

XIX. *Memoir on the Rhynchota collected by Dr. ARTHUR WILLEY, F.R.S., chiefly in Birara (New Britain) and Lifu.* By G. W. KIRKALDY, F.E.S.

[Read June 7th, 1905.]

PLATE XVII.

ALTHOUGH of an extremely interesting character, the collection of *Rhynchota* made by Dr. Willey* is too small, and too many of the forms described from neighbouring localities are as yet insufficiently known to me, to render a discussion upon their geographical distribution profitable. However, as might have been expected, the Rhynchotal fauna of Lifu partakes very closely of the nature of that of New Caledonia, while that of Birara is equally intimately related to the fauna of Papua (or New Guinea), at the same time all these are closely inter-related. Throughout I have employed the terms Lifu and Birara, as it appears expedient to retain the native names of such islands wherever these are distinctive, except those which are extensively colonized by Europeans, as, for example, New Zealand and even New Caledonia. Birara (also spelt Berrara) was formerly known as New Britain, and it was under this term that the bulk of Dr. Willey's researches have been published. The present official term, since the acquisition of the group by Germany, is Neu Pommern (or New Pomerania). The island of Murua, frequently alluded to in the following pages, is also known as "Woodlark" and is termed "Moïou" by Montrouzier.

The chief difficulty in the specific determination of this fauna as regards the *Rhynchota*, is its close relationship with that of Papua (or New Guinea), the latter being as yet very imperfectly known, the latest descriptions dating in some cases from Guérin-Meneville's contribution to the "Voyage of the Coquille," and Boisduval's

* This Memoir may be regarded as a supplement to the "Zoological Results based on material . . . collected by Dr. Willey," published in five volumes by the Cambridge University Press, 1898-1902.

volumes on the "Voyage of the *Astrolabe*." The examination of large series of *Rhynchota* from the multitude of islands comprising the Bismarck, Solomon, New Hebrides, and Loyalty Archipelagoes would be exceedingly interesting from a distributional point of view. Our principal knowledge of these faunas is derived from the works of Montrouzier (or Montrousier as he also terms himself), a French priest, who resided in New Caledonia and the surrounding islands for many years. Dr. Willey has collected some seventy-six species, falling into sixty-five genera. Of these I have described as new five genera, one subgenus, twenty species and one variety, but the principal interest of his labours lies in the large proportion of immature forms, the consideration of which is reserved for a future paper.

My thanks are due to Mr. W. L. Distant, for kindly assistance in the determination of several species, and for help with the proofs in my absence from England; and to Dr. D. Sharp for allowing me the opportunity of examining so interesting a collection.

Sub-order HOMOPTERA.

Family CICADIDÆ.

Genus *UEANA*, Dist. Ann. Mag. Nat. Hist. (7), xvi, p. 28.

Dr. Willey has collected fourteen specimens, which I have ventured to divide into two species—though somewhat doubtfully—neither of which can I refer to *Cicada lifuana*, Montrouzier, though one of them is certainly the *Ueana lifuana* as identified by Distant.

1. *UEANA LIFUANA*, Montr.

(?) *Cicada lifuana*, Montr., 1861, Ann. Soc. Ent. France, 4, 1, p. 70.

Ueana lifuana, Dist. Ann. Mag. Nat. Hist. (7), xvi, p. 29.

Montrouzier says, "Veines de la première moitié des elytres vert-bleu. Elytres irisées," . . . which does not in the least apply to any of the specimens before me. Montrouzier records it from Lifu.

2. *UEANA HARMONIA*, sp. nov.

(Plate XVII, fig. 1.)

(?) *Tibicen* (?) *lifuana*, Dist., 1883, P. Z. S., p. 190.

Pale luteous, markings on head and pronotum, lateral third of scutellum, a **W**-mark on anterior margin of scutellum, abdomen above at base—pale luteo-ferruginous; posterior margin of pronotum pale luteous. Costa, except lateral margin and basal nervures, pale luteous; lateral margins of costa very narrowly, basal cell and apical nervures fuscous. Tegmina immaculate. Ocelli yellow.

♂. Rostrum reaching scarcely beyond base of posterior coxæ; opercula larger, distinctly reaching well beyond apical margin of 1st (? 2nd) abdominal segment—genital segment apically narrowed, acutangular. Metasternal process, roundly and smoothly tubercular.

♀. Opercula smaller, not reaching to apical margin of first segment. Ultimate segment acute.

Long. 23½ mm. Expanse of tegmina 61 mm.

LIFU (Willey).

3. *UEANA POLYMNIA*, sp. nov.

(Plate XVII, fig. 2.)

(?) *Tibicen* (?) *lifuana*, Dist., l. c.

Darker, the luteous replaced by ferruginous on head, pronotum and abdomen, except posterior margin of, and longitudinal stripe on, pronotum, etc.

♂. Rostrum reaching to apex of posterior coxæ. Opercula smaller, not reaching to apical margin of 1st segment. Metasternal tubercle smaller, not smooth. Genital segment not apically truncate or slightly rounded.

♀. Opercula as in ♂.

T. polymnia thus seems to differ—beyond coloration—by the longer rostrum, the larger opercula (at least in the male), the differently formed metasternal tubercle, and the stronger nervures.

While in some specimens the ulnar nervures are quite contiguous close to the base, they are clearly apart in others. Distant records "*T. lifuana*" from New Caledonia.

Genus *BÆTURIA*, Stål.

Bæturia, Stål, 1866, Hem. Afr., IV, p. 9.

Distributed through the Malayan Archipelago and the South Pacific Ocean.

1. B. EXHAUSTA, Guérin.

Cicada exhausta, Guérin, 1838, Voy. Coquille, p. 181.
[Plate 10, fig. 6 (1831).]

Bæturia exhausta, Distant, Orient. Cic., p. 149. Pl. 15,
fig. 13.

BIRARA (Willey); also recorded from New Guinea, Amboina, Ceram and Buro (Distant); Ternate and Uliasser (Breddin).

Genus DUNDUBIA.

Dundubia, Amyot and Serville, 1843, Hémiptères, p. 470.
Cosmopsaltria, Stål, Hem. Afr., IV, p. 5.

Distributed throughout Oriental and Australian regions.

DUNDUBIA OBTECTA, Fabr.

Tettigonia obtecta, Fabricius, 1803, Syst. Rhyng., p. 35.
Cosmopsaltria obtecta, Distant, Orient. Cic., p. 67. Pl. 5,
fig. 13.

BIRARA and LIFU (Willey); I have also seen it from Ternate, Batchian, Amboina and Aru, and Distant further records it from Salawati, Halmahera (or Jilolo), Ceram, and Duke of York Island (in the Bismarck Archipelago, I presume); Obi (Breddin).

Family CERCOPIDÆ.

Genus CLOVIA.

Clovia, Stål, 1866, Hémipt. Afr., IV, p. 68.

Distributed over the Ethiopian, Oriental and Australian regions.

CLOVIA BIRARENSIS, sp. nov.

(Plate XVII, fig. 3.)

Closely allied to *C. separata*, Walker, but differing in pattern, which seems constant.

Shining black, whole surface covered with short yellowish pilosity, more thickly on the vertex. The posterior margin of vertex and a slightly rounded stripe connecting the intero-apical ocular angles;

a sub-anterior stripe across pronotum (not reaching lateral margin); a stripe reaching from posterior angle of scutellum across clavus and corium, narrowing outwardly and not quite reaching externo lateral margins of corium; a slightly curved stripe from externo lateral margins of corium—a little posterior to the stripe last described—almost to apex of tegmina (roughly at right angles to the clavo-corial stripe); a stripe (broadening posteriorly) from postero lateral angle of mesopleura, running sublaterally beneath the eyes and round the antero-lateral margin of the frons, bright yellow. Lateral margins of posterior third of tegmina exteriorly, and posterior half internally, brownish hyaline; abdomen above and connexivum beneath dark brownish; wings brownish hyaline. Frons, clypeus, rostrum, anterior legs and intermediate and posterior tibiæ, abdomen more or less, ferruginous. Sterna, coxæ, posterior femora, pale yellow. Spines and tarsi black. Genæ, except the yellowish parts, black; a sublateral stripe on mesopleura interior to the yellow, and apex of rostrum black. Head slightly declivous. Frons much swollen, rostrum reaching to apex of mesocoxæ. Ocelli very slightly nearer to one another than to the eyes. Pronotum and tegmina strongly and closely punctured, the former somewhat convex, nearly twice as long as the head. Tegmina rounded laterally, apically subrotundately acute.

♂. Genital plate long.

♀. Valves five or six times as long as the last abdominal segment.

Long. 12–12½ mm. Breadth across pronotum 4 mm.; across tegmina 5¾ mm.

Hab. BIRARA (Willey).

Var. The scutellum may be either partly or entirely ferruginous.

CLOVIA DRYAS, sp. nov.

Pale ferruginous. Vertex and pronotum with similar markings to *C. birarensis*, but apical margin of vertex (to eyes) also pale yellowish. Anterior margin of scutellum pallid. Tegmina similarly marked to *C. birarensis* except that the clavo-corial stripe practically reaches the extero-lateral margin, the apical stripe is straighter, and these marks are clouded exteriorly with dark brownish, instead of being clear-cut as in *C. birarensis*. Beneath paler ferruginous, the yellow stripe in *C. birarensis* only faintly indicated here. Anterior tibiæ and all the tarsi blackish. Head with eyes wider than the pronotum; head and pronotum not or scarcely convex. Surface of frons much flatter than in the other species. Pronotum striate-punctate, very slightly longer than vertex. Ocelli a little closer

together than to the eyes. Tegmina more parallel-sided, striate-punctate.

Long. $10\frac{1}{4}$ mm. Width 3 mm.

Hab. BIRARA (Willey).

Genus AUFIDUS, Stål.

Aufidus, Stål, Trans. Ent. Soc. London, 1863, p. 594.

AUFIDUS HYPERION, sp. nov.

(Plate XVII, fig. 4.)

Allied to *A. tripars* (Walker).

Head, thorax and basal third of tegmina, ventral surface, legs, abdomen, etc., stramineous. Base of frons proper, extreme apex of vertex, a small spot enclosing each of the ocelli, eyes, tarsi apically, exterior margin of anterior tibiæ, black. Apical two-thirds of tegmina (except lateral margin of their basal two-thirds) blackish fumate. Posterior margin of pronotum widely (except posterolateral angle) and pallid parts of tegmina, suffused with sanguineous. Abdomen above, femora and posterior tibiæ more or less sanguineous. Tegmina and pronotum posteriorly yellowish pilose; head and pronotum anteriorly blackish pilose. Frons swollen, medianly flattened and sulcate; rostrum apically black, reaching a little beyond the base of intermediate coxæ.

Long. $10\frac{1}{2}$ mm. to apex of tegmina. Breadth 3 mm.

Hab. BIRARA (Willey).

The abdomens of the two specimens (1 ♂ 1 ♀) are unfortunately a little distorted by alcohol.

Family TETTIGONIIDÆ.

Genus TETTIGONIA, Geoffr.

Tettigonia, Geoffroy, 1762, Histoire abrégée, I, p. 429.

Tettigonides (part), Signoret, Ann. Soc. Ent. France, 1853, p. 13.

The most satisfactory arrangement of this huge genus or collection of genera yet made is that by E. D. Ball, but it only applies, unfortunately, to North American forms. So little is known of the Asiatic and Australian

species that I have preferred to describe fully, as a *Tettigonia* the following interesting form, which appears to be so far unknown. *Tettigonia* in its wide sense is practically cosmopolitan.

T. WILLEI, sp. n.

Head, thorax, and abdominal sternites, rostrum and legs, testaceous, abdominal tergites a little darker. A black elongate spot on each side of the middle line of the head, at the junction of frons and vertex almost meeting in the middle and extending laterally as far as the antennal ledges; also a black spot immediately posterior to each ocellus reaching from thence almost to the base of the vertex. Apical margin of pronotum medianly black, also a number of blackish-brown spots on the anterior quarter of pronotum; scutellum with a sublateral longitudinal black stripe on each side. Tegmina dark purplish brown, interior fourth of membrane hyaline, more or less fumate. Wings purplish brown, fumate. Anterior intermediate tarsi more or less fuscous, anterior tibial bristles black. Abdomen above medianly blackish. Head triangular, sub-convex, apically acutangular; vertex and pronotum forming an obtuse angle at their junction. Seen laterally, the head from base of eye to apex of vertex is distinctly longer than the pronotum; the antennal socket is protected by a somewhat strong ledge, part of which is distinctly visible from above, interrupting the curve of the head. Ocelli large, about twice as far apart from one another as from the nearest eye. Base of vertex roundly emarginate, carinately margined through its entire breadth. Frons slightly swollen, the surface flattened, somewhat obsoletely granulate. Anterior tibiæ not (or exceedingly slightly) dilated, not sulcate. First segment of posterior tarsi longer than the other two together. Head and eyes scarcely so wide as the base of pronotum. Vertex between the eyes two-thirds wider than the eyes together. Pronotum quadrilateral, anterior margin rounded, posterior margin slightly obtusangularly emarginate. Pronotum obsoletely impressed transversely at its anterior third; strong and finely punctured (on posterior two-thirds at least). Elytra extending far beyond apex of abdomen, apically rounded.

♂. Male plates much longer than the ultimate abdominal segment, apically angular, the extero-lateral margins rotundate basally, obliquely subtruncate apically, provided with short bristles basally near the lateral margins. Pygofers dark, more than twice as long as the plates, bristly.

♀. Ultimate abdominal segment bisinuate apically, valves about four times as long as the preceding, bristly.

Long 8.4 mm. to apex of abdomen, 9.8 to apex of tegmina, width across pronotum 2.3 mm.

Hab. BIRARA (*Willey*).

THALATTOSCOPUS, gen. nov.

(Plate XVII, fig. 5.)

Very similar to *Bythoscopus*, Germ. (= *Macropsis*, Auctt.), but frons, clypeus and genæ anastomosed or only obsoletely sutured off. Postmargin of eyes beneath, emarginate. Apical margin of head widely rounded. *Ocelli* distant about two and a half times as far from each other as from the eyes. *Vertex* very short, seven or eight times as wide between the eyes as long, about twice as wide as the eyes together, acutely margined basally. Antennal ledge truncate. Pronotum and scutellum very distinctly transversely striated, pronotum at base slightly wider than the eyes, lateral margin somewhat rounded.

T. DRYAS, sp. nov.

(Plate XVII, fig. 5.)

Above pale luteous, beneath testaceous. Eyes reddish-brown. Apical margin of vertex widely rounded, rostrum slightly passing anterior coxæ. Anterior and intermediate femora incrassate, posterior femora a little dilated, tibiæ subobliquely flattened, sulcate beneath. First segment of posterior tarsi equal to the other two together. Tegmina reaching well beyond apex of abdomen.

♀. Valves four times as long as preceding segment, exteriorly subrotundate, five-eighths longer than maximum width, each valve apically subacute, covered sparsely with short, pale luteous, bristles.

Long. $10\frac{1}{2}$ mm. to apex of tegmina, 9 to apex of abdomen, width $3\frac{3}{4}$ mm. across base of pronotum.

Hab. BIRARA (*Willey*).

Family FULGORIDÆ.

Genus PHYLLYPHANTA, Am. Serv.

Phyllyphanta, Amyot and Serville, 1843, Hémiptères, p. 523. Melichar, 1902, Ann. Hofmus. Wien, XVII, p. 54.

Cromna, Walker, 1857, Journ. Linn. Soc. Lond., I, p. 85.

Distributed over the Southern Oriental Region and Malayan Isles.

P. BIRARÆ, sp. nov.

Allied to *P. producta* (Spinola), but smaller and differs as follows:—

Apparently immaculate. Frons distinctly carinate along the middle. Pronotum and scutellum distinctly 3-carinate. Tegmina narrower, intero-apical angle somewhat obtuse—not strongly acute as in *P. producta* (Spin.) and *P. dubia* (Kirby).

Preserved in alcohol and not in good condition.

Long. 7 mm. (exclusive tegmina); $11\frac{1}{2}$ mm. (with tegmina); expanse about $23\frac{1}{2}$ mm.

Hab. BIRARA (*Willey*).

Genus EURICANIA, Melichar.

Euricania, Melichar, 1899, Ann. Hof. Wien, XIII, p. 255.

Distributed over the Oriental region up to Japan and over the Pacific Islands.

E. SPLENDIDA, Fabr.

Flata splendida, Fabr., 1803, Syst. Rhyng. p. 50.

Ricania splendida, Guérin, 1838, Voy. Coquille, p. 191, [Pl. 10, fig. 10 (1831)].

Euricania splendida, Melichar, 1899, Ann. Hofmus. XIII, p. 262 (Pl. 10, fig. 8).

Hab. BIRARA (*Willey*), two examples without the white tegminal spots; also recorded from New Guinea, Dorei, Triton Bay, Kingunan, Meisol, Key and Sula (*Melichar*).

Genus TARUNDIA, Stål.

Tarundia, Stål, 1859, Berlin Ent. Zeit. III, p. 325; Melichar, 1899, Ann. Hofmus. Wien, XIII, p. 265.

Distributed over South Africa, the smaller Mascarene Islands, New Guinea, the Solomons Islands.

T. GLAUDESCENS, Melichar.

Tarundia glaucescens, Melichar, 1899, Ann. Hofm. Wien, XIII, p. 267.

Hab. BIRARA (*Willey*), also recorded from New Guinea.

HAJAR, gen. nov.

Allied to *Tarundia*, Stål, and *Pochazina*, Melichar, but distinguished by the basal cell emitting four nerves and by a different disposition of basal nerves.

Frons not narrower than long, lateral margins of clypeus not carinate, laterally rounded, subperpendicular. *Tegmina* wide trilateral. The two claval nerves uniting at the middle of the clavus; six or seven transverse nerves in clavus; great claval nerve uniting with the claval margin at the apex of the clavus. Radial and subradial veins springing at the same point from the basal cell, both running subparallel as far as stigma. *Costal membrane* much wider than costal area, slightly arched exteriorly, several of the costal nervures furcate. Longitudinal nerves in corium somewhat far apart, few transverse nervures. Those always simple. Interior ulnar nerve arising out of the basal cell at the opposite apical angle to the exterior ulnar nerve.

HAJAR FORNICATUS, sp. nov.

Pale luteo-testaceous (greenish?). Abdomen with some black spots dorsally; a few of the transverse corial nerves fumate. *Tegmina* a little longer than wide, apically rounded. Vertex a little produced, truncate apically, lateral margins carinate, at right angles to apical margin, posterior margin excavated, pronotum short, but strongly carinate medianly longitudinally. Scutellum tricarinate the lateral keels meeting the middle keel apically at an acute angle. *Frons* obscurely carinate longitudinally, strongly carinate laterally and apically. Posterior tibiae with two spines.

Long. 5.2 mm. to apex abdomen; expanse tegmina 18 mm.

Hab. BIRARA (*Willey*), 1 ♀ damaged by alcohol.

PEGGIOGA, gen. nov.

Allied to *Dictyophara*, Germ., but differs by the acutangularly emarginate bases of head and pronotum, the numerous transverse nervures in the very narrow costal membrane, and the less reticulate apical third of tegmina. *Frons* tricarinate, *clypeus* very short, strongly tricarinate, *posterior tibiae* 3-spinose. *Anterior femora* unarmed.

PEGGIOGA FORMOSA, sp. n.

(Plate XVII, fig. 6.)

Stramineous (greenish?); apex of head black, median line of the various keels of the head, pronotum, scutellum, and elytral nervures, more or less pale ferruginous. Stigma, intero-apical margin of tegmina, exterior half of the transverse series of nerves leading from the stigma, and the nerves in the costal membrane (and the nerves

in the dark apical part aforementioned) blackish-brown or blackish. Apex of femora and base of posterior tibiæ very narrowly blackish. Abdomen above more or less blackish.

Vertex subfiliform, apex subrotundate-truncate, $2\frac{1}{3}$ times as long as width of head including eyes—more than twice as long as scutellum—slightly compressed medianly, as wide between the eyes as the length of an eye (as seen from above), one-third wider than the eyes together. Posterolateral margin of pronotum truncate, at right angles to the insect's longitudinal plane; at its meeting with the convex lateral margins of scutellum, it abruptly turns forward at an obtuse angle, the two sides almost meeting at a right angle when they abruptly turn forward again acuminate; between the posterolateral angle and the apex of pronotum it is medianly and strongly elevately carinate. The upper lateral margins are roundly sinuate and do not quite reach the base, the lower lateral margins commence carinately close to the eyes and reach the posterolateral angle acuminate. Lateral part of scutellum between lateral margins and the exterior keels is strongly punctured. Interior (great) claval nerve meets the commisural vein almost at the same place as it meets the claval sutural vein, forming a very long narrow cell. Basal cell elongate gives off three nervures, the radial and subradial arising at the same spot and proceeding somewhat divergingly to the transverse veins, a little before which the radial forks; the ulnar nerve arises at the opposite apical angle of the cell and continues to the transverse veins, forking a little before them. All the apical veins are furcate, sometimes reuniting; all the veins are shortly, somewhat sparsely, pilose. Rostrum reaches the base of posterior coxæ.

Long. to apex of abdomen 13 mm., to apex tegmina 17 mm.,
expanse tegmina $24\frac{1}{2}$ mm.

Hab. LIFU (*Willey*).

Sub-order HETEROPTERA.

Family CAPSIDÆ.

IMOGEN, gen. nov.

Elongate. Head vertical, shining, polished, smooth, longitudinally impressed near the base. Eyes shortly pedicellate and very prominent, nearly twice as broad in profile as high, posterior margin sinuate. Antennæ inserted close to the inner angle of the eye, first segment a trifle shorter than the profile-width of the eye. Second incrassate towards the base, third segment very slender. Pronotum

smooth, shining, and polished, deeply impressed and constricted in the middle, with a distinct annuliform collar, lateral margins of anterior lobe rotundate, obtusangular, not reaching laterally as far as the eyes, subtuberculate. Posterior lobe laterally subcarinate, straight, widely diverging posteriorly. Scutellum smooth, shining, anteriorly depressed. Elytra long, subparallel, clavus and corium coarsely and thickly punctured; cuneus somewhat deeply excised, much longer than wide; membrane with two cells. Femora not incrassate; third segment of posterior tarsi longer than the other two together.

This genus probably belongs to the *Capsaria*, but has apparently no near relations.

IMOGEN FORMOSA, sp. nov.

Head above and beneath (except at base of vertex), basal two segments of antennæ, posterior half of scutellum, elytra, posterior margin of pronotum except medianly, basal two segments of rostrum, abdomen above and beneath, sterna more or less, femora, etc. blackish or blackish-violet. Base of vertex, pronotum, anterior half of scutellum, propleura, etc., apical two segments of rostrum, yellowish-orange; anterior tibiæ, tarsi and third segment of antennæ pallid yellow. Posterior tibiæ and tarsi black annulated with whitish. Vertex, between the eyes, about two-sevenths wider than the two eyes together. Rostrum reaching to about the middle of the mesosternum. Second segment of antennæ three times as long as the first which is two-fifths longer than the third.

Long. 5 mm. (to apex of elytra 6 mm.). Breadth 2 mm.

Hab. BIRARA (*Willey*).

Family NAUCORIDÆ.

Genus MONONYX, Laporte.

Mononyx, Laporte, 1832-3, Essai, p. 16; Montandon, 1899, Bull. Sci. Bucarest, VIII, nos. 4 and 5, pp. 4 and 5.

Not found in America, north of Mexico; or in the Palæarctic Region.

M. MIXTUS, Montandon.

Mononyx mixtus, Montand., op. cit. p. 15.

Hab. BIRARA (*Willey*); also recorded by Montandon from Australia, Amboina, and New Guinea.

Family NOTONECTIDÆ.

ENITHARES, Spinola.

Enithares, Spin., 1837, Essai, p. 60.

Distributed over Australian, Ethiopian, and Oriental Regions. Also in Brazil.

ENITHARES, sp. nov.

A new species, scarcely in sufficiently good condition to characterize, allied to *E. abbreviata*, Kirby.

Hab. BIRARA (*Willey*).

Family REDUVIIDÆ.

Genus POLYDIDUS, Stål.

Polydidus, Stål, 1858, O. V. A. F., p. 448.

A few species distributed over Oriental, Australian, and Ethiopian Regions.

POLYDIDUS ARMATISSIMUS, Stål.

Polydidus armatissimus, Stål, 1859, O. V. A. F., p. 376.

Hab. BIRARA (*Willey*); also from India, Ceylon, China, and the Philippines.

Genus PHYSODERUS, Westwood.

Physoderus, Westwood, 18, Journ. Proc. Ent. Soc. Lond., 1844, p. cxv.

Epirodera, Westwood, 18, Trans. Ent. Soc. Lond., 1847, p. 247; Leth. and Sev., l. c., III, p. 96.

Madagascar, Philippines, and the Indomalayan Islands.

PHYSODERUS AZRAEL, sp. nov.

Belongs to Stål's div. *a*.

Head, pronotum, scutellum (except the produced posterior part), membrane, sterna (in great part), dark purple-brown, almost black, dull. Scutellum posteriorly, abdomen above, etc., clear luteous. Coriaceous part of elytra fulvofuscous. Connexivum blackish, spotted with luteous. Abdomen beneath sordid yellowish-brown with two sublateral (or submedian) subparallel longitudinal lines formed of blackish-brown spots, the spotted connexivum forming a third line. Legs pale, sordid yellowish-brown, somewhat obscurely annulated with dark brown. Antennæ pallid yellowish-brown.

Long. 8 mm.

Hab. BIRARA (*Willey*).

Genus *DARBANUS*, Am. Serv.

Darbanus, Am. Serv., 1843, Hémipt., p. 370.

Euagoras, Leth. Sev., l. c., III, p. 184.

Distributed over the Oriental and Malayan Islands.

D. DOLOSUS, Stål.

Euagoras dolosus (Stål), 1863, Ann. Soc. Ent. France, p. 28.

Hab. BIRARA (*Willey*); Ké Island (*Stål*); Aru (*Distant*).

Genus *ONCOCEPHALUS*, Klug.

Oncocephalus, Klug, 1830, Symb. Phip., p. 2, almost world-wide in distribution.

ONCOCEPHALUS AMEN, sp. nov.

♂. Apparently allied to *O. assimilis*, Reuter, but differing by the proportions of the antennæ, pronotum, etc. Elongate, sordid testaceous, head with a large black spot on the posterior area, pronotum with three double longitudinal lines which are fainter on the posterior area. Scutellum with a pallid irregular central longitudinal line. Head, pronotum, and abdomen irregularly marked with black laterally. Antennæ pallid, apex of first and of second segments black, third and fourth fumate. Apex of the second and third rostral segments black. Anterior and intermediate legs pallid, anterior femora banded irregularly with brown beneath, anterior and intermediate tibiæ with three blackish rings; intermediate femora apically black. Posterior femora brownish-black, a little clouded with pallid; posterior tibiæ pallid, with two brownish rings near the base. Elytra brownish testaceous, obscurely irrorated with brownish, with two large velvety blackish-brown spots, the apical one with

a whitish wedge anteriorly. Head long and narrowed in profile, anterior spines not very prominent; anterior area and first segment of antennæ subequal in length, the former distinctly longer than the posterior area plus the eyes. Second segment of antennæ one-third longer than the first, $2\frac{3}{4}$ longer than the third, and a little more than twice as long as the fourth; first segment glabrous, second slender. Eyes beneath strongly convergent, width of eye (as seen from beneath) about three times (or more) as wide as the intraocular space. Gula not tuberculate. Rostrum incrassate, first segment reaching to anterior margin of eye. Eyes very large, occupying almost the entire width of the head in profile. Anterior lobe of pronotum destitute of discal spines, anterior angle minutely spinose. Pronotum about the middle of the lateral margins with a small tubercle, a little posterior to this somewhat deeply impressed transversely; the lateral margins of the anterior area are subparallel, of the posterior area widely divergent. Posterolateral angles acute, subvertical, not extending anteriorly beyond apical margin of posternum. Scutellum distinctly recurved posteriorly. Anterior femora, with a single row of eleven to twelve small spines inferiorly, trochanters with two or three small spines. Posterior tibiæ slightly pilulose, distinctly longer than femora.

Long. 15 mm.

Hab. BIRARA (*Willey*).

LUTEVA, sp. nov.

Genus LUTEVA, Dohrn.

Luteva, Dohrn., Linn. Ent., XIV, pp. 213 and 242.

Two or three specimens in indifferent condition from Lifu, probably referable to a new species.

Family GERRIDÆ.

Genus GERRIS, Fabricius.

Gerris, Fabr., 1794, Ent. Syst., IV, p. 188.

Limnometra, Mayr., 1866, Novara Reise, Hem., p. 174.

Cosmopolitan; the subgenus *Limnometra* occurs in every region except the Palæarctic.

GERRIS, sp. (?).

Hab. BIRARA (*Willey*).

Family NEPIDÆ.

Genus RANATRA, Fabricius.

Ranatra, Fabr., Syst. Rhyng, p. 108.*Cercotmetus*, Amyot and Serville, Hist. Hém., p. 441.

Practically cosmopolitan.

RANATRA PARMATA, Mayr.

Ranatra (*Cercotmetus*) *parmata*, Mayr., Novara Reise, p. 192; Fab. V, f. 60.*Hab.* JAVA, TJIBODAS (*Willey*).

Family ARADIDÆ.

Genus BRACHYRHYNCHUS, Lap.

Brachyrhynchus, Laporte, Essai, p. 54.

Almost world-wide in distribution.

BRACHYRHYNCHUS TAGALICUS, Stål.

Arictus tagalicus, Stål., 1870, O. V. A. P., p. 672.*Hab.* BIRARA (*Willey*), also recorded from Philippines, Burma, Java and Nias Island.

BRACHYRHYNCHUS MEMBRANACEUS, Fabr., var.

BRACHYRHYNCHUS ORIENTALIS, Laporte.

Aradus membranaceus, Fabr., 1803, Syst. Rhyng, p. 118.Var. *Brachyrhynchus orientalis*, Lap.*Hab.* BIRARA (*Willey*); also recorded from South Oriental region, New Guinea, Vanikoro, etc.

Genus NEUROCTENUS, Fieber.

Neuroctenus, Fieber, 1861, Europ. Hem., p. 34.Similar distribution to *Brachyrhynchus*, except the Palæarctic Region.

NEUROCTENUS, sp. (?)

Two specimens in indifferent condition (*Willey*)

Family PYRRHOCORIDÆ.

(= *Pyrrhocoridae* + *Lygaeidae*, Leth. and Sev.)

Genus PHYSOPELTA.

Physopelta, Ann. Serv., 1843, Hémiptères, p. 271.

Iphita, Stål, 1870, Sv., Akad. Handl., 9, No. 1, p. 99.

Distributed through the Oriental, Ethiopian, and Australian Regions.

PHYSOPELTA FIMBRIATA, Stål.

Physopelta fimbriata, Stål, 1863, Berl. Ent. Zeit., VII, p. 392.

Hab. BIRARA (*Willey*); previously recorded from Timor.

P. FAMELICA, Stål.

Physopelta famelica, Stål, 1862, Berl. Ent. Zeit., VII, p. 391.

(?) *Lygaeus woodlarkianus*, Montr., 1855, l. c., p. 105.

Hab. BIRARA (*Willey*); recorded also from Australia, New Guinea, Ceram, etc., scarcely distinguishable from *P. gutta*, Burm.

DYNAMENAIS, gen. nov.

Allied to *Æschines*, but distinguished by the glabrous abdomen and prominent eyes; also allied to *Ectatops*, Bo., distinguished by the form of the head, the much more prominent bucculæ and the glabrous abdomen.

Head almost vertical in the front of the eyes, transversely impressed behind them but not narrowed; eyes large and very prominent, shortly stylate, projecting above the surface of the vertex, as seen in profile; base of eyes touching or slightly overlapping pronotum. The base of the head between the eyes is also sulcate, slightly obtuse angulately emarginate. Pronotum, with a well-marked collar, divided from the anterior area by a punctured deeply impressed line, anterior area separate from posterior area by a very deeply impressed line, also punctured. Lateral margins and pronotum subvertical. The collar and the lateral margins are smooth and polished, the rest of the pronotum is dull and sparsely punctured, except the posterior margin which is polished and sparsely punctured. First segment of antennæ longer than second and third together and longer than fourth. Bucculæ very prominent, acute. First

segment of rostrum reaches to the base of head, or at least not beyond base of collar. Stink-gland orifices with a short sulcus, reaching along half the width of the pleuron, but very distinct; margins curved, callose. Wings with a hamus. Legs unarmed. Abdomen glabrous beneath.

DYNAMENAIS VENUSTUS, Walker.

Ectatops venustus, Walk., 1873, Cat. Hem., VI, p. 17.

Dull black, marked with yellowish white. Head, except apex; pronotum, except collar, lateral and posterior margins; scutellum; elytra, except costal margin, and the apical margin of corium—the latter widely—and the apical margin of membrane; antennæ, except extreme base of first segment, and basal two-thirds of the fourth; first segment of rostrum; basal two-thirds of the femora; apical abdomen tergites; sterna and pleura, the collar and the posterior margin of pro- and metapleura excepted; ambulacra; basal half of abdominal sternites in the middle and one or more of the other abdominal sternites entirely; black more or less dull, except the more or less shining abdominal segments, the above exceptions are all more or less yellowish-white except the sanguineous abdominal tergites. Second, third and fourth rostral segments castaneous-brown; tibiæ and tarsi pallid or brownish. The prominent parts of the bucculæ are ivory-white. Head dull, somewhat obscurely rugulose, first segment of antennæ a little more than twice as long as the second, and one-sixth longer than the fourth; second one-third longer than third. First rostral segment a trifle longer than the second; the fourth reaching a little beyond the posterior coxæ. Lateral margins of pronotum sinuate; posterior margins of pro- and metapleura, and the ambulacra smooth, polished, and punctured. Elytra, exteriorly at least, punctured. Anterior and intermediate femora somewhat incrassate. First segment of each tarsus longer than the other two segments together; third longer than the second.

Long. ♂ 7 mm., ♀ 9 mm.

Hab. BIRARA (*Willey*); New Guinea (*Walker*).

Genus DINDYMUS.

Dindymus, Stål, 1861, O. V. A. F., p. 196.

Distributed throughout Oriental, Ethiopian and Australian Regions.

DINDYMUS FAMOSUS, Distant.

Dindymus famosus, Dist., Trans. Ent. Soc. Lond., 1901, p. 589.

Hab. BIRARA (*Willey*).

DINDYMUS PYROCHROA, Boisduval.

Dysdercus pyrochroa, Boisduval, 1835, Astrolabe Ent. II, p. 642, Pl. XI, fig. 9.

Hab. BIRARA (*Willey*), Aru, Moluccas, New Guinea, Myso, etc.

Genus DYSDERCUS, Serville.

Dysdercus, Serville, 1835, in Boisduval, Astrolabe, II, p. 64.

Laporte fixed the type of the genus *Astemma* in 1833, "Essai," p. 38.

"Le genre *Astemma* a été établi sur la *Salda pallicornis* de Fab."

Astemma, Kirk., olim.

DYSDERCUS SIDÆ, Montrouzier.

Dysdecus (sic!) *sidæ*, Montr. and Sign., 1861, l. c., p. 68.

In the Journal Bombay Nat. Hist. Soc., I lumped together a number of forms under the name "*cingulatus*." Dr. Breddin has since kindly sent me specimens of *cingulatus* and *poecilus*, and has explained the difference in the Wiener. Ent. Zeit.

I now find among Dr. Willey's captures what I believe to be the true *sidæ*. *D. cingulatus* is distinguished by the shining, polished, immaculate head (except the base behind the eyes which is generally very narrowly blackish), while *poecilus* and *sidæ* have dull heads. In both of the latter the base of the head beyond the eyes is blackish, though generally more largely in *sidæ*. While in *poecilus* (as in *cingulatus*), the tylus is red, in *sidæ* it is blackish, the black colour often encroaching well over the juga, etc.; the rostrum is also entirely black (except sometimes the extreme apex of the first segment) in *sidæ*, while in the other two, at least the first segment is red. The red colour in *sidæ* is also darker and browner. These characters seem constant, other colour characters are however unreliable in *cingulatus* and *poecilus*, particularly that of the lævigate anterior transverse band on the pronotum. *Sidæ* is perhaps also more strongly punctured.

Dr. Willey has taken *A. sidæ* at Lifu, the original habitat noted by Montrouzier. I have it also in my collection from New Hebrides, New Caledonia and Loyalty Islands. Stål records it from North and West Australia.

DYSDERCUS CINGULATUS, Fabricius.

Cimex cingulatus, Fabr. 1775, Syst. Ent., p. 719.

Dysdercus cingulatus, Kirk., J. Bombay Soc., XIV, p. 301, pl. A., figs. 11 and 12 (except some of the synonymy).

Hab. BIRARA (*Willey*). Widely distributed over the Australian and Oriental Regions.

DYSDERCUS POECILUS, Herr Schäff.

Pyrrhocoris poecilus, Herr Schäff., 1844, Wanz. Ins., VII, p. 17, fig. 699; Breddin, Wien. Ent. Zeit., XX, p. 84.

Hab. BIRARA (*Willey*). A very similar distribution to that of *cingulatus*.

Genus PTOCHIOMERA, Say.

Ptochiomera, Say, 1832, Descr. Heteropt. (New Harmony).

Plociomera, Leth. and Sev., l. c., II, p. 194.

Distributed over America; also Japan, etc.

PTOCHIOMERA KYDIPPE, sp. nov.

Belongs to Stål's divisions dd. Covered all over, more thickly on head and pronotum, with silvery hair.

Head, pronotum, scutellum and under-side dull black; a silvery posterolateral spot on anterior lobe of pronotum. Posterior margin of pronotum narrowly fulvescent. Elytra pale yellowish-brown, clouded and punctured with blackish-brown. Connexivum pallid brown. Membrane fumate, irregularly marked with pallid. First and fourth antennal segments, more or less blackish, 3rd and 4th fulvous. Legs brownish, apical half of femora black. Rostrum fulvous, first and fourth segments darker. Stink orifices black. Head and eyes wider than anterior margin of pronotum. Fourth segment of antennæ twice as long as the first, a trifle longer than the second, which is a quarter longer than the third. Pronotum somewhat deeply impressed transversely, anterior area three-fifths longer than the posterior; lateral margins rounded, lateral margins of posterior area widely divergent roundly, base slightly sinuately emarginate.

Long. to apex of elytra 5 mm.

Hab. LIFU (*Willey*).

Genus PACHYMERUS, Auctt., olim.

Pachymerus, Lep. and Serv., 1895, Encycl., X, p. 322.

Aphanus, Leth. and Sev., l. c., II, p. 215 (*nec* Laporte).

Distributed throughout the Old World.

I have used the preoccupied name "*Pachymerus*" because I do not know what the correct name of the genus is.

PACHYMERUS NEREIS, sp. nov.

(Plate XVII, fig. 7.)

Although the fourth segment of the antennæ is partly pallid, this species seems to be a *Pachymerus*, but I have seen only 3 ♀♀.

Head, first segment of antennæ (except extreme apex), extreme apex of 2nd segment, the third (except extreme base) and apical half of the fourth, disk of anterior lobe of pronotum, two spots (one near apex, one near base) on the explanate lateral margin of pronotum, scutellum (except a proportionately long V-mark at posterior angle), two spots near and at apex of costal area; abdomen above entire ventral surface (except rostrum, trochanter, ♀ ovipositor, ambulacra and pleural lateral margin and connexivum), black or blackish; the exceptions all pale yellowish-brown except lateral margins of pleura which are yellowish-white. Stink orifices black. Ocelli close to the eyes, first segment of rostrum reaching to base of head, 4th to about middle of intermediate coxæ. Second and fourth segments of antennæ sub-equal, each a trifle more than twice as long as the first, and a quarter longer than the third. Disk of posterior half of pronotum, scutellum, elytra, etc., very strongly punctured. Elytra pale yellowish-brown, strongly and somewhat closely punctured with brownish-black. Clavus triseriate punctured, also with some irregular punctures between the two interior rows. Membrane pale yellowish-white marbled with pale yellowish-brown. Lateral margins of pronotum rounded, sufficiently widely explanate, more narrowly posteriorly; base truncate. Femora unarmed, except a spine near apex of anterior pair.

♀. Long. 6 mm.

Hab. LIFU (226a Willey).

Genus *OXYCARENUS*, Fieber.

Oxycarenus, Fieber, 1837, Weitenweber's Beitrage, p. 339.

Distributed throughout the Old World; occurs also in Peru.

OXYCARENUS LIFUANUS, sp. nov.

Is intermediate between Stål's divisions b and bb.

Head, rostrum, antennæ, pronotum, scutellum and clavus, black; orificial callosities white, orifices black; abdomen above black, medianly sanguineous. Corium white, with a large black spot in

the middle and a black spot at apical angle of corium. Membrane whitish hyaline with a large brownish-black spot. Legs black, except posterior tibiæ which are white except at base and apex. Ambulacra and posterior margin of metapleura white. Abdomen beneath sanguineous along some of the sutures covered with stiff whitish hairs. Head, pronotum, etc., strongly punctured. Clavus punctured in three parallel rows, and there is also a row of black punctures dividing the corium from the exocorium. First segment of antennæ scarcely reaching beyond the head, second segment half longer than the first, a trifle longer than the fourth, which is a trifle longer than the third. Rostrum reaching well beyond base of abdomen.

Long. $3\frac{1}{2}$ mm.

Hab. LIFU (*Willey*).

This may be *Macroplox luctuosis*, Montr., but that species is described as finely *granulated*, with the clavus whitish and the membrane brown. It is also a little larger than *O. lifuanus*.

Genus ASTACOPS, Boisduval.

Astacops, Boisduval, 1835, *Voy. Astrolabe*, II, p. 637.

Australia and the Malayan Archipelago.

ASTACOPS DORYCUS, Boisduval.

Astacops dorycus, Boisd., l. c., p. 638, pl. xi, fig. 16.

Hab. BIRARA (*Willey*); also from New Guinea and Mysol.

ASTACOPS, sp. nov.

Hab. LIFU (*Willey*).

This is most probably a good species, but I have refrained from describing it, as it belongs to a difficult group largely characterized by colour-markings, and there is but a single specimen before me.

Genus STALAGMOSTETHUS, Stål.

Stalagmostethus, Stål, 1868, *Svensk. Vetens. and Akad. Handl.*, 7, No. 11, p. 72.

Sub-genus *Spilostethus*, Stål, op. cit. = *Lygaeus*, Auctt. nec Fabr.

S. FAMILIARIS, Fabr., var. HOSPES, Fabr.

Cimex familiaris, Fabricius, 1781, Spec. Ins., II, p. 363.

Var. *Lygaeus hospes*, Fabr., 1794, Ent. Syst., IV, p. 150.

= *L. squalidus*, Montrouzier, 1861, A. S. E. F., 4, 1, p. 66.

Hab. LIFU (*Montrouzier* and *Willey*); Brisbane (my coll.); New Caledonia, Philippines, Malacca, China, India, Africa, Europe.

Genus ONCOPELTUS, Stål.

Oncopeltus, Stål, 1868, Svensk., Vetensk., Akad. Handl., 7, No. 11, p. 75.

ONCOPELTUS DISPAR, Walker, var.

(?) *Lygaeus bicinctus*, Montrouzier, 1861, A. S. E. F., p. 67.

Lygaeus dispar, Walker, 1872, Cat., V, p. 60.

„ „ (Willey, 332 n.); Moluccas, Borneo, etc.

Differs from the type by the pallid (sanguineous?) femora. The description of *L. bicinctus* from New Caledonia agrees with this, but the size (7 mm.) is much too small.

Genus GEOCORIS WILLEI, sp. nov.

(Plate XVII, fig. 8.)

Allied to *G. flaviceps*.

Head, anterior and lateral margins of pronotum, posterior angle of scutellum, first and apical two-thirds of third segments of antennæ, rostrum, legs, etc., pale yellow-testaceous. Rest of antennæ blackish or blackish-brown. Rest of pronotum, scutellum, elytra, abdomen, etc., bluish-black. Eyes red. Basal two-thirds of membrane fumate, apical third hyaline, colourless. Connexivum flavous, spotted with black. Head straight between antennæ and eyes, shortly triangularly prominent in the middle, unpunctate; with the eyes wider than pronotum. Fourth antennal segment fusiform, a little longer than the third, which is a little longer than the second and twice as long as the first. The pronotum has a single row of punctures near the anterior margin, not nearly reaching to the lateral margin, basal two-thirds of pronotum and the entire scutellum somewhat superficially and irregularly punctured; lateral margins of pronotum smooth, straight and sub-parallel. Clavus

with two rows of parallel punctures, interior half of corium not (or superficially) punctured, exterior half more strongly punctured.

Long. 5.4 mm. to apex of elytra ; breadth across eyes 2.5 mm.

Hab. BIRARA (*Willey*).

Family LYGAEIDÆ, Kirk.

(= COREIDÆ, Auctt.)

Genus LEPTOCORIS, Hahn.

Leptocoris, Hahn., 1833, Wanz. Inst., I, p. 200.

Serinetha, Spinola, 1837, Essai, p. 247.

Widely distributed through the Oriental, Australian, Ethiopian and Nearctic regions.

LEPTOCORIS RUFOMARGINATUS, Fabricius.

Lygaeus rufomarginatus, Fabr., 1794, Ent. Syst., IV, p. 152.

Hab. BIRARA (*Willey*); PHILIPPINES (*Stål*).

Genus MYODOCHA, Latreille.

Myodocha, Latr., 1807, Gen. Crust. Ins., III.

Leptocorisa, Latr., 1825, Fam. Nat., p. 421.

Almost world-wide in distribution except the Palæarctic region.

MYODOCHA BURMEISTERI, Montr.

Leptocorisa burmeisteri, Montrouzier, 1865, Ann. Soc. Linn. Lyon., XI, p. 227.

Hab. BIRARA (*Willey*). Described from New Caledonia ; "Se trouve à Kanala dans les champs, sur les graminées, au milieu des herbes" (*Montrouzier*).

Probably two species contained in *Willey's* captures, but the species of this genus are not very well characterized.

Genus RIPTORTUS, Stål.

Riptortus, Stål, 1859, O. V. A. F., p. 460.

Distributed over the Oriental, Ethiopian and Australian regions, also Japan.

RIPTORTUS IMPERIALIS, sp. n.

Allied to *R. robustus*, Dallas.

Head, beneath, juga, base of vertex, pronotum, scutellum, extreme base of elytra, first, second and apical two-thirds of 3rd segment of antennæ, rostrum, sterna and pleura (except as below), coxæ, trochanters, and posterior femora, a broad median longitudinal black band on abdomen below, spots on the apical segments of connexivum above, etc., black or blackish-brown, the posterior femora beneath very polished. Tylus, base of third antennal segment, abdomen above, and laterally below, a broad almost continuous, very smooth, stripe from apex of head to base of metanotum, reddish. Apical segment of antennæ, anterior and intermediate tibiæ, and all the tarsi, a somewhat indefinite pale ochreous. Posterior tibiæ blackish laterally, reddish above and below. Elytra pale ochreofulvous, membrane yellowish-brown hyaline. Pronotal spines, acuminate, prominent; pronotum minutely granulate with black. Rostrum reaching to nearly base, fine at sternum. Posterior femora with three or four larger spines and a number of smaller ones. Fourth antennal longer than the first and second together, second and third subequal.

Long. $17\frac{1}{2}$ mm., lat. 4 mm.

Hab. BIRARA (*Willey*).

(?) RIPTORTUS ATRICORNIS, Stål.

Riptortus atricornis, Stål, 1873, Sv. Vet. Ak. Handl., 11, No. 2, p. 94.

A specimen from Lifu (*Willey*) is placed here with some little diffidence. *R. atricornis* was described from Australia and Java.

Genus CLETUS, Stål.

Cletus, Stål, Eugénies Resa, Hem., p. 236.

Peniscomus, Spinola, in Signoret, 1861, Ann. Soc. Ent. France, 4, 1, p. 66 [nov. syn.].

Distributed over Oriental, Ethiopian, and Australian regions, also from North America.

CLETUS AMYOTI, Montrouzier.

Gonocerus amyoti, Montr., 1861, l. c., p. 66.

Hab. LIFU (*Montrouzier* and *Willey*).

Genus LEPTOGLOSSUS, Guérin.

Leptoglossus, Guérin, 1838, Voy. Coquille, p. 174.

Widely distributed over the Ethiopian, Oriental and Australian regions (including the Pacific Isles), America, and the Canary Isles.

L. MEMBRANACEUS, Fabricius.

(?) *Cimex australis*, Fabr., 1775, Syst. Ent., p. 708.

Cimex membranaceus, Fabr., 1781, Spec. Ins., II, p. 351.

Anisoscelis (*Lygaeus*) *bidentatus*, Montr., 1855, l. c., p. 101.

Solomons Islands, Guodalcantar (*Willey*, June 11, 1897); also from Woodlark, New Caledonia and San Cristoval, North Australia, Philippines, Africa, India, Ceylon, Canary Isles, etc. *Willey's* examples are typical *membranaceus*; *L. australis*, which is doubtfully distinct, is from Tahiti. "Vit sur les Cucurhitacées. On le trouve aussi sur certains acacias" (*Montrouzier*).

Genus MICTIS, Leach.

Mictis, 1814, Leach, Zool. Misc., I, p. 92.

Oriental, Australian, and Ethiopian regions.

MICTIS PROFANUS, Fabricius.

Lygaeus profanus, Fabricius, 1803, Syst. Rhyng., p. 211.

Næmatopus profanus, Montr., 1855, l. c., p. 102.

Hab. LIFU (*Willey*); also from Australia, Woodlark, New Caledonia, Viti, Samoa, San Cristoval, etc. "Vit sur les mimosa" (*Montrouzier*).

Genus PRIOCNEMICORIS, Costa.

Priocnemicoris, Costa, 1863, Rend. Acad. Napol., II, p. 253.

New Guinea and neighbouring islands.

PRIOCNEMICORIS ALBITHORAX, Boisd., var. PATRICIUS, nov.

I have not been able to examine *P. albithorax*, Boisd., 1835 (= *flaviceps*, Guérin, 1838), and am therefore unable to differentiate this form specifically. It differs from the typical form, as figured by Boisduval and Guérin, by the unicolorous pronotum.

Head, rostrum, entire ventral surface (except the exterolateral margins of the pleura), connexival tergites, legs (except posterior

femora, etc.) olivaceo-testaceous. Eyes, ocelli, antennæ, etc., dark reddish-brown; 4th segment of antennæ fulvous. Pronotum, scutellum, exterolateral margins of the pleura, clavus, corium, and abdomen above metallic shining green. Posterior femora (except at the base) and base of posterior tibiæ shining greenish-black. Membrane irridescent dark olivaceous, tinged with purple. There is a pale luteous band on the pleura interior to the lateral metallic margin, and a sublateral pale luteous spot on each abdominal tergite. Rostrum reaching to the middle of the mesosternum, which is channelled so far. Fourth segment of antennæ about one-half longer than the first, which is one-sixth longer than the second, which is one-half longer than the third. Pronotum transversely striolate, anteriorly obsolete callose, sulcate medio-longitudinally. Clavus and corium strongly and finely punctured. Each abdominal segment posterolaterally minutely spined.

♂. 6th (?) abdominal tergite very slightly rotundately emarginate; posterior femora somewhat incrassate, with one larger, median, and three to five smaller spines, near the apex.

♀. 6th (?) abdominal tergite roundly emarginate; posterior femora much less emarginate, lacking the median larger spine.

Long. 19 mm., lat. $5\frac{1}{3}$ – $5\frac{2}{3}$ mm.

Hab. BIRARA (*Willey*). The typical form is from New Guinea.

Genus PTERNISTRIA, Stål.

Pternistria, Stål, 1873, Svensk. Vetensk. Akad. Handl., p. 43.

Australia, New Guinea, Birara, and Aru.

PTERNISTRIA, sp.

Specimens from Birara (*Willey*) closely agreeing with the description and figure of *macromera* (*Guérin*), which, however, is unknown to me. The latter has been recorded from New Guinea and Aru.

Family CIMICIDÆ.

Genus MEGYMENUM, Laporte.

Megymenum, Lap., 1833, Essai, p. 52.

Megalymenum, Burmeister, Handb. Ent., II, p. 349 (note), 1835.

Distributed throughout the Australian and Oriental regions up to Japan.

M. AFFINE, Boisduval.

Megymenum affine, Boisd., 1835, Voy. Astrolabe, II, p. 633, Pl. 11, f. 12; Montrouzier, 1855, l. c., p. 101.

M. montrouzieri, Leth. and Sev., 1893, Cat. Hem., I, p. 239.

These two names appear to belong to the same form. Stål says of the Montrouzierian, "a *M. affine*, Boisd., vix differt," though the former is in his division "cc" and the latter in "c." Dr. Willey collected specimens from Birara. It has also been recorded from Moiou (*Montrouzier*) and New Guinea.

Genus AGAPOPHYTA, Laporte.

Agapophyta, Lap., 1833, Essai, p. 63.

The genus contains one species.

AGAPOPHYTA BIPUNCTATA, Boisduval.

Agapophyta bipunctata, Guérin, 1838, Voy. Coquille, p. 168. [Pl. 11, f. 5 (1831), not f. 15, as say Leth. and Sev.]

Hab. BIRARA (*Willey*); also from Australia, Tasmania, New Guinea, Woodlark Island, Havre Carteret, Buru and Sarawatte Islands, Moluccas, etc.

"Vit en troupe sur une espèce d'acacia à Woodlark" (*Montrouzier*).

Genus CATACANTHUS, Spinola.

Catacanthus, Spinola, 1837, Essai Hémipt., p. 325.

Distributed from India and Ceylon to Toga and from Australia to Japan.

C. PUNCTUM, Fabricius.

Cimex nigripes, Subzev., 1776, Gesch. Ins., p. 96, Pl. 10, fig. 9 (nec Fabr.).

C. punctum, Fabricius, 1787, Mant. Ins., II, p. 291.

C. carrensi, Le Guillou, 1841, Rev. Zool., p. 262.

Pentatoma tricolor, Montrouzier, 1855, l. c., p. 96.

Catacanthus nigripes, Leth. and Sev., 1893, Cat. I, p. 163.

Hab. BIRARA (*Willey*; typical *punctum*); Woodlark, Art, Australia, Philippines, Java, etc.

Genus AGONOSCELIS, Spinola.

Agonoscelis, Spinola, 1837, Essai, p. 327.

Widely distributed over Ethiopian, Oriental and Australian Regions.

AGONOSCELIS RUTILUS, Fabricius.

Cimex rutilus, Fabricius, 1775, Syst. Ent., p. 714.

Hab. BIRARA (*Willey*); also recorded from Australia, Moluccas, Java, Celebes, Batchian, Banda, etc.

Genus PLAUTIA, Stål.

Plautia, Stål, 1864, Hem. Afric., I, p. 191.

Distributed similarly to the foregoing genus.

PLAUTIA BRUNNIPENNIS, Montrouzier.

Pentatoma brunnipennis, Montr., 1861, l. c., p. 63.

Hab. BIRARA (*Willey*); LIFU (*Stål*); NEW CALEDONIA (*Montrouzier*).

A very variable species. In one specimen the posterior half of the pronotum is black and there is a large black spot towards the posterior angle of the scutellum. The corium may be immaculate or heavily spotted with black. Venter usually immaculate, but in the example first mentioned, there are three black spots on each segment. Differs from *P. fimbriatus*, Fabr., by the absence of the black thread-line on the lateral margins of the pronotum; scarcely separable from *P. affinis*, Dallas, from Australia, except that the pronotum is more coarsely punctured in the present species.

Genus ANTESTIA, Stål.

Antestia, Stål, 1855, O. V. A. F., p. 54.

Similar distribution to the foregoing.

ANTESTIA CHAMBERETI, Le Guillon.

Strachia chambereti, Le Guillon, 1841, Rev. Zool., p. 262.

Hab. BIRARA (*Willey*); also from New Guinea, Woodlark, and Waigiou.

Genus STENOZYGUM, Fieber.

Stenozygum, Fieber, 1861, Europ. Hem., p. 345.

Oriental, Ethiopian and Australian regions, also South-eastern Palæarctic.

1. STENOZYGUM ERYTHRASPIS, Boisduval.

Pentatoma erythraspis, Boisd., 1835, Voy. Astrolabe, pt. 2, p. 629, Pl. 11, fig. 8.

Hab. BIRARA (*Willey*); also recorded from Moluccas, Ceram, Batchian, Halmahera, Carteret, Ké and New Guinea.

Genus VITELLUS, Stål.

Vitellus, Stål, 1865, Ann. Soc. Ent. France, 4, 5, p. 170.

Distributed over Australia and the Malayan and Pacific Isles.

VITELLUS PUNGENS, Montrouzier.

Rhyncocoris pungens, Montr., 1861, l. c., p. 66.

Vitellus pungens, Stål, 1865, l. c., p. 172.

Hab. BIRARA (*Willey*); one ex. measuring 16 mm. long; WOODLARK (*Montrouzier*).

Genus ZANGIS, Stål.

Zangis, Stål, 1867, O. V. A. F., p. 514.

Distributed over Australian, Ethiopian and Oriental Regions.

ZANGIS MONTROUZIERI, Leth. and Sev.

Rhaphygaster sulcatum, Montr., 1861, l. c., p. 65.

Zangis montrouzieri, Leth. and Sev., 1893, l. c., p. 170.

Doubtfully distinct from *Z. sulcatum* (Montr.), Stål.

Hab. BIRARA (*Willey*); NEW CALEDONIA (*Stål*); LIFU (*Montrouzier*).

Genus CUSPICONA, Dallas.

Cuspicona, Dallas, 1851, List., p. 296.

Oriental and Australian regions.

CUSPICONA LAMINATA, Stål.

Pentatoma viride, (p.) Montrouzier, 1855, l. c., p. 98.

Cuspicona viride, (p.) Montrouzier and Signoret, 1861, l. c., p. 65.

C. laminata, Stål, 1876, Svensk. Akad. Handl., 11, No. 2, p. 102.

Hab. LIFU (*Willey* and *Montrouzier*); WOODLARK (*Montrouzier*), and NEW CALEDONIA (*Stål*).

Genus EURINOME, Stål.

Eurinome, Stål, 1867, O. V. A. F., p. 516.

New Caledonia, Lifu and the Philippines.

EURINOME BASIVENTRIS, Signoret.

Pentatoma inconspicua, Montrouzier, 1858, l. c., p. 249 (nec Dallas).

P. basiventris, Signoret, 1861, Ann. Soc. Ent. France, p. 63.

Hab. LIFU (*Willey*); Balade "commune dans les herbes, à terre sous les végétaux en décomposition" (*Montrouzier*).

Genus COCTOTERIS, Stål.

Coctoteris, Stål, 1858, O. V. A. F., p. 435.

Coccoteris, Leth. and Sev., 1893, l. c., I, p. 100.

New Guinea, Birara and Woodlark.

COCTOTERIS EXIGUUS, Distant.

Coctoteris exiguus, Distant, Trans. Ent. Soc. Lond.

A very variable species, the ground-colour ranging from pale greenish-cinereous to a fine rosy hue.

Hab. BIRARA (*Willey*); NEW GUINEA (*Distant*).

Genus EYSARCORIS, Hahn.

Eysarcoris, Hahn, 1834.

Universally distributed.

EYSARCORIS MEGASPILOIDES, Tryon.

Hab. BIRARA (*Willey*); originally described from New Guinea.

Genus *ADRISA*, Am. Serv.

Adrisa, Amyot and Serville, 1843, Hémiptères, p. 89.

Geobia, Montrouzier, 1858, Ann. Soc. Linn. Lyon., p. 245.

“ Vit toujours à terre sous les plantes, les végétaux en décomposition, et répand une odeur tres fétide” (M.).

ADRISA WILLEYI, sp. nov.

Differs from the other Australo-Polynesian species by its more elongate and parallel-sided form ; from *A. similis*, Signoret by the prosternum being only obsoletely punctured, different ostiolar structure, also the tylus not at all surpassed by the juga and the elytra reaching far beyond apex of abdomen ; from *A. numeensis*, Montrouzier by the longer membrane, more feebly punctured pronotum and different ostiolar structure. Black (somewhat dull), lateral margin of pronotum very narrowly fulvous, posterolateral angles yellowish. Elytra strongly punctured with black, clavus internally and the nervures of the corium, castaneous ; exterior one-third of corium and apical margin of the same narrowly, yellowish. Membrane yellowish hyaline, mottled with pale brown. Basal two segments of antennæ, rostrum, and anterior tibiæ, fulvous ; third segment of rostrum fumate, fourth segment, intermediate and posterior tibiæ and all the tarsi, yellowish ; coxæ, femora, entire ventral surface and tibial spines, black. Head smooth, somewhat irregularly and obsoletely striolate. Pronotum somewhat feebly punctured, except on the smooth anteromedian area. Scutellum similarly punctured, more strongly and regularly at the sides. Elytra strongly and closely punctured, more strongly so at the base ; apical margin of corium sinuate. Membrane reaching well beyond apex of abdomen. Second segment of antennæ $3\frac{1}{2}$ times as long as the first, and one-third longer than the third which is equal to the fourth. Second and third segments of rostrum subequal, each two-fifths longer than fourth. Anterior femora incrassate.

Long. $11\frac{1}{2}$ – $12\frac{1}{2}$ mm. (to apex of elytra), lat. 6 – $6\frac{7}{8}$ mm. across widest part of elytra.

Hab. LIFU (*Willey*, 226a, 212b, 319).

GEOTOMUS, Mulsant and Rey.

Geotomus, M. and R. 1866, Punaises Pentat., p. 34.

Signoret, 1883, Ann. Soc. Ent. France, p. 33.

Almost world-wide.

GEOTOMUS PYGMÆUS, Dallas.

Cydnus pygmæus, Dallas, 1851; List, p. 129.

Geotomus pygmæus, Signoret, 1883, l. c., p. 51, Pl. 3, fig. 160.

Hab. LIFU (*Willey*); described under eleven names; from India to New Caledonia and the Hawaiian Archipelago.

GEOTOMUS, sp. ?

Probably a new sp. but I have inadequate material before me.

Genus CHRYSOCORIS.

Chrysocoris, Hahn, 1834, Wanz, Inst., II, p. 38.

Distributed over the Oriental and Australian regions.

CHRYSOCORIS SEXMACULATA, Leach.

Scutellera sexmaculata, Leach, 1815, Zool. Misc., II, p. 36, Pl. XIV.

S. arrogans, Montr., 1858, l. c., 2, V, p. 258.

S. grandis, Montr., Ann. Soc. Ent. France (1861), p. 60 (nec Thunberg).

Chrysocoris (Eucorysus) sexmaculatus, Stål, Svensk. Akad. Handl., p. 19.

Hab. LIFU (290a *Willey*); also recorded from New Caledonia, Art, etc.

Genus PHILIA, Schiödte.

Philia, Schiödte, 1842, Kroyer's Nat. Tidsskr., IV, p. 279.

Distributed over Oriental Islands and Australian region.

PHILIA FEMORATA, Walker, var. AUREOCINCTA, Walker.

Callidea aureocincta, Walker, 1867, Cat. Hem. Het., I, p. 41.

Hab. BIRARA (*Sepr.*, *Willey*); the variety is recorded from New Guinea; the species is also recorded from Moluccas and Ceram. The placing of *aureocincta* as a var. of *femorata* is on Distant's authority.

PHILIA LEUCOCYANEA, Montrouzier.

Scutellera leucocyanea, Montr., 1855, l. c., p. 95.

Philia leucocyanea, Stål, 1868, Svensk. Vetensk. Akad. Handl., 7, No. 11, p. 10.

Differs from Montrouzier's description by the pronotum being of the general ground-colour, with the anterior and posterior margins metallic (green or blue). Femora usually crimson. Posterior angle of scutellum always blackish.

Hab. LIFU and BIRARA (*Willey*); also recorded from Murua, Solomons and Duke of York's Island. One example from Lifu has the scutellum largely clouded with blackish, and several specimens from Birara have a nebulous blackish median line down the scutellum.

Var. EBENINA, J. Martin.

Philia ebenina, J. Martin, 1898, Bull. Soc. Ent. France, p. 226.

P. leucocyanea, var. *ebenina*, Distant.

Hab. BIRARA (Paris Mus. and *Willey*).

One specimen has four yellowish-brown spots on the scutellum; the anterior lateral margins of the pronotum are also yellowish-brown. It would perhaps be more correct to state the ground-colour as yellowish-brown, with blackish-brown markings.

Genus TECTOCORIS, Hahn.

Tectocoris, Hahn, 1834, Wanz. Inst., II, p. 33.

This genus contains one species only.

TECTOCORIS LINEOLA, Fabricius.

Cimex lineola, Fabr., 1781, Spec. Inst., II, p. 340.

Tectocoris lineola, Leth. and Sev., 1893, Cat. Hem., I, p. 19.

Scutellera banksii, Montrouzier, 1855, Ann. Soc. Afric.

Lyon (2), VII, p. 92, and 1858, Ann. Soc. Linn. Lyon (2), V, p. 243.

Tectocoris banksii, Montrouzier, 1861, Ann. Soc. Ent. France, p. 60.

The synonymy of this variable species is given by Lethierry and Severin, the variations are described at length by Montrouzier, Stål (1873, Svensk. Vet. Akad. Handl., 11, No. 2, p. 11), and Vollenhoven (1863, Essai Faune Ent. Archip. Indo-néerl., I, p. 7). Dr. Willey has collected two

examples, (a) allied to var. *tongæ*, Boisduval; bluish, a small median spot on the pronotum anteriorly, a spot near each anterolateral angle of pronotum, anterior margin prosternum, base of abdomen and incisures of abdominal sternites (also apparently part of beneath abdominal tergites) sanguineous. (β) very near typical *banksii*, Montrouzier (which is not var. *banksii*, Donovan, but is near *diophthalmus*, Thunberg). Pale luteous above, testaceous below; lateral margins of tylus, vertex behind the eyes, two anterior submedian wedge-shaped spots on pronotum—brownish-black with a suspicion of metallic green. Connexivum (except extero-lateral margin narrowly), antennæ, a sublateral spot on each pleuron, apex of femora, the tibiæ and tarsi metallic green.

Hab. LIFU (No. 319, *Willey*); extended over the whole of Malaysia from Java eastward, Australia, Polynesia, etc. (*Woodlark*); Isle of Pines, New Caledonia, Art, Isles to the north of New Caledonia, etc., on *Hibiscus tillaceus* (*Montrouzier*); "Elle vit à Woodlark en troupes, dépose un très-grand nombre d'œufs en forme de barillet, d'abord blancs, et prenant une teinte de plus en plus rougâtre à mesure qu'ils approchent du temps de l'éclosion" (*Montrouzier*).

Genus CANTAO, Am. Serv.

Cantao, Amyot and Serville, 1843, *Hist. Nat. Hem.*, p. 29.

Distributed over the Oriental region up to Formosa and to Australia and Polynesia.

1. CANTAO VARIABILIS, Montrouzier.

Scutellera variabilis, Montr., 1855, l. c., (2) VII, p. 93 [not (2) I, as in Leth. and Sev. Cat.]

Cantao variabilis, Stål, 1873, *Svensk. Akad. Handl.*, p. 10, 11, No. 2.

Hab. BIRARA (*Willey*); Moiou (*Montrouzier*).

This is a very variable species.

Montrouzier in speaking of the *Scutellerinæ* of Oceania (I, p. 91), says: "Les mœurs de ces Scutellères sont intéressantes. Plusieurs d'elles déposent leurs œufs sous le revers des feuilles pour les mettre à l'abas de la pluie, les coudrent de leur corps, et quand ils sont éclos, conduisent leurs petits et les protègent jusqu'à ce qu'ils

aient acquis leurs ailes. On voit leur nombreuse famille les suivre le long des arbres et se presser vers elles au moindre danger. Plusieurs aussi sont parées des plus vives couleurs, et je n'ai encore rencontré chez aucune l'odeur fétide que laissent échapper les *Pentatomes*. Quant aux lieux où on les trouve, ils varient selon l'espèce. Il est des *Scutellères* comme ma *S. metallica* (= *Philia senator*, Fabr.) var., qui vivent sur les buissons exposés au soleil. D'autres, comme ma *S. splendida* (= *Calliphara billiardiens*, Fabr.), choisissent les lieux ombragés où croît une espèce de myrtacée. La *S. banksii* (= *Tectocoris lineola*, Auctt.) aime beaucoup les endroits où croissent les ketmies à feuilles de tilleul."

Genus COPTOSOMA, Laporte.

Coptosoma, Lap., 1832-3, Essai, p. 73.

Distributed throughout the Old World.

COPTOSOMA SPHÆRULA, Germar.

Coptosoma sphærulea, Germ., 1839, Zeitschr., Ent. I, p. 25.

Hab. BIRARA (*Willey*).

Described under thirteen names, from India, Siam, Java, Ceylon, China, Celebes, Sula, Borneo, Papua, etc.

Genus BRACHYPLATYS, Boisduval.

Brachyplatys, Boisd., 1835, Voy. Astrolade, Ent. II, p. 627.

Platycephala, Lap., 1832-3, Essai, p. 74.

Plataspis, Hope Cat., 1837, I, p. 16.

Similar distribution to *Coptosoma* except that it does not enter the Palæarctic region.

BRACHYPLATYS PUSILLUS, Tryon.

Brachyplatys pusillus, Tryon, 1892, Ann. Mus., Queensland, p. 13.

Hab. BIRARA (*Willey*); NEW GUINEA (*Tryon*).

Kindly identified by Mr. Distant.

EXPLANATION OF PLATE XVII.

- FIG. 1. *Ueana harmonia*.
2. „ *polymnia*.
3. *Clovia birarensis*.
4. *Aufidus hyperion*.
5. *Thalattoscopus dryas*.
6. *Peggioga formosa*.
7. *Pachymerus nereis*.
8. *Geocoris willeyi*.

OCTOBER 4TH, 1905.