

XLIII.—*The Hemiptera-Heteroptera of Rodriguez, together with the Description of a new Species of Cicada from that Island.* By W. E. CHINA, B.A.

(Published by permission of the Trustees of the British Museum.)

THE material on which this paper is mainly based forms part of the large collection of insects made in Rodriguez by Mr. H. P. Thomasset and Mr. H. J. Snell between August and November, 1918, and presented in 1919 to the University Museum of Zoology, Cambridge. A list of reports previously published on this collection was given by Hugh Scott in an introductory note to F. W. Edwards's account of the DIPTERA NEMATOCERA of the island (Ann. & Mag. Nat. Hist. (9) xii. p. 330, 1923). Since then a paper by Mr. E. Meyrick on the MICRO-LEPIDOPTERA has appeared (Trans. Ent. Soc. London, 1923, parts iii.-iv. p. 544 (April 1924)). The present paper deals with all the HEMIPTERA-HETEROPTERA, and with the only species of *Cicada* in the collection. The FULGORIDÆ have already been worked out by Mr. Frederick Muir, and it is hoped that his report will shortly be published, and that articles on the PSYLLIDÆ and JASSIDÆ by other writers will follow.

--A small collection of HEMIPTERA was made at Rodriguez by George Gulliver whilst accompanying the 'Transit of Venus' Expedition to the Island in the autumn of 1874. These specimens were described by Butler in the 'Philosophical Transactions of the Royal Society' (extra volume clxviii.) in 1879, the new species having been previously described in the Ann. & Mag. Nat. Hist. (4) xvii. p. 411 (1876). This collection included specimens of sixteen species of HETEROPTERA and three of HOMOPTERA, now in the British Museum. In the following description of the collection made by Messrs. Thomasset and Snell in 1918, reference is made to Gulliver's specimens, and Butler's determinations are emended in certain cases, thus making the paper a more complete account of the HETEROPTERA of the island. Fifty-two species are now recorded, including thirteen species and two genera hitherto undescribed from any other locality. The TYPES of the new species described below have been placed in the British Museum.

Suborder HETEROPTERA.

Family Cydnidæ.

1. *Macroscytus privignus*, Horv.

Ann. Mus. Nat. Hungarici, xvii. p. 237 (1919).

Originally described from Madagascar.

1 ♂, 1 ♀, September.

2. *Geotomus proximus*, Sign.

Ann. Soc. Ent. France, 1883, p. 54, t. 4. fig. 163.

Recorded from Réunion and Seychelles.

7 ♀ ♀, August and September.

Family Pentatomidæ.

3. *Nezara viridula*, L.

Cimex viridula, L., Syst. Nat. ed. x. p. 444 (1758).

Nezara viridula, Stål, Hemipt. Afr. i. p. 193 (1864).

Cosmopolitan.

1 ♂, 5 ♀ ♀; 1 ♀ (*Sinclair*); 1 ♀ (*Gulliver*).

4. *Antestia mauritii*, Stål.

Pentatoma mauritii, Stål, Eugen. Resa, Ins. 1859, p. 227.

Antestia mauritii, Stål, Hemipt. Afr. i. p. 204 (1865).

Recorded from Mauritius and Mozambique.

1 ♂, 2 ♀ ♀, August.

5. *Bathycælia flavolimbata*, sp. n.

♂. *Head* pale testaceous, finely punctate, sides sinuate—length 3.1 mm., width between base of eyes 2.1 mm.; eyes dark brown, ocelli red, twice as far from one another as from the eye; antennæ pale testaceous with the fourth, fifth and apical half of the third joint rufo-testaceous and densely covered with short stiff hairs—length of joints 0.8, 1.5, 2.4, 2.5, and 2.3 mm.; rostrum very long, extending to the extreme apex of the abdomen, pale olivaceous with the apex black—length of joints 2.0, 3.7, 5.3, and 3.0 mm. *Pronotum* pale olivaceous shading to rufo-testaceous posteriorly, strongly punctate, lateral margins slightly convex almost straight, posterior margin distinctly concave; length in middle 3.3 mm., width across posterior angles 8.2 mm. *Scutellum* strongly punctate, rufo-testaceous with the basal half olivaceous and the apex obscurely pale testaceous; basal angles yellow, each with a black foveate impression. *Hemelytra* rufo-testaceous, punctate, membrane pale fuscous extending slightly beyond the apex of the abdomen. *Abdomen* broader than the hemelytra, connexivum bright yellow with the interior margin broadly sanguineous, the exterior margin narrowly testaceous. *Legs* testaceous with the tarsi and the apices of the tibiæ darker.

Total length 15 mm.

Near *B. prælongirostris*, Bergr., from Seychelles, but

rather smaller and narrower and much more strongly punctate. The genitalia are quite distinct from those of the Seychelles species.

2 ♂♂ and 4 larvæ, November.

6. *Phricodus hystrix*, Germ.

Aradus hystrix, Germ., Silb. Rev. Ent. v. 1837, p. 134.

Phricodus hystrix, Spin., Rev. Mag. Zool. 1839, p. 331.

Recorded from Nyasaland, Tanganyika Territory, S. Africa, Madagascar, Mauritius, and S. India.

4 ♂♂, 5 ♀♀, and 2 larvæ, September and October; 1 ♂, 2 ♀♀ (*Sinclair*); 1 ♂, 1 ♀ and 2 larvæ (*Gulliver*).

The collection of Thomasset and Snell contains larvæ of two more species of Pentatomidæ at present indeterminable.

Family Coreidæ.

7. *Leptoglossus membranaceus*, F.

Cimex membranaceus, F., Spec. ii. p. 351, 79 (1781).

Leptoglossus membranaceus, Stål, Kongl. Sv. Vet.-Ak. Handl. xi. no. 2, p. 68 (1873).

Widely distributed over Africa, India and Malaya.

4 ♂♂, 4 ♀♀, and 2 larvæ, August and September.

8. *Acanthomia horrida*, Germ.

Syromastes horrida, Germ., Silb. Revue, v. p. 145 (1837).

Acanthomia horrida, Stål, Kongl. Sv. Vet.-Ak. Handl. xi. no. 2, p. 83 (1873).

Recorded from S. Africa, Mauritius, and Seychelles.

2 ♂♂ and 3 ♀♀.

9. *Stenocephalus punctipes*, Stål.

Kongl. Sv. Vet.-Ak. Handl. xi. no. 2, p. 85 (1873).

Recorded from Madagascar and Seychelles.

2 ♀♀, September; 1 ♀ (*Sinclair*).

10. *Cletus ochraceus*. H.-S.

Gonocerus ochraceus, H.-S., Wanzen Ins. vi. p. 7, fig. 563 (1837).

Cletus ochraceus, Stål, Hemipt. Afr. ii. p. 77 (1865).

Originally described from Cape Colony.

2 ♂♂, 4 ♀♀, and 1 larva, August and September.

11. *Liorhyssus hyalinus*, F.

Lygaeus hyalinus, F., Ent. Syst. iv. p. 168, 115 (1794).

Coreus hyalinus, F., Syst. Rhyng. (1803), p. 201.

Corizus (Liorhyssus) hyalinus, Stål, Kongl. Sv. Vet.-Ak. Handl. ix. p. 222 (1870).

Liorhyssus hyalinus, Stål, tom. cit. xi. no. 2, p. 98 (1873).

Cosmopolitan.

4 ♀ ♀, September.

12. *Serinetha hæmatica*, Germ.

Leptocoris hæmatica, Germ., Silb. Rev. Ent. v. p. 144 (1837).

Serinetha hæmatica, Dall., List Hemip. ii. p. 463 (1852).

Serinetha lateralis, Sign., Ann. Soc. Ent. France, (3) viii. p. 939 (1861).

Recorded from S. and W. Africa, Madagascar, Mauritius, and Seychelles.

8 larvæ and 1 teneral adult (*Gulliver*).

Family Dysodiidæ.

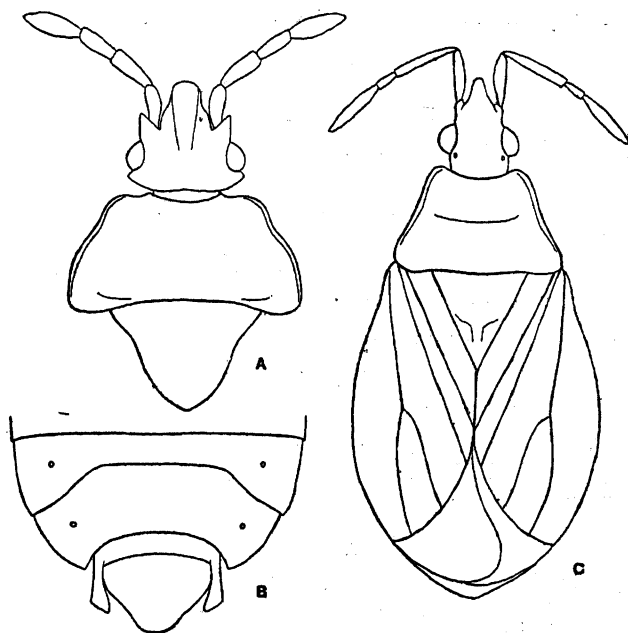
13. *Mezira gulliveri*, sp. n. (Fig. 1, A & B.)

Mezira caffra, Butl., nec Stål, Phil. Trans. Roy. Soc. clxviii., Hemipt. p. 550 (1879).

♂. *Head* dark ferruginous (tylus castaneous), densely granulate, rather longer than wide (including eyes), length 0.77 mm.; anterior process extending a little beyond the apex of first antennal joint; post-antennal teeth bluntly pointed, extending about one-third the length of the first antennal joint; postocular teeth just reaching lateral margin of eyes, rounded and little prominent; rostrum ochraceous, extending to base of head—that is, very slightly longer than rostral sulcus; antennæ moderately thickened, sparsely covered with very short depressed hairs which are longer and much more numerous on the fourth joint, ferruginous with the extreme bases and apices of the first, second, and third, and the apical half of the fourth ochraceous; second joint longer than the third, length of joints 0.28, 0.32, 0.26, and 0.37 mm. *Pronotum* ferruginous, granulate, the lateral margins and posterior lateral angles obscurely ochraceous; lateral margins moderately sinuate and narrowly carinate; posterior margin broadly emarginate; length in middle 0.66 mm., width across posterior margin 1.6 mm. *Scutellum* dark ferruginous, rugosely granulate, subtriangular, the lateral margins slightly concavely sinuate anteriorly and convexly sinuate posteriorly (length 0.82 mm., width at base 1.2 mm.). *Corium* ferruginous, membrane pale yellowish at

the base, remainder fuscous, distinctly reticulately veined, veins black and shining. *Abdomen* below distinctly convex, castaneous, smooth and shining on the disc, obscurely granulate laterally, the spiracles placed equidistantly from the anterior and posterior margins of the ventrites; posterior margin of fifth ventrite broadly but deeply emarginate; connexivum sloping downwards from the disc of the abdomen above, thus exhibiting a bevelled appearance, ferruginous, finely granulate, with the lateral margin broadly

Fig. 1.



A. *Mezira gulliveri*, sp. n., head and pronotum; B. Ventral view of apical segments of abdomen. C. *Clerada minuta*, sp. n.

and the posterior margin narrowly castaneous, the second, third, fourth, and fifth segments with two pale scale-like spots, the sixth with one. *Prosternum* dark ferruginous, thickly granulate; meso- and metasterna dark ferruginous, granulate laterally, but on the disc simply and finely rugose, a central narrow longitudinal band on the metasternum and the posterior third of the mesosternum castaneous and smooth. *Legs* ochraceous with the femora except at their

extreme apices ferruginous and granulate (especially the fore femora), but not dentate.

Total length 4.8 mm.

♀. Similar to ♂, but slightly broader and larger. Posterior margin of fifth ventrite bisinuate.

This species seems to vary somewhat in size, one ♂ measuring 5 mm. and a ♀ 6 mm. in length. Two specimens exhibit oligomery of the right-hand antenna.

7 ♂ ♂ and 3 ♀ ♀ (*Gulliver*).

Butler referred these specimens to *Mezira caffra*, Stål (now *Neuroctenus caffer*), from S. Africa and Madagascar, but the species is undoubtedly a true *Mezira*.

Family Lygæidæ.

Subfamily LYGÆINÆ.

14. *Graptostethus servus*, F.

Lygæus servus, F., Mant. Ins. ii. p. 300 (1787).

Graptostethus servus, Stål, Kongl. Sv. Vet.-Akad. Handl. xii. no. 1, p. 117 (1874).

Extends throughout African and Oriental Regions.

5 ♂ ♂, 2 ♀ ♀, September.

15. *Cænocoris nerii*, Germ.

Lygæus nerii, Germ., Faun. Eur. xxiv. p. 17 (1817).

Cænocoris nerii, Fieb., Eur. Hem. p. 166 (1861).

Previously only recorded from the Mediterranean Region and N.W. India (Sind).

1 ♀, September.

16. *Nysius euphorbiæ*, Horv.

Ann. Mus. Nat. Hungarici, viii. p. 11 (1910).

Recorded from Mauritius and Seychelles.

2 ♂ ♂, 7 ♀ ♀, August to November.

17. *Nysius albipennis*, Dist.

Trans. Linn. Soc. Lond. (2nd ser., Zool.) xvi. 2, p. 149 (1913).

Described from Seychelles and Aldabra.

9 ♂ ♂, 6 ♀ ♀, August to October.

Subfamily APHANINÆ.

18. *Paromius apicatus*, Stål.

Rhyparochromus apicatus, Stål, Öfv. Vet.-Ak. Förh. 1855, p. 34.

Plociomera apicatus, Stål, Hem. Afr. ii. p. 157 (1865).

Paromius apicatus, Stål, Kongl. Sv. Vet.-Ak. Handl. xii. no. 1, p. 148 (1874).

Recorded from Natal, Mauritius, and Seychelles.

1 ♂.

19. *Paromius gracilis*, Rmb.

Stenogaster gracilis, Rmb., Faune Ent. Andalousie, 1842, p. 139.

Paromius gracilis, Fieb., Eur. Hemipt. 1861, p. 171.

Plociomerus seychellesus, Walk. Cat. Het. v. p. 120 (1872) [n. syn.].

This widely distributed S. Palæarctic species has also been recorded from Seychelles, Sierra Leone, S. Africa, and Madagascar. [Distant has synonymised *P. seychellesus*, Walk., with *P. pallidus*, Montr.]

1 ♂.

20. *Pamera vincta*, Say, var. *capicola*, Stål.

Pamera vincta, Say, New Harm. Ind. 1831.

Plociomerus parvulus, Dall., var. *a*, Stål, Hem. Afr. ii. p. 159 (1865).

Pamera capicola, Stål, Kongl. Sv. Vet.-Ak. Handl. xii. no. 1. p. 148 (1874); Reuter, Ent. Tidskrift, 1887, p. 96.

**Pamera lounsburyi*, Dist., Trans. S. African Phil. Soc. xiv. p. 435 (1904) [n. syn.].

This species is distributed throughout the tropical and subtropical regions of the world, but var. *capicola*, Stål, has only been recorded from the Cape and Madagascar.

2 ♀ ♀.

21. *Pamera ebenau*, Reut.?

Ent. Tidskrift, 1887, p. 96.

Description based on one female from Madagascar.

2 ♂ ♂, September.

These specimens are most probably males of Reuter's species, and agree very closely with his description of the female. The anterior tibiæ are, however, slightly curved, and are armed in the middle with a small spine as in the male of *P. annulipes*, Bär. The intermediate tibiæ also possess a minute spine in the middle.

22. *Dieuches lateralis*, Sign.

Dieuches lateralis, Signoret, in Maillard's Notes sur l'île de la Réunion (Annexe J, Hemiptères), p. 29 (1862).

Beosus lateralis, Stål, Hem. Afr. ii. p. 171 (1865).

Dieuches lateralis, Stål, Kongl. Sv. Vet.-Ak. Handl. xii. no. 1, p. 162 (1874).

Described from Réunion.

5 ♀ ♀ and 2 larvæ, September.

* I have taken this opportunity of synonymising Distant's S. African species.

23. *Lethæus longirostris*, Reuter.

Ent. Tidskrift, 1887, p. 102.

Lethæus (?) *tartareus*, Butl., nec Stål, Phil. Trans. Roy. Soc. clxviii, Hemipt. p. 550 (1879).

Recorded from Madagascar, Natal, and Rhodesia.

1 ♂, 4 ♀, and 6 larvæ, August and September.

2 ♂, 1 ♀ (*Sinclair*).1 ♂, 1 ♀, and 3 larvæ (*Gulliver*).24. *Lethæus snelli*, sp. n.

♂. *Head* black, finely punctate except at the base behind the ocelli; more acute in front than in *L. punctus*, Bergr.; eyes black, ocelli small, colourless, close to the base of the eyes; length in the middle 1.0 mm., width across eyes 1.2 mm., width between the eyes 0.7 mm.; antennæ, first joint castaneous with several bristles 0.6 mm., second pale brown 1.2 mm., third yellow with the base brown 0.9 mm., apical joint yellow 0.8 mm.; rostrum testaceous with the apex black, extending to base of abdomen—length of joints 0.83, 0.83, 0.67, and 0.57 mm. *Pronotum* black with the posterior margin and angles obscurely castaneous, much less strongly and more regularly punctate than in *L. punctus*, Bergr., with two impunctate areas anteriorly; lateral margins almost straight, without the narrow ampliate border of *L. punctus*, Bergr., and *L. stellatus*, Dist.; length in the middle 1.2 mm., posterior margin 2.2 mm., anterior margin 1.0 mm. *Scutellum* black, much less strongly punctate than in *L. punctus*, Bergr. (length 1.4 mm.). *Hemelytra* punctate, dark castaneous, rather paler along the costal margins, with a small pale yellow elongate spot in the middle of the claval margin of the corium and an irregular pale yellow spot on the membranal margin towards the apex; membrane colourless hyaline, extending beyond the apex of the abdomen. *Sternum* black, punctate, the posterior lateral angle of the prosternum and the posterior margin of the metasternum pale castaneous. *Abdomen* castaneous, very obscurely punctate. Femora castaneous, tibiæ and tarsi pale testaceous, the tibiæ armed with a few dark bristles.

Total length, including membrane, 6 mm.

♀. Similar to ♂, but larger (length 7 mm.).

7 ♂, 10 ♀, and 6 larvæ, August and September.

3 ♀ (*Sinclair*).

This species differs from both *L. stellatus*, Dist., and *L. punctus*, Bergr., in the straight un-explanate lateral margins of the pronotum and in the apical antennal joint being shorter than the third.

25. *Lethaus stellatus*, Dist.

Trans. Linn. Soc. Lond. (2nd ser., Zool.), xvi. 2, p. 155 (1913).

A single ♂ taken by Thomasset and Snell, although differing slightly from the typical specimens in size and colouring, seems to be referable to this species. It is slightly larger than the type-specimen and the hemelytra are more variegated with ochraceous.

Recorded from Seychelles, Aldabra, and Assumption.

26. *Laehnophorus guttulatus* Reut.

Ent. Tidskrift, 1887, p. 99. [*Laehnophorus*, Dist., Trans. Linn. Soc. Lond. (2nd ser., Zool.), xvi. p. 153 (1913).]

Described from Madagascar.

3 ♀ ♀, August.

27. *Clerada minuta*, sp. n. (Fig. 1, C.)

♀. Uniformly pale castaneous, strongly and regularly punctate. Head as long as pronotum in the middle (0.74 mm.), width between the eyes 0.35 mm.; eyes dark red, granulate, ocelli much less pronounced than in *C. apicicornis*, Sign., and placed not quite so far laterally, being situated slightly behind the posterior inner angles of the eyes; rostrum testaceous, just reaching the anterior coxæ—length of joints 0.26, 0.12, 0.46, and 0.22 mm.; antennæ uniformly pale castaneous, with the second, third, and fourth joints clothed with short pale hairs; first joint slightly incrassate, passing the apex of the head by half its length, fourth fusiform, more incrassate than in *C. apicicornis*, Sign.—length of joints 0.38, 0.44, 0.17, and 0.41 mm.; bucculæ moderately elevated, long, extending almost to the anterior margin of the prosternum. Pronotum with the lateral margins less strongly sinuate than in *C. apicicornis*—width 0.61 mm. anteriorly, 1.3 mm. posteriorly. Scutellum equilateral—length 0.7 mm. Hemelytra broader in the middle than across the base of the scutellum, the costal margin rounded beyond the middle; claval commissure shorter than scutellum, claval suture longer than the apical margin of the corium; clavus with four complete rows of punctures; membrane much reduced, not reaching the apex of the abdomen, opaque and testaceous at base, transparent at the apex. Legs unicolorous with the rest of the insect, unarmed, first joint of hind tarsi distinctly longer than the second and third together, second very short. Total length 3.7 mm., breadth across middle of hemelytra 1.7 mm.

2 ♀ ♀.

I have referred this species to the genus *Clerada*, Sign. It bears some resemblance to *Panchæa*, Stål, but differs in the exserted head.

Family Pyrrhocoridæ.

28. *Dysdercus flavidus*, Sign.

Ann. Soc. Ent. France, (3) viii. p. 955 (1860).

Dysdercus fasciatus, Butl., nec Sign., Phil. Trans. Roy. Soc. clxviii, Hemipt. p. 550 (1879).

Recorded from Madagascar, Mauritius, and Mayotte.

3 ♂♂, 3 ♀♀, August and September; 3 ♂♂, 3 ♀♀ (Gulliver).

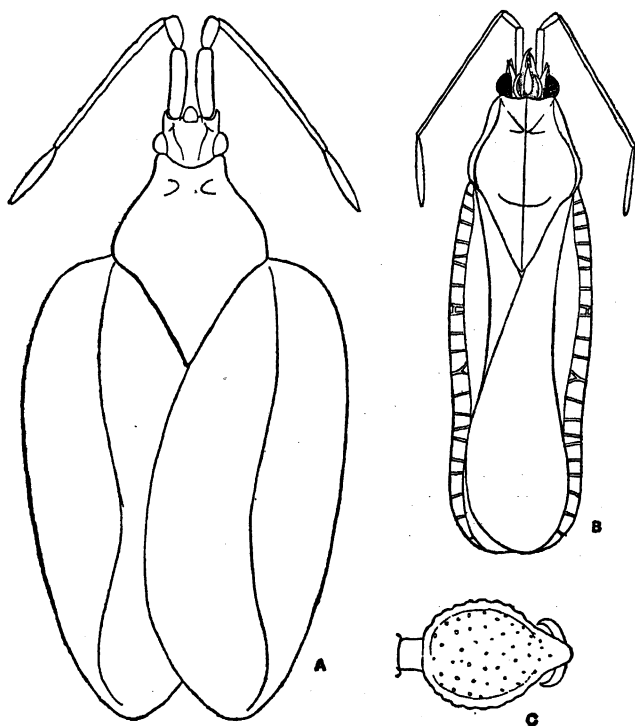
Family Tingitidæ.

29. *Teleonemia insularis*, sp. n. (Fig. 2, B.)

♂. Elongate, pale ochraceous. Head triangular, pale castaneous, punctate, with nine whitish depressed spines directed anteriorly, including one median posterior spine, two lateral posterior lying along the inner edges of the eyes, two median anterior placed close together between the bases of the antennæ, two lateral anterior placed at the apices of the eyes, and one on the outer side of each of the antenniferous tubercles; eyes black, granulate; antennæ uniformly pale ochraceous—first joint thickened 0.3 mm., second thickened 0.15 mm., third thin 1.0 mm., fourth gradually thickened and clothed with pale hairs 0.5 mm.; bucculæ whitish, well elevated, closed in front, but not produced in front of the apex of tylus; rostrum ochraceous, extending to midway between the intermediate and hind coxæ. Pronotum with the lateral margins slightly sinuate, narrowly and uniformly explanate, vertically recurved and not at all reflexed against the dorsal surface of the pronotum; anterior collar (hood) moderately elevated, disc strongly convex, and posterior process about as long as wide at the base, obtusely pointed; median carina distinct, extending from anterior margin to apex of posterior process; lateral carinæ absent; pale ochraceous, densely reticulate on the disc, but with reticulations larger and more distinct on the posterior process; median carina and lateral margins whitish, cicatrices and two lateral longitudinal lines (in usual position of lateral carinæ) pale castaneous; a spot on each side of the median carina towards the apex of the posterior process dark brown. Sternal ridges whitish, distinct, united posteriorly; metasternal orifices moderately distinct. Hemelytra narrow,

elongate, extending well beyond apex of abdomen, whitish hyaline, the nervures of the areolets ochraceous, a spot at about the apex of the discoidal area dark brown; costal area narrow, moderately reflexed with a single row of areolets; subcostal area sloping, widest at about one-third its length from the base (nearly twice as wide at this place as the costal area), at the apex very narrow and nearly vertical,

Fig. 2.



A. *Litadea delicatula*, sp. n.; C. Hind tarsus of same.
B. *Teleonemia insularis*, sp. n.

densely areolate, except towards the apex; discoidal area inseparable from the membrane, much less densely areolate than subcostal area, the areolets increasing in size towards the apex of the membrane; nervure separating subcostal and discoidal areas continued to outer angle of apex of hemelytra, strongly defined, almost carinate. *Abdomen*

castaneous; legs pale ochraceous, moderately long, the apical joints of tarsi broadly ovate. Total length 3.2 mm., width of pronotum at widest point 0.8 mm., width of hemelytra at widest point 0.9 mm.

♀. Slightly larger and paler.

8 ♂♂, 7 ♀♀, and 14 larvæ.

LITADEA, gen. nov.

Head smooth, shining, unarmed, triangular, about as long as broad at base including eyes, disc slightly elevated; eyes granulate with the posterior margins touching the anterior border of the pronotum, tylus extending well beyond juga, antenniferous tubercles large, armed laterally with a short blunt spine or tubercle; antennæ moderately long, basal joint incrassate, cylindrical, a little longer than the head, second joint little more than one-third the length of the first, less incrassate, wider at apex than at base, third joint long twice as long as the first, fourth joint subequal to the first; bucculæ moderately elevated, closed anteriorly, not at all produced in front of apex of tylus, widely separated in the middle and forming a broadly ovate figure when seen from the ventral side; rostrum short, extending only a little beyond the anterior coxæ. *Pronotum*, except for a thin impunctate median line, densely punctate, with the posterior process densely areolate; lateral margins slightly sinuate, evenly rounded, and not at all explanate or carinate; hood obsolete, median and lateral carinæ absent, posterior process moderately short, subequal in length to the rest of the pronotum. Sternal ridges distinct, but very little elevated; metasternal orifices very distinct. *Hemelytra* flattened, extending well beyond the apex of the abdomen, very broad, the costal area very strongly explanate, arching suddenly outwards from the base of the hemelytron almost at right angles to the lateral angle of the pronotum; areas very distinctly separated, the costal and subcostal areas fused, distinctly and regularly areolate; the discoidal area and the membrane fused, the former, however, much more densely areolate than the membrane or the costal areas; the vein separating the discoidal area and membrane from the costal areas rather more distinct than in *Serenthia* and *Lullius*; areolets circular, except along the anal margin. *Legs* rather short, femora longer than the tibiæ, fore femora above more or less suddenly incrassate at the base, but not so much so as in *Serenthia*; tarsi apparently two-jointed, the apical joint broadly ovate, concave below, the cavity filled with short, erect, bristle-like hairs.

Genotype, *Litadea delicatula*, sp. n.

This very distinct genus comes close to *Lullius*, Dist., but differs in the widely explanate costal area and in the longer basal antennal joints.

30. *Litadea delicatula*, sp. n. (Fig. 2, A & C.)

♂ ♀. *Head* pale castaneous, smooth, and shining, eyes black; antennæ with basal joint and apical third of third joint pale castaneous, rather paler than the head, second, fourth, and basal two-thirds of third joint black—length of joints 0.54, 0.20, 1.08, 0.51 mm.; bucculæ whitish; rostrum ochraceous with the apex black, extending slightly beyond the anterior coxæ. *Pronotum* and hemelytra yellowish ochraceous, the costal areas and membrane very pale; pronotal cicatrices pale castaneous. *Abdomen* below dark ochraceous, tinged with olive-green; the sternal ridges and metasternal orifices whitish. Legs pale yellow.

Total length (including hemelytra) 3.9 mm., width of pronotum at widest part 1.0 mm., width of hemelytra at base of costal area 1.9 mm.

9 ♂♂, 2 ♀♀, and 1 larva.

The colouring of the antennæ seems to vary somewhat, possibly due to the degree of maturity. In some the first, second, third, and extreme base of the fourth joint are concolorous with the head, and only the remainder of the last joint is black. In others the second joint is unicolorous with the first, while the basal two-thirds of the third and the fourth are black.

Family Reduviidæ.

Subfamily EMESINÆ.

31. *Ischnonyctes inermiceps*, Bergr.

Ann. Soc. Ent. Belge, 1. p. 270 (1906).

Emesa barbara, Butl., nec Lucas, Phil. Trans. Roy. Soc. clxviii., Hemipt. p. 551 (1879).

Described from E. Madagascar.

2 ♂♂, 5 ♀♀, and 1 larva; 2 ♀♀ (*Gulliver*).

This species seems to vary somewhat in depth of colouring, due no doubt to the degree of maturity. The size is also variable and ranges from 17 mm. in the ♂ to 20 mm. in the ♀.

Subfamily STENOPODINÆ.

32. *Sastrapada baerensprungi*, Stål.

Harpagochares baerensprungi, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 381.

Sastrapada baerensprungi, Stål, Kongl. Sv. Vet.-Ak. Handl. xii. no. 1, p. 86 (1874).

Widely distributed over S. Palearctic, Oriental, Australian, and Ethiopian Regions, including Réunion and Madagascar.

1 ♂ (*Sinclair*).

33. *Oncocephalus sordidus*, Stål.

Öfv. Vet.-Ak. Förh. 1855, p. 44.

Recorded from S. and E. Africa, Seychelles, Madagascar, and Réunion.

4 ♀ ♀, 3 ♂ ♂, and 5 larvæ, August and September.

2 ♀ ♀ (*Sinclair*).

The ten specimens of *O. cancellatus*, Stål, recorded from Rodriguez by Butler, cannot now be found, but it is probable that they would really belong to this species.

Subfamily *REDUVIINÆ*.

34. *Conorhinus rubrofasciatus*, de Geer.

Mém. iii, p. 349, t. 35. fig. 12 (1773).

Recorded from Brazil, W. Indies, India, China, Philippines, Sierra Leone, Seychelles, Madagascar, and Réunion.

1 ♂, September; 1 ♂, 2 ♀ ♀ (*Sinclair*).

The specimen taken by Slater, and recorded by Butler, cannot now be found in the British Museum Collection.

35. *Rhinocoris* ? *laniger*, Butl.

Reduvius laniger, Butl., Ann. & Mag. Nat. Hist. (4) xvii. p. 411 (1876); Phil. Trans. Roy. Soc. clxviii, Hemipt. p. 550, pl. liv. figs. 6 & 6 a (1879).

Harpactor laniger, Leth., Sev. Cat. Hemipt. iii. p. 180 (1896).

The type of Butler's species cannot now be found in the British Museum Collection.

Family Nabidæ.

Subfamily *NABINÆ*.

36. *Nabis* (*Reduviolus*) *capsiformis*, Germ.

Nabis capsiformis, Germ., Silb. Rev. Ent. v. p. 132 (1837).

Reduviolus capsiformis, Reut., Mém. Soc. Ent. Belge, xv. p. 114 (1908).

**Sastrapada nigrolineata*, Dist., Ann. & Mag. Nat. Hist. (9) vi. p. 159 (1920) [n. syn.].

Cosmopolitan.

4 ♂ ♂, 2 ♀ ♀, and 3 larvæ.

* I have taken this opportunity to synonymise Distant's species from New Caledonia.

Family Anthocoridae.

Division LYCTOCORARIA.

37. *Lasiochilus sladeni*, Dist.

Trans. Linn. Soc. Lond. (2) xvi., Zool. p. 185, pl. xiii. f. 22 (1913).

Described from Seychelles.

4 specimens.

38. *Lasiochilus seychellensis*, Dist.

Trans. Linn. Soc. Lond. (2) xvi., Zool. p. 185, pl. xiii. f. 23 (1913).

Described from Seychelles.

2 specimens.

Family Miridae.

Division CAPSARIA.

39. *Creontiades pallidus*, Rmb.

Phytocoris pallidus, Rmb., Faun. Ent. Andal. p. 159 (1842).

Pantiliodes pallidus, Reut., Act. Soc. Sci. Fenn. xxiii. no. 2, p. 238, t. 2. f. 14 (1896).

Creontiades pallidus, Poppius, Act. Soc. Sci. Fenn. xli. no. 3, p. 22 (1912).

**Megacaelum* (*Creontiades*) *mimicum*, Dist., Trans. Linn. Soc. Lond. (2) xvi., Zool. p. 175, pl. xiii. fig. 15 (1913) [n. syn.].

Widely distributed over Mediterranean and Ethiopian regions, including Madagascar and Seychelles.

1 ♂, 1 ♀.

40. *Proboscidoecoris punctaticollis*, Reut.

Öfv. Finska Vet. Soc. Förh. xlvii. no. 10, p. 16 (1905).

Recorded from E. Africa, Pemba Is., Madagascar, Réunion, and Comoren.

1 ♀.

Division MACROLOPHARIA.

41. *Engytatus volucer*, Kirk.

Trans. Ent. Soc. Lond. 1902, p. 247.

Described from Réunion.

2 ♂♂, 2 ♀♀, and 2 larvæ.

Kirkaldy described the hemelytra as greyish cinereo-hyaline, but Poppius (Act. Soc. Sci. Fenn. xlv. no. 3, p. 18 (1914)) says that in the type-specimen the tips of the corium

* I have taken this opportunity to synonymise Distant's species from Seychelles.

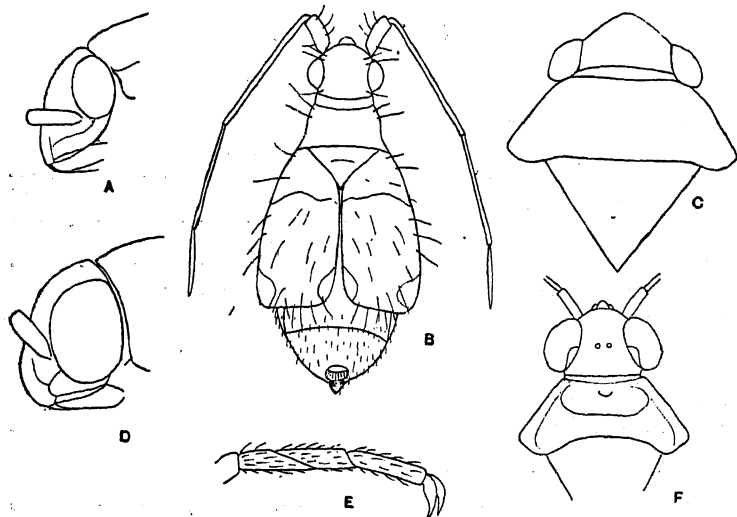
and cuneus are mutilated. In all the specimens from Rodriguez, the extreme outer apex of the corium and the extreme apex of the cuneus are dark.

Division SYSTELLONOTARIA.

42. *Chatocapsus scotti*, sp. n. (Fig. 3, B.)

♀. Head dark chocolate-brown, very finely granulate, not at all shining, with several long erect bristle-like hairs; vertex and frons strongly convex, clypeus at its apex with a few short pale hairs, moderately strongly prominent, distinctly

Fig. 3.



- A. *Trevesa albidopicta*, sp. n., side view of head; C. Head and pronotum of same; E. Hind tarsus of same. B. *Chatocapsus scotti*, sp. n. D. *Campylomma selecta*, sp. n., side view of head. F. *Acanthia subcarinata*, sp. n., head and pronotum.

separated from the frons, the anterior surface of which forms an obtuse angle with it; eyes rather small, widely separated, granulate, with a few short erect hairs, the posterior margins touching the anterior margin of the pronotal collar*; base of the head including eyes a little narrower than the posterior margin of the pronotum; antennæ long, placed slightly below the anterior apices of the eyes, basal joint ochraceous

* In the type-specimen the head is slightly protruding and consequently the eyes do not touch the pronotum.

with the basal half brown, somewhat thickened, covered with pale short depressed hairs and with a few long erect bristles, surpassing apex of head by nearly half its length; remaining joints ochraceous, moderately fine, gradually tapering towards the apex and clothed with fine, short, depressed hairs, the second joint three times as long as the basal one, the third a little more than two-thirds the length of the second, and the fourth two-thirds the length of the third; rostrum long, extending to the base of the abdomen, brown, the basal joint extending to the base of the procoxæ. *Pronotum* dark chocolate-brown, dull, very finely granulate, with several long erect bristle-like hairs, especially on the anterior lateral margins; apical collar distinct, rather flattened, disc convex, the calli indistinctly delimited, lateral margins slightly convexly sinuate, the posterior margin widely emarginate and distinctly wider than the anterior margin. *Scutellum* unicolorous with the pronotum, dull, finely granulate with several long erect hairs, the disc concave when seen from the side. *Hemelytra* convex, parchment-like; clavus, corium, and cuneus fused together, membrane absent; moderately shining, sparsely covered with long erect bristle-like hairs, extending about two-thirds the length of the abdomen, apical margin truncate with the angles rounded, costal margin slightly explanate; dark chocolate-brown, the basal third, the basal half of the costal margin, a large spot on the external angle, and a smaller spot on the anal angle whitish; wings absent or rudimentary. *Abdomen* dark brown, shining, covered with short and long hairs, very broad towards the apex, moderately narrowed towards the base. *Legs* covered with short depressed hairs, the upper side of the femora with a row of long bristle-like hairs, the tibiæ armed with a few feeble bristle-like spines. Tarsi linear, the basal joint short, the second a little longer than the third; claws well developed, arolia absent or piliferous. Coxæ, trochanters, basal half of middle and hind femora, extreme base of fore femora, tibiæ, and tarsi whitish yellow; fore femora and apical half of middle and hind femora chocolate-brown, extreme apices of femora yellowish.

Total length 2.2 mm., width of pronotum anteriorly 0.4 mm., posteriorly 0.54 mm.

1 brachypterous ♀.

I have referred this species to *Chaetocapsus*, although it differs in certain characters from Poppius's description*.

* Acta Soc. Sci. Fenn. xlv. no. 3, p. 38 (1914).

The genus was described from a single macropterous ♂ from Togo. The chief differences, excluding those naturally associated with a brachypterous ♀, are that the "fore-body" is "matt" and the hemelytra shining.

Division HETEROTOMARIA.

43. *Cyrtorrhinus parviceps*, Reut.

Revue d'ent. 1890, p. 258.

* *Cylloceps pellicia*, Uhl., Proc. Zool. Soc. Lond. xlviii. p. 711 (1893) [n. syn.].

Recorded from Egypt, E. Africa, Seychelles, and West Indies (St. Vincent).

2 ♂ ♂, 16 ♀ ♀.

Division PHYLARIA.

44. *Sthenarus leucochilus*, Reut.

Öfv. Finska Vet. Soc. Förh. xlvii. no. 22, p. 8 (1905).

Recorded from Seychelles, Réunion, Pemba, Madagascar, and E. Africa.

9 ♂ ♂, 22 ♀ ♀, August and September.

45. *Campylomma selecta*, sp. n. (Fig. 3, D.)

Head yellow, smooth, covered with short pale hairs and long semi-erect black hairs; short and depressed, slightly wider at base (including eyes) than pronotum anteriorly, basal margin of vertex straight, distinctly angular, not rounded; clypeus fairly prominent; eyes granulate; antennæ placed one-third length of eye from the anterior (ventral) margin of the eye; first joint short, scarcely reaching apex of clypeus, yellowish with the base and apex light brown; second joint light brown, gradually thickening towards the apex, about three times longer than the first; third joint mutilated, basal part black, remainder missing; rostrum light yellow, with the apex dark brown, extending to midway between the middle and hind coxæ, basal joint just reaching the anterior margin of the prosternum. Pronotum greenish yellow, smooth, covered with short pale hairs and long semi-erect black hairs; lateral margins straight. Scutellum with lateral margin somewhat shorter than the basal width, the base exposed and the extreme apex dark brown, otherwise similar to pronotum. Hemelytra pale greenish yellow, more or less hyaline; the clavus and corium covered with dark

* I have compared the type-specimen of this West Indian species with that of Reuter's *C. parviceps* and consider them to be synonymous.

hairs, which are somewhat longer and thicker on the costal margin; extreme apex of clavus dark brown, and the apical margin of the embolium narrowly reddish (the embolium is very distinctly delimited except towards its extreme apex); membrane colourless hyaline with veins and two spots near apex of cuneus brownish yellow. Wing-cell with a fairly distinct hamus. *Abdomen* and thorax below pale yellow. *Legs* pale yellow, the last joint of the tarsus brown; hind femora with two black spots above, close together, near the apex and three black spots below, one near the apex and two near the middle; the middle femora also spotted towards the apex; tibiae armed with black spines arising from small black spots; the last joint of tarsus slightly longer than the second, the first short; tarsal pads (arolia) distinct, reaching about the middle of the claws, arising from a blunt basal tooth of the claw and converging towards their apices.

Total length 3 mm., width across base of pronotum 1.3 mm.

1 ♀.

This species seems to agree fairly well with the specific description of *Plagiognathidea grisescens*, Poppius, but it differs in the generic characters.

TREVESSA *, gen. nov.

Very small, oblong-ovate, impunctate, covered with rather long, pale, semi-erect hairs.

Head one-fifth shorter than the width including the eyes, very slightly wider at base than anterior margin of pronotum, very strongly downwardly inclined so that only the basal two-thirds can be seen from above, and the clypeus is nearly at right angles to the plane of the disc of pronotum; eyes granulate, moderately small, with the posterior margins touching the anterior margin of the pronotum; width of vertex between the eyes two-thirds the total width including the eyes; vertex and frons moderately strongly convex, clypeus not at all prominent, basal margin of vertex slightly convexly curved, angular, almost carinate; antennæ placed about one-fifth length of eye from its apex—basal joint short, scarcely reaching the apex of the clypeus, second joint long, a little more than four times the length of the first, remainder missing; rostrum long, extending to base of third apparent

* The British steamer 'Trevesa' foundered in the Indian Ocean on June 4th, 1923, and Captain Forster, the chief engineer, and sixteen of the crew reached Rodriguez on the 26th of June after covering 1200 miles in an open boat. The rest of the crew reached Mauritius on the 29th.

abdominal segment, its basal joint extending to base of prosternal xyphus, the second joint longest, extending to apex of pro-coxæ, the third and fourth joints subequal. *Pronotum* transverse, trapeziform—apical margin slightly concave, no apical stricture, lateral margins straight, rather sharply angular along basal third, disc slightly convex, the calli very indistinctly delimited, not at all prominent, extending to middle of disc; posterior margin strongly emarginate, uncovering the mesoscutum. Prosternal xyphus difficult to see, but not at all convex and apparently margined. *Scutellum* triangular, flat on disc, laterally shorter than width at base. *Hemelytra* well developed, extending well beyond apex of abdomen; the fracture well developed, distinctly sinuate, the corium at apical margin slightly overlapping the base of the cuneus; membrane biareolate, but outer areole small and the dividing vein (apex of radius) indistinct. Wings large, the wing-cell without a hook-vein (hamus). Femora dark brown, except the bases and extreme apices, not at all spotted, hind femora strongly incrassate; tibia rather feebly armed with a few pale bristle-like spines. Tarsi moderately short, apex of first joint strongly obliquely truncate, so that when viewed from above first joint is much shorter than the second, and when viewed from below basal joint is much longer than the second; viewing from the side and taking the median length, the first is slightly shorter than the second; the second and last joints subequal; tarsal claws well developed, moderately curved, arolia absent.

Genotype, *T. albidopicta*, sp. n.

The position of this genus is doubtful—I have, however, referred it to the Phylinae in spite of certain exceptional characters, such as the absence of a wing-cell hamus. The general facies are those of *Campylomma*, but it differs in the structure of the tarsus, the femoral markings, etc.

46. *Trevessa albidopicta*, sp. n. (Fig. 3, A, C, & E.)

Dark chocolate-brown, covered with pale semi-erect hairs. The basal angles of the pronotum obscurely, the apical half of the scutellum, the base of the hemelytra as far as the apex of the scutellum, the outer apex of the corium above the base of the cuneus, the base and extreme apex of the cuneus whitish. Membrane pale fuscous, areolar veins whitish. Antennæ ochraceous, the apical half of the second joint brown. Rostrum ochraceous with the tip blackish. Femora chocolate-brown with the bases broadly whitish.

and the apices narrowly yellowish. Tibiæ pale, the posterior tibiæ with the base whitish and the middle brown. Abdomen below shining brown.

Total length, including membrane, 2 mm.; width 0.7 mm.
2 ♀ ♀, September.

Family Veliidæ.

47. *Rhagovelia nigricans*, Burm.

Velia nigricans, Burm., Handb. xi. p. 213 (1835).

Velia infernalis, Butl., Ann. & Mag. Nat. Hist. (4) xvii. p. 411 (1876);

Phil. Trans. Roy. Soc. clxviii., Hemipt. p. 551, pl. liv. fig. 5 (1879).

Rhagovelia nigricans, Kirk., Entomologist, xxxiv. p. 310 (1901).

Widely distributed over Ethiopian and Oriental Regions, including Syria and Seychelles.

3 ♂ ♂, 5 ♀ ♀, apterous; 1 ♂, 2 ♀ ♀, winged; and 1 larva. September.

4 ♂ ♂, 5 ♀ ♀, apterous (*Gulliver*), including Butler's type of *V. infernalis*.

Family Gerridæ.

48. *Limnogonus dolosa*, Bergr.

Rev. d'Ent. xii. p. 203 (1893).

Described from Seychelles.

5 ♀ ♀ and 2 ♂ ♂ apterous, 1 ♀ winged, and 1 larva.

The males are distinctly smaller than the females, measuring only 6.3 mm. (♀ ♀, 8-9 mm.).

Family Acanthiidæ.

49. *Acanthia* (*Saldula*) *subcarinata*, sp. n. (Fig. 3, F.)

♂. Oval, rather elongate. Head black with a short golden-yellow pubescence and a few long bristles above, and a silvery pubescence below; clypeus and the transverse carinæ above its base golden yellow; labrum (except the base and apex, which are brown), the apices of the loræ, a small round spot on each side between the ocelli and the eyes, and the sinuate inner posterior margin of the eyes narrowly, pale yellowish; eyes large with a few short erect hairs, ocelli about twice as far from the margin of the eye as from one another; rostrum shining brown, extending to the base of the hind coxæ; antennæ moderately thin, the basal joint short, shining brownish ochraceous, somewhat thickened, slightly pubescent with a few black bristles; second joint unicolorous with the first, rather darker towards

its apex, clothed with black hairs, slightly more than twice as long as the first; third and fourth black clothed with longer hairs, the fourth subequal with the first, the third a little longer than the first. *Pronotum* black, moderately shining, thickly covered with short golden hairs, apical stricture distinct, posterior margin broadly and moderately deeply emarginate, nearly three times broader than the length of the pronotum in the middle, anterior margin nearly once and a half broader than the length in the middle, distinctly narrower than the base of the head including eyes; callus distinctly convex, extending a little beyond the middle of the pronotum, and approaching very closely to the lateral margin on each side, its anterior margin deeply foveolate in the middle, but without a longitudinal sulcation behind the fovea; lateral margins straight, very little explanate, and very feebly carinate. *Sternum* shining black, covered laterally with short whitish hairs; apical margin of pro-acetabula broadly whitish. *Scutellum* shining black, thickly covered with short golden and dark brown hairs, the latter mainly on the apical half; lateral margins about as long as width at base. *Hemelytra* mainly dull, slightly shining on the costal margin, covered with a short dark brownish-black pubescence, the basal two-thirds of the clavus and the extreme base of the corium also with short golden hairs; colour brownish grey with the basal two-thirds of the clavus, the apex of the costal margin, and a large spot on the margin level with the apex of the clavus, black; the rest of the costal margin except towards the base, which is brownish, is dull whitish yellow; a spot on the apex of the clavus and various obscure markings on the corium greyish; membrane extending well beyond the apex of the abdomen, the four cells whitish, each with a fuscous spot, and the first, second, and third also fuscous towards the base; the marginal area fuscous, except the extreme outer apical edge and the outer basal edge; the first or interior cell reaching the apex of the second and extending slightly above its base; veins fuscous. Wings well developed. *Abdomen* below shining blackish brown, covered laterally with short whitish hairs, the apical margins of the first five apparent segments narrowly ochraceous, the apical third of the sixth (covering the genitalia) white. Trochanters yellowish white; femora brown, with the basal third and the apex narrowly yellowish white; fore tibiae whitish, with the base, a median annulation, and the extreme apex brown; middle and hind tibiae whitish tinged with brown on the outside, the base of the hind tibiae brown:

spines dark brown; tarsi with the basal and apical joints brownish. Total length 3·3 mm., basal width of pronotum 1·2 mm.

1 ♀ (on mud).

This species is readily distinguished by the feebly explanate and obsoletely carinate lateral margins of the pronotum. It resembles *opacula*, Zett., in shape, and *pallipes*, F., in the pilosity of the hemelytra; there are, however, much fewer golden hairs towards the base of the corium.

Family Corixidæ.

50. *Micronecta felix*, Butl. (Fig. 4, B.)

Sigara felix, Butler, Ann. & Mag. Nat. Hist. (4) xvii. p. 412 (1876); Phil. Trans. Roy. Soc. clxviii., Hemiptera, p. 551, pl. liv. figs. 8 & 8a (1879).

Redescription:—

♂. *Head* one and a half times as long (seen from above) as the pronotum in the middle, dark piceous brown, except the disc of the vertex which is whitish; obscurely and irregularly rugose; width including the eyes distinctly greater than the width of the pronotum. *Pronotum* sepia-brown, lateral margins very short, the outer posterior angle of the eye reaching to the base of the hemelytra; strongly transversely wrinkled, five times as wide as long in the middle. *Scutellum* subequilateral, a little shorter than the pronotum, smooth, shining, dark brown. *Hemelytra* much broader in the middle than at the base, moderately convex, dark shining sepia-brown, immaculate, with the costal margin broadly whitish; obsoletely punctate, regularly covered with short, pale, depressed, bristle-like hairs; subcostal furrow short, extending about one-quarter the length of the hemelytra. *Legs* fuscous, the basal half of the intermediate femur and the hind femur ochraceous. Intermediate femur a little shorter than the tibia, tarsus, and tarsal claws together; tibia two-thirds the length of the tarsus, tarsal claws a little shorter than the tibia. Abdomen below grey. Total length 2·3 mm., width across pronotum 0·89 mm., width across middle of hemelytra 1·3 mm.

6 specimens (*Gulliver*). Type is a ♂.

This species appears to belong to the *solitaria*, Horv., group.

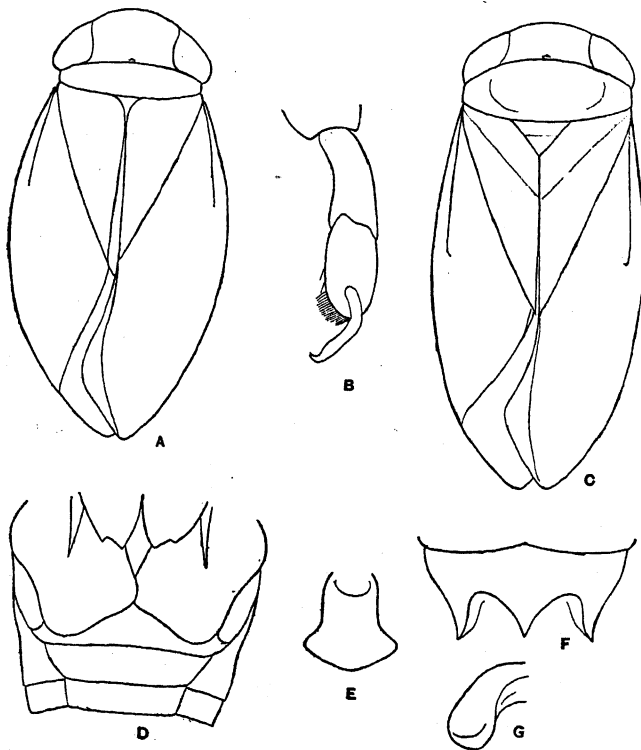
51. *Micronecta sulcata*, Sign.? (Fig. 4, C.)

Signoret, Ann. Soc. Ent. France, (3) viii. p. 971 (1861); Butler, Phil. Trans. Roy. Soc. clxviii., Hemiptera, p. 551 (1879).

The single ♀ specimen collected by Gulliver agrees more or less with Signoret's meagre description.

The *head* is about four-fifths the length of the pronotum in the middle, moderately arched between the eyes, smooth pale shining yellow, the clypeus brown and a trace of a narrow median brown line towards the apex of the frons,

Fig. 4.



- A. *Micronecta dubia*, sp. n. B. *Micronecta felix*, Butl., anterior tibia and tarsus. C. *Micronecta sulcata*, Sign.? D. *Cicada thomasseti*, sp. n., ventral view of opercula; F. Seventh apparent tergite of same; E. and G. End and lateral view respectively of uncus of same.

but not visible on the vertex. *Pronotum* with the sides not quite half the length of the posterior margin of the eye; three times as wide as long in the middle, shining greyish yellow with the disc largely brown. *Scutellum* dark brown on the apical half and ochraceous on the basal half, sides

shorter than the width at the base. *Hemelytra* yellowish grey tinged with brown, shining, obscurely punctate, and clothed with short depressed bristle-like hairs; the costal margin towards the base, the anterior margin of the clavus broadly, and the inner margin narrowly, pale yellow; hemelytra nearly two and a half times the length of the subcostal furrow; costal margins subparallel. *Abdomen* below and legs pale yellow; intermediate femur distinctly shorter than the tibia, tarsus, and tarsal claws together; tibia a little more than half the length of the tarsus; tarsal claws long, slightly longer than the tibia.

Total length 3.3 mm., width across pronotum 1.2 mm.

1 ♀ (*Gulliver*).

This species appears to belong to the *pharaonum*, Horv., group.

Originally described from Madagascar.

52. *Micronecta dubia*, sp. n. (Fig. 4, A.)

Sigara scutellaris, Butl., nec Stål, Phil. Trans. Roy. Soc. clxviii., Hemiptera, p. 551 (1879).

♀. *Head* a little more than twice the length of the pronotum in the middle, strongly arched between the eyes, pale olivaceous brown above, rather paler below, obscurely rugose; clypeus rather darker. *Pronotum* with the sides very short, the posterior margin of the eyes four and a half times as long as the lateral margin of the pronotum; pale olivaceous brown, obscurely transversely wrinkled, five times as wide as long in the middle. *Scutellum* unicolorous with pronotum, small, three-quarters the length of the pronotum in the middle. *Hemelytra* strongly convex, unicolorous with pronotum, but somewhat paler; the membrane and the apical disc of the corium darker, the latter dark area extending more narrowly up the middle of the corium; the inner edge of the costal marginal area, the base of the claval suture, and two obscure spots on the clavus also darker; more or less shining, and very obscurely punctate, regularly covered with short depressed hairs; subcostal furrow short, little more than one-quarter the length of the hemelytra, costal margins distinctly convex, the hemelytra wider in the middle than at the base, but not so much so as in *M. felix*, Butl. *Abdomen* below olivaceous grey, covered with short pale hairs. *Legs* yellow, the intermediate femur a little longer than the tibia, tarsus, and tarsal claws together; tibia two-thirds the length of the tarsus; tarsal claws subequal with tibia.

Total length 2.9 mm., width across pronotum 1 mm., width across middle of elytra 1.5 mm.

2 ♀ ♀ (*Gulliver*).

This species appears to belong to the *latiuscula*, Horv., group.

Suborder HOMOPTERA.

Family Cicadidæ.

Cicada thomasseti, sp. n. (Fig. 4, D, E, F, & G.)

♂. *Head* ochraceous with a black transverse band between the eyes, extending backwards between the ocelli to the posterior margin, and three small black spots on each side between the ocelli and the base of the eyes. *Frons* with a central longitudinal black stripe, and laterally with several black horizontal striæ. Length of head from middle of posterior margin to dorsal apex of frons 3.5 mm.; width, including eyes, 10 mm. *Antennæ* black, merging into dark fuscous towards the apical joints. *Rostrum* extending to the posterior coxæ, pale ochraceous, with the apex black. *Pronotum* ochraceous with two narrow subparallel black stripes down the centre, and two crescent-shaped black marks on either side; oblique sulci dark brown. *Lateral margins* pale yellow margined interiorly with dark brown, strongly carinate but scarcely dilated, armed at the anterior angles behind the eyes with a minute tooth; posterior margin transversely wrinkled—length in middle 4 mm., width anteriorly 8.5 mm., posteriorly 11.5 mm. *Mesonotum* ochraceous, with four obconical dark brown spots along the anterior margin, the outer pair extending almost to the posterior margin and somewhat reticulately cut up by invading ochraceous bands, the inner pair extending a little beyond the middle; above and bordering on the cruciform elevation are three small black spots—one central, the others directly below each of the two obconical marks; the area above these three spots and the middle of the cruciform elevation is brown in colour, and forms part of a rich brown stripe, which extends across the metanotum between the tympanal coverings to the abdomen; width anteriorly 10 mm. *Tympanal coverings* strongly developed, pale ochraceous, completely covering the tympanal orifices. *Opercula* pale ochraceous, short, rounded, not extending beyond the metasternum, the interior posterior angles overlapping,

the lateral margins concavely sinuate (fig. 4, D). *Abdomen* ochraceous with the basal half of the first apparent tergite rich brown, the tergites laterally and the middle of the first tergite blackish brown; the sixth apparent tergite with a black patch on each side towards the base; the seventh apparent tergite (covering the anal style) deeply cut out on each side to form a dorsal and two lateral teeth (fig. 4, F). *Uncus* black, broad, strongly inwardly curved (fig. 4, E & G). *Tegmina* and wings vitreous, immaculate, the veins ochraceous, and the basal membranes greyish ochraceous. Width of tegmen at widest part 12 mm., length 40 mm.

Total length of body 27 mm., breadth across tympanal coverings 13 mm., expanse of tegmina 86 mm.

♀. Similar to male, but smaller—length 23 mm.

7 ♂♂, 1 ♀.

In some of the specimens the colour-markings are much less distinct, the pronotum being entirely ochraceous, except for the two subparallel median black stripes.

Larvæ collected by Gulliver in 1874 probably belong to this species.

XLIV.—*On a Pelagic Phase of Arenicola marina and of Eteone arctica.* By A. MEEK and B. STORROW, Dove Marine Laboratory, Cullercoats.

[Plate VII.]

ALTHOUGH the common lugworm, *Arenicola marina*, is abundant in sandy beaches all round the coast, and is gathered by digging for bait, its method of development is not known. It was therefore with a great deal of expectancy that we observed it in a pelagic condition in the harbour at Beadnell on the Northumberland coast. The 'Evadne' arrived at Beadnell on 20th March, 1924, and on the 21st we observed two polychæts near the surface, drifting in the current, but both maintaining their position by active contractions and wriggling movements. Examples of each were easily procured with no better an instrument than a broom, and we were surprised to find that one was *Arenicola marina* and, afterwards, that the other was *Eteone arctica*, a determination which was kindly confirmed by Professor M'Intosh.