

III. *A Revision of Astathes, Newm., and allied Genera of Longicorn Coleoptera.* By CHARLES JOSEPH GAHAN,
M.A.

[Read February 8th, 1901.]

PLATE IV.

THE revision here offered of a small but interesting group of Longicorn beetles is based upon an examination of the types of nearly all the species hitherto described. M. René Oberthür was good enough to send me, for examination and comparison, the types of all the species of this group described by the late James Thomson, as well as some additional types and numerous specimens from his collection. Most of the remaining species were described by Newman and Pascoe, and the types of these are now in the British Museum collection. I am indebted to Dr. Meinert of Copenhagen for his kindness in enabling me to identify the Fabrician species with much greater certainty than could otherwise have been possible. I have taken advantage of the opportunities thus afforded me to redescribe many of the species, finding that the descriptions already existing were in the majority of such cases quite inadequate for their identification. Those given by Thomson in his 'Systema Cerambycidarum' were short preliminary diagnoses, published, as the author himself stated, "afin de prendre date"; the full descriptions which were said to be ready in MS., and were promised for publication in the following year, have not yet appeared, nor are they likely ever to appear, in print. Pascoe's species were described at somewhat greater length, but in many cases, with insufficient attention to structural details, a great drawback in dealing with a group where so many of the species have a great resemblance in colour and markings. Five species, referable to the genus *Astathes*, and all quite distinct from one another, were described by Fabricius. Four of these are placed together in the Munich Catalogue as synonyms or varieties of one species; and the fifth has been omitted from that work. These facts alone are sufficient to show that a revision of the group was greatly needed. The genera here dealt

with include all the Oriental *Astathes*, with the exception of *Tropimelopa*, Thoms., *Eustathes*, Newm., *Ochrocessis*, Pasc., and *Cyanastus* Pasc., each of which contains not more than one or two species.

Genus ASTATHES.

Astathes, Newm., The Entomologist, i, p. 299 (1842); Lacord., Genera des Coléopt., ix, p. 873.

Tetraophthalme, Blanch., Hist. des Insectes, ii, p. 161 (1845).

Tetraophthalmus, Thoms., Archiv. Ent., i, p. 48 (1857).

Type of the genus : *Astathes perplexa*, Newm.

The characters of this genus have been given at full length by Lacordaire, and need not be repeated here. It will be sufficient to point out that the genus is chiefly distinguishable from its allies by having the metasternal process continued almost the whole way between the middle coxae, with its anterior end resting upon the end of the vertical mesosternum. The antennæ always extend up to or a little beyond the apex of the elytra in the male; the first joint is always shorter than the third, and never asperate near the apex; the second is scarcely longer than broad, and the last joint is sharply pointed, and usually glabrous, at the apex. The form and structure of the prothorax, especially of its centronotal tubercle, vary considerably and, taken in conjunction with certain other characters, afford a good means of dividing the genus into sections.

The genus ranges over almost the whole of the Oriental region, and is practically limited to that region, especially if the island of Celebes be regarded as part of it. No species, however, has been recorded from Ceylon, and only one species is known to occur in Peninsular India. The species of our first section are found only in the Philippine Islands and Celebes; those of the second section belong for the most part to the Indo-Chinese sub-region; while all the remaining species of the genus are almost entirely confined to the Malayan sub-region.

SECTION I.

Prothorax with a rather strong conical tubercle on each side; the centro-dorsal gibbosity abruptly, but not highly, raised, flattened above, narrower in front than behind, and impressed on each side

anteriorly with a deep horizontally directed pit. Costæ of elytra usually more or less obsolete and never very acute.

1. *Astathes perplexa.*

Astathes perplexa, Newm., The Entomologist, i, p. 299 (1842).

Astathes illigeri, Thoms., Syst. Ceramb., App., p. 558.

Entirely testaceous with the exception of the last six or seven joints of the antennæ which are infuscate. Head somewhat strongly, but not very thickly, punctured in front, feebly and sparsely punctured on the crown. Pronotum rather feebly and sparingly punctured, the punctures being rather large, and arranged, some in rows the others more irregularly, on the basal half; with numerous very minute setigerous pits in addition, the setæ arising from these being of a tawny colour. In the female type the elytra are pale yellowish-testaceous, contrasting with the more rufous tint of the head and prothorax, and the costæ are almost obsolete. In three other specimens, the elytra are nearly concolorous with the head and pronotum, and in two of these the costæ are distinctly, though not strongly, raised. In the type of *illigeri*, Thoms., the elytra are rufous in tint, exhibiting slight purplish reflexions in certain lights, and the costæ are distinctly raised.

Hab. PHILIPPINE ISLANDS (Cuming). Type (♀) in Brit. Mus. Type (♂) of *illigeri*, Thoms., in coll. Oberthür.

2. *Astathes mniszechii.*

Astathes perplexa, var. γ , Newm., The Entomol., i, p. 299 (1842).

Tetraophthalmus mniszechii, Thoms., Archiv. Ent., i, p. 50 (1857).

Very closely allied to *A. perplexa*, Newm., the only character serving to distinguish it being the somewhat feebler puncturation of the front of the head, and the presence of a very distinct, but rather small, violet spot behind the middle of each elytron. The elytra are usually of a rufo-testaceous colour, exhibiting slight purplish reflexions in certain lights; but in one specimen in M. Oberthür's collection, the general colour is pale yellow or stramineous, with the antennæ infuscate towards the apex, and the violet spot on each elytron rather larger and more conspicuous than in the type.

Hab. PHILIPPINE ISLANDS. Type (♀) in coll. Oberthür.

3. *Astathes bigemmata.*

Astathes bigemmata, Thoms., Syst. Ceramb., p. 558.

Distinguishable from *A. minzechi*, Thoms., by its paler yellowish-testaceous colour, and the presence of a very much larger violaceous-blue spot on each elytron, this spot extending longitudinally almost from the middle to the posterior fifth, and transversely across almost the entire width of the elytron.

Hab. PHILIPPINE ISLANDS. Type (♀) in coll. Oberthür.

4. *Astathes posticata*, sp. n. (Plate IV, fig. 1.)

Astathes perplexa, var. β , Newm., The Entomologist, i, p. 299 (1842).

“Elytrorum apex lâte violaceus.”

Testaceous: with the last six or seven joints of the antennæ infuscate, and the apical third part of the elytra deep metallic-blue or green, slightly tinged with violet anteriorly. Structural characters as in *A. perplexa*, Newm., but with the costæ of the elytra somewhat more prominent than in that species.

Long. 13–19, lat. 6–8 mm.

Hab. PHILIPPINE ISLANDS (Cuming, Semper). Type (♀) in Brit. Mus. ♂ in coll. Oberthür.

5. *Astathes bella*, sp. n. (Plate IV, fig. 2.)

Reddish-testaceous, with the elytra dark metallic-blue, the last six joints of the antennæ blackish-brown, and the outer faces of the tibiae more or less infuscate. Head closely and strongly punctured in front, less closely on the vertex; the front with only a faint indication of a median carina near the base. Prothorax with the lateral tubercles rather short and obtuse; the centro-dorsal gibbosity slightly convex in the longitudinal direction, distinctly and rather closely punctured, its sides converging from behind forwards and perforated each with a deep horizontal pit near the anterior end. Elytra strongly, but not thickly, punctured near the base; with some rows of smaller punctures extending thence to the middle; the apical half almost entirely impunctate; each with two feebly raised dorsal costæ in addition to the costa running alongside the sutural margin, and with a dusky patch in front of the middle formed of closely aggregated short decumbent setæ, longer erect setæ being sparsely scattered over the whole surface. Underside and legs with sparsely spread tawny setæ. Antennæ of the male extending a little

beyond the apex of the elytra; the first two or three joints testaceous the intermediate joints yellowish-white.

Long. 10, lat. 4 mm.

Hab. NORTH CELEBES (Fruhstorfer). Two ♂♂ in Tring Museum; one ♀ in coll. Oberthür.

Although this species shows a tendency in some of its characters to approach those of the next section, it is strongly marked off from them by the form of the centro-dorsal elevation of the prothorax, and agrees fairly well on the whole with the other species placed in the present section.

SECTION II.

Prothorax with a very short blunt tubercle on each side; the centro-dorsal gibbosity strongly raised, convex, somewhat rounded in outline, prolonged sufficiently in front to interrupt the anterior transverse groove, and impressed on each side anteriorly with a deep horizontally directed pit. Costæ of elytra never prominent, and usually almost obsolete.

5. *Astathes gibbicollis.*

Astathes gibbicollis, Thoms., Syst. Ceramb., p. 559.

Head and prothorax rufo-testaceous; head punctured strongly and closely in front, less closely on the vertex; prothorax sparingly punctured, the punctures being most numerous on the dorsal and lateral tubercles. Elytra entirely yellowish-testaceous, somewhat sparsely punctured, with the punctures diminishing in size on the posterior half. Underside and legs testaceous; with the tibiæ dorsally near the apex, the tarsi, and a spot on each side of the metasternum, dark brown. Antennæ of the male reaching not quite to the apex of the elytra; first three joints rufo-testaceous, slightly infuscate, fourth and fifth pale fulvous, last six dark brown.

Hab. MALACCA; BURMA; and N. INDIA. Type (♂) in coll. Oberthür.

This species has only a superficial resemblance to *A. rufescens*, Thoms., near which Thomson placed it, and seems to be most nearly allied to the following species.

7. *Astathes dimidiata.*

Tetraopes dimidiata, Gory, in Guérin's Icon. règne anim., Ins., p. 244, pl. 45, fig. 3.

Tetruophthalmus hirtulus, Buq. (in Dej. Cat.) nec Thoms.

Head and prothorax yellowish-testaceous ; head closely punctured, especially in front ; prothorax somewhat closely punctured on the dorsal and lateral tubercles, sparsely elsewhere. Elytra violaceous from the base almost to the middle, and thence to the apex pale fulvous or yellowish ; the costæ obsolete or represented only by very feebly raised lines. Body underneath and legs pale testaceous, but with a large spot on each side of the metasternum, black, and the anterior abdominal segments sometimes infuscate at the sides. Antennæ of the male reaching to or a little beyond the apex of the elytra ; first four or five joints fulvous or testaceous, last six or seven fuscous.

Hab. JAVA (Horsfield), PENANG (Lamb), BORNEO, PERAK, BURMA, and SIAM.

In Pascoe's collection, I found two examples of this species from Penang, and one from Sarawak, mixed up with those of another species under the name of *splendida*, Fab. The coloration of *dimidiata* greatly resembles that of *splendida*, Fab., but the two species are easily distinguished by the structural characters given for the respective sections in which they are here placed.

8. *Astathes bimaculata*.

Cerambyx bimaculatus, Fab., Ent. Syst., i, 2, p. 263 (1792).
Astathes extrema, Pasc., Trans. Ent. Soc. Lond., (2) v, p. 46 (1859).

Yellowish-testaceous or fulvous ; elytra each with a rather large and somewhat rounded violaceous spot placed just in front of the middle, extending thence about half-way to the base, and, in the transverse direction, reaching from the outer margin to within a short distance of the suture ; metasternum with a fuscous spot on each side ; antennæ slightly infuscate towards the apex, the first three joints nitid and sparsely setose, the remaining joints pubescent and dull. In structural characters agrees very closely with *A. dimidiata*, Gory, but in general form is relatively a little longer and narrower than that species.

Hab. SOUTH INDIA, Tranquebar, Madras, Trevandrum, Bangalore. Type in Copenhagen Museum. Type (♀) of *extrema*, Pasc. in Brit. Mus.

The Fabrician description of this species appears to have been overlooked by the authors of the Munich catalogue, as I can find no reference to it in that work. From Fabricius's description I had strongly suspected that his species was identical with the *A. extrema* of Pasc. ; and

what little doubt remained in my mind was set at rest on receiving for examination, a specimen which Dr. Meinert had carefully compared, and found to agree, with the Fabrician type.

9. *Astathes violaceipennis.*

Tetraophthalmus violaceipennis, Thoms., Archiv. Ent., i, p. 53 (1857).

Tetraophthalmus fulgidus, Thoms. (nec Fabr.), l. c., p. 54.

Astathes ignita, Thoms., Syst. Ceramb., p. 557 (1865).

Head, prothorax, body underneath, and legs, testaceous; tarsi and apices of tibiae more or less infuscate; elytra entirely violaceous, and glossy, but with a slight fuscous patch on each near the middle, due to the greater density of the black setæ over that part; antennæ testaceous; with the last six or seven joints fuscous. Head closely and rather coarsely punctured. Prothorax more or less closely punctured on the dorsal and lateral tubercles. Elytra sparsely and finely punctured; each with three slightly raised costæ, one of which lies close alongside the suture.

Hab. NORTH INDIA, Assam, Nepal, Sikhim, and BURMA. Types in coll. Oberthür.

This species is distinguishable from *episcopalis*, Chev. and others placed in this section, not only by differences in coloration but also in having the costæ of the elytra distinct, though not so strongly raised and acute as in the species of the next section.

10. *Astathes janthinipennis.*

Astathes janthinipennis, Fairm., Ann. Soc. Ent. Belg., 1895, p. 187.

Head, prothorax, body underneath, and femora testaceous; antennæ with the third joint brownish-testaceous, the fourth and fifth pale fulvous, the first two and the last six more or less fuscous; elytra entirely violaceous and nitid, but with a somewhat cloudy patch on each near the middle due to the aggregation there of short, decumbent black setæ, longer erect black setæ being more sparsely spread over the whole surface; tibiae and tarsi brownish-black. Head thickly and strongly punctured in front, sparsely punctured above. Centro-dorsal tubercle of prothorax sparsely punctured. Elytra distinctly but somewhat sparsely punctured; each with two slightly elevated costæ in addition to one running close alongside the suture.

Hab. UPPER TONKIN.

This species is very closely allied to *A. violaceipennis*, Thoms., and differs from it by characters of only minor importance, such as the fuscous colour of the first two antennal joints, and the sparser puncturation of the prothorax.

11. *Astathes episcopalis.*

Astathes episcopalis, Chevr., Rev. et Mag. de Zool., 1852, p. 418.

Head, thorax, body underneath, and femora, testaceous; elytra violaceous; antennae black, with the bases of the 4th, 5th, 6th, and of some of the succeeding joints, fulvous; tibiae and tarsi black. Puncturation variable; the head being usually very closely, and the prothorax less closely punctured; but in some specimens the dorsal tubercle of the prothorax is as closely punctured as the head; elytra somewhat closely punctured, but in some specimens much less so than in others.

Hab. CHINA, HONG KONG, and FORMOSA. Type (♂) in Brit. Mus.

An example of this species in M. Oberthür's collection is ticketed "*violaceipennis*, Thoms. Type," but is evidently not the one described by Thomson under that name. The true *violaceipennis* of Thomson appears to me, from his description, to be identical with the species subsequently described by him as *nitida*, and I think it not improbable that the same specimen served as the type in each case, the original label having, perhaps, been accidentally removed from that specimen to one of *episcopalis*, Chevr.

12. *Astathes cyanoptera.*

Astathes cyanoptera, Gahan, Ann. Mag. Nat. Hist., (7) v. p. 353 (1900).

Closely allied to *A. episcopalis*, Chevr., but differing from it as follows:—Less densely setose; dorsal tubercle of prothorax very sparsely punctured; elytra cyaneous, somewhat more strongly punctured; proximal part of the tibiae testaceous; third, fourth, and fifth points of the antennae almost entirely fulvous, and the underside of the first joint testaceous.

Hab. HAINAN ISLAND (Whitehead). Types (♂ ♀) in Brit. Mus.

13. *Astathes perversa*, sp. n. (Pl. IV, fig. 3.)

Reddish-testaceous; antennae with the last eight joints more or less deeply infuscate; elytra metallic-blue from the base to a little beyond the middle; metasternum with a large black spot on each side. Head rather closely punctured in front, less closely above. Prothorax sparsely punctured, except on the centro-notal tubercle; the latter having the form characteristic of this section, but somewhat less strongly raised than in the preceding species. Elytra rather thickly punctured; each with two short dorsal costæ, in addition to one alongside the suture.

Long. 9 mm. lat. 4 mm.

Hab. WEST BORNEO, Pontianak. Type in coll. Oberthür.

This species seems to link the present section with the next. The centro-notal tubercle is less raised, and the transverse ridges between it and the sides of the prothorax less broad and obtuse, than they are in the other species of this section. By these characters, and by the more extended metallic-blue area of the elytra, as well as by the presence of two tolerably distinct dorsal costæ on each elytron, the species may be distinguished from *A. dimidiata*, Gory, to which it has a considerable resemblance in colour.

SECTION III.

Prothorax much narrower at the apex than at the base; the lateral tubercles short, gradually sloped in front, abruptly raised and somewhat sharply edged behind; the centro-dorsal tubercle moderately raised, somewhat pyramidal in form, sloped gradually in front and prolonged to interrupt the anterior transverse groove, impressed on each side in front with a deep horizontal pit. Elytra each with three distinctly raised costæ, in addition to an acute sutural costa.

14. *Astathes splendida*.

Cerambyx splendidus, Fab., Ent. Syst., i, 2, p. 263 (1792); Syst. El., ii, p. 279 (1801).

Cerambyx splendidus, Weber, Observationes Ent., p. 86 (1801).

Lamia dallorji, var. 1. Illig., in Wied. Archiv. für Zool., i, 2, p. 136, pl. 1, fig. 5 (1800).

Cerambyx dallorji, var. 1. Illig., Mag. für Insekt., iv, p. 109 (1805).

Astathes decipiens, Pasc., Trans. Ent. Soc. Lond., (2) v, p. 46 (1859).

Var. *Astathes splendida*, Pasc., op. cit., (3) iii, p. 353 (1867).

Reddish- or yellowish-testaceous ; elytra violaceous from the base up to, or a little beyond, the middle ; antennae infuscate towards the apex ; metasternum with a larger or smaller black patch on each side ; the hind legs, and sometimes also the middle legs, more or less infuscate. Head strongly and rather closely punctured in front, sparsely punctured above. Prothorax thickly punctured on the central tubercle, more sparsely elsewhere. Elytra rather sparsely punctate and setose, the setæ on the anterior violaceous half being black, on the posterior half, tawny. Antennæ of the male reaching to the apex of the elytra.

Var. The violaceous area of the elytra extending a little farther back than in the type. Body underneath and legs entirely testaceous.

Hab. SUMATRA, JAVA, and (of the *var.*) BORNEO. Types in Copenhagen Museum. Type of *decipiens*, Pasc., in Brit. Mus.

Fabricius, in his description, gave Tranquebar as the locality of this species, but must have done so in error. Dr. Meinert has very kindly sent me for examination one of the original types of Fabricius, and this type specimen undoubtedly belongs to the form occurring in Sumatra, and described by Pascoe as *A. decipiens*. All the examples from Borneo which I have seen belong to the variety, which Pascoe erroneously regarded as the true *splendida* of Fab.

15. *Astathes lemooides*.

Astathes lemooides, Thoms., Syst. Ceramb., p. 558 (1865).

Head, prothorax, and apical half of elytra rufo-testaceous ; basal half of elytra violaceous, the hind border of this violaceous area being rather strongly arcuate ; body underneath black, but with the prothorax and mesosternum testaceous ; legs black, with the tarsi testaceous ; antennæ testaceous, with the last five or six joints infuscate, and the first two sometimes fuscous on the dorsal face.

Hab. SUMATRA. Type (♀) in coll. Oberthür.

This species agrees closely in structure and punctuation with *A. splendida*, Fab., but is easily to be distinguished from it by the stronger and more regular arcuate emargination of the basal violaceous area of the elytra, as well as by the black colour of the underside.

16. *Astathes unicolor.*

Astathes unicolor, Pasc., Trans. Ent. Soc. Lond., (3) iii, p. 349 (1867).

Astathes coccinea, Pasc., l. c., p. 350.

Entirely testaceous with the exception of the last four or five joints of the antennae which are more or less infuscate. In structural characters closely agreeing with the preceding two species.

Hab. BORNEO, Sarawak, Labuan and Sandakan. Types ($\delta \delta$) in Brit. Mus.

This species is almost identical in coloration with *A. rufescens*, Thoms., and its elytra are similarly costate and punctate; but in the latter species the centro-dorsal tubercle of the prothorax is less raised and is without a pit on each side anteriorly.

The type of *coccinea* is slightly narrower than that of *unicolor*, and the head more closely punctured; but the difference in coloration which appears to have existed at the time when they were described has since almost completely vanished, probably as the result of fading in one of the specimens.

17. *Astathes fulgidus.* (Plate IV, fig. 4.)

Cerambyx fulgidus, Fab., Syst. El., ii, p. 280.

Astathes fulgida, Pasc., Trans. Ent. Soc. Lond., (3) iii, p. 353 (1867).

Yellowish-testaceous, with the elytra entirely metallic-blue, -green or violaceous, and the antennae infuscate towards the apex. Head with a rather prominent transverse ridge between the oblique flattened upper part of the front, and the lower median vertical part, and a similar oblique ridge on each side between the upper part and the lower lateral part of the front; upper part of the front canalicate along the middle, the lower part with a sharp median carina. Elytra each with four acute costæ in addition to one running alongside the suture.

Hab. SUMATRA. Type in Copenhagen Museum.

Though I have not seen the type, I have no doubt as to my correct identification of this species. The prominent ridges on the front of the head serve to distinguish it from all other species of the genus.

18. *Astathes terminata*.

Astathes terminata, Pase, Trans. Ent. Soc. Lond., (2) iv, p. 109 (1857); id. (3) iii, p. 351.

Head, prothorax, and body underneath, black; elytra for about three-fifths of their length from the base, violaceous, the remaining part reddish- or yellowish-testaceous; legs fuscous or piceous, with the tarsi and distal portion of the tibiae, testaceous; antennae yellowish-white, with the first joint brownish-testaceous or piceous, and the last three or four infuscate. Head thickly punctured in front, sparsely on the vertex. Central tubercle of pronotum not strongly raised, slightly convex above with a more abrupt conical point in the middle, rather thickly punctured.

Hab. MALACCA. Type (♀) in Brit. Mus.

The type of this species is relatively somewhat narrower and more elongate than the other species of this section; but in some of the following forms (which I provisionally treat as varieties), the shape is more in accordance with that characteristic of the section.

Var. 1. *sumptuosa* (Dup. MS.).

= *Tetraophthalmus daldorfii*, Thoms. (neq Illig. nec Fab.), Archiv. Ent., i, p. 52.

Elytra violaceous from the base to the middle only, or to a little beyond it; body underneath black as in the type of *terminata*.

Hab. JAVA and MALACCA.

Var. 2. Elytra coloured as in the type; abdomen and the greater part of the metasternum testaceous.

Hab. JAVA.

Var. 3. *westermanni* (Mannerb. MS.).

Elytra violaceous from the base to the middle only, or to a little beyond it; abdomen wholly, and the metasternum to a greater or less extent, testaceous.

Hab. PENANG, DING DING ISLANDS, PERAK, and BORNEO.

SECTION IV.

Centro-dorsal tubercle of prothorax less strongly raised, especially in front, where it is scarcely above the level of the transverse groove, and not impressed on each side with a horizontal pit. Elytra each with two distinctly raised, acute costæ in addition to one alongside the suture. The fossa in front of the apex of the last ventral segment

of the female larger and deeper than in the species of the other sections.

19. *Astathes levis.*

Astathes levis, Newm., The Entomologist, i, p. 299 (1842).

Astathes divisa, Pasc., Trans. Ent. Soc. Lond., (2) v, p. 47 (1859).

Var. 1. = *A. gallerucoides*, Thoms., Syst. Ceramb., p. 557 (1865).

Var. 2. = *A. basalis*, Thoms., l. c., p. 557.

A. casta, Thoms., l. c., p. 538.

Reddish-testaceous ; elytra from the base to the middle or to a little beyond it, violaceous-blue, the hinder part of this blue area with a patch of closely aggregated black setae ; the antennae infuscate at the apex, the tarsi, and the apices of the tibiae, brownish-black. Head and prothorax distinctly but rather sparsely punctured ; central tubercle of pronotum sub-pyramidal in form, and more strongly raised than in the majority of the species belonging to this section. Elytra sparsely punctured.

Hab. PHILIPPINE ISLANDS (Cuming). Type (♀) of *levis*, Newm., and type (♂) of *divisa*, Pasc., in Brit. Mus.

Pascoe gave India as the locality of *divisa* and his type specimen is so labelled ; but this specimen agrees so well in every respect (save the sexual differences) with Newman's type, that I feel almost certain the locality India is wrong, and that the specimen really came from the Philippines.

Var. 1. *gallerucoides*, Thoms. Differs from the type of *levis*, Newm., in having a narrow testaceous border at the base of each elytron from the suture to the humeral depression. Type (♀) in coll. Oberthür.

Var. 2. *basalis*, Thoms.=*casta*, Thoms. In this variety the blue area of the elytra does not extend as far as to the middle, and the sutural margins the whole way up to, and alongside of, the scutellum are testaceous. Type (♀) in coll. Oberthür.

I could find no difference between the type of *basalis* and that of *casta*, except a slight difference in tint, the reddish-testaceous colour of the former being replaced by yellowish-white in the latter.

20. *Astathes gemmula*.

Astathes gemmula, Thoms., Syst. Ceramb., p. 557 (1865).

Reddish-testaceous, with the elytra from the base to a little beyond the middle, purplish-violaceous; first two joints of the antennæ, black, last six or seven infuscate; tarsi and apices of tibiæ infuscate. Head and prothorax distinctly but rather sparsely punctured; upper part of front of head depressed in the middle, and separated by an obtuse and oblique ridge on each side from the lateral and lower parts of the front; dorsal tubercle of prothorax sub-pyramidal in form, and as strongly raised in the middle as in *A. levis*, Newm.

Hab. CELEBES. Type (δ) in coll. Oberthür.

This species agrees very well in structure with *A. levis*, Newm., and has a considerable resemblance to it in colour, the chief differences being that the first two joints of the antennæ are black, and the elytra do not exhibit a fuscous patch on the posterior part of the violaceous area.

21. *Astathes plagiata*, sp. n.

Astathes levis, var. γ . Newman, The Entomologist, i, p. 299.

Astathes plagiata (Hope MS.).

Reddish-testaceous. Antennæ with the basal joint brownish or pieaceous, the last six or seven infuscate, and the intermediate joints pallid. Elytra each with a rather large violaceous-blue spot placed a short distance before the middle, about midway between the suture and outer margin. Tarsi and, to a greater or less extent, the tibiæ, infuscate. Front of head distinctly but not very closely punctured; furnished with a rather feeble median carina in its lower half in both sexes; vertex feebly and sparsely punctured. Prothorax rather sparsely punctured; the transverse ridge is not prominent at the sides, and the centro-dorsal tubercle scarcely exists as such, being hardly raised above the level of the surrounding parts. Elytra each with two dorsal costæ in addition to the juxta-sutural costa.

Hab. PHILIPPINE ISLANDS, N.E. Luzon (Whitehead). Type in Brit. Mus.

The very feebly raised centro-dorsal tubercle of the prothorax, together with the different markings of the elytra, serve to distinguish this species from *C. levis*, of which Newman regarded it as a variety.

22. *Astathes instabilis*, sp. n.

Head, prothorax, body underneath, legs, and antennæ testaceous; fourth and fifth joints of the antennæ pallid, and the last three or four infuscate; tibiae sometimes more or less blackish; elytra violaceous-blue, except in the apical fifth or sixth part, which is testaceous. Head sparsely punctured above, more closely in front, with the interstices minutely punctulate. Pronotum strongly but sparsely punctured; the central tubercle almost as strongly raised as in *A. leris*, Newm. Elytra sparsely punctured; each with two distinct dorsal costæ in addition to an acute costa lying close alongside the suture; the setæ on the violaceous area black, those on the apical testaceous area, tawny in colour. Antennæ of the male a little longer than the body, those of the female reaching to the apical fifth of the elytra.

Var. 1. Elytra entirely testaceous, and the setæ on them all tawny in colour.

Var. 2. Elytra testaceous; with the setæ mostly black in colour, those only near the apex being tawny.

Long. 11–15 mm.

Hab. SOUTH and SOUTH EAST BORNEO. Types in coll. Oberthür.

23. *Astathes japonica*.

Tetraophthalmus japonicus, Thoms., Archiv. Ent., i, p. 51 (1857).

Head, prothorax, body underneath, legs, and base of the antennæ, testaceous; intermediate joints of the antennæ pallid, the last four or five infuscate; elytra violaceous, except in their apical sixth part and for a short distance forwards along the sutural and lateral margins, rather closely beset with tawny setæ, especially at and in front of the middle so that a faint tawny band becomes visible there in certain lights. Head sparsely punctured above, more closely in front, with the interstices minutely punctulate. Pronotum sparsely punctured. Elytra distinctly, but not closely, punctured from the base almost to the apex; each with two acute dorsal costæ in addition to one running alongside the suture. Antennæ of the male a little longer than the body.

Hab. (?) Type (♂) in coll. Oberthür.

Var. Apex of elytra more narrowly testaceous than in the type; middle and front tibiae, and sometimes also the hind tibiae, blackish.

Hab. SOUTH EAST BORNEO (Doherty). In Brit. Mus. and in coll. Oberthür.

This variety differs so slightly from the type as to make it extremely probable that the type itself came from Borneo or Java, and not from Japan as stated by Thomson. No other specimens of this or of any species of *Astathes* have been recorded from Japan. The species is very closely allied to *A. instabilis*, the only definite character by which it is distinguishable being the presence of numerous tawny setæ on the anterior violaceous area of the elytra, causing the latter to exhibit a somewhat golden gloss in certain lights.

24. *Astathes montana*, sp. n.

Head, prothorax, underside, femora, and base of antennæ, reddish-testaceous; vertex of head and two small spots on the pronotum faintly piceous, intermediate joints of antennæ pallid, last joints infuscate: elytra of a deep violaceous blue colour, except at the extreme apical border where they are rufescens; all the tibiæ, and the posterior face of the front femora blackish. Head distinctly but rather sparsely punctured, with the interstices between the larger punctures on the front minutely punctulate; prothorax sparsely punctured on the centro-dorsal tubercle, in the channel in front of it, and on the lateral tubercles; elytra sparsely punctured from the base almost up to the apex.

Long. 12, lat. 5 mm.

Hab. HIMALAYAS (Melly). Type (♂) in Brit. Mus.

In coloration this species resembles *A. violaceipennis*, Thoms., but differs in having the tibiæ entirely black. It is distinguished further from that species in being less densely setose, and having the centro-dorsal tubercle of the prothorax less raised, and without a pit on each side in front.

25. *Astathes velata*.

Astathes velata, Thoms., Syst. Ceramb., p. 557 (1865); Pasc., Trans. Ent. Soc. Lond., (3) iii, p. 353.

Yellowish-testaceous; with the last five or six joints of the antennæ infuscate; and the elytra from the base almost to the middle, violaceous-blue, but with this violaceous-blue area more or less widely interrupted at the suture by a triangular extension forwards of the testaceous area. Centro-dorsal tubercle of the prothorax feebly raised, appearing as little more than the median portion of a sinuate ridge crossing the pronotum from side to side; but with the anterior slope of the tubercle extending to the transverse groove in front and raised slightly above its level so as to interrupt it.

Hab. JAVA and SUMATRA. Type (♀) in coll. Oberthür.

This species is closely allied to *A. levata*, Newm., and is chiefly distinguishable from it by the less extent of the violaceous area on the elytra, and the feebler development and closer puncturation of the centro-notal tubercle. This tubercle is of somewhat the same size and form in all the remaining species of this section.

In M. Oberthür's collection there is a specimen ticketed "intermedia Thoms. type" which can only be regarded as a variety of *velata*, Thoms. Though labelled 'type' it has not, to my knowledge, been described. It differs from the type of *velata* in having the elytra violaceous from the base quite up to the middle, and this violaceous area not so widely interrupted at the suture. The locality of the specimen is not indicated by any label, but a specimen in the Brit. Mus. very closely agreeing with it, is ticketed Java.

26. *Astathes rufescens*.

Astathes rufescens, Thoms., Syst. Ceramb., p. 559 (1865).

Very closely allied to *A. velata*, Thoms., and probably only a variety of that species, the chief differences noticeable relating to the colour of the elytra. Elytra entirely yellowish-testaceous, giving more or less strong purplish reflexions, especially towards the base, in certain lights; with a small area on each side between the middle and the base rather closely beset with blackish setæ, the setæ over the rest of the surface being more sparsely scattered, and tawny in colour. (In some specimens the shoulder of each elytron has a distinct purplish colour.)

Hab. JAVA and SUMATRA. Type (♀) in coll. Oberthür.

Having been unable to find any structural difference between this form and *A. velata*, I was inclined to think that the difference in coloration might be due to immaturity of the specimens. But from an examination of a large number of specimens, M. Oberthür has come to the conclusion that this is not the case. He believes, however, that *A. rufescens* is only a unicolorous form of *A. velata*.

27. *Astathes nitens*. (Plate IV, fig. 5.)

Cerambyx nitens, Fab., Syst. Eleuth., ii, p. 279 (1801).

Lamia dulciorii, var. 3, Illig., in Wiedem. Archiv. für Zool. i, 2, p. 136 (1800).

Cerambyx ignitus, Illig., Mag. für Insekt., iv, p. 109 (1805).
Astathes nitens, Pasc., Trans. Ent. Soc. Lond., (3) iii, p. 350
 (1867).

Astathes fabricii, Thoms., Syst. Ceramb., p. 558 (1865).
 Var. *Astathes apicalis*, Thoms., l. c., p. 558.

Astathes humeralis, Heyden, Abh. Sencken. nat. Ges., xxiii,
 p. 578 (1897).

Head, prothorax and abdomen black; antennæ yellowish or reddish-testaceous, with a variable number of the joints nearest the apex more or less infuscate; elytra testaceous, with the posterior sixth or seventh part violaceous; prosternum and hind breast entirely, or in part only, testaceous; legs variable in colour, the femora and tibiae being usually for the most part pitchy-black, but sometimes entirely testaceous. Head and prothorax distinctly, but rather sparsely punctured, the punctures on the prothorax being mostly confined to the centro-dorsal and lateral tubercles; these tubercles not more raised than in the preceding species, and similar to them in form, that is they appear as little more than the median and lateral parts of a sinuate ridge crossing the pronotum from side to side sloping gradually in front, and abruptly raised and rather sharply edged behind. Elytra distinctly enough, but sparsely, punctured, each with two distinct dorsal costæ in addition to one alongside the suture, the costæ external to these being almost, or quite, obsolete.

Hab. SUMATRA, NIAS I., BORNEO, MALACCA and SIAM.

This species is placed in the Munich Catalogue as a variety of *A. splendida*, Fab., and so also is *A. fulgida*, Fab., but it will be seen from the positions which I have assigned to them, that these three species are really very distinct from each other, differing as they do by strongly marked structural characters. *A. nitens* varies to some extent in colour. In some specimens the elytra are entirely testaceous, or have only the extreme apical border violaceous, while in the type (♂) of *apicalis*, Thoms., from Malacca, the whole posterior third part of the elytra is violaceous. In *humeralis*, Heyd., described from one (♀) example from Baram in North Borneo, the apical fourth part of the elytra is violaceous, a condition somewhat intermediate between that of *apicalis* and the typical form of *nitens*.

28. *Astathes caloptera*.

Astathes caloptera, Pasc., Journ. of Ent., i, p. 63 (1860).
Astathes cyanipennis, Thoms., Syst. Ceramb., p. 557 (1865).

Entirely black with the exception of the elytra and antennæ; elytra of a deep violaceous-blue colour, and the antennæ pale yellowish with the last three or four joints infuscate. In its relatively broad form and in all its structural characters the species agrees well with *A. nitens*, Fab.

Hab. BORNEO. Type (♂) of *caloptera* in Brit. Mus. Type (♀) of *cyanipennis* in coll. Oberthür.

This species varies very considerably in size, one of the male specimens described by Pascoe measuring only 9 mm. in length, whereas a large female in the Brit. Mus. collection has a length of 17 mm.

29. *Astathes posticalis.*

Astathes posticalis, Thoms., Syst. Ceramb., p. 558 (1865); Pasc., Trans. Ent. Soc. Lond., (3) iii, p. 351 (1867).

Head, prothorax and abdomen black; elytra violaceous from the base to a little beyond the middle, thence to the apex testaceous, the violaceous area with an almost straight hind border; antennæ testaceous, with the intermediate joints pallid, and the last five or six infuscate; hind-breast testaceous; legs more or less pubescent. Agrees with *A. nitens*, Fab., in structural characters.

Hab. BORNEO. Type (♂) in coll. Oberthür.

This species appears to vary in the extent of the violaceous colour on the elytra. In one specimen before me the violet area does not reach quite up to the middle, in another it reaches just to the middle, while in all the remaining specimens it reaches to a little beyond the middle.

30. *Astathes ignorantina.*

Tetraophthalmus ignorantinus, Thoms., Archiv. Ent., i, p. 51 (1857).

Head and prothorax black; elytra dark violaceous for nearly two-thirds of their length from the base, apical part testaceous; metasternum and abdomen testaceous, with the middle of the first segment black; fore and middle femora blackish, hind femora testaceous; tibiae all slightly black at base, and testaceous towards the apex; tarsi testaceous; antennæ pale yellowish-testaceous. Pronotum sparsely punctured, with transverse ridge and median tubercle closely resembling those of *caloptera*, Pasc., and *nitens*, Fab.

Hab. JAVA. Type (♀) in coll. Oberthür.

Var. Differs from the type in having the abdomen entirely

testaceous, the posterior femora, as well as the anterior and middle femora, black, and the tibiae, especially the anterior pair, black to a greater extent.

Hab. WEST BORNEO, Pontianak. In coll. Oberthür and in Brit. Mus.

Astathes lukenthuli, Heyden (Abh. Sencken. nat. Ges., xxiii, p. 578 (1897), from Samarinda in East Borneo, seems to be identical with this variety. It is described as being closely allied to *A. posticalis*, Thoms., but differing as follows: elytra violaceous to a greater extent (for four-sevenths of their length from the base); front tibiae wholly, and the middle and hind tibiae in their basal part, black; abdomen rufous; central tubercle of pronotum strongly raised ("thorace in medio postice alte calloso"). These differences, with the exception of the last, are almost precisely the same as those by which the above variety may be distinguished from *posticalis*; but there is no appreciable difference in the size or form of the pronotal tubercle, and it is therefore possible that Heyden's species may be one of the varieties of *A. terminata*, Pasc. instead. In none of these varieties known to me, however, are the front tibiae black to a greater extent than those of the other two pairs; as a rule, they are less black.

31. *Astathes purpurea*.

Astathes purpurea, Pasc., Trans. Ent. Soc. Lond., (2) iv, p. 108 (1857); id. (3) iii, p. 354.

Head and prothorax black and glossy; the underside and legs pitchy-black, but with the hind-breast, the tarsi, and apices of the tibiae testaceous; elytra entirely of a dark purplish or violet colour; first three joints of the antennae brownish, the remaining joints pale testaceous. Front of head distinctly but not very closely punctured; furnished with a rather feeble median carina in its lower part in the female; vertex of head and disk of prothorax sparsely punctured; centro-dorsal tubercle of prothorax feebly raised, slightly notched in the middle behind, and impressed with a shallow pit in front. Elytra relatively rather narrow, sparsely but rather strongly punctured; each with a juxta-sutural and two dorsal costæ.

Hab. SINGAPORE. Type (♀) in Brit. Mus.

This species somewhat resembles *A. caloptera*, Pasc., in general coloration, but differs in having the tarsi and hind-breast testaceous instead of black; and is further to

be distinguished by its relatively narrow form. In general form it is more like the species of the next section; but from the structure of its prothorax I consider it to be more nearly allied to the species placed in the present section.

SECTION V.

Centro-dorsal tubercle of prothorax small and narrow, not prolonged in front to interrupt the anterior transverse groove, the latter being continued in a straight line right across the pronotum; dorso-lateral tubercles not sharply edged behind. Elytra each with two distinct dorsal costæ in addition to the sutural costa. Last ventral segment of the female not foveate. The species of this section are, as a rule, smaller, and relatively narrower than those of the preceding sections.

32. *Astathes straminea.*

Astathes straminea, Pasc., Trans. Ent. Soc. Lond., (2) iv, p. 108 (1857).

Head and prothorax black; elytra entirely yellowish-testaceous; underside almost wholly pitchy-black; femora and tibiae more or less piceous; antennæ pale testaceous with the basal joints more or less brown. Head distinctly and rather closely punctured in front, less closely on the vertex; pronotum closely punctured at the sides of the central tubercle and in the groove in front of and behind it. Elytra feebly punctured.

Hab. BURMA. Type in Brit. Mus.

The type specimen appears to be slightly immature, the legs antennæ and elytra being paler than in other specimens, and the centro-dorsal tubercle of the prothorax slightly testaceous instead of black.

33. *Astathes bipartita.*

Astathes bipartita, Thoms., Syst. Ceramb., p. 558 (1865).

Astathes pulchella, Pasc., Trans. Ent. Soc. Lond., (3) iii, p. 354 (1867).

Reddish-testaceous or fulvous; with the basal half of the elytra violaceous-blue, the apical half yellowish, the metasternum at the sides, and the last three or four joints of the antennæ dark brown. Head densely punctured in front. Pronotum less closely but more strongly punctured, except on the central and lateral tubercles which are somewhat smooth and glossy. Elytra sparsely and rather feebly punctured, each with two distinct dorsal costæ in addition to the one alongside the suture.

Hab. MALACCA, Tringano, Patani, Singapore, and SUMATRA. Type of *bipartita* in coll. Oberthür; type of *pulchella* in Brit. Mus.

In size, form and structure this species agrees pretty closely with *A. straminea*, Pasc., but has an entirely different coloration.

34. *Astathes cincta*, sp. n. (Pl. IV, fig. 6.)

Yellowish-testaceous; with a broad steel-blue band crossing the whole width of the elytra between the base and the middle, the anterior border of the band being at a short distance behind the base, and the posterior, a little in front of the middle of the elytra; apex of antennæ slightly infuscate. Head thickly punctured in front and furnished with a feeble median carina near the base; less closely punctured above and impressed with a median line. Prothorax slightly protuberant at the middle of each side: closely and strongly punctured above except along the central tubercle, the latter in the form of a slightly raised obtuse ridge extending from the posterior to the anterior transverse groove. Elytra rather sparsely punctured; each with two distinct dorsal costæ in addition to the sutural costa. Antennæ of the male a little longer than the body; those of the female a little shorter than the body.

Long. 9-10 mm.

Hab. JAVA, Gounod Gedeh (Ledru). Type in coll. Oberthür.

This species, though closely resembling *A. fasciata* in coloration and in the relative position of the elytral band, is much smaller in size and differs further in having the centro-dorsal tubercle of the prothorax obtuse instead of strongly acute.

35. *Astathes fasciata*, sp. n.

Astathes levis, var. β . Newman, The Entomologist, i, p. 299.

Head, prothorax, and first three joints of the antennæ testaceous; intermediate joints of the antennæ pale yellow, last five or six infuscate; elytra yellowish- or reddish-testaceous, with a broad blue band crossing them transversely just before the middle; body underneath, and legs testaceous, with the tarsi and the discal half of the tibiae infuscate. Head densely and somewhat rugosely punctured in front, sparsely and feebly above; the front with a prominent median carina in its lower half. Antennæ reaching to the apex of the elytra in the male. Prothorax feebly tuberculate at the sides; its centro-dorsal tubercle taking the form of a sharp ridge extending from the

posterior to the anterior transverse groove; strongly and rather closely punctured except on the centro-dorsal ridge. Elytra feebly and sparsely punctured, but with the punctures appearing larger through being surrounded each by a small dusky area; two distinctly raised costæ, in addition to the juxta-sutural costa, present on each elytron.

Hab. PHILIPPINE ISLANDS. Type (δ) in Brit. Mus. Two ♀ examples collected by C. Semper, in coll. Oberthür.

36. *Astathes contentiosa.*

Astathes contentiosa, Pasc., Trans. Ent. Soc. Lond., (3) iii, p. 352.

Head, prothorax, and body underneath, black; elytra purplish- or violaceous-black in the basal half, testaceous or yellowish in the hinder half, with the testaceous colour extending forwards triangularly at the suture; antennæ testaceous or fulvous, with the last few joints slightly infuscate; femora blackish, tarsi, and the tibiae to a greater or less extent, testaceous. Head and prothorax sparsely punctured, the punctures being thickest and most distinct around the central tubercle of the pronotum. Elytra sparsely and rather feebly punctured.

Hab. MALACCA, Singapore, Johore, and Sinkip Island. Type in Brit. Mus.

In the type from Singapore, the elytra are slightly tinted with purplish at the apex, and in the specimen from Johore they are distinctly but very narrowly tipped with violet. The species is very nearly allied to *A. partita* (= *daldorffii*, Fab.), but is somewhat smaller in size, and distinguishable by the much greater extent of the violaceous area on the basal half of the elytra.

37. *Astathes partita*, sp. n.

Cerambyx daldorffii, Fab. (nee Illiger), Syst. Eleuth., ii, p. 279.

Astathes daldorffii, Pasc., Trans. Ent. Soc. Lond., (3) iii, p. 350.

Head, prothorax and scutellum, black; elytra reddish-testaceous, but with the apex and a spot extending inwards to a greater or less extent from each shoulder, violaceous-blue; antennæ reddish-brown at the base, fuscous at the end, the intermediate joints being pale testaceous; body underneath black; legs piebonds with the tarsi and sometimes also the apices of the tibiae testaceous.

Hab. MALACCA and SUMATRA. Type in Brit. Mus.

This species agrees pretty closely with *A. straminea*, Pasc., and *A. flaviventris*, Pasc., both in form and structure, and is chiefly distinguishable from them by the difference in the coloration of the elytra. It is without doubt the species described by Fabricius as *Cerambyx daldorffii*, but it certainly is not one of the three forms included by Illiger under that name. Illiger's *C. daldorffii* seems to have been made up of three very distinct species, his var. 1 being identical with *splendida*, Fab., his var. 2 with *fulgidu*, Fab., and his var. 3 with *nitens*, Fab.

38. *Astathes flaviventris*.

Astathes flaviventris, Pasc., Trans. Ent. Soc. Lond., (3) iii, p. 352.

Head, prothorax, and scutellum black; elytra for about one-half or two-thirds of their length from the base, violaceous-blue, and thence to the apex, testaceous; antennae reddish-brown at the base, pale yellow in the middle, infuscate towards the apex; body underneath and legs, piceous or black, with the abdomen, the tarsi and the apices of the tibiae testaceous. Head distinctly, but not very closely punctured in front, more feebly and sparsely punctured on the vertex. Pronotum closely punctured at the sides of the central tubercle and in the transverse grooves. Elytra feebly and somewhat sparsely punctured.

Hab. BORNEO. Type in Brit. Mus.

This species greatly resembles *A. terminata*, Pasc., in size, form and coloration, so much so that specimens of the two species are sometimes mixed up together in collections. But an examination of the character of the centro-dorsal tubercle of pronotum will readily enable one to distinguish them. Another character to be noted is the presence of a rather well-marked depression on the last ventral segment in the female of *A. terminata*, and the almost complete absence of any such depression in *A. flaviventris*.

Genus ANASTATHES, gen. nov.

Head almost flat between the antenniferous tubercles. Antennae rather short and thick, those of the female scarcely reaching to the apical third of the elytra; third joint not longer than the first: second joint scarcely longer than broad; last joint sharply pointed and sub-glabrous at the apex. Prothorax transverse, furnished with an obtuse, transverse tubercle or ridge at the middle of each side, and

a large obtuse tubercle on the middle of the disc. Elytra nearly parallel-sided, broadly rounded and unarmed at the apex. Intercoxal process of the prosternum raised in the middle almost to a level with the coxae; mesosternal process vertical in front, turned back at the end to meet the anterior process of the metasternum, which is advanced nearly three-fourths of the way between the middle coxae.

Type of the genus: *Astathes nigricornis*, Thoms.

1. *Anastathes nigricornis*.

Astathes nigricornis, Thoms., Syst. Ceramb., p. 560.
Tetraophthalmus nigricornis (Dej. Cat.).

♀. Reddish-testaceous; with the elytra somewhat paler towards the apex; antennae entirely black. Head sparsely and rather feebly punctured; front slightly concave in the middle between the antennae, convex in its lower part. Antennae reaching about to the apical third of the elytra; first joint very closely punctured. Prothorax almost equally broad at the base and apex, rather deeply canaliculate at each side behind the lateral tubercle, less deeply in front of it; the discoidal tubercle extending almost from the base to the apex, strongly and rather closely punctured. Elytra about one-half longer than broad, sparsely and not strongly punctured from the base to a little beyond the middle; each with two feebly raised dorsal costæ. Last ventral segment with an impressed line along the middle, and a faint depression near the apex.

Hab. MALACCA (Type ♀ in coll. Oberthür), PENANG (Lamb) and JAVA.

2. *Anastathes biplagiata*, sp. n. (Plate IV, fig. 9.)

♀. Yellowish-testaceous; elytra each with a large oval black spot placed transversely just before the middle; antennae with the first three joints black and glossy, the remaining joints dark brown and dull. Head strongly but not closely punctured; the front broad, nearly flat above between the antennae, slightly convex below and furnished with a very faint median carina. Antennae scarcely extending beyond the middle of the elytra; the first joint very closely punctured; the last eight joints together hardly longer than the first three together. Prothorax almost as broad in front as at the base; the centro-notal tubercle large and obtuse, extending almost from the base to the apex, strongly and rather closely punctured. Elytra distinctly but not closely punctured, the punctures becoming gradually smaller on the posterior half; costæ almost entirely obsolete. Last ventral segment as long as the three preceding it

impressed with a groove along the middle, and a faint depression near the apex.

Long. 10, lat. 4 mm.

Hab. SIAM, Laos (in coll. Oberthür), Lakhon (Armand — in Paris Museum).

Genus CLEONARIA.

Cleonaria, Thoms., Syst. Ceramb., p. 119 (1864).

Narrow and elongate in form. Head slightly depressed between the antennæ. Antennæ shorter than the body in both sexes, densely setose, the setæ being longer and forming a fringe on the posterior side; first joint shorter than the third, asperate in front near the apex. Prothorax sub-cylindrical, scarcely broader than long, slightly rounded in the middle at the sides, feebly raised in the middle of the disc, impressed with a straight anterior and a sinuate posterior transverse groove. Elytra more than twice as long as broad, a little wider than the prothorax, and slightly wider posteriorly than at the base. Intercoxal process of prosternum narrow in the middle, and not strongly raised. Mesosternal process nearly horizontal, prolonged between the middle coxae for the greater part of their length. Legs rather short, the hind femora scarcely reaching beyond the second abdominal segment. Tarsal claws appendiculate in both sexes. Last ventral segment of the female long, and impressed with a median line; that of the male shorter and narrower and without impression.

Type of the genus: *Cleonaria bicolor*, Thoms.

1. *Cleonaria bicolor*.

Cleonaria bicolor, Thoms., Syst. Ceramb., p. 119 (1864).

Head and prothorax testaceous yellow, with a faint ochreous pubescence, and furnished also with erect tawny setæ; head with a dark spot behind the lower lobe of each eye, and sometimes also, with a dark spot on each of the antenniferous tubercles; prothorax with a dark blue band along the lower part of each side; antennæ black; elytra pale yellow or stramineous; body underneath, with the exception of the pro- and meso-sterna, dark metallic-blue; legs black, varying to pieous. Head and prothorax distinctly but not very closely punctured. Elytra setose, thickly and strongly punctured, except near the apex; slightly flattened along each side of the suture. Antennæ reaching to the apical fourth of the elytra in the male, to a little beyond the middle in the female; first joint very thickly punctured.

Hab. SIAM (Type ♀, in coll. Oberthür); and S. INDIA, Madras, Nilgiris.

I have been unable to detect any sufficient specific difference in the examples from South India. They agree in all essential respects with the type. In the latter, the head is not darker at the base of the antennae, and the dark spot behind each eye is very faint; but the same is true also of most of the South-Indian specimens.

2. *Cleonaria cingalensis*, sp. n.

Apical fourth or fifth part of the elytra dark metallic-blue; the coloration of all the remaining parts of the insect very similar to that of *C. bicolor*, Thoms. Head with a median, carini-form tubercle on the lower part of the front in the male, slightly gibbous in front in the female. In other structural characters, and in general form, the species agrees with *C. bicolor*.

Long. 10-13, lat.

Hab. CEYLON. Types (♂ ♀) in Brit. Mus.; ♀ in coll. Oberthür.

Genus CHREONOMA.

Chreonomia, Pasc., Trans. Ent. Soc. Lond., (3) iii, p. 358.

Head broadly and moderately concave between the antenniferous tubercles. Antennae a little longer than the body in the male usually shorter than the body in the female; first joint asperate in front at, or near, the apex; second joint nearly twice as long as broad. Prothorax transverse, sub-cylindrical, protuberant, or not, at the middle of each side; the disc with a more or less distinct median elevation. Elytra slightly widened out posteriorly, rounded and unarmed at the apex, without raised lines. Prosternum not very strongly raised between the coxae; meso-sternum sloped in front, prolonged between the middle coxae for the greater part of their length.

Type of the genus: *Chreonomia venusta*, Pasc.

The more typical species of this genus form a group or section distinguished by the following characters:

Scape of the antennae as long as, or slightly longer than, the third joint, gradually and slightly thickened towards the apex; last joint sharply pointed and sub-glabrous at the tip. Prothorax very slightly or not at all protuberant at the sides; the anterior groove feeble and indistinct, especially in the middle; the posterior groove distinct at the sides, very narrow and strongly bowed back in the

middle behind the discal elevation ; the latter very slightly raised and only apparent on the posterior part of the disc. Last ventral segment of the female obtusely pointed at the apex.

This section includes *C. venusta*, Pasc., and *C. seclusa*, Pasc., from Batchian, *C. bimaculata*, Pasc., from Waigiou, *C. flavicincta*, Pasc., from Saylee, *C. vernula*, Pasc., from Morty, and *C. annulicornis*, Pasc., from Celebes.

The following four species are closely related to these but differ in having the prothorax more protuberant at the middle of each side ; the last joint of the antennæ less sharply pointed and covered entirely with pubescence ; and the last ventral segment of the female more broadly rounded at the apex.

Chreonomia pallida.

Astathes pallida, Thoms., Syst. Ceramb., p. 559.

Astathes kraatzi, Thoms., l. c., p. 559.

Entirely pale yellowish-testaceous, excepting the last five to seven joints of the antennæ which are infuscate. Prothorax with a very slight elevation extending along the middle of the disc almost from the base to the apex ; this elevation smooth, and only distinctly limited posteriorly where it is bounded by the basal transverse groove. Elytra rather thickly punctured from the base to a little beyond the middle. Scape of the antennæ a little longer than the third joint, asperate in front at the apex. Last ventral segment of ♀ with a rather broad and deep fovea before the apex.

Hab. JAVA (Type ♂ of *pallida*) and PHILIPPINE ISLANDS, Mindanao (Type ♀ of *kraatzi*).

Chreonomia puncticollis.

Astathes puncticollis, Thoms., Syst. Ceramb., p. 559.

♀. Characters as in *C. kraatzi*, Thoms., but with the smooth space along the disc of the prothorax much narrower and restricted to the posterior part of the disc ; and the pronotum at the sides of, and in front of, this smooth space much more thickly punctured.

Hab. PHILIPPINE ISLANDS. Type (♀) in coll. Oberthür.

Chreoma dapsilis.

Phaea dapsilis, Newm., The Entomologist, i, p. 300 (1842).

♀. Yellowish-testaceous, with the last six joints of the antennæ dark brown, and rather more than the apical half of the elytra dark

metallic-blue, this blue area being extended somewhat further forward in the middle, with its anterior margin rounded. Head distinctly but rather sparsely punctured in front, without raised line or carina. Antennæ three-fourths the length of the body; scape equal in length to the third joint, slightly thickened towards the apex, thickly punctured, asperate near the apex. Prothorax sparsely punctured, except along the middle of the centro-notal elevation, which is smooth. Elytra rather thickly punctured on the basal testaceous area.

Hab. PHILIPPINE ISLANDS, Manilla. Type in Brit. Mus.

Chreonomia dilecta.

Phaea dilecta, Newm., The Entomologist, i, p. 300 (1842).

♀. Antennæ, and the apical fifth of the elytra black; all the rest of the body pale yellowish-testaceous. Head almost impunctate; front with a very feeble median carina in its lower half. Antennæ nearly as long as the body; first joint a little shorter than the third, asperate over nearly the whole of its anterior face. Prothorax very slightly protuberant at the middle of each side; the centro-notal elevation sparsely punctured, ill defined in front, distinctly limited behind by the backwardly deflexed part of the posterior groove. Elytra slightly widened out posteriorly, rather thickly punctured except near the apex.

Hab. PHILIPPINE ISLANDS, Manilla. Type (♀) in Brit. Mus.

In the remaining species of the genus, the scape of the antennæ is shorter than the third joint, and the last joint is entirely pubescent and not very sharply pointed: the prothorax is more distinctly protuberant at the middle of each side, its anterior groove is continued across the pronotum, its posterior groove is less strongly bowed back in the middle, and the central elevation, lying between these grooves, is more strongly raised.

These include *C. albicornis*, Pasc., *C. melanura*, Pasc., and *C. tabida*, Pasc., in addition to the following:

Chreonomia discoidalis.

Astathes discoidalis, Thoms., Syst. Ceramb., p. 559.

♀. Head and prothorax reddish-testaceous, the elytra of a paler, yellowish-testaceous colour; underside, legs, and antennæ, testaceous. Head sparingly punctured. Prothorax with a slight elevation on the

middle of the disc between the anterior and posterior transverse grooves; this elevation strongly and rather thickly punctured, the lateral parts of the pronotum being less thickly punctured. Elytra sparsely, but rather strongly, punctured for about two-thirds of their length from the base. Scape of the antennae with two or three short oblique ridges near the apex, the one nearest the apex being the longest, and somewhat resembling the limiting carina of the open cicatrice met with in the *Mesosinæ*.

Hab. MALACCA. Type (♀) in coll. Oberthür.

Chremonia pallidiventris.

Astathes pallidiventris, Thoms., Syst. Ceramb., p. 559.

Astathes agrota, Thoms., l. c., p. 560.

Very closely allied to *C. discoidalis*, Thoms., and similar to it in colour, the only characters serving to distinguish it being the somewhat more strongly raised, and less thickly punctured, elevation on the middle of the pronotum, and the greater number—five or six—of the short transverse ridges forming the rasp-like roughness near the apex of the antennal scape. In the male type the front of the head is furnished with a cariniform tubercle similar to that occurring in *C. frontalis*, Gahan, but much less strongly developed.

Hab. COCHIN CHINA. Types in coll. Oberthür.

The type of *pallidiventris* is a male, that of *agrota*, a female; and there can be no doubt that both belong to one species.

Chremonia nigriventris.

Astathes nigriventris, Thoms., Syst. Ceramb., p. 559 (1865).

Chremonia nigriventris, Pase., Trans. Ent. Soc. Lond., (3) iii, p. 360 (1867).

Hab. MALAY PENINSULA, Singapore (Wallace), Perak (Ridley).

This species is closely allied to *C. discoidalis*, Thoms., but differs in having the metathorax and abdomen, black; and the centro-notal tubercle of the prothorax less closely punctured. In the male, the head has a strongly developed cariniform tubercle on the middle of the front: in the female the front of the head is somewhat gibbous in the middle, but is without a tubercle or carina.

Chreonomia testacea.

Tetraophthalmus testaceus, Thoms., Archiv. Ent., i, p. 55 (1857).

Metasternum and the first three abdominal segments blackish-brown; hind femora also dark brown, except at the extremities; all the rest of the body, including the elytra and antennae, testaceous. In structural characters this species agrees pretty closely with *C. pallidiventris* and *C. nigriventris*, but in the male the front of the head is only slightly more gibbous than in the female and is without a distinct carina or tubercle.

Hab. JAVA. Type (♂) in coll. Oberthür.

Chreonomia punctata.

Astathes punctata, Thoms., Syst. Ceramb., p. 559.

Hab. MALACCA. Type (♀) in coll. Oberthür.

This species was described from a female example which greatly resembles the female of *C. testacea*, Thoms., differing only in having the underside entirely testaceous.

Chreonomia frontalis.

Chreonomia frontalis, Gahan, Ann. Mus. Civ. Genova, (2) xiv, p. 100 (1894).

Hab. NORTH INDIA and NORTH BURMA.

Chreonomia basalis.

Chreonomia basalis, Gahan, Trans. Ent. Soc. Lond., 1894, p. 487.

Hab. HONG KONG.

Chreonomia comata, sp. n. (Plate IV, fig. 8.)

♂. Head, antennæ at the base, prothorax, and a narrow transverse band at the base of the elytra, yellowish-testaceous; rest of the elytra violaceous-blue; last six joints of the antennæ and the apices of the fourth and fifth, dark brown; body underneath, and legs, testaceous, densely clothed with tawny hairs, which are much longer and more densely placed on the sides of the abdomen. Head rather broad and convex in front, without a median carina, densely setose. Prothorax with the centro-notal tubercle rather strongly raised, somewhat oval in outline, convex above, and distinctly and closely punctured except along the middle. Elytra rather closely punctured, with the punctures becoming

gradually smaller towards the apex; somewhat densely setose, the sete being longer on the basal part, shorter near the apex, black on the violaceous area, and tawny like those of the head and thorax, on the basal testaceous band. Antennæ longer than the body; first joint rather short, oboconical, asperate in front near the apex; joints 3rd to 8th or 9th slightly angulate at the apex on the anterior side, the same joints with a fringe of short setæ on the posterior side.

Long. 12 mm.; lat. 4 mm.

Hab. HONG KONG. Type (δ) in coll. Oberthür.

This species greatly resembles *C. basalis*, Gah., in size, form and coloration, and comes from the same locality. It differs in having the testaceous band at the base of the elytra nearly twice as broad, the head of the male without a frontal carina, the antennal joints slightly angulate at the apex and more densely setose, the legs and body underneath much more thickly covered with tawny hairs, and these hairs very much longer, especially on the sides of the abdomen.

Chironoma fortunei.

Placomicrus fortunei, Thoms., Archiv. Ent., i, p. 58, pl. 8, fig. 2.

Hab. CHINA, Shanghai.

Var. *japonica*, var. n.

Differs from the Chinese form in having the antennæ entirely black.

Hab. JAPAN, Kaisa, and Province of Satsuma. (In coll. Oberthür, and in Brit. Mus.)

Chironoma weisei Heyden.

Abhandl. Senck. Naturf. Gesellschaft, xxiii, p. 577 (1897).

Long. 8 mm.

Hab. CELEBES, Donggala.

This species is unknown to me; but since it is described as having the suture and two costæ on the posterior part of the clytra, strongly raised, I have considerable doubt as to its being a true *Chironoma*. It seems to be very like *Astethes bipartita*, Thoms., in coloration, and possibly belongs to that genus.

Genus PLAXOMICRUS.

Plaxomierus, Thoms., Archiv. Ent., i, p. 57 (1857).
Placomicrus (Thoms.), in Cat. Gemin. and Harold.

Head depressed between the antenniferous tubercles. Antennae sparsely ciliate, a little longer than the body in the male, shorter than the body in the female; first joint shorter than the third, asperate in front at the apex; second joint longer than broad; last joint more or less sharply pointed, but not glabrous at the apex. Prothorax slightly protuberant at the middle of each side, and with a central swelling or tubercle on the disc. Elytra more or less strongly dilated posteriorly, attaining their greatest breadth at about a third or fourth of their length from the apex; broadly rounded at the apex. Intercoxal process of prosternum very narrow in the middle, and but slightly raised. Mesosternal process narrow and nearly flat, prolonged between the middle coxae for the greater part of their length. Middle tibiae bent inwards near the apex, very strongly in the male, less strongly in the female. Tarsal claws appendiculate in both sexes.

Type of the genus: *Placomicrus ellipticus*, Thoms.

1. *Placomicrus ellipticus*. (Plate IV, fig. 7.)

Placomicrus ellipticus, Thoms., Archiv. Ent., i, p. 58 (1857) (♀).

Yellowish-testaceous and nitid; with the elytra almost entirely violaceous, the extreme basal and apical margins only being testaceous; the last six or seven joints of the antennae deeply infuscate; the tarsi, and the apices of the tibiae slightly infuscate. Head feebly and sparsely punctured, impressed with a median longitudinal line. Prothorax closely and rather strongly punctured over almost the whole upper surface; the anterior transverse groove straight and distinct across the middle as well as at the sides; the posterior groove bent back in the middle forming a boundary to the central tubercle. Elytra very strongly dilated behind, strongly but sparsely punctured in their anterior half, with the interstices finely and sparsely punctulate; furnished above with sparsely scattered erect setæ, and along the outer margins with a fringe of short setæ. Underside rather thickly clothed with tawny setæ.

♂. Antennæ a little longer than the body. Middle tibiae strongly bent inwards at about one-third from the apex; first tarsal joint of the same legs with a long laminate process projecting in front of the second joint and equal in length to that joint.

♀. Antennæ a little shorter than the body. Middle tibiae slightly incurved towards the apex. Last ventral segment impressed with a median line which widens into a shallow pit near the apex.

Hab. SHANGHAI. Type (♀) in coll. Oberthür. ♂♂ and ♀♀ in Brit. Mus.

2. *Platromicrus ventralis*, sp. n.

♂. Very similar in form and structure to *P. ellipticus*, Thoms., and closely resembling it also in coloration, but distinguishable as follows: Elytra entirely violaceous; first four abdominal segments black; tarsi, apices of the tibiae, and the whole outer face of the four front tibiae, black. Head rather closely punctulate in front. Prothorax somewhat more thickly punctured than in *P. ellipticus*, especially on the centro-notal tubercle.

Long. 13 mm.; lat. (ad basin clytrorum), 4·25 mm.; lat. max., 6 mm.

Hab. UPPER TONKIN, N.W. of Bao Lac (Dr. Battarel—in coll. Oberthür).

3. *Platromicrus latus*, sp. n.

♀. Yellowish-testaceous and nitid; with the elytra almost entirely violaceous, a small spot only at the extreme base of each adjoining the scutellum being, like the latter, testaceous; the last seven joints of the antennæ dark brown; the tarsi, the apices and almost the whole of the outer face of the tibiae, black. Head feebly and sparsely punctured, impressed with a median line. Prothorax distinctly, but rather sparingly punctured; the anterior transverse groove somewhat shallower and less distinct in the middle. Elytra strongly dilated behind, attaining their greatest breadth at about one-third from the apex; strongly but sparsely punctured on the anterior half, finely and sparsely punctulate over their whole surface; furnished above with longer and shorter black setæ, and along the lateral margins with a fringe of short black setæ. Underside sparsely clothed with tawny setæ. Antennæ reaching to the posterior third of the elytra. Middle tibiae inenerved towards the apex.

Long. 12-13 mm.; lat. (ad basin clytrorum), 5 mm.; lat. max., 7·25 mm.

Hab. BHUTAN, Maria Basti and Pedong. Type (♀) in coll. Oberthür.

This species is very similar in coloration to *P. ellipticus*, but has a different form, the head, prothorax, and base of the elytra being relatively broader than in that species,

and the dilatation of the elytra behind not so great in proportion to the width of the anterior parts. It differs also in having the prothorax more sparsely punctured, and the anterior transverse groove shallower and less distinct in the middle.

4. *Plaxomicrus oberthuri*, sp. n.

♀. Pale testaceous-yellow, and nitid; with the elytra in their basal half, excepting a spot on each side of the scutellum, violaceous; the last four or five joints of the antennae, the tarsi, and the outer faces of the tibiae more or less deeply infuscate. Head very minutely punctulate, marked also with some larger sparsely scattered punctures both on the front and vertex. Prothorax slightly nitid, strongly and closely punctured on the centro-notal tubercle and in the transverse groove in front of it; the centro-notal tubercle slightly flattened on top. Elytra gradually and not strongly dilated behind; sparsely punctured on the basal violaceous area; the hind margin of this area indented at the suture and also, but less strongly, at about the middle of the width of each elytron; setae sparsely scattered above, aggregated at the lateral margins to form a short black fringe. Antennae reaching to the apical third of the elytra. Middle tibiae very feebly curved. Last ventral segment impressed with a median line, flattened and scarcely depressed in the middle before the apex.

Long. 12 mm.; lat. ad basin elytrorum, 4 mm.; lat. max. 5·5 mm.

Hab. ASSAM, Khasia Hills, 2000'. Type in coll. Oberthür.

This species, though having the elytra less dilated posteriorly, and the middle tibiae but very slightly curved, agrees pretty closely in other points of structure with the typical forms of *Plaxomicrus*, and I have, therefore, placed it in this genus rather than in *Chromona* towards which it shows an approximation in general form.

Genus LASIOPHITRYS, gen. nov.

♂. Head very broad, flattened in front, widest between the lower lobes of the eyes, furnished with a short fringe of hairs just above the upper margin of each of these lobes; labrum short, broad, attached by an equally short and broad membranous epistome to the clypeal margin; mandibles broad, flattened in front. Antennae a little longer than the body; first joint shorter than the third and fringed with short hairs underneath; last joint somewhat obtusely pointed, and not glabrous, at the apex. Prothorax with a slight protuberance at the middle of each side followed by a groove which extends upwards to, and widens out at, the side of a centro-notal

elevation ; the latter somewhat oblong in form, limited behind by the narrow basal groove, and continued uninterruptedly to the anterior margin in front. Elytra about twice as long as their conjoint width at the base, slightly widened out posteriorly and broadly rounded at the apex. Sternal processes as in *Chreonomia*. Claws of tarsi strongly toothed at the base.

♀. Head a little less broad, slightly convex in front, and without a fringe over the lower lobe of each eye ; mandibles narrower, and slightly convex in front. Antennæ shorter than the body, and without a fringe under the first joint. Last ventral segment longer, impressed with a line along the middle, and a shallow pit near the apex.

Lasiophrys latifrons, sp. n. (Plate IV, fig. 10.)

♂. Head and prothorax yellowish- or reddish-testaceous in colour, with the apex and inner edge of the mandibles black ; basal half of elytra black, the rest yellowish ; antennæ testaceous, with the last four or five joints dark brown ; body underneath yellowish-testaceous, with the meta-thorax, especially at the sides, more or less reddish-brown ; legs black, with all the coxae, and the anterior face of the front femora, testaceous. Head widened upwards from the base to the lower lobes of the eyes, and as wide there as the elytra in their widest part, sparsely punctured with rather small unequal-sized punctures, marked with a dark longitudinal line, which becomes slightly raised, forming a short carina, on the crown ; antenniferous tubercles feebly raised, with the broad front between them slightly concave ; mandibles rugosely punctured in front except at the edges. Prothorax strongly and rather thickly punctured on the centro-notal elevation. Elytra sparsely punctured.

♀. Antennæ reaching to the apical third of the elytra ; last ventral segment with an impressed line along the middle.

Long. 16–18, lat. 6 mm.

Hab. BHUTAN, Maria Basti. (In coll. Oberthür, and in Brit. Mus.)

Genus MOMISIS.

Momisis, Pasc., Trans. Ent. Soc. Lond., (3) iii, p. 361 (1867).

Type. *M. argota*, Pasc., l. c., p. 362, pl. xvi, fig. 4.

This genus was founded for a single species represented only by one female specimen. The male of the same, or a very closely allied, species has been described by Ritsema under the name of *Bachusa nigriventris* (Notes), Leyden

Mus., iii, p. 7). Though Mr. Ritsema subsequently pointed out (l. c. p. 82) that his species was founded upon the male sex of *Momisis agrota*, he seems still later to have altered his opinion in regard to the identity of the two species, for in a list published in the 'Notes,' vol. x, p. 253, he gives them as being distinct, referring both, as well as two other species described by him, to the genus *Bacchisa*.

Bacchisa coronata, Pasc.—the type of *Bacchisa*—is, however, distinguished from all these species by characters which seem to me to be of more than specific importance, and I, therefore, retain *Momisis* as a distinct genus. The two genera agree in general form, in sternal characters, and in the fact that the male is furnished with tufts of hairs on the sides and vertex of the head; but they are distinguishable as follows:

Scape of the antennae scarcely reaching to the middle of the prothorax, much shorter than the third joint; tarsal claws very feebly or not at all appendiculate at the base.—*BACCHISA*, Pasc.

Scape of the antennae reaching beyond the base of the prothorax, almost, or quite, as long as the second and third joints together; tarsal claws distinctly appendiculate in both sexes.—*MOMISIS*, Pasc.

Momisis melanura, sp. n. (Plate IV, fig. 11.)

♂. Testaceous, with the antennae, the apical sixth of the elytra, the abdomen and tarsi black. Head with a long tuft of tawny hairs on the vertex between the antennæ, another on each side placed obliquely between the lower lobe of the eye and the antennary tuber, and one smaller in front of each of the antennary tubers; lower part of the front with a concave shovel-like process, which projects downwards in front of the mandibles; upper part of front with a sharp median ridge which is more strongly raised at its upper (or posterior) end. Prothorax nearly parallel-sided, slightly narrowed towards the base, clothed with a faint tawny pubescence, and without tubercle or elevation on the disc. Elytra rather thickly punctured, the punctures being tolerably large from the base to the middle, and becoming gradually smaller and less distinct posteriorly; clothed with tawny pubescence and erect tawny setæ on the testaceous part, with black pubescence and setæ on the apical black area. Antennæ twice as long as the body; the first joint nearly equal in length to the second and third together, fringed with long tawny hairs on anterior side near the base, with shorter black hairs on both sides for the greater part of its length; third joint with long hairs on posterior

side. Metasternum slightly black along the outer margins; middle and hind tibiae somewhat blackish at apex.

Long. 10 $\frac{1}{2}$, lat. 3 mm.

Hab. NORTH QUEENSLAND, Bellenden Ker (B. G. Rye). Type ♂ in Brit. Mus.

This species is distinguished from the other species of *Momisis* by the much greater length of the male antennae, these organs being twice as long as the body, whereas in *M. nigriventris*, Rits., they are very little more than half as long again as the body, and in *M. singularis*, Rits., are only equal to the body in length.

EXPLANATION OF PLATE IV.

- Fig. 1. *Astathes posticata*, sp. n.
- 2. " *bella*, sp. n.
- 3. " *perversa*, sp. n.
- 4. " *fulgida*, Fab.
- 5. " *nitens*, Fab.
- 6. " *cinerea*, sp. n.
- 7. *Placomicrus ellipticus*, Thoms., ♂.
- 8. *Chironomus comata*, sp. n., ♂.
- 9. *Anastathes biplagiata*, sp. n., ♀.
- 10. *Lasiophrys bidifrons*, sp. n., ♂.
- 11. *Momisis melanura*, sp. n., ♂.



2.



1a.



1.



4.



4a.



5a.



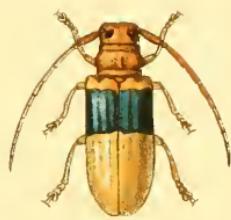
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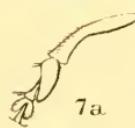
3a.



7.



6.



7a.



5.



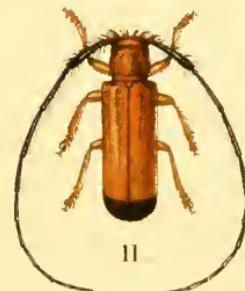
8.



11a.



9.



11.



9a.



10a.



10.