

II.—On some new Species of Blattidæ in the Oxford and Paris Museums. By R. SHELFORD, M.A., F.L.S.

Subfam. *ECTOBINÆ*.

Genus ANAPLECTOIDEA, Shelf.

*Anaplectoidea Dohertyi*, sp. n.

♀. Clear testaceous, nitid. Head rufo-testaceous, antennæ testaceous. Pronotum posteriorly truncated, exposing the scutellum, testaceous, lateral margins hyaline. Tegmina with fifteen costal veins; anterior ulnar with six branches, some of which are oblique, posterior ulnar simple; anal vein strongly curved, well marked; four axillary veins; the part of the right tegmen overlapped by the left reticulated. Wings hyaline, suffused with a pale flavid tint, with ten costal veins incrassated at the apex; medio-discal field crossed by eleven transverse veinlets; ulnar vein curved upwards, with five branches, the medio-ulnar field only one third the breadth of the medio-discal field, first anal vein quadrimargose; apical area small, barely one fifth of total wing-length, its basal margin obtusely angled, its apex slightly emarginate, divided almost equally by a longitudinal vein. Supra-anal lamina produced, its apical margin straight; subgenital lamina ample, semiorbicular; cerci elongate, nine-jointed.

Length of body 7 mm.; length of tegmina 6 mm.

Sangir (*W. Doherty*); one example (Oxford Mus.).

Genus HOLOLAMPRA, Sauss.

*Hololampra minuta*, sp. n.

♀. Head rufo-castaneous, antennæ fuscous with exception of first two basal joints, which are testaceous. Pronotum covering vertex of head, trapezoidal, the angles rounded, sides deflexed, posterior margin nearly straight; all the margins testaceous, most broadly at posterior angles; disk rufo-castaneous, with a posterior transverse castaneous vitta which is notched anteriorly. Tegmina ovate, smooth, shining, hyaline-testaceous, extending as far as middle of fourth abdominal tergite, the veins testaceous; eight costal veins, the last three ramose, discoidal sectors oblique and few in number, anal vein not impressed. Wings scale-like. Abdomen testaceous above, banded with black, beneath black margined with



testaceous, last segment and subgenital lamina rufo-castaneous; supra-anal lamina short, trigonal, with a median impressed line; subgenital lamina ample, semiorbicular, projecting beyond the supra-anal lamina; cerci moderate, black. Legs rufo-testaceous; femora very sparsely armed, not more than two spines on the anterior and posterior margins of each.

Total length 6 mm.; length of tegmina 4 mm.

Andrahomana, South Madagascar (*Ch. Alluaud*, 1901); two examples (Paris Museum).

One of the smallest species of the genus.

Subfam. *PHYLLODROMINÆ*.

Genus *ISCHNOPTERA*, Burm.

*Ischnoptera Ridleyi*, sp. n.

♂. Head ferruginous, a V-shaped darker mark between the antennal sockets; antennæ ferruginous, longer than the body. Pronotum rounded, posteriorly truncate, sides slightly deflexed, not covering vertex of head; disk rufous, with two broad vittæ, black in colour, not reaching the posterior margin, their outer margins sinuate, their inner margins straight. Tegmina ferruginous; radial vein bifurcated at the middle; sixteen costal veins; discoidal area with eleven longitudinal sectors; seven axillary veins. Wings hyaline, veins fuscous, the marginal field suffused with flavid; radial vein bifurcated at the middle, mediastinal vein with five branches; fourteen costal veins; median vein sinuate; ulnar vein with fourteen branches, six of which go to the apex of the wing. Abdomen infuscated above, ferruginous below; the seventh tergite notched in the middle of its posterior margin, the eighth very narrow; the eighth sternite reduced to a pair of lateral lappets; the supra-anal lamina quadrate, its posterior margin notched and produced on each side of the notch into two curved and slender processes; the subgenital lamina subquadrate, its posterior margin much thickened, forming two asymmetrical swellings which are grooved and furnished with numerous minute denticles; styles absent. Front femora with the anterior border beneath armed throughout its length with long stout spines.

Length of body 22 mm.; length of tegmina 20 mm.

Singapore (*H. N. Ridley*, March to May, 1906); one example (Oxford Museum).

This species, like so many of its Oriental congeners, presents unusual modifications of those external parts which are



related to reproduction. The form of the subgenital lamina in *I. Ridleyi* recalls that of *Hemithyrsocera histrio*, Burm.

*Ischnoptera perpulchra*, sp. n.

♀. Head testaceous, antennæ (mutilated) testaceous at base. Pronotum trapezoidal, posterior margin slightly produced; disk flavo-testaceous, encircled by a broad penannular ring of black, open on the anterior margin, lateral and posterior margins testaceous. Tegmina castaneous, margin testaceous; eighteen costal veins; radial vein bifurcated beyond the middle, the lower branch sending ramifications to the apex of the wing; discoidal field with nine longitudinal sectors, the most internal of which are angled. Wings hyaline, veins fuscous, marginal field bordered with testaceous; mediastinal vein with six branches, ten to twelve costal veins, radial vein bifurcated beyond the middle; ulnar vein with seven branches, three of which run towards the dividing vein. Abdomen flavo-testaceous above, except at the apex, which is fuscous, testaceous below; supra-anal lamina produced triangular, subgenital lamina ample. Legs testaceous; front femora armed on the anterior margin beneath with strong spines throughout its length, the most basal the longest; formula of apical spines  $\frac{3}{1}, \frac{1}{1}, \frac{1}{1}$ ; front femora without a genicular spine, unless the most anterior apical spine is to be regarded as such.

Length of body 12 mm.; length of tegmina 14 mm.

Macassar, Celebes (*W. Doherty*, 1896); one example (Oxford Museum).

This species is rather a puzzling one; the angulation of some of the discoidal sectors of the tegmina suggests the genera *Pseudomops* and *Pseudothyrsocera*, but this is a character that also crops up in *Phyllodromia*, and, taken by itself, is not of the greatest importance; it is on account of the branching of the vena ulnaris alarum, so characteristic of *Ischnoptera*, that I have referred this species to that generic position.

*Ischnoptera cavernicola*, sp. n.

♂. Head castaneous, mouth-parts testaceous; antennæ testaceous, one and a half times longer than the body. Pronotum rufo-castaneous, with lateral and posterior margins narrowly castaneous. Tegmina clear testaceous, radial vein bifurcated, twelve costal veins, six discoidal sectors. Wings hyaline, mediastinal vein with three branches, seven costal



veins, radial vein not bifurcated, ulnar vein sending three branches to the dividing vein and three to the apex of the wing. Abdomen rufo-testaceous, supra-anal lamina slightly produced, rounded; subgenital lamina produced, narrow, with two stout styles; cerci elongate. Legs rufo-testaceous; front femora with anterior margin beneath armed throughout its length with a series of short spines, the most distal the shortest; apical spines  $\frac{1}{1}$ ,  $\frac{1}{1}$ ,  $\frac{1}{1}$ ; genicular spines 1, 1, 1.

Length of body 10 mm.; length of tegmina 9.5 mm.

In cave at Bidi, Sarawak, Borneo (*R. Shelford*); one example (Oxford Museum). [No. 22.]

The species, which can be readily recognized by the pale pronotum with dark margins, was found in some numbers in a large and quite dark cave in the limestone formation at Bidi, Sarawak; it is somewhat remarkable that this cockroach, a Stenopelmatid (? *Dolichopoda*), and a species of crab (*Potamon bidiense*, Lanch.), which were all found in considerable numbers in the darkest part of the cave, show no reduction in size of the eyes; one can only suppose that the caves have been peopled within quite recent times by these Arthropoda. The antennæ of the Stenopelmatid are of great length, but this is not the case in *Ischnoptera cavernicola*.

#### Genus ELLIPSIDIUM, Sauss.

##### *Ellipsidium castaneum*, sp. n.

♀. Head dark rufous, with a black spot between the antennal sockets; antennæ with the basal half strongly incrassated, black, the two basal joints rufous, apical half with a testaceous band occupying ten lower joints, the remaining joints fuscous. Disk of the pronotum rufo-testaceous, with a symmetrical black design, anterior and posterior margins pale testaceous, lateral margins hyaline. Tegmina castaneous, with the densely reticulated veins pale testaceous, the mediastinal field hyaline. Wings infuscated, veins flavid. Abdomen black beneath, sternites with white margins; subgenital lamina with the apex slightly cleft; cerci black, with castaneous legs. Legs castaneous, the coxæ black, with white borders, the tarsi black.

Total length 14 mm.; length of tegmina 12.5 mm.; pronotum 4 × 6 mm.

Humboldt Bay, New Guinea (*W. Doherty*, 1896); one example (Oxford Museum).



This well-marked species somewhat extends the range of the genus, hitherto known only from Australia.

GENUS PIROBLATTA, NOV.

Differs from *Chrastoblatta*, Sauss. & Zehnt., by the less prominent vertex, by the shape of the pronotum, by the greater breadth of the tegmina, and by the presence of a prominent triangular apical area in the wings.

Head almost covered by the pronotum; pronotum trapezoidal, anterior margin truncate, sides deflexed, posterior margin slightly arcuate; scutellum exposed; tegmina longer than the body, discoidal sectors oblique. Wings with a large apical triangle, projecting beyond the anterior part of the wing; ulnar vein bifurcate and sending also two to three branches to the dividing vein. Front femora unarmed beneath, mid and hind femora very sparsely armed on both borders beneath; genicular spines present on all the femora. Supra-anal lamina in the male somewhat quadrately produced, in the female triangularly produced.

On a re-examination of the species described by me as *Theganopteryx Bouvieri* (Trans. Ent. Soc. 1906, p. 236) I have come to the conclusion that a new genus must be established for this and for the species described below. In general appearance both species are very like *Theganopteryx*, but the branching of the ulnar vein of the wings is sufficient to place them close to the genus *Chrastoblatta*, from which, however, they may be distinguished by the points enumerated above. Both species are testaceous in colour and quite unlike the conspicuous *Chrastoblatta dimidiata*, Sauss. & Zehnt., and *C. tricolor*, Sauss. & Zehnt. The females are shorter and a little broader than the males.

*Piroblatta Alluaudi*, sp. n.

♂. Head rufo-castaneous; maxillary palpi and antennæ testaceous, the latter longer than the body; pronotum rufo-testaceous, the lateral margins hyaline. Tegmina testaceous hyaline; fifteen to sixteen costal veins, eight oblique discoidal sectors. Wings hyaline; veins fuscous, marginal field flavid; fourteen to fifteen costal veins, their apices very slightly incrassated; ulnar vein bifurcated and sending three branches to the dividing vein; first axillary vein quadri-ramose, triangular apical field large. Legs and cerci rufo-testaceous. Abdomen piceous; supra-anal lamina trigonal, subgenital lamina semiorbicular; the left style stout and curved, the right style minute.



♀. Similar to the male, but shorter; supra-anal lamina triangular; subgenital lamina ample.

♂. Length of body 7 mm.; length of tegmina 8 mm.

♀. Length of body 7 mm.; length of tegmina 7.5 mm.

Diego Suarez, Madagascar (*Alluaud*, April 1896); eight examples (Paris Museum).

*Piroblatta Bouvieri*, Shelf.

*Theganopteryx Bouvieri*, Shelford, Trans. Ent. Soc. London, 1906, p. 236.

The female has the pronotum less strongly marked with testaceous than the male; the supra-anal lamina is trigonal, the subgenital lamina ample and semiorbicular; the tegmina measure 8 mm., as against 10.8 mm. in the male, the body 8 mm., as against 9.5 mm. in the male.

GENUS PHYLLODROMIA, Serv.

*Phyllodromia picturata*, sp. n.

♂. Head testaceous, with castaneous markings, forming a symmetrical design. Pronotum transversely elliptical, lateral margins hyaline; disk of the pronotum pale testaceous, with castaneous markings composed of irregular spots and two central longitudinal lines; a few minute castaneous points in the hyaline margins. Tegmina hyaline testaceous, with castaneous spots disposed along the veins, denser at two points in the marginal field, forming two indistinct maculae; an oblique castaneous fascia on the right tegmen extending from the middle of the anal field to the apical third of the radial vein; mediastinal vein with two branches, radial vein not bifurcated, twelve costal veins; anterior ulnar vein sending several branches to the sutural margin, posterior ulnar vein simple; anal vein somewhat sinuate, its apex suddenly bent inwards. Wings hyaline; nine costal veins, the six basal clavately incrassated, the apical three ramose; ulnar vein with five branches. Abdomen infuscated above, testaceous, marbled with fuscous below; supra-anal lamina short, transverse; subgenital lamina ample, somewhat irregular, the left style larger than the right and curved (cerci mutilated). Legs testaceous; tibiae banded with castaneous; tarsi fuscous except the basal two thirds of the first joint; front femora not armed beneath; mid and hind femora sparsely spined; apical spines  $\frac{1}{6}$ ,  $\frac{1}{1}$ ,  $\frac{1}{1}$ ; no genicular spine on front femora.



Length of body 9 mm.; length of tegmina 10 mm.; pronotum  $2.2 \times 4.5$  mm.

Singapore, Botanic Gardens (*H. N. Ridley*); one example (Oxford Museum).

The species in the characters presented by the femora and supra-anal lamina resembles the *Ectobinæ*, but the wing-structure is typically *Phyllodromine*.

*Phyllodromia albovariegata*, sp. n.

♀. Head dark castaneous, with two diverging testaceous lines running from the vertex to the sides of the clypeus; clypeus rufo-testaceous; palpi fusco-testaceous; antennæ testaceous at base, the rest fuscous. Pronotum trapezoidal, dark castaneous, with a narrow central line testaceous, lateral margins hyaline. Tegmina dark castaneous, paler towards the apex, mediastinal field and base of marginal field hyaline; a transverse white fascia extending from the marginal field to the apex of the anal field, not meeting its fellow of the opposite side; twelve costal veins, the apical four branched, discoidal sectors oblique. Wings infuscated, costal margin very narrowly flavid; eleven costal veins, their apices incrassated; ulnar vein 5-ramose, the branches joined by transverse venulæ; a prominent apical triangle. Abdomen fuscous, with a fulvous patch on the disk below; supra-anal lamina short, transverse; subgenital lamina large, produced, its apex cleft; cerci long, testaceous. Legs testaceous, front femora armed with several spines on the anterior margin beneath, the more distal being the shortest of the series; mid femora strongly spined; hind femora sparsely spined, apical spines  $\frac{2}{1}, \frac{1}{1}, \frac{1}{1}$ ; no genicular spine on front femora.

Length of body 6.2 mm.; length of tegmina 7 mm.

Fernando Po (*L. Conradt*, 1901); one example (Paris Museum).

*Phyllodromia nimbata*, sp. n.

♂. Testaceous. Head with a rufous band between the eyes and sometimes with a narrower band between the antennal sockets. Pronotum trapezoidal; lateral margins hyaline; disk testaceous, with rufous markings symmetrically disposed. Tegmina clear testaceous; ten costal veins, five longitudinal discoidal sectors. Wings hyaline; mediastinal vein with two branches; eight to nine costal veins, their apices clavately incrassated; ulnar vein with four branches. Abdomen infuscated above, testaceous below, with



fuscous margins; supra-anal lamina trigonal, slightly emarginate; subgenital lamina triangularly produced, with two styles; cerci elongate, testaceous. Legs testaceous; front femora armed on anterior margin beneath with a series of spines, the most distal short and serrated; apical spines  $\frac{1}{1}$ ,  $\frac{1}{1}$ ,  $\frac{1}{1}$ ; all the femora with genicular spines.

♀. Head entirely rufo-testaceous; supra-anal lamina transverse; subgenital lamina ample, semiorbicular, posterior margin slightly but widely emarginate.

	♂.	♀.
Length of body . . . . .	11 mm.	8.1 mm.
Length of tegmina . . . . .	10 mm.	9.8 mm.

Kuching, Sarawak, Borneo; five examples (Oxford Museum). [No. 29.]

The species is undoubtedly closely allied to *Phyllodromia liturifera*, Stål, the type of which is now before me, but differs in the following points:—It is smaller; the head is not marked with three castaneous bands; the coloration of the tegmina is different; the wings are clear hyaline and their veins pale testaceous; the costal veins are more numerous; the supra-anal lamina is slightly more produced and its apex is emarginate; the subgenital lamina is narrower. It is quite evident that de Saussure correctly identified *P. liturifera*, Stål (Mél. Orthopt. ii. p. 56, 1869), and his detailed description of the species is perfectly accurate in every point.

*Phyllodromia nebulosa*, sp. n.

♂. Head testaceous; four longitudinal lines on the vertex, three indistinct transverse bands on the face, castaneous. Pronotum trapezoidal, lateral margins hyaline, disk marbled with castaneous and testaceous. Tegmina clear testaceous, with numerous irregular castaneous markings occurring between the veins; ten to eleven costal veins, five longitudinal discoidal sectors. Wings hyaline; veins testaceous, mediastinal vein with two branches; eight costal veins, their apices clavately incrassated; ulnar vein with four branches. Abdomen infuscated; supra-anal lamina triangular; subgenital lamina ample, semiorbicular, with two styles, the margin of the lamina emarginate at their points of insertion; cerci long, testaceous, base and apex fuscous. Legs testaceous, the tibiæ banded with fuscous; armature of femora as in the preceding species.

♀. All the castaneous markings on the head more distinct;



supra-anal lamina transverse, slightly emarginate; subgenital lamina very large, its posterior margin slightly and asymmetrically emarginate.

	♂.	♀.
Total length . . . . .	10 mm.	11 mm.
Length of tegmina . . . . .	9 mm.	8 mm.

Kuching, Sarawak, Borneo; three examples (Oxford Museum). [No. 30.]

The small size of the species and the marbling of the tegmina with darker markings serve to distinguish it from any of the described Oriental forms; its nearest ally appears to be *P. ignobilis*, Wlk., from Sula Islands.

*Phyllodromia Hewitti*, sp. n.

♂. Fulvo-castaneous. Antennæ equal to total length of body, fuscous except at base. Pronotum trapezoidal, smooth, shining, sides deflexed, not covering vertex of head, with obscure darker markings, posterior margin slightly produced. Tegmina with radial vein bifurcated, twenty-one costal veins, discoidal area with nine longitudinal sectors. Wings with marginal area somewhat coriaceous; mediastinal vein with five branches, radial vein bifurcated from near base; twelve costals; ulnar vein with three branches; a prominent triangular apical area. Front femora with eleven long spines on anterior margin beneath, the more distal closely set together; formula of apical spines  $\frac{2}{1}, \frac{1}{1}, \frac{1}{1}$ ; no genicular spine on front femora. Supra-anal lamina triangular; subgenital lamina produced, highly irregular in appearance; no styles.

Total length 21 mm.; length of body 18 mm.; length of tegmina 18 mm.

Kuching, Sarawak. [No. 27.]

This species, which I have pleasure in naming after Mr. J. Hewitt, Curator of the Sarawak Museum, has all the appearance of an *Ischnoptera*, but the wing-venation is that of a typical *Phyllodromia*; it is, perhaps, most nearly allied to *P. ferruginea*, Br.

*Phyllodromia* (?) *japonica*, sp. n.

♀. Rufo-castaneous, nitid, broad, short. Head with a darker mark between the eyes; antennæ longer than the body, fuscous except at base. Pronotum trapezoidal, sides deflexed, not quite covering vertex of head, posterior margin



very slightly angled; a short black line on each side in front. Tegmina not longer than abdomen; radial vein bifurcate; eleven costals; seven axillaries; discoidal sectors oblique. Wings suffused with rufo-testaceous; mediastinal vein with three branches, radial vein bifurcated; eight costals; ulnar vein with three rami reaching apex of wing and two irregular and anastomosing rami which are directed towards the apex of wing but do not reach it; no apical triangle. Abdomen dark castaneous above and beneath, margined with paler; supra-anal lamina triangular; cerci moderate; subgenital lamina ample. Legs rufo-testaceous, all the femora strongly armed; no genicular spine on front femora; formula of apical spines  $\frac{2}{1}, \frac{1}{1}, \frac{1}{1}$ .

Total length 15.2 mm.; length of tegmina 12 mm.; pronotum  $5.5 \times 7.9$  mm.

Riou-Kiou, Oshima, Japan; three examples (Paris Museum).

This is a very puzzling species, and I include it in the genus *Phyllodromia* with considerable doubt; in general appearance it approaches the Madagascar species of *Allacta*, but it certainly does not belong to that genus. The wing-venation is suggestive of the genus *Ischnoptera*, but does not strictly conform to that type nor to the wing-venation of *Phyllodromia*.

#### GENUS PSEUDOPHYLLODROMIA, Br.

##### *Pseudophyllodromia elegans*, Shelf.

♀. Head flavo-testaceous; a rufous band on the vertex and between the eyes; antennæ fuscous except three basal joints, which are testaceous; second and third joints of maxillary palpi black. Pronotum transversely elliptical, anteriorly truncate, posteriorly very slightly angulate; lateral margins broadly, posterior margin narrowly hyaline testaceous; disk dark castaneous, with four testaceous markings; an anterior median line, stopping short before the middle of the disk; two dots on each side of the middle line in the centre of the disk, a median posterior dot, in addition a rufescent marking on each side of the disk in front. Tegmina fusco-castaneous, marginal area and area between radial and anal vein testaceous hyaline; twelve to thirteen costal veins, five discoidal sectors, five axillary veins. Abdomen fusco-castaneous above; supra-anal lamina short, trigonal; abdomen beneath and legs flavo-testaceous; subgenital lamina ample, tipped with fuscous, its posterior margin cleft in the middle; cerci moderate, testaceous.



Total length 11.5 mm. ; length of body 9 mm. ; length of tegmina 9.2 mm.

Maroni, French Guiana (*F. Geay*, 1903) ; one example (Paris Museum).

*P. histrio*, Sauss., appears to be the nearest ally of this species, which is well marked by the dark tegmina with one hyaline band.

#### Genus PSEUDECTOBIA, SAUSS.

##### *Pseudectobia Alluaudi*, sp. n.

♀. Rufo-testaceous. Antennæ and mouth-parts testaceous. Pronotum covering vertex of head, trapezoidal ; anterior margin truncate, posterior margin obtusely angled, lateral margins pellucid, with an opaque testaceous submarginal band bordered inwardly by a rufous suffusion. Tegmina convex, nitid, venation of anal and discoidal fields obsolete ; anal vein deeply impressed, arcuate, reaching sutural margin at a point on one half of its length ; fifteen costals. Wings small, hyaline ; radial vein bifurcated near its apex ; twelve costal veins ; ulnar vein triramose ; apical triangle well defined, projecting beyond the anterior margin. Abdomen broad ; supra-anal lamina triangular ; subgenital lamina semiorbicular, projecting slightly beyond the supra-anal lamina. Front femora with eleven spines along the anterior margin beneath ; hind femora with four pairs of spines ; genicular spines and a pair of apical spines on each femur.

Total length 10 mm. ; length of tegmina 7 mm. ; pronotum 3 × 5 mm.

Diego Suarez, Madagascar (*Alluaud*, April 1896) ; one example (Paris Museum).

De Saussure created this genus or subgenus for the reception of the species *Luneli*, Sauss., *liturifera*, Stål, *insularis*, Sauss., regarding the apical triangle and branched ulnar vein of the wings of prime importance. As I have shown (*Trans. Ent. Soc. London*, p. 231, 1906), the presence of an apical triangle in the wings is a feature that appears in so many subfamilies of Blattidæ, that, taken by itself, it is of small value for purposes of generic distinction. I do not believe that *liturifera*, Stål, and *insularis*, Sauss., are congeneric, and I have seen the types of both species ; *Luneli*, Sauss., is congeneric with *liturifera*, Stål, and I do not see how either species can be separated from the genus *Phyllo-dromia* ; *insularis*, Sauss., is a broad convex insect, very



different from the other two species, and may well be selected as the type of the genus, which can be distinguished by the following characters:—

Broad, convex insects; the tegmina not projecting much beyond the tip of the abdomen, their venation sometimes obsolete in the anal and discoidal fields. Wings with an apical triangle, the ulnar vein ramose. Femora generally strongly armed. Supra-anal lamina variable, but usually produced.

Type of the genus *P. insularis*, Sauss.

The other species of the genus are *P. bipunctata*, Wlk., *P. adimonialis*, Wlk. (= *Lupparia adimonialis*), possibly *P. latipennis*, Br. (= *Phyllodromia latipennis*), and the new species described above. Of the species previously included in the genus, *P. pallidula*, Bol., and *P. vœltzkowiana*, Sauss. & Zehnt., have the supra-anal lamina produced, the abdomen is missing in *P. Luneli*, Sauss., and in *P. intermedia*, Sauss. & Zehnt.; it is probable that the shape of this tergite is as variable as in the genus *Phyllodromia*, and too much reliance should not be placed on its transverse form in *P. subpectinata*, Sauss. & Zehnt., and *P. antiguensis*, Sauss. & Zehnt. In all these species the armature of the femora is most variable. They cannot be placed in the genus *Theganopteryx* on account of the ramose character of the *vena ulnaris alarum* (cf. Trans. Ent. Soc. p. 232, 1906), but the presence of a triangular apical area in the wings does not forbid their entry in the genus *Phyllodromia*, seeing that this character does occur in several well-marked and well-recognized species of that genus. *P. punctulata*, Sauss. & Zehnt., must be referred to the genus *Theganopteryx*.

#### Subfam. NYCTIBORINÆ.

#### *Nyctibora bicolor*, sp. n.

♀. Head entirely black, with a scanty erect pubescence on the front; ocelli minute, testaceous; antennæ incrassated, black, apical joints rufescent, densely pubescent. Pronotum transversely elliptical, anterior border not nearly covering vertex of head; posterior border more arcuate than anterior, covering the scutellum; disk with two converging impressions, flavo-testaceous, with a shield-shaped black mark on the disk, posterior margin with a fine black line. Tegmina coriaceous, serio-punctate and reticulate between the raised veins, not pubescent; the basal three fifths flavo-testaceous, the apical two fifths dark castaneous; radial vein black throughout its



length, sutural margins black, anal vein deeply impressed, mediastinal vein sending several branches to the margin, costals numerous. Wings dark castaneous, ulnar vein with nine branches. Abdomen entirely black, except apical half of subgenital lamina, which is flavo-testaceous; supra-anal lamina triangular, produced; subgenital lamina ample, its lateral margins shortly produced; cerci black (mutilated). Legs black; front femora unarmed, mid femora with four spines on posterior margin, none on anterior margin; hind femora with two spines on posterior margin, none on anterior margin; genicular spines on second and third femora; formula of apical spines  $\frac{2}{1}, \frac{1}{1}, \frac{1}{0}$ .

Total length 26·8 mm.; length of body 17 mm.; length of tegmina 23·8 mm.; pronotum 6 mm.  $\times$  8·5 mm.

Yarimaguas, Peru (*Sallé*, 1886); one example (Paris Museum).

This species, that described below, and *N. crassicornis*, Burm., should probably be included in a new genus, characterized by the incrassated antennæ, shape of the pronotum, and sparse armature of the femora.

*Nyctibora nigrocincta*, sp. n.

♂. Head entirely black; antennæ black, except apical joint, which is castaneous, incrassated, pubescent. Pronotum as in the preceding species, but with the lateral and posterior margins slightly reflected and with a very scanty recumbent pubescence, yellow, with a shield-shaped black mark on the disk. Tegmina long, coriaceous at base and reticulate, not pubescent; four branches to the mediastinal vein, costals numerous; colour yellow, radial vein at base, a broad streak on sutural margin of anal field, a broad band from near the costal margin to the sutural margin in the apical third, black; apex castaneous. Wings fusco-castaneous; a broad pre-apical yellow band; costals irregular, six branches to the ulnar vein. Abdomen black above and below; supra-anal lamina triangular; subgenital lamina produced, very convex, with two styles; cerci black. Legs black; front femora with no spines beneath; mid femora with three to four spines on posterior margin, none on anterior margin; hind femora with five spines on posterior margin, none on anterior margin; genicular spines on the mid and hind femora; formula of apical spines  $\frac{0}{1}, \frac{1}{1}, \frac{1}{1}$ .

♀. Similar to ♂, but rather larger, the black band extending right across the tegmina, castaneous apex of tegmina more extended, subgenital lamina as in *N. bicolor*, mihi.



♂. Total length 24 mm.; length of body 17.5 mm.; length of tegmina 20 mm.; pronotum 4.2 mm. × 6 mm.

♀. Total length 27 mm.; length of body 20.2 mm.; length of tegmina 21 mm.; pronotum 5 mm. × 8 mm.

Colombia; four examples (Oxford Museum).

Subfam. *EPILAMPRIINÆ*.

Genus *NOTOLAMPRA*, Sauss.

*Notolampra antillarum*, sp. n.

♂. Castaneous. Head and antennæ testaceous, the former with a few scattered castaneous punctures. Pronotum not punctate, castaneous, the lateral borders broadly, the anterior margin narrowly, testaceous, semiopaque, with a few scattered fuscous or castaneous dots. Tegmina castaneous, the lateral borders testaceous, semiopaque with scattered castaneous dots, these borders are continuous with the pronotal testaceous borders and are broadest at the base, narrowing to the apex; radial vein marked at its base by a dark line, no other veins visible; surface of tegmina seriopunctate. Wings rufo-testaceous; intercalated apical triangle small. Abdomen rufo-testaceous; supra-anal lamina triangular, slightly notched; subgenital lamina trigonal, somewhat asymmetrical with two styles; cerci short. Legs testaceous spotted with castaneous; front femora with two spines only at base of anterior margin beneath, rest of anterior margin occupied by piliform setæ, one spine on posterior margin; mid and hind femora with two spines on anterior margin, four on posterior margin; formula of apical spines  $\frac{2}{1}, \frac{1}{1}, \frac{1}{0}$ ; no genicular spine on front femora.

Total length 19 mm.; length of tegmina 14 mm.; pronotum 6 mm. × 7.5 mm.

Trinité, Martinique (*A. Bourgouin*, 1901); one example (Paris Museum).

The species is most closely allied to *Notolampra punctata*, Sauss., from Brazil, but differs in the testaceous borders of the tegmina and in its proportions.

Genus *APSIDOPIS*, Sauss.

*Apsidopis Wallacei*, sp. n.

♀. Pale testaceous. Frons concave and transversely striated; a chevron-shaped depression at base of clypeus and two marks between the eyes castaneous; antennæ fuscous



except basal joint; eyes  $1\frac{1}{2}$  mm. apart. Pronotum cucullate, of the form characteristic of the genus, punctate and with numerous minute fuscous or castaneous maculæ. Tegmina semicoriaceous, densely serio-punctate between the veins in the basal two thirds, in the apical third the punctures merge into quadrangular interspaces between numerous reticulated interstitial veins, a few minute fuscous dots are scattered over the tegmina; mediastinal vein with ten branches; seven ramose costal veins; nine anal veins, the first ramose. Wings angulated at the apex as in the genus *Derocardia*, Sauss.; marginal area testaceous with fuscous spotting at apex, the apex semicoriaceous; mediastinal vein multiramose; costal veins irregular, the interspaces filled by reticulated interstitial veins; ulnar vein with nineteen branches. Supra-anal lamina ample, prominent, bilobed; subgenital lamina semiorbicular; cerci slender and short. Front femora with five spines on middle of anterior margin beneath, piliform setæ extending from them to apex, two spines on posterior margin; mid and hind femora with three to four spines on each lower margin; formula of apical spines  $\frac{1}{1}$ ,  $\frac{1}{1}$ ,  $\frac{1}{0}$ ; minute genicular spines on mid and hind femora, none on front femora; posterior metatarsus shorter than remaining joints, its pulvillus produced proximally.

Length of body 30 mm.; length of tegmina 35 mm.; pronotum 11 mm.  $\times$  12.5 mm.

Sarawak (*Wallace*; Wilson Saunders collection, Oxford Museum).

The species is close to *A. oxyptera*, Wlk., also from Borneo, which exhibits the same characters of punctuation of the tegmina; but *A. oxyptera* is smaller, more rufous in colour, the proportions of the pronotum are different and the pronotum is less closely punctate, but more densely covered with castaneous dots. Both species can be distinguished from *A. acutipennis*, Sauss., by their larger size.

#### Subfam. BLATTINÆ.

#### Genus BLATTA, L.

#### *Blatta Rothschildi*, sp. n.

♂. Rufo-castaneous. Head with four darker markings between the eyes; ocelli and clypeus testaceous; antennæ much longer than the body, first two joints and apical third rufo-castaneous, remainder fuscous. Pronotum trapezoidal; anterior and posterior borders truncate, flavo-testaceous, a



castaneous marking like an inverted **W** on the disk, a central testaceous line. Tegmina abbreviated, not extending much beyond the second abdominal tergite, surface reticulate, anal vein reaching internal posterior angle of tegmina. Wings rudimentary. The first and second abdominal tergites flavo-testaceous, third to fifth flavo-testaceous with castaneous lateral and posterior borders; sixth rufo-castaneous, enlarged; seventh flavo-testaceous with central castaneous macula, narrow, posterior margin sinuate and slightly emarginate in the middle; supra-anal lamina quadrate, broadly emarginate, rufo-castaneous with a testaceous macula at the posterolateral angles. Cerci black, apices rufo-castaneous. Abdomen beneath rufo-castaneous, lateral margins castaneous and a castaneous stigma on second to fourth sternites; subgenital lamina notched on each side, the long slender styles springing from the notches. Legs rufo-castaneous. Metatarsus scarcely equal to remaining joints, spined beneath, its pulvillus minute.

♀. Head black; ocelli, clypeus, genæ, vertex flavo-testaceous; antennæ rufo-castaneous. Pronotum as in ♂, but the discal black marking much enlarged, so that it occupies all the disk, leaving only a narrow sinuate flavo-testaceous margin, no central testaceous line. Tegmina squamiform, not extending beyond metanotum, black, with a yellow line at base; mesonotum, metanotum, and first five abdominal tergites black, with a broad central transverse flavo-testaceous band; sixth tergite enlarged, concavely depressed, black with flavo-testaceous lateral and posterior margins; seventh tergite somewhat triangularly produced, black, apex slightly emarginate, flavo-testaceous; supra-anal lamina produced, narrower than in ♂, broadly emarginate. Abdomen beneath and legs black, disk of abdomen rufo-castaneous; coxæ margined outwardly with flavo-testaceous, tibial spines and tarsi castaneous.

♂. Total length 21 mm.; length of tegmina 10 mm.; pronotum 5.8 mm. × 7.2 mm.

♀. Total length 26 mm.; length of tegmina 4 mm.; pronotum 8 mm. × 10 mm.

South of Lake Rudolph, Brit. E. Africa (*Maurice de Rothschild*, 1905); five examples (Paris Museum).

The nearest ally of the species appears to be *B. manca*, Gerst., from W. Africa.



## Subfam. OXYHALOINÆ.

## Genus OXYHALOA, Br.

*Oxyhaloa variabilis*, sp. n.

♀. Rufo-castaneous. Vertex of head rufo-castaneous, a clear testaceous band between the antennæ, genæ testaceous; frons, clypeus, labrum, palpi, and antennæ shining black. Pronotum with two oblique impressions anteriorly, with a few minute punctures from which spring short slender hairs. Tegmina with the veins fuscous, sparsely pubescent, very variable in length, in some examples reaching tip of abdomen, in others lanceolate and extending no further than the third tergite; thirteen costals; discoidal field reticulate. Wings as variable in length as the tegmina, flavid at base, the rest infuscated; veins fuscous, ulnar vein with eight to nine rami, the basal ones transverse. Abdomen broad, black above, the margins of the segments narrowly rufous, beneath rufo-castaneous; supra-anal lamina short with rounded posterior angles, not emarginate; subgenital plate projecting beyond the supra-anal lamina, fuscous, ample, its margin sinuated; cerci short, fuscous, tipped with rufous. Legs black, apices of coxæ and femora rufous, tibial spines rufous.

Total length from 16 mm. to 13.5 mm.; length of body from 16 mm. to 12.5 mm.; length of tegmina from 11 mm. to 8 mm.; breadth of pronotum from 6.2 mm. to 5 mm.; length of pronotum from 4.5 to 4 mm.

Interior of Djibouti (*Hermann*); one example (Paris Museum).

This is the smallest species of the genus, and is remarkable on account of the variation in size of the wings and tegmina; apparently this variation bears no relation to the variation in size of the individual, for one of the smallest specimens has long tegmina and one of the largest has these organs much reduced.

## Genus PARAPLECTA, nom. nov.

(= *Cirphis*, Stål.)

The name *Cirphis*, created by Stål in 1876 (*Æfv. Vet.-Akad. Förh.* xxxiii. p. 74) for a cockroach (*C. pallipes*) from Damara Land, is preoccupied, having been applied by Walker in 1865 to a genus of Noctuid moths.



*Paraplecta æthiopica*, sp. n.

♂. Castaneous, smooth, nitid; vertex of head not covered by pronotum; ocelli, apex of clypeus, mouth-parts, and antennæ testaceous; minutely punctured. Pronotum trapezoidal, with rounded posterior angles, minutely punctured; posterior margin truncate, exposing the scutellum. Tegmina semicoriaceous, barely reaching apex of abdomen; eleven or twelve costals; discoidal field reticulate, anal vein impressed; eight axillaries. Wings with a large apical reflected area, two fifths of total wing-length, its basal margin obtusely angled; costals highly irregular and obsolescent; median vein consisting of two parallel branches, with one or two transverse venulæ connecting them; ulnar vein with seven branches. Abdomen castaneous above, supra-anal lamina produced; abdomen rufo-castaneous below, subgenital lamina asymmetrical with one style (the left); cerci short, acuminate, 4-jointed. Legs testaceous; femora spineless, tarsal claws without arolia.

♀. Similar to ♂, but larger, tegmina and wings (when folded) not extending beyond the sixth abdominal tergite; supra-anal lamina produced quadrately; subgenital lamina ample, produced, narrowed posteriorly.

♂. Total length 9 mm.; length of tegmina 8 mm.; pronotum 3 mm. × 3.2 mm.

♀. Total length 11 mm.; length of tegmina 7 mm.; pronotum 3.5 mm. × 3.8 mm.

Fernando Po (*L. Conradt*, 1901); six examples (Paris Museum).

The species can readily be distinguished from *P. pallipes*, Stål, by the wing-structure: in Stål's species there is a conspicuous triangular apical area which in *P. æthiopica* has become extended to form an apical reflected area; the venation is very similar in both species, but in *pallipes* the costals are better marked and the rami of the ulnar vein are more numerous, the double median vein is common to both species.

## Genus CHORISTIMA, Tepper.

*Choristima*, Tepper, *Trans. Roy. Soc. S. Austral.* xix. p. 165 (1895).

*Aphlebidea*, Brancsik, *Jahresh. Ver. Trencsin. Com.* xix. & xx. p. 56 (1897).

Kirby in his 'Synonymic Catalogue of Orthoptera' (1904), following Brancsik, places *Aphlebidea* in the Ectobinæ; but as the femora are unarmed beneath and a triangular apical field is present in the wings, the genus falls naturally into the



subfamily Oxyhaloinæ(=Plectopterinaæ). *Aphlebidea* is undoubtedly the same as Tepper's genus *Choristima*, described two years previously, and *A. Brunneri*, Brancs., if not identical with *Choristima galerucoides*, Wlk., is most closely allied. *Blatta apicifera*, Wlk. (Cat. Blatt. B. M. p. 110, 1868), is the male of *C. galerucoides*, Wlk.: the type, which is in the British Museum, is in extremely poor condition, the abdomen and antennæ being missing; it is smaller than the female, the tegmina and wings are relatively longer and would, I imagine, extend beyond the tip of the abdomen. Tepper's diagnosis of the genus is extremely brief, but Brancsik's description of *Aphlebidea* is detailed enough to render it readily recognizable. The species included in the genus may be distinguished as follows:—

- |     |  |  |
|-----|--|--|
| a.  | Subgenital lamina in ♀ somewhat cucullate. |  |
|     | b. Rufous                                  | <i>C. Brunneri</i> , Brancs.   |
|     | bb. Testaceous                             | <i>C. Kershawi</i> , Tepp.   |
| aa. | Subgenital lamina in ♀ not cucullate.      |  |
|     | b. Piceous above                           | <i>C. hydrophoroides</i> , Wlk.  |
|     | bb. Rufous                                 | <i>C. galerucoides</i> , Wlk.<br>(syn. <i>C. loftyensis</i> , Tepp.;<br><i>C. apicifera</i> , Wlk.). |

*Chorisonaura pectinata*, Sauss. (Mél. Orthoptér. iv. p. 131, 1872), may be referred to a new genus, on account of the fusion of the radial and ulnar veins of the tegmina—a condition which obtains also in *Ectobia*, Westw., but not in the genera *Chorisonaura*, Br., or *Choristima*, Tepp., to which it is most nearly allied.

#### GENUS ECTONEURA, nov.

Allied to *Choristima*, Tepper, but the radial and ulnar veins of tegmina fused and emitting oblique veins to both margins. Tegmina and wings somewhat reduced in the female, but not to so great an extent as in *Choristima*; triangular apical area large and conspicuous. Supra-anal lamina transverse or slightly produced; subgenital lamina of the male narrow, triangular, of the female large and subquadrate. Femora spineless beneath, except for apical spines, the formula of which is  $\frac{1}{0}, \frac{1}{1}, \frac{1}{1}$ .

Type, *E. pectinata*, Sauss.

#### *Ectoneura figurata*, sp. n.

♂. Head fusco-castaneous with a pale testaceous band



between the eyes; antennæ testaceous. Prothorax transversely elliptical, margins hyaline; disk fusco-castaneous with the centre testaceous, on which are some fuscous markings. Tegmina hyaline with pale fuscous spots along the veins; twelve costal veins, nine discoidal rami. Wings hyaline, veins fuscescent; nine costal veins; medio-discal area twice as broad as medio-ulnar, crossed by several irregular transverse bars; ulnar vein simple; first axillary vein biramose, upper branch irregularly bifurcate. Abdomen fuscous, with testaceous markings; cerci long, fuscous, with a broad testaceous band. Legs testaceous.

Total length 8 mm.; length of tegmina 6.5 mm.

Five males without locality (Oxford Museum).

It is possible that this is the *Blatta marcida* of Erichson, a species placed by Brunner with some doubt in the genus *Ectobia*, Westw.

#### Genus CHORISONEURA, Br.

##### *Chorisoneura Brunneri*, sp. n.

♀. Head fuscous, vertex rufo-castaneous; antennæ fuscous at base, the remainder testaceous. Prothorax transversely elliptic, disk fuscous, margins hyaline. Tegmina castaneous with hyaline costal margin and with fuscous humeral vitta, veins white; sixteen costal veins, very irregular; median vein distinct, longitudinal, discoidal vein with four irregular branches; the whole surface of the tegmina is much reticulated, and the veins are rather obscured thereby; the part of the right tegmen covered by the left is infuscated. Wings fuscous, the edge of the marginal field yellowish; eleven costal veins, their ends swollen, joined by transverse bars; medio-discal field crossed by several transverse bars; ulnar vein arcuate, simple; apical triangle unevenly divided, its base acutely angled, its apex subtruncate. Abdomen fulvous, legs testaceous. Cerci long, testaceous.

Total length 8.5 mm.; length of tegmina 7.5 mm.

Rio Grande do Sul. Two examples labelled in Brunner v. Wattenwyl's handwriting "*Chorisoneura*, sp. n." (Oxford Museum).

The species appears to be distinct from anything described; perhaps it shows most affinity with *C. anomala*, Sauss. & Zehnt.

##### *Chorisoneura morosa*, sp. n.

♂. Head rufo-fuscous, with a pale narrow transverse line between the eyes; antennæ (mutilated) testaceous;



pronotum with the disk fuscous, margins hyaline. Tegmina pale fulvous, surface not reticulated, veins prominent and white, a fuscous humeral vitta; twelve costal veins, the last two biramose; the humeral vein also giving off four rami to the sutural margin, the discoidal vein giving off only three; ulnar vein triramose. Wings infuscated, edge of marginal field yellow; fourteen costal veins, medio-discal field crossed by numerous transverse bars; ulnar vein forked at apex, axillary vein triramose; apical area unequally divided, acutely angled at base, its apex subtruncate. Body and legs testaceous beneath.

Total length 9 mm.; length of tegmina 7 mm.

Cachabi, Ecuador (W. F. H. Rosenberg coll., Dec. 1896); one example (Oxford Museum).

The species is evidently allied to *C. translucida*, Sauss., from Mexico.

Subfam. *PANCHLORINÆ*.

Genus *ZETOBORA*, Burm.

*Zetobora lata*, sp. n.

♂. Head black; labrum golden; antennæ at base black, nitid, the rest fuscous, villose. Pronotum with anterior margin strongly rounded in the middle, less so laterally, the margin slightly reflected, the posterior margin only slightly curved, the postero-lateral angles slightly notched; disk with a humeral carina on each side, the "hood" with a few tubercles, nitid, the sides with numerous tubercles of various sizes, a few granules on the front; castaneous except for a testaceous hyaline patch, semicircular in shape, in front; scutellum with central carina and a few punctures. Tegmina broad, scarcely exceeding the abdomen in length, testaceous-hyaline, anal field and humeral vein castaneous; marginal field very broad, its outer border slightly thickened and margined; mediastinal area with large shallow punctures; anal field reticulate-punctate; discoidal field reticulate; apex broadly rounded. Supra-anal lamina quadrate, notched; subgenital lamina produced, rather asymmetrical, with one style (the right). Abdomen castaneous; the dorsal tergites with their posterior angles strongly produced backwards and projecting considerably beyond the sternites, very much as in the genus *Capucina*, Sauss.



Total length 22 mm. ; length of tegmina 25 mm. ; breadth of tegmen 13 mm. ; pronotum 10 mm.  $\times$  16.2 mm.

The species is characterized by its great breadth in proportion to its length ; the notched postero-lateral angles of the pronotum are also distinctive.

Subfam. *CORYDINÆ*.

Genus *EUTHYRRAPHA*.

*Euthyrrapha bigeminata*, sp. n.

♀. Very similar to *E. pacifica*, Coq., but the pronotum entirely fuscous, a round pale testaceous spot on each tegmen beyond the middle ; the abdomen beneath is orange with the apex fuscous. The tegmina at base are slightly rugose, minutely punctate, and furnished with an erect pubescence ; the apex of the tegmina appears velvety. Legs fuscous, coxal joints and tibial spines castaneous. Subgenital lamina strongly carinate.

Total length 7.5 mm. ; length of body 5 mm. ; length of tegmina 6 mm.

Ivory Coast, W. Africa (*G. Thoiré*, 1901) ; one example (Paris Museum).

Subfam. *PERISPHERINÆ*.

Genus *PARANAUPHÆTA*, Br.

*Paranauphæta Brunneri*, sp. n.

♀. Closely allied to *P. rufipes*, Haan, but smaller. Head with three maculæ on the vertex ; the ocelli, genæ, clypeus, and basal joints of the palpi testaceous ; apical joints of antennæ not testaceous. Pronotum with the testaceous margins much narrower than in *P. rufipes*. Tegmina and wings as in *P. rufipes*. Abdomen above less strongly marked with testaceous ; subgenital lamina ample, produced, emarginate. Coxæ testaceous, castaneous at base ; femora testaceous at base, remainder castaneous ; tibiæ and tarsi rufo-castaneous.

Total length 20 mm. ; length of body 18 mm. ; length of tegmina 17.1 mm.

Kuching, Sarawak (*Shelford*, 1900) ; one example (Oxford Museum).



## Genus EUSTEGASTA, Gerst.

*Eustegasta agrilidina*, sp. n.

♂. Black, nitid, with dark green metallic reflections. Head entirely of this colour except the labrum, which is testaceous; antennæ with five basal joints, black, nitid, remainder fuscous. Pronotum of typical form, broadly bordered laterally with orange. Tegmina with an orange spot at base of discoidal area, another in apical third of marginal area. Abdomen above fuscous, broadly margined with orange, beneath orange; supra-anal lamina short, trigonal, fuscous; subgenital lamina small, asymmetrical, without styles, black; cerci pale testaceous. Front legs orange; mid and hind coxæ black, outwardly bordered with white, femora and tibiæ orange, all the tarsi fuscous; front femora with two spines on anterior margin beneath; mid femora with one spine on anterior margin, none on posterior margin; hind femora with one spine on anterior margin, three on posterior margin; formula of apical spines  $\frac{1}{0}, \frac{1}{1}, \frac{1}{0}$ ; no genicular spine on front femora.

Total length 12.5 mm.; length of body 10 mm.; length of tegmina 10.1 mm.

N'Kogo, French Congo (*H. Bonnet*, 1903); one example (Paris Museum).

The nearest ally of the species is *E. metallica*, Sauss.

*Eustegasta variegata*, sp. n.

♂. Head testaceous; occiput, a cordate patch on the frons, the genæ, two spots on the clypeus, and the palpi castaneous or black; antennæ black, the six basal joints nitid. Pronotum testaceous, the disk rufo-castaneous, with two black longitudinal vittæ of irregular shape. Tegmina rufo-castaneous; mediastinal area and two thirds of marginal area clear testaceous, the stripe at its termination expanding into a spot that extends on to the outer part of discoidal field; a humeral stripe; the anal vein and a longitudinal stripe in the anal field black, faint indications of a testaceous spot at base of discoidal field. Wings flavo-hyaline; median vein bifurcate; ulnar vein with ten rami, four of which reach the apex of the wing. Abdomen orange above and beneath; supra-anal lamina quadrate, posterior angles acute, not emarginate; subgenital lamina asymmetrical, with one style, the right; cerci orange. Coxæ black, outwardly bordered with testaceous; front femora castaneous, the other femora



and all the tibiæ flavo-testaceous; tibial spines rufo-castaneous, apical joints of tarsi fuscous; femoral spines as in preceding species, except that the mid femora have no spines beneath.

Total length 13·8 mm.; length of body 10 mm.; length of tegmina 10·8 mm.

Congo (*Dybowski*, 1896); two examples (Paris Museum).

Nearest to *E. Lueci*, Dom.

#### Genus ELLIPSICA, Sauss. & Zehnt.

##### *Ellipsica rugosa*, sp. n.

♀. Black, narrowly elliptical, convex. Head punctate; clypeus, mouth-parts, and antennæ flavo-testaceous. Sides of the thoracic tergites strongly deflexed, their posterior angles acute and produced backwards, their surface beset with tubercles, between which are numerous punctures; on the meso- and metanotum the tubercles are in a double row, on the pronotum they are less regularly placed. Abdominal tergites transversely divided by a sulcus into two unequal portions; the anterior narrow portion is impunctate and smooth, the posterior portion is marked by a double row of punctures followed by a double row of tubercles; the transverse sulci are laterally very deep, especially in the posterior segments, and one row of punctures lies in these sulci; on the seventh tergite the tubercles are larger and less regularly arranged than in the preceding segments. Supra-anal lamina quadrate, margined, tuberculate. Abdominal sternites transversely divided by sulci like the tergites, punctate but not tuberculate; subgenital lamina ample, punctate. Legs black, tarsi flavo-testaceous, arolia large.

Total length 15 mm.; pronotum 5 mm. × 7 mm.

West coast of Madagascar (*Lantz*, 1882); two examples (Paris Museum).

The species is quite unlike any other of the genus in its tuberculate characters.

#### Genus PSEUDOGLOMERIS, Br.

##### *Pseudoglomeris magnifica*, sp. n.

♀. Brilliant metallic green or blue-green. Head punctate; eyes 1 mm. apart; base of antennæ and palpi flavid, apical half of antennæ fuscous, middle section castaneous. Pronotum semiorbicular, posterior angles backwardly produced; anterior border margined and slightly



reflected, densely punctate; anteriorly the punctures are irregular, producing a reticulate appearance; a few irregular smooth spaces on all the thoracic tergites; thorax beneath black, shining. Abdomen with large shallow punctures above; lateral margins of fifth and sixth segments slightly sinuate, four or five punctures in the sulci of third to sixth segments; supra-anal lamina quadrate, slightly concave, angles rounded; abdomen beneath æneous, densely punctate, lateral smooth stigmata on each segment; subgenital lamina ample, sinuate, striato-punctate. Cerci rufous. Coxæ, apices of femora, tibiæ, and tarsi rufo-testaceous; femora castaneous.

Total length 23 mm.; pronotum 7·8 mm. × 14 mm.

Tuyen-Quan, Central Tonkin (*A. Weiss*, 1901); a long series of specimens in all stages of growth (Paris Museum).

This is one of the most brilliantly-coloured cockroaches known to science; its colour is reminiscent of the gorgeous metallic-green Cetoniid beetles of the Eastern Tropics.

### III.—*New Eastern, Australian, and African Heterocera.*

By Colonel C. SWINHOE, M.A., F.L.S., &c.

#### Family Bombycidæ.

##### *Andraca apodecta*, nov.

♂ ♀. Of a uniform ochreous-fawn colour, the male slightly suffused with brownish and darker than the females; shafts of the antennæ dark brown above, white at the sides, pectinations of the male brown; some whitish suffusion along the outer portions of the costa in the male, not present in the females: fore wings with three transverse indistinct grey lines or thin bands—antemedial, medial, and discal, the two former sinuous, the latter deeply angled outwardly below the costa: hind wings with two medial lines and with the ground-colour of the wings paling towards the costa: the hairs on the abdominal margin dark brown, this margin curved inwards but without any excision. Underside paler, lines as above.

Expanse of wings, ♂  $1\frac{8}{10}$ , ♀  $2\frac{4}{10}$  inches.

Padang, W. Sumatra; one male, two females.

The fore wings are not so produced as in the type species of the genus, *bipunctata*, Walker, from India, and it is without the excision of the abdominal margin of the hind wing as in that species, but it has every other character of the genus.