.," without further indication. Two examples.

Subgenus *XENOCHARA* Muls. et Rey.

Xenochara Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 60; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 32; Bernh., W. Z. B. li, 1901, p. 457 (Suppl.); Casey, Trans. Acad. Sc. St. Louis, xvi, 1906, pp. 128, 146; Reitt., Faun. Germ. ii, 1909, p. 24; Fenyès, Gen. Ins. 173 B, 1920, p. 403; Portevin, Encycl. Ent. A, xii, 1929, i, p. 236.

Eyes rather large, not prominent. Antennæ with the penultimate joints moderately transverse. Pronotal epipleura not visible from the side. Elytra distinctly emarginate postero-externally. Abdomen distinctly narrowed towards the apex, very closely punctured, at least on the anterior segments, the first two transversely impressed. Mesosternum acutely pointed, carinate, extending nearly the whole length of the coxæ, these narrowly separated. Posterior tarsi much shorter than the tibiæ.

Key to the Species.

- | | |
|---|--|
| Elytra red, with scutellary and lateral black markings; fore-parts without ground-sculpture | <i>puberula</i> Klug., p. 632. |
| Elytra red, with scutellary black marking only; fore-parts with distinct ground-sculpture | [p. 633.
<i>motschulskyi</i> , nom. n., |

2206. *Aleochara* (*Xenochara*) *puberula*.

Aleochara puberula Klug, Abh. Akad. Wiss. Berlin, 1832-33, p. 139; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 32; Everts, Col. Neerl. i, 1898, p. 167; Bernh., W. Z. B. li, 1901, p. 457 (Suppl.); Reitter, Faun. Germ. ii, 1909, p. 24; Cam., Trans. Ent. Soc. Lond. 1920 (1921), p. 398; Portevin, Encycl. Ent. A, xii, 1929, i, p. 236.

Aleochara analis M'Leay, Trans. Ent. Soc. N. S. Wales, ii, 1871-73, p. 135; Fauv., Ann. Mus. Civ. Gen. x, 1877, p. 283; Lea, Proc. Linn. Soc. N. S. Wales, xlv, 1920, p. 375.

- Aleochara armitagei* Woll., Ins. Mader. 1854, p. 559.
Aleochara badia Motsch.*, Bull. Soc. Nat. Mosc. xxxi, 1858,
 iii, p. 237; Cam., E. M. M. lxix, 1933, p. 220.
Aleochara brunnescens Motsch., l. c. p. 243; Cam., l. c. p. 220.
Aleochara decorata Aubé, Ann. Soc. Ent. Fr. (2) viii, 1850,
 p. 311; Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch.
 ii, 1874, p. 60.
Aleochara deserta Er., Gen. Spec. Staph. 1839-40, p. 173.
Aleochara dubia Fauv., Ann. Soc. Ent. Fr. (4) iii, 1863, p. 428.
Aleochara major Eichelb., Berl. Ent. Zeitschr. lvi, 1910, p. 176.
Aleochara sanguinolenta Motsch., Bull. Soc. Nat. Mosc. xxxi,
 1858, iii, p. 241.
Aleochara vaga Er., Gen. Spec. Staph. 1839-40, p. 172; Boh.,
 Ins. Caffr. i, 1848, p. 270.

Not very shining; head and abdomen black, the 8th segment and posterior margin of the 7th yellowish-red, the posterior margins of the sternites rather broadly rufescent; thorax reddish-brown, the margins lighter; elytra red, with a triangular black marking occupying the basal and sutural regions and an oval black spot externally. Antennæ blackish, the first three joints and apex of the last reddish-yellow. Legs reddish-yellow. Length 3-4 mm.

Head round, moderately finely and rather closely punctured and without ground-sculpture. Antennæ with the 3rd joint as long as the 2nd, 4th as long as broad, 5th to 10th moderately transverse, about a half broader than long, the 11th longer than the 9th and 10th together. Thorax transverse (7.75 : 5.5), the sides gently rounded and more retracted in front, more finely and more closely punctured than the head and without ground-sculpture. Elytra as long as the thorax, behind slightly broader, moderately finely, closely and asperately punctured. Abdomen narrowed towards apex, very closely, moderately finely punctured, rather more sparingly behind. Pubescence fine, yellow and rather close.

Widely distributed in India. Cosmopolitan. In dung.

2207. *Aleochara (Xenochara) motschulskyi*, nom. n. (Plate III, fig. 9.)

Oxyroda plagiata Motsch.*, Bull. Soc. Nat. Mosc. xxxi, 1858,
 iii, p. 242; Cam., E. M. M. lxix, 1933, p. 220.

Near *puberula*, but larger (4.75-7 mm.) and more robust, the fore-parts less shining, the colour similar, except that the lateral black spot of the elytra is absent, the antennæ similarly coloured and constructed but a little longer, the puncturation of the fore-parts finer and with a fine but distinct ground-sculpture; abdomen more shining, somewhat iridescent, less finely and less closely punctured and less pubescent than in *puberula*.

♂: 8th dorsal segment with a narrow acute emargination.

"Ind. or.," without further indication. One example.

I have not seen specimens from India or Ceylon, but they are found in the Malay Peninsula, Cochin China, and Sumatra in dung.

Subgenus *BARYODMA* Thoms.

Baryodma Thoms., Öfv. Svenska Vet.-Akad. Förh. 1858, p. 31; id., Skand. Col. ii, 1860, p. 249; Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, pp. 44, 48; Fowler, Col. Brit. Is. ii, 1888, p. 11; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 33; Bernh. W. Z. B. li, 1901, p. 459 (Suppl.); Casey, Trans. Acad. Sci. St. Louis, xvi, 1906, pp. 129, 150, 319; Reitt., Faun. Germ. ii, 1909, p. 24; Johansen, Danmarks Rovbiller, 1914, p. 20; Fenyés, Gen. Ins. 173 B, 1920, p. 404; Portevin, Encycl. Ent. A, xii, 1929, i, p. 236.

Antennæ with the penultimate joints distinctly transverse, but not three times as broad as long. Eyes normal. Elytra not emarginate postero-externally. Abdomen a little narrowed before the apex, the first two visible tergites transversely impressed at base, very closely punctured on the anterior segments, sometimes less closely on the posterior. Posterior tarsi as long as the tibiæ. Mesosternum carinate, its process rounded behind, extending nearly the whole length of the coxæ, these moderately separated.

Key to the Species.

- | | |
|---|---------------------------------|
| 1. Entirely black species..... | <i>brunnipes</i> , sp. n. |
| Elytra at least in part reddish or reddish-yellow | [p. 634. |
| 2. Thorax very finely and closely punctured.. | 2. |
| Thorax much less closely punctured..... | 3. |
| 3. Larger (5-5.5 mm.); abdomen less densely punctured | <i>trivialis</i> Kr., p. 635. |
| Smaller (2 mm.); abdomen very densely punctured | <i>indica</i> , sp. n., p. 635. |
| | <i>parva</i> , sp. n., p. 635. |

2208. *Aleochara (Baryodma) brunnipes*, sp. n.

Moderately shining, entirely black. Antennæ black. Legs dark brown, the tarsi reddish. Length 4.5-5.5 mm.

In size and build scarcely differing from *intricata* Mannerh., but of different colour, the antennæ a little shorter, the intermediate joints more transverse; elytra and abdomen less finely punctured, the latter less closely also. Head very finely, moderately closely punctured, without ground-sculpture. Antennæ moderate, the 4th to 10th joints transverse, the penultimate twice as broad as long. Thorax transverse (5.3 : 3.75), the sculpture as on the head. Elytra as long as but a little broader than the thorax, closely, moderately finely, roughly punctured. Abdomen a little narrowed towards the apex, closely and finely punctured, a little less closely behind.

Pubescence throughout rather coarse, moderately close, brownish-yellow.

Chakrata district : Deoban, alt. 9330 feet : Manjgaon, alt. 6500 feet. Mussooree district, alt. 6500 feet.

2209. *Aleochara (Baryodma) indica*, sp. n.

Moderately shining, black, the elytra with narrow indeterminate red fascia extending from the shoulder to the sutural angle. Antennæ black, the first two joints and legs reddish-yellow. Length 5-5.5 mm.

Differs from *brunnipes* in the colour, narrower build, and less transverse thorax (4 : 3) ; the sculpture and pubescence in the two species scarcely differing.

Ghum district : Tiger Hill, alt. 8000-10,000 feet.

2210. *Aleochara (Baryodma) trivialis*, Kr.

Aleochara trivialis Kr.*, Arch. Naturg. xxv, 1859, p. 18.

Moderately shining, black, the elytra blackish, with an indeterminate reddish-yellow spot near the sutural angle or reddish-yellow with the postero-external and scutellary regions more or less extensively infuscate. Antennæ black, the first two joints reddish or reddish-yellow. Legs reddish-yellow, the tibiæ sometimes infuscate. Length 2.75-3.5 mm.

Build of *indica* but smaller, the antennæ similarly constructed, the puncturation of the head and thorax less fine and on the latter much less close, and both with a feeble ground-sculpture. Elytra a little shorter than the thorax, less roughly and distinctly less closely punctured, abdomen as closely but more finely punctured than in *indica*.

Ceylon : Suduganga. India : Mahé ; Dehra Dun. Also in South China, the Malay Peninsula, Aden, and Somaliland.

2211. *Aleochara (Baryodma) parva*, sp. n.

Moderately shining black, the elytra and last segment of abdomen reddish-yellow, the former obscurely infuscate externally. Antennæ brown, the first two joints and legs reddish-yellow. Length 2 mm.

Of the build of *trivialis* and with similar short elytra, but considerably smaller, the antennæ thinner, the penultimate joints less transverse, head and thorax much more finely and much more closely punctured and without ground-sculpture ; elytra roughly but more finely and closely punctured than in *trivialis*, the abdomen also more finely and closely punctured than in that species. Much resembles the genus *Tinotus* in facies, but the anterior tarsi are 5-jointed.

Siwaliks : Kheri Rau.

Subgenus *ISOCHARA* Bernh.

Isochara Bernh., W. Z. B. li, 1901, pp. 440, 461 (Suppl.); Reitter, Faun. Germ. ii, 1909, p. 25; Johansen, Danmarks Rovbiller, 1914, p. 21; Fenyès, Gen. Ins. 173 B, 1920, p. 405; Scheerp., Sitz. Math. Nat. Ak. Wien, cxxxviii, 1929, p. 248; Portevin, Encycl. Ent. A, xii, 1929, i, p. 237; Scheerp., Rev. Suisse Zool. xli, 1934, p. 142.

A subgenus of doubtful validity and only differing from *Baryodma* in the more parallel-sided abdomen, an equivocal character.

Key to the Species.

1. Thorax with four quadrately placed punctures on the disc, coriaceous. Elytra red [p. 638.
denticulata Motsch.,
2. Thorax without such punctures 2.
2. Thorax closely, strongly and deeply punctured [p. 638.
punctiventris Kr.,
3. Thorax more finely and superficially punctured 3.
3. Head and thorax less shining and with distinct coriaceous ground-sculpture
Head and thorax shining and without ground-sculpture 4.
moesta Gr., p. 637.
4. Elytra bright yellowish-red 4.
Elytra otherwise coloured 5.
rutilipennis Kr., p. 639.
5. Each elytron with well-defined triangular reddish-yellow spot at the posterior margin
Elytra uniformly reddish-brown *tristis* Gr., p. 636.
germana, sp. n., p. 640.

2212. *Aleochara (Isochara) tristis* Grav.

Aleochara tristis Gr., Mon. Col. Micr. 1806, p. 170; Kraatz, Naturg. Ins. Deutschl. Col. ii, 1856-58, p. 89; Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 72; Fowler, Col. Brit. Is. ii, 1888, p. 14, tab. 37, fig. 4; Ganglb., Kaf. Mitt.-Eur. ii, 1895, p. 34; Everts, Col. Neerl. i, 1898, p. 170; Bernh., W. Z. B. li, 1901, p. 461 (Suppl.); Reitt., Faun. Germ. ii, 1909, p. 25; Johansen, Danmarks Rovbiller, 1914, p. 21; Everts, Col. Neerl. iii, 1922, p. 71; Portevin, Encycl. Ent. A, xii, 1929, i, p. 237; Scheerp., Sitz.-Ber. Akad. Wiss. Wien, Abt. i, cxxxviii, 1929, p. 248.

Aleochara bimaculata Steph., Ill. Brit. Ent. Mandib. v, 1832, p. 158.

Aleochara bipunctata Ol., Ent. iii, 1895, no. 42, p. 31.

Aleochara erectesetosa Jek., Col. Jekel. i, 1873, p. 41.

Aleochara flavomaculata Ménétr., Cat. rais. 1832, p. 147; Fald., Faun. Trans-Cauc. i, 1836, p. 133; Kolenati, Melet. Ent. iii, p. 10.

Aleochara geometrica Schrank, Faun. Boica, i, 1798-1804, p. 642.

Aleochara nigripennis Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 76.

Aleochara nigripes Miller, W. Z. B. ii, 1852, p. 27; Kraatz, Naturg. Ins. Deutschl. Col. ii, 1856-58, p. 90; Redtb., Faun. Austr. ed. ii, 1858, p. 155, and ed. iii, 1874, p. 138.

Shining, black, the elytra with well-defined triangular reddish yellow spot with its base on the posterior border and the apex

extending towards the shoulder. Antennæ black, the first joint pitchy. Legs brown, the tarsi reddish. Length 3.5-5.5 mm.

Head much narrower than the thorax, finely, rather sparingly punctured, but less finely and more closely towards the base: ground-sculpture scarcely visible. Antennæ with the 3rd joint as long as 2nd, 4th slightly, 5th to 10th more transverse, the penultimate joints about twice as broad as long. Thorax transverse (5.75:4), the sides rounded and rather strongly retracted in front, finely, moderately closely punctured, more closely and less finely towards the base, the ground-sculpture scarcely visible. Elytra scarcely as long as the thorax but a little broader, moderately coarsely and rather closely and roughly punctured, the ground-sculpture feeble. Abdomen a little narrowed before the apex, coarsely and closely punctured, especially at the bases of the segments, on the penultimate segments more finely and more sparingly. The whole insect covered with a moderately close, stiff, yellowish, semi-erect pubescence. Posterior tarsi distinctly shorter than the tibiæ.

Simla Hills, Chakrata, and Mussooree districts, alt. 7000-8300 feet. Also in middle and southern Europe and Asia.

2213. *Aleochara (Isochara) moesta* Grav.

Aleochara moesta Gr., Col. Micr. Brunsv. 1802, p. 96; Fowler, Col. Brit. Isl. ii, 1888, p. 17, tab. 37, fig. 8; Everts, Col. Neerl. i, 1898, p. 169; Bernh., W. Z. B. li, p. 462 (Suppl.); Reitter, Faun. Germ. ii, 1909, p. 25; Fowler & Donisthorpe, Col. Brit. Isl. vi, 1913, p. 39; Johansen, Danmarks Rovbiller, 1914, p. 24, figs. 9, 9a; Everts, Col. Neerl. iii, 1922, p. 71; Portevin, Encycl. Ent. A, xii, 1929, i, p. 237; Scheerp., Sitz.-Ber. Akad. Wiss. Wien, Abt. i, cxxxviii, 1929, p. 249; Peyerimh., Mém. Soc. Hist. Nat. Afr. Nord, no. 2, 1931, p. 36 (Miss. Hoggar).

Aleochara convexiuscula Kol., Melet. Ent. ii, 1846, p. 10.

Aleochara crassiuscula Sahlb., Ins. Fenn. i, 1834, p. 396; Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 65; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 34; Everts, Col. Neerl. i, 1898, p. 170; Champ., E. M. M. xlv, 1898, p. 194; Fowler & Donisthorpe, Col. Brit. Isl. vi, 1913, p. 38, tab. 3, fig. 10; Johansen, Danmarks Rovbiller, 1914, p. 22; Everts, Col. Neerl. iii, 1922, p. 71.

Aleochara scutellaris Lucas, Hist. Nat. Anim. Art. Algérie, ii, 1849, p. 103, tab. II, fig. 7.

Aleochara tristis Er., Käf. Mark Brand. i, 1837-39, p. 355; id., Gen. Spec. Staph. 1839-40, p. 162; Kr., Naturg. Ins. Deutschl. Col. ii, 1856-58, p. 89; Thoms., Skand. Col. ii, 1860, p. 252.

Moderately shining, black, the elytra reddish-yellow, with the sides and scutellary region more or less infuscate. Antennæ black, the first two joints and legs reddish. Length 3.5-4.5 mm.

In size and build scarcely differing from *tristis* and with similarly constructed antennæ, but distinctly less shining and with less definite elytral colour-pattern; moreover the puncturation of the head and thorax is finer and closer and there is also a distinct ground-sculpture, the abdomen is more finely and densely punctured, including the terminal segments, and the pubescence throughout is shorter.

Dehra Dun. Also in Europe, Madeira, Canary Islands, North Africa, and Arabia.

2214. *Aleochara (Isochara) denticulata*.

Aleochara denticulata Motsch., Bull. Soc. Nat. Mosc. xxxi, 1858, iii, p. 238.

Aleochara quadripunctata Woll.*, Col. Hesper. 1867, p. 230.

Moderately shining, black, the elytra red. Antennæ black, the first three joints and legs reddish-yellow. Length 3-4 mm.

A small, robust species near *moesta*, but with shorter, broader thorax, etc. Head very finely, sparingly punctured and with distinct coriaceous ground-sculpture. Antennæ with the 3rd joint as long as 2nd, 4th to 10th transverse, the penultimate twice as broad as long, the 11th as long as the 9th and 10th together. Thorax transverse (4:3), convex, very finely and sparingly punctured, distinctly coriaceous, the disc with four larger, quadrately placed punctures. Elytra a little shorter but slightly broader than the thorax, not emarginate postero-externally, rather finely, closely, asperately punctured and with a very fine ground-sculpture. Abdomen nearly parallel, densely punctured, a little more sparingly on the last two segments. Pubescence throughout yellow, depressed, moderately close.

♂: 8th dorsal segment truncate, very finely and closely denticulate.

"Ind. or.," without further indication. Also in the Canary Islands, British Somaliland, and Zanzibar.

2215. *Aleochara (Isochara) punctiventris*.

Aleochara punctiventris Kr.*, Arch. Naturg. xxv, 1859, p. 18.

Black, shining, the elytra reddish-yellow, more or less infusate externally and at the scutellary region. Antennæ black, the first three joints and legs reddish-yellow. Length 2.5-3 mm.

Head suborbicular, a good deal narrower than the thorax, impunctate in front, at the sides and base rather closely, deeply, moderately finely punctured, the ground-sculpture feeble. Antennæ rather slender, the 3rd joint as long as the 2nd, the 4th to 10th gradually increasing in width, but with the penultimate joints only slightly transverse, the 11th stout, as long as the preceding two together. Thorax transverse

(5.5 : 4), convex, the sides rounded, moderately retracted in front, the posterior angles obtusely rounded, along the middle sometimes with an obsolete impressed line, the puncturation moderately fine, deep but not close, the ground-sculpture feeble. Elytra as long and as broad as the thorax, rather closely, moderately finely, somewhat roughly punctured and with a weak ground-sculpture. Abdomen parallel, less shining, densely and rather finely punctured throughout. Pubescence yellowish, rather sparing and semi-erect.

♂: 8th dorsal segment feebly, broadly emarginate and scarcely perceptibly denticulate; 6th ventral segment a little produced and broadly rounded.

Ceylon: Belligam. India: Dehra Dun; Siwaliks; Rohatgaon. Also in the Malay Peninsula, Borneo, and Hong-kong.

2216. *Aleochara (Isochara) rutilipennis*.

Aleochara rutilipennis Kr., Arch. Naturg. xxv, 1859, p. 17.

Aleochara sareptana Solsky, in Fedtschenko, Reise Turk. (5) ii, 1874, p. 161; Bernh., W. Z. B. li, 1901, p. 476 (Suppl.).

Aleochara semirubra Fauv., Ann. Mus. Civ. Gen. x, 1877, p. 293.

Moderately shining, black, the margins of the thorax usually very narrowly reddish; elytra bright red or reddish-yellow, the apex of the abdomen sometimes reddish. Antennæ blackish, the first four joints and legs reddish-yellow. Length 3.5-4.5 mm.

A somewhat abnormal species in the transverse head and large but not prominent eyes. Head transversely suborbicular, narrower than the thorax (5 : 7.5), the eyes large, distinctly longer than the post-ocular region, finely, moderately closely punctured and without ground-sculpture. Antennæ rather long, slender, the 3rd joint as long as the 2nd, 4th and 5th longer than broad, 6th to 10th increasing in width, the penultimate slightly transverse, the 11th as long as the 9th and 10th together. Thorax transverse (7.5 : 5), convex, the sides rounded and more retracted in front, finely and closely punctured and without ground-sculpture. Elytra slightly longer and a little broader than the thorax, not emarginate postero-externally, less finely and more closely punctured. Abdomen a little narrowed at the apex, in the basal impressions finely and closely, elsewhere equally closely but more coarsely punctured, except on the last two segments, where the puncturation is finer and less close. Fore-parts closely covered with a short, fine, depressed yellow pubescence. Posterior tarsi nearly as long as the tibiæ.

Ceylon. India: United Provinces; Dehra Dun, Siwaliks, Raniket, W. Bhalkot, Sinni Gad, Chilla. Malabar. Also in Europe, Asia, Java, Australia, and Africa.

2217. *Aleochara (Isochara) germana*, sp. n.

Shining; head and abdomen black, thorax darker, elytra lighter reddish-brown. Antennæ black, the first four joints and legs reddish-yellow. Length 3 mm.

In the build and structure of the antennæ similar to *rutilipennis*, and with the same large eyes, differs in the colour, less closely punctured thorax and elytra, and much less closely pubescent fore-parts; the sculpture of the abdomen scarcely differs from that of *rutilipennis*.

Dehra Dun: Song River.

Subgenus *HOMŒOCHARA* Muls. et Rey.

Homœochara Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 130; Ganglb., Kaf. Mitt.-Eur. ii, 1895, p. 41; Bernh., W. Z. B. li, 1901, p. 463 (Suppl.); Johansen, Danmarks Rovbiller, 1914, p. 26; Fenyès, Gen. Ins. 173 B, 1920, p. 407; Portevin, Encycl. Ent. A, xii, 1929, i, p. 238.

Eyes small or moderate, not prominent. Antennæ moderately thickened towards the apex, the penultimate joints moderately transverse. Third joint of the maxillary palpi considerably thickened towards the apex, conical, the 4th long. Pronotal epipleura not visible from the side. Mesosternal process extending nearly the whole length of the coxæ, carinate, the keel interrupted in the middle, pointed, the coxæ narrowly separated. Elytra moderately emarginate postero-externally. Abdomen parallel, only a little narrowed at apex, the first three visible segments transversely impressed, usually closely punctured at the bases of the segments and very sparingly elsewhere, sometimes the bases only sparingly punctured. Tarsi moderate, shorter than the tibiæ.

Key to the Species.

- Black species, at most with the elytra brown;
abdomen moderately finely and distinctly
punctured in the impressions *sparsa* Heer, p. 640.
Elytra yellow; abdomen in the impressions
with a transverse row of very fine punctures only [p. 641.
pallidipennis, sp. n.,

2218. *Aleochara (Homœochara) sparsa*.

Aleochara sparsa Heer, Faun. Helv. i, 1838-42, p. 317; Fairm. et Laboulb., Faun. Ent. Fr. i, 1854, p. 448; Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 138; Bernh., W. Z. B. li, 1901, p. 463 (Suppl.); Reitt., Faun. Germ. ii, 1909, p. 25; Gridelli, Boll. Soc. Ent. Ital. i, 1918, p. 36; Portevin, Encycl. Ent. A, xii, 1929, i, p. 238; Lindroth, Insektenfaun. Isl., Zool. Bidr. Uppsala, xiii, 1931, p. 183.
Aleochara intractabilis Heer, Faun. Helv. i, 1838-42, p. 318.

Aleochara latipalpis Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 131.

Aleochara succicola Thoms., Skand. Col. ii, 1860, p. 216; Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 134; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 41; Champ., E. M. M. xxxiii, 1897, p. 97; Everts, Col. Neerl. i, 1898, p. 168; Fowler & Donisthorpe, Col. Brit. Isl. vi, 1913, p. 39; Johansen, Danmarks Rovbiller, 1914, p. 26, fig. 11; Everts, Col. Neerl. iii, 1922, p. 71.

Aleochara pernigra Schub., D. E. Z. 1906, p. 378.

Shining, black, the elytra sometimes brown. Antennæ black, sometimes with the 1st or 1st and 2nd joints reddish; maxillary palpi with 3rd joint black, sometimes reddish; legs black, the knees and tarsi reddish, sometimes entirely yellowish-red. Length 2-4.5 mm.

A widely distributed species in the Palearctic region and varying considerably in size and closeness of the puncturation. Head suborbicular, a good deal narrower than the thorax, finely, rather sparingly punctured, with a scarcely visible ground-sculpture; eyes moderate. Antennæ with the 3rd joint as long as the 2nd, 4th to 10th gradually more transverse, the penultimate about twice as broad as long, 11th as long as the 9th and 10th together. Thorax transverse (5.3:4), convex, the sides rounded and moderately retracted in front, the posterior angles rounded, ground-sculpture absent. Elytra as long as and slightly broader than the thorax, moderately finely and moderately closely punctured. Abdomen parallel, a little narrowed at apex, closely punctured at the bases of the segments, very sparingly elsewhere. Pubescence rather long, semi-erect.

Chakrata district: Konain, alt. 8000 feet. Kashmir: Songam.

2219. *Aleochara (Homœochara) pallidipennis*, sp. n.

Shining, black, the elytra yellow. Antennæ blackish, the first four joints, maxillary palpi and legs reddish-yellow. Length 4 mm.

Build of *sparsa*, but differently coloured and with shorter, stouter antennæ. Puncturation of the head and thorax very fine and by no means close; ground-sculpture absent; elytra as long as the thorax but a little broader, as finely but a little more closely and roughly punctured; abdomen at the bases of the segments each with a row of fine punctures, elsewhere yet more fine and very sparing. Pubescence on the fore-parts rather long and semi-erect.

Chakrata district: Deoban, alt. 9330 feet.

MESOCHARA, subgen. n.

Eyes moderate. Antennæ moderately thickened towards the apex. Maxillary palpi with normal 3rd joint, the 4th nearly as long. Thorax distinctly transverse, the pronotal epipleura not visible from the side. Elytra scarcely emarginate postero-externally. Abdomen nearly parallel, only a little narrowed before the apex, the first three visible tergites transversely impressed, very sparingly punctured except at the bases of the segments. Mesosternum only keeled at the base, its process narrow, extending nearly the whole length of the coxæ, the apex narrowly truncate, coxæ narrowly separated. Posterior tarsi as long as or shorter than the tibiæ.

Key to the Species.

- | | |
|--|---|
| Head and thorax with distinct ground-sculpture; antennæ with the first two joints reddish-yellow; posterior tarsi shorter than the tibiæ | [p. 642.
<i>almorensis</i> , sp. n., |
| Head and thorax without ground-sculpture; antennæ with the first two joints pitchy; posterior tarsi as long as the tibiæ | <i>inornata</i> , sp. n., p. 643. |

2220. *Aleochara (Mesochara) almorensis*, sp. n.

Shining, black, the posterior margins of the abdominal tergites rufescent, the elytra dark brown. Antennæ black, the first two joints and legs reddish or reddish-yellow. Length 3.5 mm.

A small, narrow species with ground-sculpture on the head and thorax very like that of *moesta* Gr. Head suborbicular, narrower than the thorax (4 : 6), eyes moderate; very finely, sparingly punctured and with a fine but distinct wavy ground-sculpture. Antennæ with the 3rd joint as long as the 2nd, 4th as long as broad, 5th to 10th transverse, the penultimate about twice as broad as long, the 11th as long as the 9th and 10th together. Thorax transverse (5.75 : 4.25), convex, a little less finely and distinctly more closely punctured than the head, the ground-sculpture similar. Elytra a little longer (5.5 : 4.25) and broader than the thorax, less finely and more closely punctured, the ground-sculpture less distinct. Abdomen parallel, a little narrowed at the apex, at the bases of the segments with a few small, rather close punctures, elsewhere very sparingly punctured. Pubescence rather long, yellow and depressed.

W. Almora : Kumaun (*H. G. Champion*).

2221. *Aleochara (Mesochara) inornata*, sp. n.

Shining, black. Antennæ reddish, the 1st joint pitchy. Legs reddish-brown, the tarsi reddish-yellow. Length 4 mm.

Build of *cuniculorum*, the antennæ similarly constructed and with the posterior tarsi as long as the tibiæ, as in that species; the puncturation of the head and thorax scarcely differs, but there is no trace of ground-sculpture, the elytra more finely and less closely punctured; the puncturation of the abdomen is much finer and much more sparing, the elytra scarcely emarginate.

Chakrata district: Deoban, alt. 9330 feet. Dehra Dun. Kumaun: Naini Tal: West Bhalkot. Punjab: Jalori Pass, alt. 10,800 feet.

Subgenus *POLYCHARA* Muls. et Rey.

Polychara Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 64; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 34; Bernh., W. Z. B. ii, 1901, p. 465 (Suppl.); Reitter, Faun. Germ. ii, 1909, p. 25; Johansen, Danmarks Rovbiller, 1914, p. 22; Fenyès, Gen. Ins. 173 b, 1920, p. 408; Portevin, Encycl. Ent. A, xii, 1929, i, p. 237.

Eyes normal. Antennæ moderately incrassate. Maxillary palpi with normal 3rd joint. Pronotal epipleura not visible from the side. Mesosternum pointed, carinate, extending nearly the whole length of the coxæ, these narrowly separated. Elytra either completely rounded postero-externally or more or less emarginate. Abdomen parallel, only a little narrowed before the apex, the first three segments transversely impressed. Posterior tarsi variable.

Key to the Species.

- | | |
|---|---|
| 1. Elytra distinctly emarginate postero-externally | 2. |
| Elytra not emarginate | 4. |
| 2. Black species, with strong greenish-bronze reflex | <i>aerata</i> , sp. n., p. 647. |
| Species without metallic reflex | 3. |
| 3. Elytra black, at most with the posterior margin narrowly and obscurely reddish-yellow; thorax without trace of ground-sculpture | [p. 646.
<i>himalayica</i> , sp. n., |
| Elytra black, the posterior margin and a distinct marking at the postero-internal angle, sometimes more or less extended forwards, reddish-yellow; thorax with a very feeble ground-sculpture | [p. 647.
<i>cuniculorum</i> Kr., |
| 4. Entirely black, the pubescence depressed.. | <i>dohertyi</i> , sp. n., p. 645. |
| Not entirely black, the elytra either entirely red, or black with the humeral angle and more or less of the posterior region reddish-yellow | 5. |

5. Elytra entirely bright red *beesoni*, sp. n., p. 646.
 Elytra otherwise 6.
6. Antennæ black, the first two joints some-
 times pitchy; the pubescence on the fore-
 parts semi-erect *confusa*, sp. n., p. 645.
 Antennæ black, the first two or three joints
 bright reddish-yellow; pubescence of the
 fore-parts depressed 7.
7. Thorax less closely punctured; first two
 tergites very finely punctured at their
 bases, the following much less finely
 and more closely. ♂: 8th tergite rather
 deeply emarginate and finely crenulate .. *asiatica* Kr., p. 644.
 Thorax more closely punctured; first two
 tergites scarcely less finely punctured at
 their bases than the following. ♂: 8th
 tergite with eight sharp teeth *viatica* Fauv., p. 645.

2222. *Aleochara (Polychara) asiatica*.

Aleochara asiatica Kr.*, Arch. Naturg. xxv, 1859, p. 15; Cam.,
 Trans. Ent. Soc. Lond. 1920, p. 398.

Aleochara japonica Shp.*, Trans. Ent. Soc. Lond. 1874, p. 8.

Moderately shining, black, the margins of the thorax very narrowly reddish; elytra red, the sides, scutellary and sutural regions more or less extensively black, sometimes black, with the humeral angles and posterior margin yellowish-red. Antennæ black, the first two or three joints and the legs reddish-yellow. Length 3-5.5 mm.

In build scarcely differing from *brevipennis* Gr. Head small, suborbicular, finely, moderately closely punctured and without ground-sculpture. Antennæ moderately thickened towards apex, the 3rd joint as long as the 2nd, 4th scarcely, 5th to 10th more transverse, the penultimate about a half broader than long, the 11th as long as the preceding two together. Thorax transverse (5:4), convex, the sides rounded, more retracted in front, the posterior angles rounded, as finely but rather more closely punctured than the head; ground-sculpture absent. Elytra a little shorter and a little broader than the thorax, very closely, finely but roughly punctured, not emarginate postero-externally. Abdomen only a little narrowed before the apex, at the bases of the first two visible segments very finely and closely punctured, at the bases of the following less finely and more closely. Pubescence on the fore-parts yellow, fine, rather close and depressed, on the abdomen longer and more sparing.

♂: 8th dorsal segment rather deeply arcuately emarginate and finely crenulate.

♀: 8th dorsal segment less deeply emarginate and not crenulate.

Ceylon. India: Dehra Dun; Siwaliks. Also in the Malay Peninsula, Borneo, Java, Sumatra, Philippines, China, and Japan.

2223. *Aleochara (Polychara) viatica*.

Aleochara viatica Fauv., Rev. d'Ent. xxiii, 1904, p. 67; Cam., Trans. Ent. Soc. Lond. 1921, p. 398.

In build, size and colour similar to *asiatica*, but differs in the thorax being distinctly more closely and rather less finely punctured; the puncturation at the bases of the first two visible segments scarcely differs from that of the following, whereas in *asiatica* it is much finer; the puncturation of the abdomen as a whole is not quite so close and the sexual characters are different.

♂: 8th dorsal segment in the middle of the posterior margin, with small, acute, triangular excision, and on each side with four sharp teeth, of which the external on each side is the largest.

♀: 8th dorsal segment very feebly, broadly emarginate.

India: Nilgiri Hills. Burma: Schwego-myo; Carin Asciiu Ghéu; Carin Asciiu Cheba. Ceylon: Belligam.

Wrongly recorded by me from Singapore in Trans. Ent. Soc. Lond. 1921, p. 398.

2224. *Aleochara (Polychara) confusa*, sp. n.

Moderately shining, black, the elytra with the humeral angle and an ill-defined spot on the posterior margin near the postero-external angle yellowish-red. Antennæ and palpi black, the first two joints of the former sometimes pitchy. Legs reddish-yellow, the tibiæ and posterior femora infuscate. Length 5 mm.

Somewhat like certain forms of *asiatica* in the colour of the elytra, but the thorax is narrower, the sides more retracted in front and entirely black; the antennæ are similarly constructed but not so stout, the puncturation of the thorax less fine and closer, its pubescence semi-erect; the elytra scarcely differ from *asiatica* in sculpture and, like it, are a little shorter than the thorax; the puncturation of the abdomen is finer and less close than in that species.

♂: 8th dorsal segment with eight strong triangular teeth on the posterior margin, separated from each other by arcuate emarginations.

Ghum district.

2225. *Aleochara (Polychara) dohertyi*, sp. n.

Moderately shining, entirely deep black. Antennæ black. Legs reddish, the tarsi lighter. Length 5.5 mm.

Build of *asiatica*, but more robust, the antennæ similarly constructed, head and thorax more closely punctured, elytra less finely, more closely punctured, the punctures asperate as in that species, abdomen more finely and less closely punctured especially behind; 8th dorsal segment truncate.

Manipur (*Doherty*). Unique. British Museum.

2226. *Aleochara (Polychara) beelsoni*, sp. n.

Shining, black, the elytra bright red. Antennæ black, the first two joints and legs reddish-yellow. Length 5 mm.

In build and antennal structure similar to *asiatica*, but at once distinguished by the colour of the elytra; the sculpture of the head and thorax scarcely differs from that species, but that of the elytra is not quite so close though equally fine and rough, whilst that of the abdomen is not quite so fine and rather closer; the 8th segment in the unique specimen is broadly and feebly emarginate and is probably a female.

Birsinghpur, Rewa (*Beeson*).

2227. *Aleochara (Polychara) himalayica*, sp. n.

Shining, black, the posterior margin of the elytra sometimes very narrowly and obscurely yellowish. Antennæ black, the first two joints pitchy. Legs reddish-brown, the tarsi lighter. Length 3.75-5 mm.

Very like *diversa* Sahlb. in build, except that the head is narrower; the antennæ also are not quite so stout and darker at the base, the head and thorax more finely and a little more closely punctured, the abdomen closely punctured at the bases of the segments. Head suborbicular, much narrower than the thorax (5:7.5), eyes moderate, finely, moderately closely punctured and without ground-sculpture. Antennæ a little thickened towards the apex, the 3rd joint as long as the 2nd, 4th as long as broad, 5th to 10th transverse, the penultimate about a half broader than long, the 11th as long as the 9th and 10th together. Thorax transverse (7.5:6), convex, the sides and posterior angles rounded, a little more retracted in front, finely, moderately closely punctured and without ground-sculpture. Elytra broader and a little longer than the thorax, emarginate postero-externally, less finely and more closely punctured. Abdomen parallel, slightly narrowed at the apex, at the bases of the segments rather coarsely and closely punctured, elsewhere much more finely and much more sparingly. Pubescence long, yellow, more or less depressed.

♂: 8th dorsal segment with seven or eight very small teeth on the posterior margin.

Chakrata district : Bodyar ; Dodora Khud ; Binal Gad. Simla Hills : Fagu, alt. 7000-8000 feet. W. Almora : Dhauli Ganga. Kashmir : Gulmarg. In dung.

2228. *Aleochara (Polychara) aerata*, sp. n.

Shining, black, with distinct greenish-bronze reflex, the posterior margin of the elytra very narrowly and obscurely yellowish ; antennæ black, the first two joints brownish-yellow ; legs reddish-yellow, the femora and tibiæ infuscate. Length 5 mm.

In build similar to *rufitarsis* Heer, the antennæ very similarly constructed, the abdomen rather less finely punctured in the impressions. Head finely, rather closely punctured, the punctures flat and superficial, ground-sculpture absent. Antennæ moderately thickened towards the apex, the 3rd joint a little longer than the 2nd, 4th as long as broad, 5th to 10th transverse, the penultimate about a half broader than long, the 11th as long as the 9th and 10th together. Thorax transverse (7.25 : 5.5), with punctures similar to but, at the base, closer than those of the head ; ground-sculpture absent. Elytra a little longer and broader than the thorax, rather finely but more closely and roughly punctured, emarginate postero-externally. Abdomen a little narrowed before the apex, closely punctured at the bases of the segments, more finely and much more sparingly elsewhere. Pubescence on the fore-parts rather long, yellow and semi-erect.

Ghum district : Lepchajagat.

2229. *Aleochara (Polychara) cuniculorum*.

Aleochara cuniculorum Kr., Ann. Soc. Ent. Fr. (3) vi, 1858, Bull. p. 188 ; id., Berl. Ent. Zeitschr. 1862, p. 318 ; Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 93 ; Redtb., Faun. Austr. ed. iii, 1874, p. 140 ; Fowler, Col. Brit. Isl. ii, 1888, p. 15 ; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 40 ; Everts, Col. Neerl. i, 1898, p. 169 ; Bernh., W. Z. B. li, 1901, p. 487 (Supp.) ; Reitt., Faun. Germ. ii, 1909, p. 25 ; Everts, Col. Neerl. iii, 1922, p. 69 ; Portevin, Encycl. Ent. A, xii, 1929, i, p. 237 ; Gridelli, Ann. Mus. Civ. Gen. liv, 1930, p. 83.

BIOLOGY.—Heidenreich, D. E. Z. 1902, p. 156.

Shining, black, the elytra with a yellowish-red spot at the postero-internal angle often extending a variable distance along the suture and along the posterior margin narrowly. Antennæ black, the first two joints reddish. Legs reddish-yellow. Length 3.5-4.5 mm.

Head suborbicular, about two-thirds as broad as the thorax, eyes moderate, finely, rather sparingly punctured and without ground-sculpture. Antennæ rather long, a little thickened towards the apex, the 3rd joint a little longer than the 2nd,

4th as long as broad, 5th to 10th moderately transverse, the penultimate about a half broader than long, the 11th as long as the 9th and 10th together. Thorax transverse (6.5:4.5), convex, the sides and posterior angles rounded, moderately retracted in front, finely and rather sparingly punctured like the head, but with a very feeble ground-sculpture. Elytra as long as but a little broader than the thorax, less finely and much more closely, somewhat roughly punctured. Abdomen a little narrowed towards the apex, finely and closely punctured at the bases of the first four visible segments, much more finely and sparingly elsewhere. Pubescence yellow, rather long, moderately close. Posterior tarsi as long as the tibiae.

Dehra Dun and Mussooree districts. Also in Europe, North Africa, Russia, and Mongolia.

2230. *Aleochara* (*Polychara* ?) *incerta*.

Aleochara incerta Epp., W. E. Z. xiv, 1895, p. 53.

Black, shining, finely and sparingly pubescent, elytra greenish-black, knees and tarsi reddish; thorax sparingly punctured, the elytra scarcely longer, a little more closely punctured; abdomen subparallel, not very closely punctured in front, sparingly and finely punctured behind. Length 2 lin.

♂: 6th tergite truncate and obsoletely crenulate and furnished with black cilia; the 6th sternite somewhat triangularly produced.

♀: unknown.

In build and colour very like *inconspicua*, but larger and with more sparing and finer puncturation of the elytra and differently punctured abdomen; black, shining, with fine grey pubescence and dark metallic green elytra and reddish knees and tarsi. Head round, half as broad as the thorax, with fine scattered punctures. Palpi black. Antennæ black, stout, as long as the head and thorax, slightly thickened towards the apex, the 2nd and 3rd joints of equal length, 4th as long as the breadth at the apex, 5th obviously longer and broader, the following gradually becoming slightly broader and shorter, the penultimate slightly transverse, the 11th as long as the preceding two together, oviform, with blunt apex. Thorax about a half broader than long, as broad as the elytra, the sides lightly rounded, more retracted in front than behind, with feebly rounded posterior and blunt anterior angles, convex, sparingly and finely punctured and pubescent. Elytra scarcely longer than the thorax, more strongly and closely punctured. Abdomen subparallel, on the anterior segments rather finely and not closely punctured, on the 5th and 6th segments very sparingly.

Simla. A single ♂ (ex *Eppelsheim*).

I do not know this species, and the subgenus to which it belongs is doubtful. In the Catalogue of Bernhauer and Scheerpeltz it is placed in *Dyschara*, but, as this subgenus is characterized by the 11th antennal joint in the ♂ being as long as the preceding three together, it cannot, according to the description, belong to it.

2231. *Aleochara* (s. str. ?) *tuberiventris*.

Aleochara tuberiventris Kr.*, Arch. Naturg. xxv, 1859, p. 14.

Shining, dark reddish-brown; elytra yellowish-brown, infuscate towards the sides. Antennæ pitchy, the first three joints and legs reddish-yellow. Length 5 mm.

Of doubtful systematic position, but the mesosternum is truncate and appears to be without a keel. In size and build very similar to *tenuicornis* Kr., but in all other respects different. Head round, much narrower than the thorax, finely and sparingly punctured and without ground-sculpture. Antennæ with the 3rd joint longer than the 2nd, 4th to 6th joints strongly, the penultimate scarcely, transverse, the 11th as long as the preceding two together (the 6th and following joints are now absent in the type). Thorax a half broader than long, the sides rounded, more retracted in front, the posterior angles entirely rounded, moderately finely, rather sparingly punctured and without ground-sculpture. Elytra a little longer and a little broader than the thorax, not emarginate postero-externally, rather less finely and more closely punctured, but not at all rugose. Abdomen finely and sparingly punctured throughout.

♂: 5th tergite elevated in the middle as a rounded boss; 8th with a strong median keel produced a little beyond the posterior margin as a tooth, on each side with a tooth separated from the median one by an arcuate emargination.

"Ind. Port." (*Helfer*). Unique.

Subgenus *COPROCHARA* Muls. et Rey.

Coprochara Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 146; Ganglb., Kaf. Mitt.-Eur. ii, 1895, p. 41; Bernh., W. Z. B. li, 1901, p. 500 (Suppl.); Reitt., Faun. Germ. ii, 1909, p. 27; Johansen, Danmarks Rovbiller, 1914, p. 28; Fenyés, Gen. Ins. 173 B, 1920, p. 412; Portevin, Encycl. Ent. A, xii, 1929, i, p. 234.

Eyes moderate. Antennæ moderately thickened towards apex. Maxillary palpi with normal 3rd joint. Thorax on each side of the smooth median line with an irregular row of small punctures; pronotal epipleura not visible from the side. Elytra not emarginate postero-externally. Abdomen subparallel, only a little narrowed at apex, the first three

visible tergites transversely impressed. Mesosternum carinate, its process extending the whole length of the coxæ, its apex briefly rounded, the coxæ moderately separated. Legs moderate, the posterior tarsi as long as the tibiæ.

Key to the Species.

- Elytra each with a yellowish-red marking *bipustulata* L., p. 650.
 Elytra uniformly black *bilineata* Gyll., p. 651.

2232. *Aleochara (Coprochara) bipustulata.*

- Staphylinus bipustulata* L., Faun. Suec. ed. ii, 1761, p. 232; Bernh., W. Z. B. li, 1901, p. 502 (Suppl.) (*Aleochara*); Reitt., Faun. Germ. ii, 1909, p. 27, tab. 41, fig. 6; Blatchley, Col. Indiana, i, 1910, p. 366.
Homalota biguttula Kolenati, Melet. Ent. iii, 1846, p. 8.
Homalota binotata Woll., Cat. Col. Ins. Mader. 1857, p. 182.
Homalota bipunctata Ol., Ent. iii, 1795, no. 42, p. 31.
Homalota cursor Steph., Ill. Brit. Ent. Mandib. v, 1832, p. 159.
Homalota dorsalis Steph., l. c. p. 160.
Homalota fusconotata Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 155; id., Opusc. Ent. xx, p. 439.
Homalota latipennis Muls. et Rey, l. c. pp. 155, 439.
Homalota nitida Grav., Col. Micr. Brunsv. 1802, p. 97; Er., Käf. Mark Brand. i, 1837-39, p. 358 (ex parte); id., Gen. Spec. Staph. 1839-40, p. 168 (ex parte); Redtb., Faun. Austr. ed. i, 1849, p. 668, ed. ii, 1858, p. 154, and ed. iii, 1874, p. 137 (omn. ex parte); Kraatz, Naturg. Ins. Deutschl. Col. ii, 1856-58, p. 105; Thoms. Skand. Col. ii, 1860, p. 254; Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 151; Fowler, Col. Brit. Isl. ii, 1888, p. 18, tab. 38, fig. 2, a, b; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 42; Everts, Col. Neerl. i, 1898, p. 167; Johansen, Danmarks Rovbiller, 1914, p. 28; Col. Neerl. iii, 1922, p. 69.
Homalota transitia Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 155; Opusc. Ent. xx, p. 439.
Homalota velox Steph., Ill. Brit. Ent. Mandib. v, 1832, p. 159.
 BIOLOGY.—Riley, Proc. Ent. Soc. Washington, ii, 1893, pp. 405-410; Slingerland, Bull. Cornell Univ. Agric. Exper. Stat. Ithaca, 1894, pp. 481-577.

Shining, black, the elytra behind near the suture with a large yellowish-red marking, usually well defined. Antennæ and 3rd joint of the maxillary palpi black. Legs dark brown with reddish tarsi. Length 2-4.5 mm.

Head with a few moderate, scattered punctures and without ground-sculpture. Antennæ with the 3rd joint as long as the 2nd, 4th about as long as broad, 5th to 10th transverse, the penultimate twice as broad as long, the 11th as long as the 9th and 10th together. Thorax transverse (7.5:5.5), convex, the sides and posterior angles rounded, more retracted in front, with a median impunctate area and on each side of it with an irregular row of small punctures, towards the sides with a few others; ground-sculpture absent. Elytra

a little broader and scarcely longer than the thorax, rather coarsely but not very closely punctured. Abdomen rather finely and closely punctured at the bases of the segments, elsewhere much more sparingly, the last segment with a few asperate punctures. Pubescence throughout yellow and scanty.

Chakrata district: Deoban, alt. 9330 feet. Simla Hills: Matiana, alt. 7900 feet. Mussooree district and Dehra Dun. Widely distributed in the Palæartic and Nearctic regions, also at the Cape.

2233. *Aleochara (Coprochara) bilineata*.

Aleochara bilineata Gyll., Ins. Suec. i, 2, 1810, p. 436; Redtb., Faun. Austr. ed. ii, 1858, p. 154, and ed. iii, 1874, p. 137; Kr., Naturg. Ins. Deutschl. Col. ii, 1856-58, p. 105; Thoms., Skand. Col. ii, 1860, p. 254; Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 147; Fowler, Col. Brit. Isl. ii, 1888, p. 19; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 41; Everts, Col. Neerl. i, 1898, p. 167; Bernh., W. Z. B. li, 1901, p. 500 (Suppl.); Reitt., Faun. Germ. ii, 1909, p. 27; Johansen, Danmarks Rovbiller, 1914, p. 28; Portevin, Encycl. Ent. A, xii, 1929, i, p. 235, fig. 254.

Aleochara agilis Steph., Ill. Brit. Ent. Mandib. v, 1832, p. 154.

Aleochara alpicola Heer, Faun. Helv. i, 1838-42, p. 317.

Aleochara immaculata Steph., Ill. Brit. Ent. Mandib. v, 1832, p. 154.

Aleochara nigricornis Gredler, Käf. Tirol, 1863, p. 464; Redtb., Faun. Austr. ed. iii, 1874, p. 139.

Aleochara nitida var. Er., Käf. Mark Brand. i, 1837-39, p. 358; id., Gen. Spec. Staph. 1839-40, p. 168.

Shining, black. Antennæ black. Legs dark brown, tarsi reddish. Length 2.5-4.5 mm.

Differs from *bipustulata* in the uniform colour and the puncturation throughout distinctly coarser and deeper. In all other respects resembling *bipustulata*.

From the same localities as the preceding. Also in Europe.

Genus **RHEOCHARA** Muls. et Rey.

Rheochara Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 163; Fowler, Col. Brit. Is. ii, 1888, p. 20; Ganglb., Käf. Mitt.-Eur. ii, 1895, p. 42; Bernh., W. Z. B. li, 1901, p. 484 (Suppl.); Reitt., Faun. Germ. ii, 1909, p. 27; Johansen, Danmarks Rovbiller, 1914, p. 29; Portevin, Encycl. Ent. A, xii, 1929, i, p. 239.

Metalea Muls. et Rey, Hist. Nat. Col. Fr. Brévip. Aléoch. ii, 1874, p. 461.

Rheobioma Cas., Trans. Acad. St. Louis, xvi, 1906, p. 180.

Rheocharella Cas., l. c. p. 181.

Head suborbicular, narrower than the thorax, the temples bordered below, the eyes small or moderate, not prominent. Mouth-parts as in *Aleochara*. Antennæ with the penultimate

joints moderately transverse. Thorax only slightly transverse, the pronotal epipleura not visible from the side. Elytra emarginate postero-externally. Abdomen nearly parallel, only a little narrowed at the apex, the first three visible tergites transversely impressed, the first two or three sternites also slightly transversely impressed at their bases. Mesosternum only keeled at the base, its process narrow, extending nearly the whole length of the coxæ, its apex narrowly truncate, coxæ narrowly separated. Posterior tarsi as long as or shorter than the tibiæ. In facies much resembling *Ocalea* Er., to which the type of the subgenus, *spadicea* Er., was originally referred.

Key to the Species.

Elytra a little longer than the thorax, bicolorous; posterior tarsi shorter than the tibiæ	<i>simlaensis</i> , sp. n., p. 652.
Elytra as long as the thorax, unicolorous; posterior tarsi as long as the tibiæ	<i>montivaga</i> , sp. n., p. 652.

2234. *Rheochara montivaga*, sp. n.

Shining; head and abdomen black, the posterior margins of the tergites broadly rufescent; thorax reddish-brown; elytra yellowish-brown. Antennæ black, palpi pitchy. Legs reddish. Length 5 mm.

In build scarcely differing from *spadicea* Er. but the eyes are larger, the antennæ shorter and stouter, the abdomen much less closely punctured. Head suborbicular, narrower than the thorax (4.25 : 6), the eyes about as long as the post-ocular region, very finely and sparingly punctured and without ground-sculpture. Antennæ with the 3rd joint as long as the 2nd, 4th to 6th as long as broad but increasing in width, 7th to 10th about a half broader than long, the 11th longer than the 9th and 10th together. Thorax slightly transverse (6 : 5), the sides evenly rounded, scarcely more retracted in front than behind, the posterior angles rounded, finely, sparingly punctured and without ground-sculpture. Elytra as long as and a little broader than the thorax, moderately finely and moderately closely, asperately punctured. Abdomen a little narrowed behind, very finely punctured, rather closely at the bases of the segments, much more sparingly elsewhere. Pubescence yellow, rather sparing and depressed.

Chakrata district : Manjgaon, alt. 6500 feet.

2235. *Rheochara simlaensis*, sp. n.

Shining; head and abdomen black, the latter with the posterior margins of the segments distinctly rufescent; thorax dark reddish-brown; elytra ferruginous red, more or

less extensively infusate posteriorly. Antennæ blackish, the first three joints, apex of the last, maxillary palpi, and legs reddish-yellow. Length 5 mm.

In build very like *spadicea* Er. but with shorter, stouter antennæ and shorter tarsi. Head suborbicular, narrower than the thorax (4.5 : 5.75), the eyes rather large, as long as the post-ocular region, very finely, sparingly punctured and without ground-sculpture. Antennæ moderately thickened towards the apex, the 3rd joint as long as the 2nd, 4th as long as broad, 5th to 10th transverse, the penultimate about a half broader than long, the 11th longer than the preceding two together. Thorax transverse (6.75 : 5.5), convex, the sides and posterior angles rounded, more retracted in front, less finely and much more closely punctured than the head; ground-sculpture absent. Elytra longer (7.5 : 5.5) and broader than the thorax, emarginate postero-externally, less finely and more closely punctured and with a very fine ground-sculpture. Abdomen gradually narrowed behind, at the bases of the first four visible segments with a transverse row of closely placed, moderately coarse punctures, elsewhere very finely and very sparingly punctured. Pubescence on the fore-parts rather long, yellow, depressed, and moderately close.

Simla Hills; Fagu, alt. 8000 feet. In fungus. Kashmir : Gulmarg.

CREOCHARA, gen. n.

This genus at first sight appears to belong to the polymorphic genus *Zyras*, and the species on which it is founded was described as such both by Bernhauer and myself; it is, however, one of the Aleocharini. Head transversely suborbicular, narrower than the thorax, the neck stout and concealed by it, the eyes large, much longer than the post-ocular region but not prominent; temples finely and entirely bordered below. Antennæ with the 1st joint rather long, clavate, the distal half excavated for the reception of the 2nd joint. Labrum transverse, a half broader than long, the anterior border and angles rounded, in the middle with a small arcuate emargination. Mandibles rather stout, pointed, edentate. Outer lobe of maxilla broader than the inner, densely ciliate on the truncate apical margin; inner lobe narrow, pointed, very closely and finely spinose along the distal half of the inner border. Maxillary palpi rather long, the 1st joint very small, 2nd elongate, lightly curved, and a little thickened towards the apex, 3rd a little longer but scarcely thicker at the apex than the preceding, 4th narrower and nearly half as long, 5th narrower, much shorter and conical. Labial palpi rather long, 1st joint cylindrical,

2nd narrower and a little shorter, 3rd narrower and shorter than the preceding, 4th short and conical. Tongue triangular, as long as the 1st joint of the labial palpi, its apex with an acute triangular notch and split to the middle. Paraglossæ well developed, extending to the level of the apex of the tongue. Thorax transverse, rather strongly narrowed behind, the pronotal epipleura visible from the side. Elytra short, the postero-internal and postero-external angles rounded. Abdomen a little narrowed backwards, the first three visible tergites transversely impressed at their bases. Mesosternum simple, its process very short and broad, extending but little between the coxæ, truncate; metasternal process long, broad, and parallel, extending between the coxæ, truncate and separated from the mesosternum by a short, broad, shining intersternal

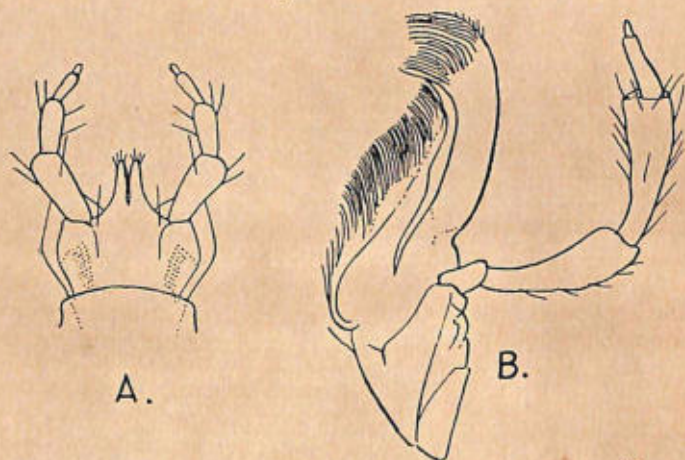


Fig. 140.—*Creochara brevipennis*. A, labium; B, maxilla.

piece; coxæ widely separated. Legs moderate, all the tibiæ spinose. Tarsi 5, 5, 5; the anterior with the first four joints short and subequal; middle with the 1st joint as long as the 2nd and 3rd together, the 2nd to 4th subequal; posterior with the 1st joint almost as long as the following three together, these subequal, 5th a little shorter than the 1st. Claws simple, lightly curved.

2236. *Creochara brevipennis*. (Plate III, fig. 10.)

Myrmedonia brevipennis Bernh., Stett. Ent. Zeit. lxiv, 1903, p. 21.
Myrmedonia (? *Pella*) *montana* Cam., Ann. Mus. Civ. Gen. lii,
 1925, p. 46.

Entirely black, rather shining; elytra shorter than the thorax. Antennæ and legs black, tarsi ferruginous. Length 6-7.5 mm.

Head transverse, suborbicular, the eyes large, the temples short and completely rounded, moderately coarsely and moderately closely punctured except in front, where sculpture is nearly absent, in the middle anteriorly with a small fovea, finely but distinctly shagreened. Antennæ with the 1st joint long, moderately thickened apically, longitudinally sulcate from the middle to the apex, 2nd joint a good deal shorter than the 1st, twice as long as broad, 3rd longer than 2nd, 4th very short, strongly transverse, 5th and following moderately transverse, longer and broader than the 4th and not increasing appreciably in width, 11th conical, shorter than the preceding two together. Thorax wider than the head, transverse, widest a little before the middle, the sides rounded and narrowed in front, the anterior angles slightly obtuse, more strongly contracted but scarcely sinuate to the completely rounded posterior angles, all the margins strongly bordered; disc rather uneven, on either side of the middle line with a longitudinal impression, each with two large punctures, more externally, towards the sides with a similar large puncture, the rest of the surface uniformly but more coarsely punctured than the head except towards the anterior angles, which are more sparingly punctured, ground-sculpture as on the head. Scutellum asperate. Elytra shorter and broader than the thorax, strongly transverse, sutural angle strongly rounded, the posterior margins oblique, much more closely and more deeply punctured than the thorax, with obsolete ground-sculpture. Abdomen gradually narrowed behind, very finely and sparingly punctured, the 7th segment moderately closely asperate, 8th closely granulate.

♂: 8th dorsal segment much more coarsely granulate, more produced, its apical margin more distinctly crenulate.

A number of specimens taken by the author at Matiana, Sinla Hills, alt. 7900 feet above the sea, in the carcase of a bird.

Also in Tong-king and Sumatra.

MYCETOCHARA, gen. n.

In general facies much resembling *Ocalea* Er. Head suborbicular, narrower than the thorax, the neck stout, eyes rather large, longer than the post-ocular region, the temples completely bordered below. Labrum transverse, feebly emarginate, the emargination furnished with a membrane. Mandibles not prominent, curved, pointed, edentate. Outer lobe of maxilla not extending beyond the inner, its apex finely ciliate; inner lobe narrow, pointed, the distal half internally with long, slender, rather closely placed spines. Maxillary palpi with 1st joint small, 2nd elongate, slightly curved, a little thickened towards the apex, 3rd as long as the

2nd but thicker apically, 4th much narrower, about half as long as the 3rd, 5th small, conical, its base about as broad as the apex of the 4th. Mentum transverse, trapezoidal, feebly broadly emarginate in front. Labial palpi rather long, the 1st joint stout, cylindrical, twice as long as broad, 2nd narrower and a little longer, 3rd much narrower and about half as long as the 2nd, 4th small and conical. Tongue narrow, scarcely as long as the 1st joint of the labial palpi, split to the middle into two narrow parallel lobes. Thorax moderately transverse,

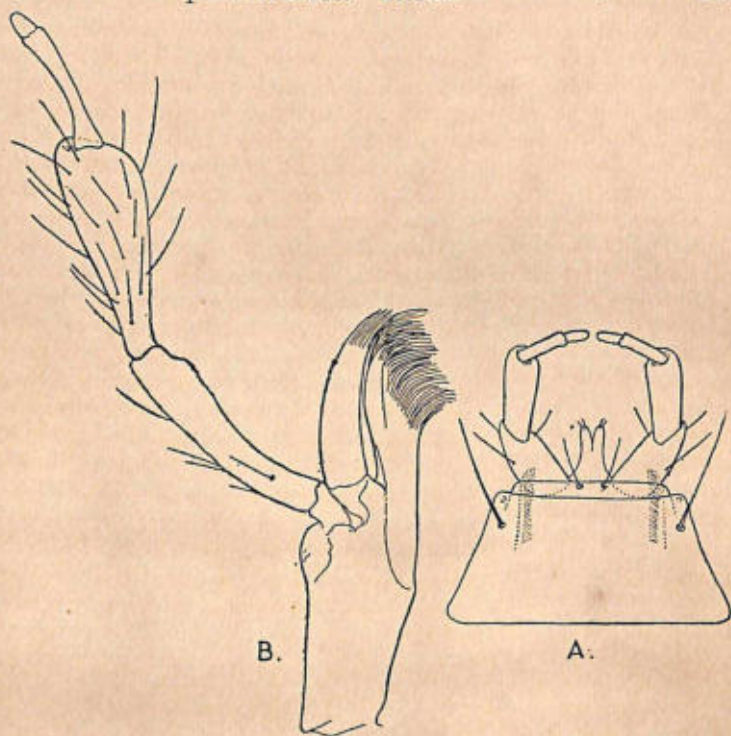


Fig. 141.—*Mycetochara basiventris*. A, labium; B, maxilla.

the pronotal epipleura visible from the side. Elytra slightly longer and distinctly broader than the thorax, emarginate postero-externally. Abdomen gradually narrowed from base to apex, the first three visible tergites transversely impressed at their bases. Mesosternum keeled at the base, its process extending about three-fourths the length of the coxæ, narrowly truncate at apex and meeting the rounded apex of the metasternum, the coxæ moderately separated. Legs rather long, the anterior and middle tibiæ finely spinose. Tarsi 5, 5, 5; the anterior with the first four joints short and subequal

middle with the 1st joint shorter than the 2nd, 2nd to 4th of equal length; posterior with the 1st joint scarcely longer than the 2nd, 2nd to 4th decreasing in length, 5th longer than the 1st. Claws simple, lightly curved.

2237. *Mycetochara basiventris*, sp. n.

Shining; head and last three abdominal segments black, the first three red, usually infuscate in the middle, the 3rd sometimes extensively; thorax dark reddish-brown with the sides lighter; elytra dark brown, usually more or less extensively reddish at the base. Antennæ black, the first three joints and legs reddish-yellow. Length 5 mm.

Head finely, sparingly punctured, and with a fine wavy ground-sculpture. Antennæ with the 3rd joint a little longer than the 2nd, 4th small, about as long as broad, narrower than the 5th, 5th to 7th scarcely differing amongst themselves, about as long as broad, narrowed at their bases, 8th to 10th slightly transverse, scarcely differing from each other, 11th as long as the preceding two together. Thorax transverse (7:5.5), convex, the sides rounded and somewhat deflexed in front, straighter and more retracted behind, the posterior angles obtusely rounded, before the scutellum with a fovea, much less finely and more closely punctured than the head, the punctures asperate; ground-sculpture scarcely visible; meso- and metasterna yellow. Elytra longer (6.5:5.5) and distinctly broader than the thorax, finely, closely and roughly punctured and with a fine ground-sculpture. Abdomen narrowed backwards, at the bases of the anterior segments with a few small punctures, the posterior margins with a few others, elsewhere practically impunctate; first three sternites red. Pubescence of the fore-parts fine, short and depressed.

Darjeeling: Lepchajagat (*Gardner*). In fungus.

Genus **MASEOCHARA** Sharp.

Maseochara Sharp, B. C.-A. i, 2, 1882-87 (1883), p. 154; Casey, Trans. Acad. Sci. St. Louis, xvi, 1906, pp. 130, 168; Fenyès, Gen. Ins. 173 c, 1922, p. 417.

Tithanis Casey, Contrib. Col. N. Amer. i, 1884, p. 16.

BIOLOGY.—Böving and Craighead, Ent. Amer. xi, 1931, tab. 16, figs. F, G, H, I.

Rather parallel in build. Head narrower than the thorax, suborbicular, neck moderately stout, eyes moderate, the temples rather finely but completely bordered below. Labrum transverse, broadly emarginate in front, the emargination closed by a membrane. Mandibles rather short and stout, slightly curved, pointed, edentate. Outer lobe of maxilla scarcely broader than the inner and not produced beyond it,

finely ciliate at the apex; the inner pointed and incurved at apex, with slender, closely placed spines along the inner border, which are longer towards the base, the basal half strongly ciliate. Maxillary palpi 5-jointed, the 1st joint small, 2nd curved and a little thickened towards apex, 3rd longer, but scarcely thicker apically than the preceding, 4th subulate, about half as long as the 3rd, 5th very small, narrower than the 4th, quadrate. Mentum transverse, trapezoidal, broadly emarginate in front. Labial palpi 4-jointed, short, 1st joint short and stout, 2nd shorter and narrower, 3rd as long as the 2nd but much narrower, 4th very small, conical, truncate. Tongue short and broad, a little narrowed towards apex and split to the middle into two stout parallel lobes. Thorax transverse, the pronotal epipleura visible from the side. Elytra a little broader than the thorax, not emarginate postero-externally. Abdomen parallel, only slightly narrowed behind, only the first two visible tergites transversely impressed. Mesosternum simple, its process broad, extending more than half the length of the coxæ, truncate and meeting the truncate apex of the metasternum, the coxæ rather widely separated. Legs rather short, the anterior and middle tibiæ spinose. Tarsi 5, 5, 5; the anterior and middle with the first four joints short and subequal; posterior with the 1st joint slightly longer than the 2nd, 2nd to 4th subequal, 5th longer than the 1st. Claws simple, lightly curved.

Key to the Species.

- Elytra reddish-yellow, usually infusate at the scutellum and postero-externally *horni* Bernh., p. 658.
 Elytra black or pitchy *javana* Fauv., p. 659.

2238. *Maseochara horni*.

Atheta horni Bernh.*, D. E. Z. 1902, p. 21.

Maseochara indica Fauv., Rev. d'Ent. xxiii, 1904, p. 66.

Fore-parts moderately, abdomen more strongly shining, black, the elytra reddish-yellow, the scutellary and postero-external regions infusate. Antennæ black, the first two joints and legs reddish-yellow. Length 2.5-4 mm.

Head suborbicular, narrower than the thorax, the eyes rather large, as long as the post-ocular region, not prominent; with small, flat, obsolete umbilicate punctures not very closely placed, the front impunctate; ground-sculpture strong, coriaceous. Antennæ with the 3rd joint as long as the 2nd, 4th small, slightly transverse, the 5th to 10th gradually more strongly, the penultimate about twice as broad as long, the 11th longer than the preceding two together. Thorax transverse (6:4.75), the sides rounded in front, straighter and

rather strongly retracted behind, the posterior angles obtusely rounded: before the scutellum obsoletely impressed, along the middle sometimes with a fine impressed line, the puncturation similar but much closer than on the head, the ground-sculpture similar, at the sides with two or three long setæ. Elytra scarcely longer but a little broader than the thorax, finely, closely and asperately punctured, near the shoulder with a long seta and with a fine ground-sculpture. Abdomen a little narrowed at the apex, finely, moderately closely punctured, only a little less closely behind. Anterior and middle tibiæ with a long seta at the middle. Pubescence rather long, yellow, semi-erect.

Ceylon: Nalanda, Kandy. India: Nilgiri Hills; Bengal; Kalimpong; Ghum. Also in Sumatra.

2239. *Maseochara javana*.

Maseochara javana Fauv., Rev. d'Ent. xxiii, 1904, p. 66.

Very like *horni*, but differs in the entirely black or pitchy elytra and darker legs, with only the knees and tarsi reddish-yellow; the thorax also is a little longer and so less transverse (7:6), the base before the scutellum bi-impressed, the disc sometimes with four small quadrately placed punctures, the general puncturation closer; in other respects similar. Length 2.5-5 mm.

Darjeeling district: Rangirum, alt. 6000 feet (*Gardner*). Also in Java, Borneo, and Lombok.

Genus **TETRASTICTA** Kr.

Tetrasticta Kr., Linn. Ent. xi, 1857, p. 54; Cam., Trans. Ent. Soc. Lond. 1920, pp. 362, 397; Fenyés, Gen. Ins. 173 B, 1922, p. 417.

Rather robust and more or less oblong, in facies somewhat resembling a large *Gyrophæna* or certain species of *Zyras*, as *laticollis* Märk., for example. Head narrower than the thorax, the mouth-parts produced, transversely suborbicular, strongly constricted behind, the neck moderate and concealed by the thorax; eyes large, temples strongly bordered below. Labrum transverse, feebly broadly emarginate, the anterior border narrowly membranous. Antennæ with the 1st joint sulcate for about half its length, the 4th and following each with a few rather long hairs. Mandibles moderate, slightly curved, pointed, edentate. Maxillary palpi with the 1st joint small, 2nd slightly curved and slightly thickened towards apex, 3rd longer than 2nd and more thickened, 4th subulate, half as long as the 3rd, 5th very small. Inner lobe of maxilla pointed, densely ciliate internally, at the apex also with some fine spines; outer

lobe extending a little beyond the inner and closely covered with short cilia at the apex. Mentum transverse, trapezoidal, feebly, broadly emarginate in front. Labial palpi with moderate 1st joint, 2nd nearly as long but narrower, 3rd narrower and slightly shorter than 2nd, 4th narrower and about a third as long as the preceding. Tongue rather long, narrowed towards apex and split nearly to the middle. Thorax strongly transverse, the pronotal epipleura not visible from the side, the disc in the type with four quadrately placed punctures, the sides and base finely bordered. Prosternum rather short and with a transverse arcuate ridge. Mesosternum short and broad, simple, scarcely extending half the length of the coxæ, broadly truncate, the metasternal process long and broad, meeting the mesosternum, the coxæ widely separated. Elytra short, not emarginate postero-externally. Abdomen parallel, the first two visible tergites transversely impressed at base. Legs moderate; tibiæ finely spinose. Tarsi 5, 5, 5; the anterior with the first four joints short, equal, the 5th as long as the preceding three together; middle with the 1st joint rather short, slightly longer than the 2nd, 2nd to 4th equal; posterior with the 1st joint elongate, distinctly longer than the 2nd, 2nd to 4th gradually decreasing in length, the 5th nearly as long as the 1st. Claws simple. The species of the genus are associated with termites.

Key to the Species.

1. Shining, black, the elytra brownish-yellow; thorax with four distinct quadrately placed punctures *polita* Kr., p. 660.
Differently coloured; thorax without or with less distinct quadrately placed punctures.
2. Larger (4.5 mm.) and more robust; thorax and elytra reddish-brown, the former with four fine quadrately placed punctures. . . . [p. 661].
Smaller (3.75 mm.) and narrower; thorax without quadrately placed punctures; elytra yellow, infuscate externally. . . . *assamensis*, sp. n.,
mendosa, sp. n., p. 661.

2240. *Tetrasticta polita*.

Tetrasticta polita Kr., Linn. Ent. xi, 1857, p. 55; id., Arch. Naturg. xv, 1859, p. 19, tab. 1, fig. 6, a, b; Cam., Trans. Ent. Soc. Lond. 1920, p. 397.

Shining, black, the elytra and base of the abdomen yellowish-brown, the former blackish externally. Antennæ black, the first three joints and legs reddish-yellow. Length 3 mm.

In facies much resembling a *Gyrophæna* subgenus *Phanerota*, but with much less prominent eyes. Head narrower than the thorax, the front produced, the eyes very large, occupying the whole side of the head, very finely, sparingly punctured

and with scarcely visible ground-sculpture. Antennæ with the 1st joint sulcate for about the apical half, the 3rd as long as the 2nd, 4th strongly transverse, 5th to 7th transverse, longer than the 4th, differing but little amongst themselves, 8th to 10th gradually a little less transverse, about a half broader than long, the 11th as long as the 9th and 10th together. Thorax strongly transverse (6.5 : 4), convex, the sides rounded, more retracted behind and rounded with the base, the disc with four moderate quadrately placed punctures, towards each side with another and a fine scattered puncturation as on the head; ground-sculpture absent. Scutellum very finely, closely punctured. Elytra as long as and a little broader than the thorax, as finely but less sparingly punctured. Abdomen parallel and, except for a row of extremely fine punctures at the posterior margins of the segments, practically impunctate. Pubescence throughout yellow, stiff and semi-erect on the fore-parts, very sparing on the abdomen.

♂: 8th dorsal segment rounded and very finely and closely crenulate.

Ceylon. Also in Singapore.

2241. *Tetrasticta mendosa*, sp. n.

Shining; head black, thorax light chestnut-brown; elytra yellow, the postero-external region blackish; abdomen pitchy-black, the posterior margins of the segments rather broadly reddish-yellow. Antennæ blackish, the first three joints and legs reddish-yellow. Length 3.75 mm.

Much resembling *Zyras laticollis* Märk. in build. Larger and more robust than *polita*, and apart from the different colour the eyes are smaller, the puncturation of the head finer and less sparing, the ground-sculpture more evident, thorax with the anterior pair of punctures absent and the posterior scarcely visible, very finely and much more closely punctured, elytra slightly longer than the thorax, more finely and more closely punctured than in *polita*, and with a very fine ground-sculpture, abdomen very finely and moderately closely punctured on the 2nd to 4th visible segments, the 5th almost impunctate, the 6th moderately closely punctured. Antennæ as in *polita*, the pubescence throughout less sparing than in that species.

♂: 8th dorsal segment truncate and finely and closely crenulate.

Dehra Dun.

2242. *Tetrasticta assamensis*, sp. n.

Shining; head black, thorax and elytra reddish-brown, the latter more or less infuscate behind, abdomen pitchy-black, the first two visible segments reddish. Antennæ

black, the first three joints and legs reddish-yellow. Length 4.5 mm.

The largest and most robust species of the genus; build of *mendosa*. Head with a few fine scattered punctures and without ground-sculpture. Antennæ with the 3rd joint longer than the 2nd, 4th and 5th very short, strongly transverse, 6th to 10th longer, less transverse, gradually increasing in length, the 9th and 10th about a half broader than long, the 11th as long as the 9th and 10th together. Thorax transverse (5:3), the sides rounded with the base, a little more retracted in front, finely and sparingly punctured, the four quadrately placed punctures feeble; ground-sculpture absent. Elytra broader and slightly longer than the thorax, less finely and much more closely punctured, in the ♂ with a short ridge against the suture behind the middle. Abdomen parallel, finely and rather sparingly punctured throughout. Pubescence throughout yellow, semi-erect.

♂: 8th dorsal segment on each side of the middle with a keel, the space between flattened and with a few granules, the posterior margin semicircularly emarginate.

Assam: Patkai Mountains (*Doherty*). British Museum.

Genus **PARALEOCHARA** Cam.

Paraleochara Cam., Trans. Ent. Soc. Lond. 1920, pp. 275, 362.

In facies much resembling *Hoplandria* Kr. and *Pseudoplandria* Fenyès. Labrum transverse, the anterior margin truncate, the anterior angles rounded. Mandibles long and stout, prominent, lightly curved and pointed at the apex, simple, the clypeus acutely triangularly produced. Maxillary palpi 5-jointed, the 1st joint small, the 2nd elongate, lightly curved and widened towards the apex, the 3rd a little longer than the 2nd, gradually widened towards the apex, the 4th small, subulate, about half as long as the preceding, the 5th very small, a little narrower than the 4th. Inner lobe of the maxilla narrow, slightly curved and pointed at the apex, the inner margin densely set with moderately long and rather fine pectinations; outer lobe oblong, lightly curved, densely ciliate at the anterior border. Tongue moderately broad and moderately long, extending to the level of the apex of the 1st joint of the labial palpi and split to the middle into two narrow lobes. Labial palpi 4-jointed, the 1st joint stout, moderately long, the 2nd about as long but not quite so stout as the 1st, the 3rd shorter and narrower than the 2nd, the 4th narrower and shorter than the 3rd. Gular sutures narrowly separated and parallel in front, diverging gradually posteriorly. Temples strongly bordered below. 1st joint

of antennæ sulcate for quite one-third its length above. Pronotal epipleura not visible from the side. Prosternum broadly rounded behind. Mesosternal process very short, extending but a little distance between the coxæ, broad and truncate posteriorly; metasternal process produced, meeting the mesosternal process, broad and truncate anteriorly, its sides and apex finely bordered. Intermediate coxæ distant. Tarsi 5, 5, 5; the anterior pair with the first four joints short and subequal, the 5th about as long as the preceding three together, claws simple, the pulvinus with a rather long spine. The middle pair with the first four joints short and subequal (but longer than those of the anterior pair), the 5th elongate, about as long as the preceding three together. The posterior pair with the joints elongate, the 1st as long as the 2nd and 3rd together, which gradually decrease in length, the 5th elongate. Elytra not sinuate. 3rd and 4th (first two visible) dorsal segments of the abdomen transversely impressed at the base.

2243. *Paraleochara translata*. (Plate III, fig. 11.)

Aleochara translata Walk.*, Ann. Mag. Nat. Hist. (3) iii, 1859, p. 52.

Homalota splendida Kr.*, Arch. Naturg. xxv, 1859, p. 38.

Paraleochara fungivora Cam., Trans. Ent. Soc. Lond. 1920, p. 276.

Very shining, light chestnut-brown or reddish-yellow, the head and 6th and 7th abdominal segments black, the former sometimes with the disc reddish-yellow; elytra pitchy-black, the base lighter. Antennæ reddish-brown, the first three joints, mouth-parts and legs reddish-yellow. Length 2.9 mm.

Head orbicular but produced in front, the mandibles prominent; eyes moderate, not prominent; puncturation very fine and very sparing, pubescence sparing, stiff and coarse. Antennæ stout, the 1st joint laterally compressed, the apical third of the upper border sulcate, the 3rd a little shorter than the 2nd, the 4th to the 10th transverse, gradually increasing in breadth, the penultimate about twice as broad as long, the 11th short, oval. Thorax transverse, one-fifth as broad again as long, widest at the middle, the sides rounded and retracted anteriorly, more strongly retracted posteriorly in a nearly straight line to the rounded posterior angles; puncturation fine, very sparing, pubescence coarse, stiff and sparing and erect, the sides and base finely bordered. Elytra blackish, scarcely as long as the thorax but a little broader, transverse, very obsoletely and sparingly punctured, pubescence scanty, stiff and sparing. Abdomen parallel, the 3rd, 5th and 6th segments with a few fine punctures,

the rest nearly impunctate, pubescence long, vary sparing and stiff.

♂ (?): Sth dorsal segment narrowed, emarginate posteriorly. Ceylon. Also in Singapore.

Genus **PSEUDOPLANDRIA** Fenyès.

Pseudoplandria Fenyès, Bull. Mus. Comp. Zool. Harvard Coll. lxx, 1921, p. 30.

Hoplandria Cam., Trans. Ent. Soc. Lond. 1920, pp. 362, 397 (nec Kraatz).

In facies very like *Hoplandria* Kr. More or less fusiform, subconvex and usually brightly coloured species. Head

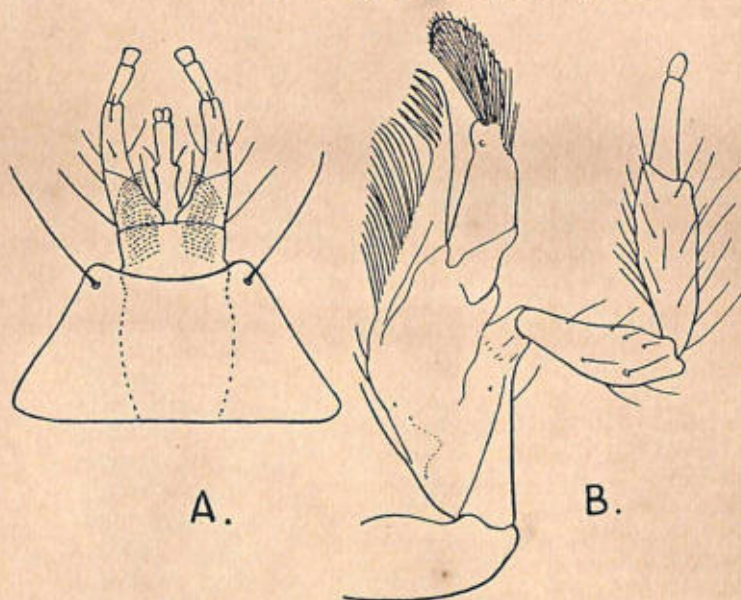


Fig. 142.—*Pseudoplandria sivalikensis*. A, labium; B, maxilla.

narrower than the thorax, transversely suborbicular, its base ensconced in the thorax, neck moderate, about a fourth as broad as the head; eyes large, longer than the post-ocular region, which is strongly bordered below. Antennæ moderate, the penultimate joints more or less transverse, setiferous. Labrum transverse, slightly arcuately emarginate in front, the angles rounded. Mandibles moderate, acutely pointed, the right with a small sharp tooth at the middle of the inner border. Outer lobe of maxilla broader than the inner and extending beyond it, membranous at apex and covered with short hairs; inner lobe narrow, acute, near the apex with

six or seven slender spines, behind these closely ciliate. Maxillary palpi with the 1st joint very small, 2nd slightly curved and slightly thickened towards the apex, 3rd a little longer but scarcely thicker, 4th subulate, about half as long as the 3rd, 5th narrower than the 4th, quadrate. Mentum transverse, trapezoidal, the anterior border feebly and broadly emarginate. Labial palpi rather long, the 1st joint moderate, a little narrowed towards the apex, which is obliquely truncate, 2nd longer than the 1st but scarcely narrower at its base, slightly narrowed towards the apex, 3rd a little narrower than the 2nd and half as long, 4th narrower and quadrate. Tongue narrow and elongate, extending to the level of the apex of the 2nd joint of the labial palpi, the apex with two small teat-shaped appendages, on each side about the middle with a seta. Paraglossæ ciliate, extending to the apex of the tongue. Thorax transverse, convex, the sides and base narrowly bordered, the disc occasionally with four obsolete quadrately placed punctures, the pronotal epipleura not visible from the side. Prosternum short, with short median keel and transverse arcuate ridge. Mesosternum keeled throughout, its process rather broad and extending nearly the whole length of the coxæ, its apex rounded and meeting the short, rounded, metasternal process, the coxæ rather widely separated. Elytra distinctly emarginate postero-externally. Abdomen gradually narrowed from base to apex, the first two visible segments transversely impressed. Legs moderate, tibiæ finely spinose. Tarsi 5, 5, 5; the anterior with the first four joints short, subequal, 5th almost as long as the preceding four together; middle with the first four joints rather short, subequal; posterior with the first four joints subequal, rather short, 5th as long as the first two together. Claws single, slightly curved. The species are found in decaying fruit and fungus. All the Oriental species described as *Hoplandria* Kr. are referable to this genus, from which it is at once distinguished by the 5-jointed anterior tarsi and the keeled mesosternum.

Key to the Species.

- | | |
|--|--|
| 1. Entirely black, only the base of antennæ and legs reddish-yellow | 2. |
| Otherwise coloured | 3. |
| 2. Larger (5 mm.), 5th to 7th joints of antennæ longer than broad..... | <i>nigra</i> , sp. n., p. 667. |
| Smaller (3 mm.); 5th to 7th joints of antennæ transverse | <i>nigrata</i> , sp. n., p. 668. |
| 3. Abdomen finely, closely and uniformly punctured except on the last two segments | [p. 669.
<i>punctiventris</i> , sp. n., |
| Abdomen less closely and irregularly punctured..... | 4. |

- | | | |
|---|-----|------------------------------------|
| 4. Thorax dark reddish-brown or dark ferruginous-red | 5. | |
| Thorax red or yellowish-red | 6. | |
| 5. Larger (4-5 mm.); antennæ longer, the 6th joint distinctly longer than broad... | | <i>splendida</i> , sp. n., p. 667. |
| Smaller (3 mm.); antennæ shorter, the 6th joint not longer than broad | | [p. 668. |
| 6. Antennæ longer, the 5th joint not transverse | 7. | <i>nilgiriensis</i> , sp. n., |
| Antennæ shorter, the 5th joint transverse | 11. | |
| 7. First two visible tergites impunctate in the basal impressions | 8. | |
| At least the 2nd visible tergite distinctly punctured in the basal impression | 10. | |
| 8. Abdomen with fine but distinct rugæ on the 3rd to 5th visible tergites, postero-external angle of elytra with superficial impression | | <i>dohertyi</i> , sp. n., p. 674. |
| Abdomen with very feeble rugæ; postero-external angle of elytra without impression | 9. | |
| 9. Abdomen very finely uniformly punctured, more sparingly on the penultimate segments | | <i>beesoni</i> , sp. n., p. 672. |
| Abdomen less finely, more sparingly and irregularly punctured | | <i>gratella</i> , sp. n., p. 673. |
| 10. Larger (3.3 mm.); head, thorax and abdomen dark ferruginous-red; elytra more coarsely punctured | | <i>ceylonica</i> , sp. n., p. 670. |
| Smaller (3 mm.); head, thorax and abdomen bright yellowish-red; elytra less coarsely punctured | | [p. 674. |
| 11. Antennæ black, the base and apex reddish-yellow | 12. | <i>andrewesi</i> , sp. n., |
| Antennæ red or reddish | 14. | |
| 12. Larger (3.3 mm.) and more robust; head, thorax and abdomen red | | <i>fraterna</i> , sp. n., p. 670. |
| Smaller (2-3 mm.); thorax and abdomen yellowish-red | 13. | |
| 13. Elytra black, the base narrowly reddish-yellow, asperately punctured | | [p. 671. |
| Elytra reddish-yellow, more or less infusate, scarcely asperately punctured | | <i>siwalikensis</i> , sp. n., |
| 14. Larger (4 mm.) and more robust; head dark red | | <i>fuscipennis</i> Kr., p. 674. |
| Smaller (3 mm.) | | [p. 669. |
| 15. Head and elytra black | 15. | <i>masuriana</i> , sp. n., |
| Elytra blackish with reddish base, or brownish-yellow with the disc more or less infusate | 16. | [p. 671. |
| 16. Elytra blackish with reddish base | | <i>brevicornis</i> , sp. n., |
| Elytra brownish-yellow, the disc infusate | 17. | |
| 17. Narrower; head pitchy-black; abdomen less finely and more closely punctured .. | | [p. 672. |
| Broader; head yellowish-red; abdomen very finely and sparingly punctured ... | | <i>madrasiensis</i> , sp. n., |
| | | <i>indica</i> , sp. n., p. 673. |

2244. *Pseudoplandria splendida*, sp. n.

Shining; head black, thorax lighter or darker reddish-brown, with the margins narrowly lighter; elytra black, the shoulders red; abdomen red, with the 3rd to 5th visible segments black or infuscate. Antennæ and legs reddish-yellow. Length 4-4.5 mm.

Head very finely and sparingly punctured and without ground-sculpture. Antennæ with the 3rd joint a little longer than the 2nd, 4th to 7th longer than broad, decreasing in length, 8th to 10th slightly transverse, 11th as long as the 9th and 10th together. Thorax transverse (8:5.5), the disc with four small quadrately placed punctures, as finely but rather more closely punctured than the head; ground-sculpture absent. Elytra slightly longer and slightly broader than the thorax, closely and asperately punctured, more coarsely in the ♂. Abdomen acuminate, the bases of the first two visible segments impunctate, elsewhere very finely and moderately closely punctured and with a row of larger asperate punctures along the posterior margin; the 3rd and 4th more coarsely punctured, the punctures more or less elongate; 5th and 6th very sparingly punctured. Pubescence yellow, semi-erect on the head and thorax, the abdomen with long straight hairs at the posterior margin of the segments, shorter elsewhere, and on the first two segments distinctly curved on the flat.

♂: elytra more coarsely punctured and adjacent to the postero-internal angle, with a curved keel and a little tubercle external to it, the postero-external area broadly impressed; abdomen with a strong median keel on the 3rd and 4th segments; 6th with a finer keel not reaching the base or the posterior margin; 7th with strong median keel throughout; 8th deeply arcuately emarginate and with three or four small teeth, the surface with a few fine granules.

Ghum district: Rongdong Valley.

2245. *Pseudoplandria nigra*, sp. n.

Shining, black. Antennæ black, the first three joints and apex of the 11th reddish-yellow. Legs reddish-yellow, the femora infuscate. Length 5 mm.

In size and build similar to *splendida*, the sculpture of the fore-parts and antennal structure scarcely differing; the bases of the first four visible tergites are, however, closely and rather coarsely punctured, but elsewhere the sculpture is very similar.

♂: elytra with a large tubercle near the postero-internal angle and a smaller one a little external to it, the postero-

external area broadly impressed; abdomen with the 4th tergite furnished with a fine short median keel at the posterior margin; 7th with a strong median keel; 8th deeply arcuately emarginate and with four or five little teeth, the surface with some small scattered granules.

Ghum district. In fungus.

2246. *Pseudoplandria nigrata*, sp. n.

Shining, black. Antennæ black, the first four joints reddish-yellow. Palpi pitchy. Legs reddish, the tarsi lighter. Length 3 mm.

Rather robust, the abdomen more parallel than in most species of the genus. Differs from *nigra* in the smaller size, shorter antennæ and less roughly punctured elytra. Head very finely, sparingly punctured. Antennæ with the 4th joint a little longer than broad, the 5th to 10th transverse, the penultimate about twice as broad as long. Thorax transverse (5.5 : 4), very finely, moderately closely, obsoletely punctured, usually with indication of four larger quadrately placed punctures on the disc. Elytra broader and a fourth longer than the thorax, rather closely, moderately finely, somewhat asperately punctured. Abdomen subparallel, the bases of all the segments closely crenulately punctured, elsewhere very finely, sparingly punctured (especially on the last three segments) and with some fine rugæ. No sexual characters are present in the specimens, which are probably ♀.

Nilgiri Hills.

2247. *Pseudoplandria nilgiriensis*, sp. n.

Shining; head, thorax and base of abdomen dark ferruginous-red, the elytra and rest of abdomen black. Antennæ blackish, the first four joints and the last reddish-yellow. Legs reddish-yellow. Length 3 mm.

♂: size and build of *nigrata*, the antennæ similarly constructed but differently coloured, the legs lighter, the elytra much more roughly punctured, the bases of the first two visible segments of the abdomen impunctate, elsewhere with less fine punctures and stronger rugæ. Elytra with a tubercle at the postero-internal angle and a fine keel extending from it parallel and close to the posterior margin for the inner half. Abdomen with a fine median keel along the posterior half of the 4th segment; 5th with a small elongate tubercle in the middle; 6th with a short median keel at the base; 7th with strong median keel; 8th with the posterior margin closely denticulate.

Nilgiri Hills.

2248. *Pseudoplandria punctiventris*, sp. n.

Shining; head and elytra black, thorax and abdomen dark reddish-brown, the 3rd and 4th visible segments sometimes blackish. Antennæ black, the first three joints and apical half of the 11th reddish-yellow. Palpi pitchy. Legs reddish-yellow. Length 3.5 mm.

♂: size and build of *nigrata*, but with differently coloured thorax and abdomen, the antennæ longer, the 11th joint longer, thorax more distinctly punctured, elytra more closely punctured, the abdomen (including the basal impressions) finely and closely punctured, more sparingly on the last three segments, the 3rd and 4th visible segments with distinct rugæ. Head very finely, sparingly punctured. Antennæ with the 4th joint a little longer than broad, the 5th as long as broad, 6th to 10th gradually more transverse, the penultimate about twice as broad as long, the 11th longer than the 9th and 10th together. Thorax very finely, moderately closely punctured. Elytra rather finely and closely punctured, less finely and more roughly in the ♂.

♂: 7th dorsal segment of abdomen with a strong median keel in the posterior half; 8th broadly arcuately emarginate and with five or six sharp slender teeth of which the external on each side is the longest.

Assam: Naga Hills: Kampison, alt. 6000 feet.

2249. *Pseudoplandria masuriana*, sp. n.

Shining; head, thorax and abdomen ferruginous-red; elytra black, with the shoulders reddish. Antennæ reddish, the first three joints and the last reddish-yellow. Legs reddish-yellow. Length 4 mm.

Somewhat less robust than *splendida* and differently coloured, the elytra in the ♂ without tubercle or impression, the antennæ shorter and stouter. Head extremely finely, very sparingly punctured; ground-sculpture absent. Antennæ with the 3rd joint as long as the 2nd, 4th scarcely, 5th to 10th gradually more transverse, the penultimate fully twice as broad as long. Thorax transverse (7:5), convex, the disc with four obsolete, quadrately placed punctures, very finely, rather closely but obsoletely punctured. Elytra broader and a little longer (6:5) than the thorax, finely, rather closely, asperately punctured. Abdomen gradually narrowed backwards, the first two visible segments impunctate at their bases, towards the posterior margins with a few very fine punctures, 3rd and 4th closely, moderately finely punctured at their bases, elsewhere with a few fine asperate punctures, 5th and 6th very sparingly punctured. Pubescence yellow, stiff, semi-erect.

♂: 7th dorsal segment with a large median tubercle near the posterior margin; 8th with a straight spine on each side, the border between slightly arcuately emarginate and obscurely crenulate.

Mussooree district. In fungus. Naini Tal. W. Almora: Kumann.

2250. *Pseudoplandria ceylonica*, sp. n.

Shining; head, thorax and abdomen ferruginous-red, elytra blackish, the base and shoulders more or less extensively reddish. Antennæ reddish-yellow. Legs reddish-yellow. Length 3.3 mm.

Colour of *masuriana*, but smaller and narrower, antennæ longer and thinner. Head very finely, sparingly punctured. Antennæ with the 3rd joint as long as the 2nd, 4th and 5th a little longer than broad, 6th to 10th transverse, the penultimate about twice as broad as long, the 11th longer than the 9th and 10th together. Thorax transverse (6:4), convex, with four quadrately placed, very obsolete punctures on the disc, and extremely finely, sparingly punctured. Elytra longer (5:4) and a little broader than the thorax, in the ♂ moderately closely covered with small granules, in the ♀ rather closely and rather finely punctured. Abdomen on the first two visible segments with a few very fine punctures posteriorly, the impressions sparingly punctured, 3rd and 4th finely and closely punctured at their bases, very sparingly elsewhere, 5th very sparingly punctured. Pubescence throughout yellow and semi-erect.

♂: sculpture of elytra granular; at the postero-internal angle with an oblique ridge or tubercle, the area adjacent to the posterior margin crescentically impressed, the impression almost impunctate. Abdomen with the 4th segment furnished with a fine median keel abbreviated in front and behind; 5th with some fine rugæ; 7th with a sharp median keel; 8th arcuately emarginate and denticulate.

Ceylon: Bogawantalawa, alt. 4920-5200 feet (*G. Lewis*).

2251. *Pseudoplandria fraterna*, sp. n.

Shining; head, thorax and abdomen red, elytra blackish, with the base, shoulders and posterior margin narrowly reddish-yellow. Antennæ blackish, the first three joints and the last reddish-yellow. Legs reddish-yellow. Length 3.3 mm.

♂: very like *ceylonica*; differs in the colour of the antennæ, the thorax as finely but less sparingly punctured, the elytra scarcely granular but with a closer, finer, distinctly asperate

punctuation and without tubercle or impression; abdomen less punctured, the 7th segment with a small, sharp-pointed tubercle in the middle, the 8th arcuately emarginate, obscurely denticulate.

♀: unknown.

Ceylon: S. Belligam.

2252. *Pseudoplandria siwalikensis*, sp. n.

Shining; head red, thorax and abdomen yellowish-red, elytra black with the base narrowly, the apical margin very narrowly, reddish-yellow. Antennæ black, the first three joints and greater part of the last reddish-yellow. Legs reddish-yellow. Length 3 mm.

Smaller and narrower than *ceylonica*, the head distinctly narrower, antennæ shorter and thinner, thorax shorter and so more transverse and without trace of quadrately placed punctures, the punctuation very similar. Head very finely, sparingly punctured. Antennæ with the 3rd joint as long as the 2nd, 4th a little longer than broad, 5th slightly, 6th to 10th more strongly transverse, the penultimate about twice as broad as long. Thorax transverse (5:3.5), less finely and much more closely punctured than the head. Elytra broader and about a third longer than the thorax, asperately punctured, more finely and less closely externally, near the postero-internal angle with a tubercle, larger in the ♂. Abdomen very finely and indistinctly punctured on the first two visible segments, more closely and distinctly on the following two, the last two very sparingly.

♂: elytra much more roughly punctured, especially internally, near the postero-internal angle with a larger tubercle than in the ♀, the posterior angles (internal and external) upturned, the area between impressed and nearly impunctate; abdomen with the 7th segment furnished with a sharp median keel in the posterior half; 8th truncate and with seven or eight small sharp teeth, the external one on each side a little longer.

Siwaliks: Malhan Range.

2253. *Pseudoplandria brevicornis*, sp. n.

Shining; head and elytra black, thorax darker, abdomen lighter red. Antennæ and legs reddish-yellow. Length mm.

Darker than *siwalikensis* in colour, the antennæ stouter and entirely reddish-yellow, the elytra a little longer and more closely punctured. Head very finely and very sparingly punctured. Antennæ with the 4th joint as long as broad, 5th

to 10th gradually more transverse, the penultimate about three times broader than long. Thorax convex, transverse (4.5 : 3.3), very finely, rather sparingly punctured. Elytra longer (4.5 : 3.3) and broader than the thorax, closely, finely and asperately punctured. Abdomen impunctate at the bases of the first two visible segments, with a few very fine punctures near the posterior margins, the two following closely and finely punctured at the bases, more finely and much more sparingly elsewhere; 5th with a few small asperate punctures, 6th rather closely covered with similar ones, its posterior margin closely and finely denticulate in both sexes.

♂ : 7th abdominal segment with a small tubercle at the middle of the posterior border.

Ghum district.

2254. *Pseudoplandria beesoni*, sp. n.

Shining; head, thorax and abdomen red, the latter with the 3rd to 5th visible segments black, with reddish posterior margins; elytra black, with the shoulders and postero-external angles obscurely reddish. Antennæ and legs reddish-yellow. Length 3.75 mm.

Larger and more robust than *brevicornis*, the elytra less shining, the antennæ with the 4th joint longer than broad, the 5th as long as broad, the penultimate scarcely three times as broad as long. Thorax as finely but more closely punctured and with four larger quadrately placed punctures on the disc. Elytra about a fourth longer than the thorax, finely and rather more closely punctured than in *brevicornis*. Abdomen as in *brevicornis* but with the 4th and 5th segments more punctured and the 6th truncate and without denticles.

♂ : unknown.

Ghum district.

2255. *Pseudoplandria madrasiana*, sp. n.

Shining; head pitchy-black, thorax and abdomen yellowish-red, elytra brownish-yellow, with the base and posterior margin lighter. Antennæ and legs reddish-yellow. Length 3 mm.

In size and build very like *brevicornis* and with similarly constructed and coloured antennæ, but much more brightly coloured and the posterior angles of the thorax more broadly rounded, the 3rd and 4th visible segments of the abdomen much more distinctly punctured and with stronger rugæ, the last segment feebly arcuately emarginate (? ♀).

Madras : Nilambur.

2256. *Pseudoplandria gratella*, sp. n.

Shining; head red, thorax, elytra and abdomen reddish-yellow, the elytra extensively infusate, the abdomen with the 3rd and 4th visible segments infusate. Antennæ reddish-brown, the first three or four joints and the legs reddish-yellow. Length 3 mm.

♀: very like *sivalikensis* but more robust, the antennæ longer and thicker, the 4th joint distinctly longer than broad, the 5th as long as broad, the penultimate twice as broad as long; puncturation of the head and thorax scarcely differing in the two species, but that of the elytra a little finer but equally close, abdomen with the first two visible segments impunctate at base and sparingly punctured towards the apex, the 3rd and 4th segments less punctured than in *sivalikensis*.

♂: unknown.

Dehra Dun: Kaligad. Assam: Patkai Mountains.

2257. *Pseudoplandria indica*, sp. n.

♀: size, build and colour of *gratella*, but at once distinguished by the less fine and much closer puncturation of the thorax and elytra, the former also with four larger quadrately placed punctures on the disc; the antennæ are shorter, the 4th joint not longer than broad, the 5th transverse, the penultimate joints shorter; the first two visible segments of the abdomen are impunctate at their bases as in *gratella*, but the bases of the following are much more closely punctured than in that species, very sparingly elsewhere.

♂: unknown.

Naini Tal, Kumaun (*H. G. Champion*). Unique. British Museum.

2258. *Pseudoplandria championi*, sp. n.

Shining; head and elytra pitchy-black, the base of the latter more or less rufescent; thorax and abdomen red, the 3rd and 4th visible segments blackish. Antennæ red, the base and apex reddish-yellow. Legs reddish-yellow. Length 3 mm.

Size and build of *indica*, the antennæ similar, thorax much more finely and sparingly punctured, elytra darker, the puncturation finer and closer, the abdomen with only the first visible segment impunctate at the base, elsewhere with puncturation as in *indica*.

♂: unknown.

United Provinces: Ranikhet (*H. G. Champion*). Unique. British Museum.

2259. *Pseudoplandria andrewesi*, sp. n.

Shining, yellowish-red, the elytra blackish, with the base more or less broadly, the posterior margin very narrowly reddish-yellow. Antennæ reddish-brown, the first three or four joints and the 11th reddish-yellow. Legs reddish-yellow. Length 3 mm.

Similar to *gratella* in build, but with thinner antennæ, the puncturation of the head and thorax very similar, but the elytra less closely punctured, the abdomen with the first four visible segments closely and distinctly crenulately punctured at their bases, elsewhere very sparingly punctured, whereas in *gratella* the first two visible segments are impunctate at the bases and the following two much less distinctly crenulate.

♂: elytra with the posterior angles (internal and external) upturned; behind the middle and towards the suture with one to three large tubercles, the postero-external region broadly, the posterior margin narrowly impressed and almost impunctate; puncturation asperate, much closer towards the suture, more sparing externally; abdomen with the 4th to 7th segments keeled along the middle, the keels on the 6th and 7th stronger; 8th obtusely emarginate.

Nilgiri Hills (*Andrewes*).

2260. *Pseudoplandria dohertyi*, sp. n.

♀: colour of *gratella*, the antennæ similar but slightly larger (3.3 mm.) and more robust; differs in the elytra being more closely and less finely punctured and with a superficial impression at the postero-external angle; as in *gratella* the first two visible abdominal segments are not punctured at their bases, but the punctures on the following segments are coarser, closer, more asperate and elongate.

♂: unknown.

S. India: Manipur (*Doherty*). Unique. British Museum.

2261. *Pseudoplandria fuscipennis*.

Hoplandria fuscipennis Kr.*, Arch. Naturg. xxv, 1859, p. 9.

Shining, yellowish-red, the head and elytra more or less infusate. Antennæ red, the 1st, 2nd and 11th joints reddish-yellow. Legs reddish-yellow. Length 2 mm.

Very like *philippina* Bernh., but at once distinguished by the closely punctured bases of the abdominal tergites and the rather larger but scattered punctures elsewhere, whereas in *philippina* the bases of the tergites are impunctate and scattered punctures are absent, only a few very fine asperate

punctures being found along the posterior margins of the segments; the antennæ also are shorter than in *fuscipennis*. Head distinctly narrower than the thorax, the eyes large but not prominent, extremely finely, sparingly punctured and without ground-sculpture, the pubescence yellow, sparing and stiff. Antennæ stout, the 1st joint rather long, as long as the 2nd, 3rd a little shorter, 4th small, transverse, 5th to 10th more strongly, the penultimate fully twice as broad as long, the 11th longer than the preceding two together. Thorax rather more than a third broader than long, convex, the sides evenly rounded with the base, as finely but rather less sparingly punctured than the head; ground-sculpture absent, the pubescence similar. Elytra distinctly broader and nearly a third longer than the thorax, emarginate postero-externally, a little less finely and distinctly more closely punctured, scarcely asperate. Abdomen gradually narrowed towards the apex, moderately finely, closely punctured at the bases of the first four visible segments, elsewhere with some larger scattered punctures, the 5th with a few asperate punctures.

♂: 6th (4th visible) segment with seven or eight fine longitudinal keels, much more obsolete in the ♀.

Ceylon.

GONIONYCHA, gen. n.

Parallel, subdepressed species, very similar in facies to *Apimela paradoxa* Bernh. Head suborbicular, neck rather stout, eyes large, as long as the post-ocular region, this strongly bordered below. Antennæ slender. Mouth-parts a little produced, the labrum short, transverse, truncate; mandibles rather long, curved, pointed and edentate; outer lobe of maxilla broader than the inner and extending a little beyond it, obliquely truncate and ciliate at apex; inner lobe narrow, curved at apex and pointed, with closely placed, rather long slender spines along the inner border; maxillary palpi long, the 1st joint small, 2nd elongate, slightly curved and thickened towards the apex, 3rd longer than the 2nd and thicker apically, 4th subulate, a third as long as the preceding, 5th slightly narrower, a little longer than broad, truncate. Mentum transverse, trapezoidal, truncate; labial palpi with the 1st joint cylindrical, twice as long as broad, 2nd much narrower but about as long, 3rd a little shorter than the 2nd but much narrower, 4th slightly narrower and about twice as long as broad, truncate. Tongue rather broad, shorter than the 1st joint of the labial palpi and divided to the middle into two teat-shaped lobes; paraglossæ feeble. Thorax as long as broad, the sides sinuately retracted behind, the pronotal epipleura visible from the side. Prosternum well developed, not carinate, the posterior deflexed part truncate. Mesosternum

simple, its process short, nearly rectangular, extending about half the length of the coxæ, these contiguous behind; metasternal process short, pointed, extending but slightly between the coxæ. Elytra not emarginate. Abdomen parallel, the first three visible tergites transversely impressed at their base, the first three sternites slightly transversely constricted at base. Legs rather long, tibiæ ciliate. Tarsi 5, 5, 5; the anterior with the first four joints short and subequal, the 5th as long as the preceding three together, tumid; middle with the first four joints rather short, subequal, 5th as long as the

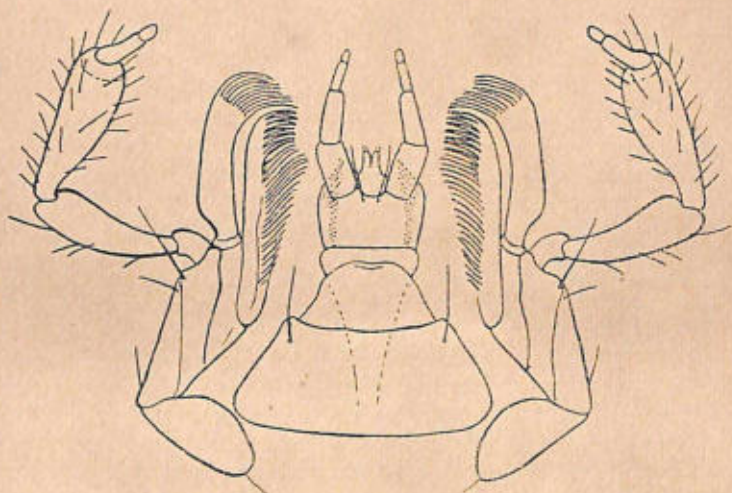


Fig. 143.—*Gonionycha indica*, maxilla and labium.

preceding two together, tumid; posterior with the 1st joint as long as the 2nd and 3rd together, 2nd to 4th subequal, rather short, 5th as long as the 1st, tumid; all the claws angulate between the base and the middle. The species are found in the shingly banks of fast-flowing streams.

Genotype, *indica*, sp. n.

Key to the Species.

Elytra pale yellow	<i>indica</i> , sp. n., p. 676.
Elytra brown	<i>assamensis</i> , sp. n., p. 677.

2262. *Gonionycha indica*, sp. n. (Plate III, fig. 12.)

Shining, black, the last segment of the abdomen and the posterior margins of the others very narrowly yellowish; elytra pale yellow. Antennæ black, the first two or three joints and legs yellow. Length 3.5–3.75 mm.

Head as broad as the thorax, the eyes large, as long as the post-ocular region, the disc sometimes with a very small impression, rather closely covered with small, flat, rather obsolete punctures except in front, which is finely coriaceous. Antennæ long and slender, the 3rd joint as long as the 2nd, the following all longer than broad, decreasing in length, the penultimate only slightly longer than broad, the 11th longer than the 10th. Thorax as long as broad, the sides rounded in front, sinuately retracted behind, the posterior angles rounded, at the middle of the base sometimes with a large flat impression, the puncturation very similar to that of the head except antero-externally, where it is much finer and much more sparing; ground-sculpture very fine, coriaceous. Elytra broader and very slightly longer than the thorax, closely, but more finely and obsoletely punctured. Abdomen parallel, finely, moderately closely punctured on the first three visible segments, much more sparingly on the 4th, very sparingly on the 5th and 6th, the latter truncate. Pubescence yellow, moderately close on the fore-parts, much more sparing on the abdomen.

Dehra Dun : Song River, in shingle.

2263. *Gonionycha assamensis*, sp. n.

Shining; head black, thorax and elytra brown, abdomen brownish-yellow, the 4th and 5th visible segments black. Antennæ black, the first two joints and legs yellow. Length 4 mm.

Differs from *indica* in the colour and in the following respects: the head is rounder and a little narrower than the thorax, the sculpture, however, is very similar; the antennæ are longer and more slender, the penultimate joints twice as long as broad; thorax of similar shape and with a large, flat, median impression in the posterior half, the puncturation very similar but ground-sculpture absent; elytra a little longer than the thorax, closely, finely but much more distinctly punctured than in *indica*, the abdomen a little more sparingly punctured on the anterior segments than in that species.

Assam : Naga Hills, Kampison, alt. 6000 feet.

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[All names printed in *italics* are synonyms.]

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* For *ferruginea* (nom. præocc.) read *ferrugata*.

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* For *nimborum* (nom. preocc.) read *montivaga*.

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PLATE I.

- Fig. 1. *Masuria plumbea* Cam.
2. *Eusteniamorpha indica* Cam.
3. *Entermitophila fletcheri* Cam.
4. *Gyrophæna appendiculatâ* Motsch.
5. *Diestota testacea* Kr.
6. *Plagiusa ceylonica* Kr.
7. *Cænonica thoracica* Motsch.
8. *Placusa insigniventris* Cam.
9. *Troposilusa armata* Cam.
10. *Pseudatheta elegans* Cam.
11. *Demerinda termitophila* Cam.
12. *Rhopalinda termitophila* Cam.

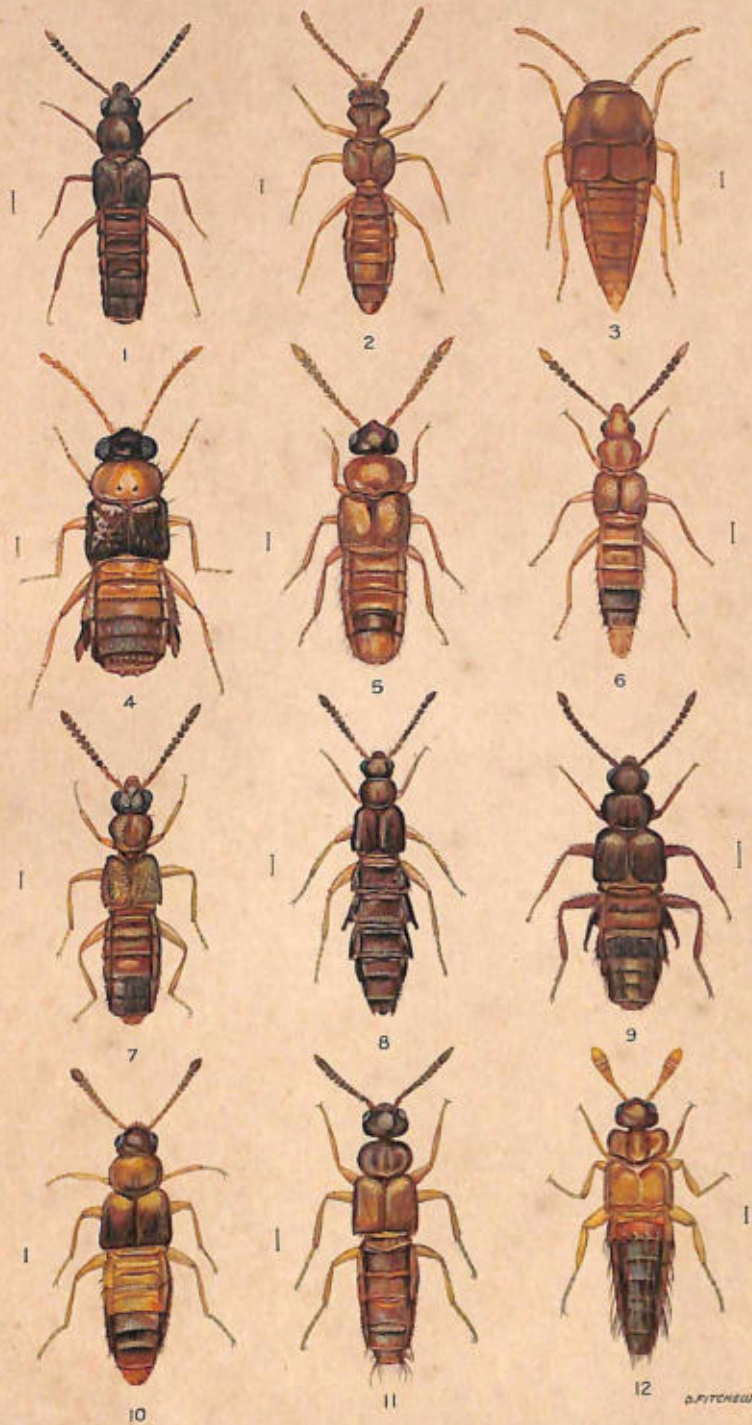


PLATE II.

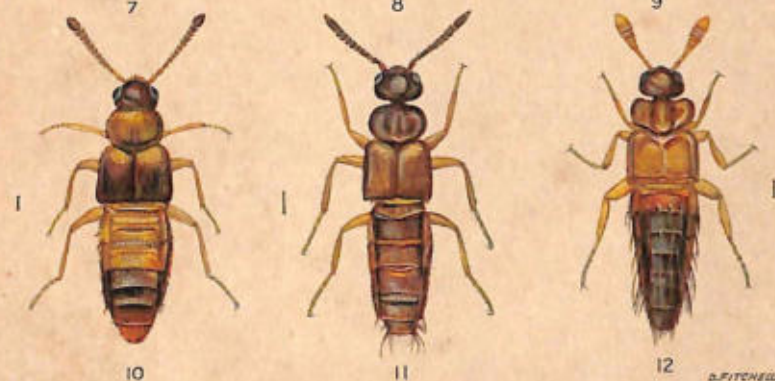
- Fig. 1. *Paraloconota muscicola* Cam., ♂.
2. *Pelioptera exasperata* Kr.
3. *Rhopaletes flavus* Cam.
4. *Amaurodera bomfordi* Epp.
5. *Tetrabothrus indicus* Cam.
6. *Astilbus punctatissimus* Kr.
7. *Astilbus trigonocephalus* Cam.
8. *Orphnebius hauseri* Epp.
9. *Deroleptus ceylonicus* Cam.
10. *Pheidologitonetes setifer* Cam.
11. *Jacobsonella flavescens* Cam., ♂.
12. *Jacobsonella flavescens* Cam., ♀.



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PLATE I.

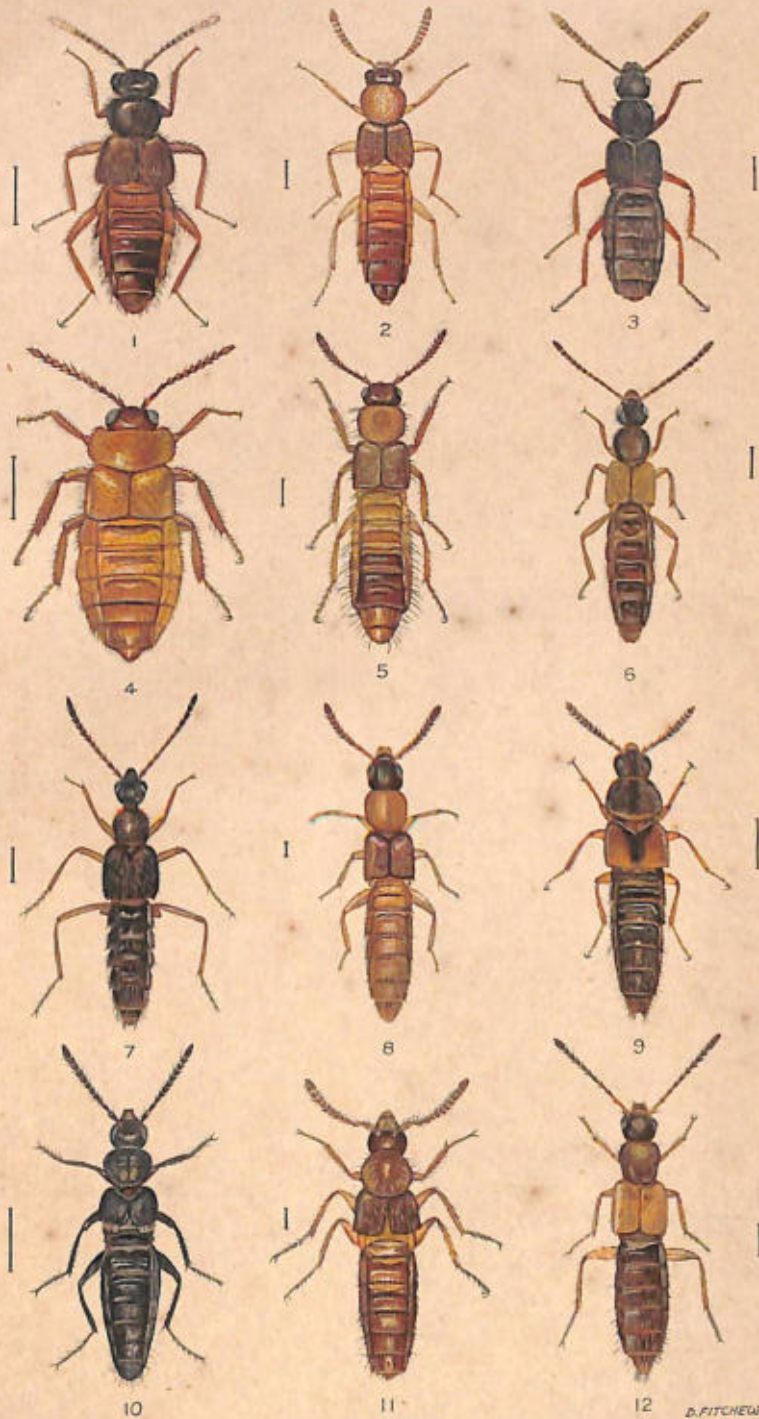
- Fig. 1. *Masuria plumbea* Cam.
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6. *Plagiusa ceylonica* Kr.
7. *Cænonica thoracica* Motsch.
8. *Placusa insigniventris* Cam.
9. *Troposilusa armata* Cam.
10. *Pseudatheta elegans* Cam.
11. *Demerinda termitophila* Cam.
12. *Rhopalinda termitophila* Cam.



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PLATE III.

- Fig. 1. *Zyras* (s. str.) *gardneri* Cam.
2. *Zyras* (*Pella* ?) *coloratus* Cam.
3. *Zyras* (*Zyrastilbus*) *almorensis* Cam.
4. *Pedinopleurus birmanus* Cam.
5. *Atacta floralis* Bernh.
6. *Parapimela indica* Cam.
7. *Ocalea* (*Tetrocalea*) *rufobrunnea* Cam.
8. *Pseudomeotica colorata* Cam.
9. *Aleochara* (*Xenochara*) *motschulskyi*, nom. n.
10. *Greophaga brevipennis* Bernh.
11. *Paraleochara translata* Walk.
12. *Gonionycha indica* Cam.



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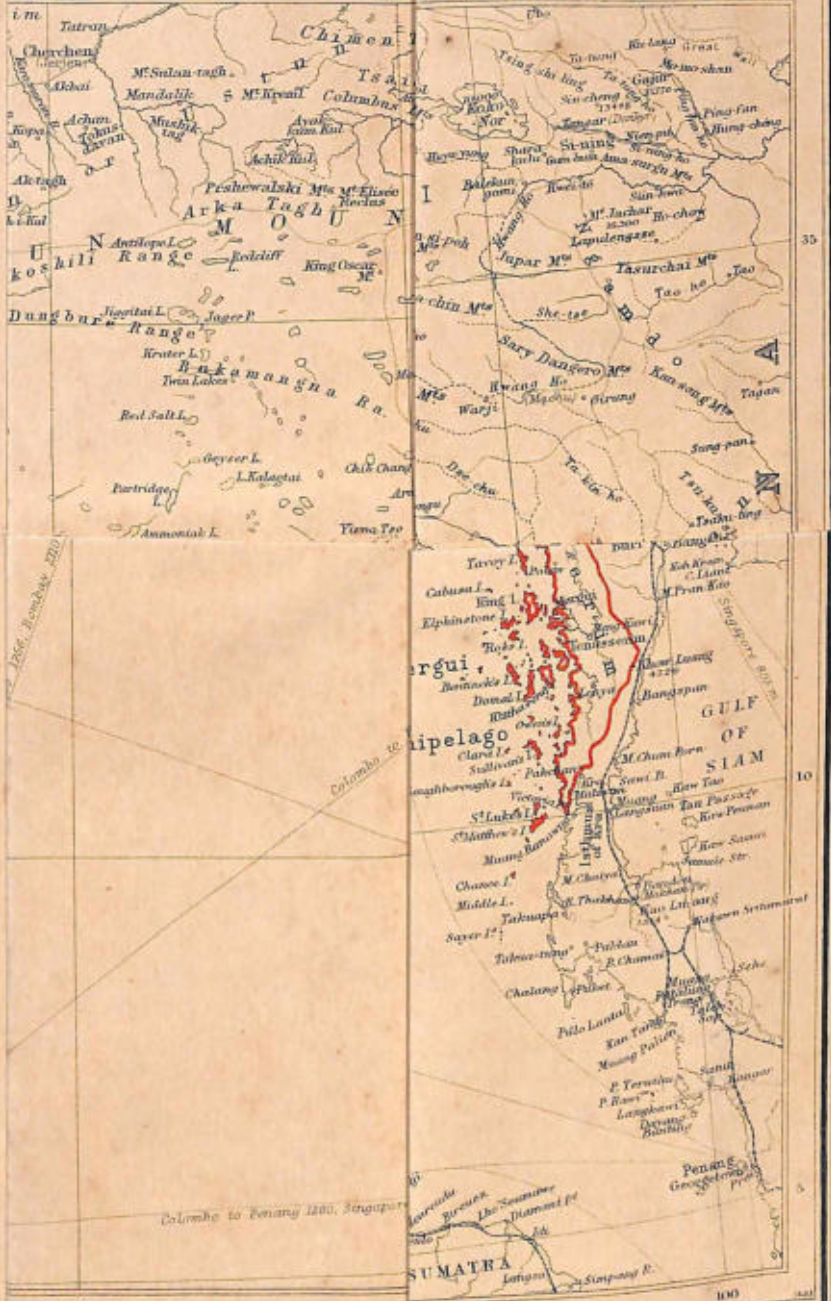
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