NEW GENERA AND SPECIES OF REDUVIDAE (HEMIPTERA-HETEROPTERA) FROM THE INDO-AUSTRALIAN REGION

by

N. C. E. MILLER F. R. E. S., F. Z. S., F. E. S. S. A.

(Commonwealth Institute of Entomology, London)

The new genera and species of Reduviidae with which the present paper deals are from the collection of the Museum Zoologicum Bogoriense, Bogor, Java.

Types will be found in the Rijksmuseum van Natuurlijke Historie, Leiden, Holland; paratypes in the Museum Zoologicum at Bogor (Java). Paratypes of the following new species have been presented to the British Museum (Natural History) London: — Cimbus drescheri sp.n., Veledella variabilis sp.n., and Aulacogenia borneensis sp.n.

I am indebted to Dr M. A. LIEFTINCK, the former director of the Museum Zoologicum Bogoriense, for the privilege of studying this collection.

Sub-family Saicinae

Polytoxus beckingi sp.n. (fig. 1)

Colour. Segments 1 and 2 of antennae fuscous; remaining segments missing. Head reddish brown. Rostrum dark stramineous. Anterior lobe of pronotum pale testaceous with a wide, median piceous suffusion; posterior lobe light red with a wide, median dark brown suffusion with a narrow pale testaceous area on each side; spines pale stramineous. Lower area of propleura piceous; upper area of propleural epimeron suffused with light red; propleura spine pale testaceous; meso- and metapleura piceous; sterna testaceous. Scutellum piceous; spine pale stramineous; postscutellum and spines piceous. Hemelytra testaceous with longitudinal median infumate suffusion. Connexivum and abdomen ventro-laterally stramineous; abdomen mid-ventrally testaceous; sub-laterally dark brown. Legs testaceous; femora apically, tibiae basally broadly fuscous; extreme apex of femora and extreme base of tibiae suffused with red.

Structure. Basal segment of antennae sub-equal in length to head, pronotum and scutellum together. Anterior lobe of pronotum smooth with

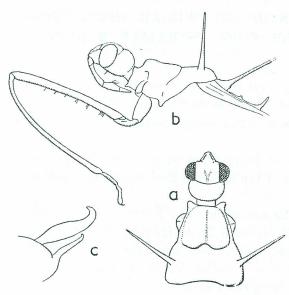


Fig. 1. Polytoxus beckingi sp.n. a. Head & pronotum, dorsal view. b. Head, pronotum, scutellum, postscutellum & anterior leg, lateral view.
c. Pygophore, lateral view.

a median, longitudinal shagreened area; posterior lobe minutely shagreened; pronotal spines longer than posterior lobe, sub-erect, slender, acute. Scutellar spine slender, oblique, apparently as long as pronotal spines (apex damaged). Postscutellar spine sub-erect, less than half as long as scutellar spine. Prosternal spine sub-acute. Hemelytra damaged apically.

Total length 6.5 mm. Greatest pronotal width (excluding spines) 1.2 mm.

1 & (holotype), W. Java, Mt Salak, Gunung Bunder, Tjampea, vi.1933, R. W. BECKING. Differs from other known species in shape of

notal, scutellar and postscutellar spines and in genitalia.

Sub-family Tribelocephalinae

Opistoplatys seclusus sp.n. (fig. 2)

(

Colour. Testaceous. Antennae, rostrum and legs paler. Corium and membrane dark infumate; costal area and veins of corium dark testaceous. Setae pale fulvous.

Structure. Basal segment of antennae strongly constricted basally, very feebly curved, somewhat thicker in apical two-thirds; segment 2 sub-equal in length to 1; remaining seven segments equal in length to each other with the ninth segment a little longer. Eyes a little shorter than height of head; rostrum strongly constricted basally. Head longer than pronotum; vertex about half as wide as an eye. Anterior lobe of pronotum narrowly medially longitudinally sulcate and with feeble diagonal sulci. Hemelytra extending very slightly beyond apex of abdomen.

Total length 9.0 mm. Hemelytra 6.0 mm. Greatest pronotal width 2.0 mm.

1 & (holotype) W. Java, Mt Gede-Pangrango, Tjibodas, 1400 m, vi.1940, A. M. NEERVOORT.

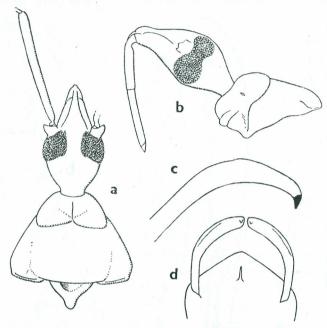


Fig. 2. Opistoplatys seclusus sp.n. a. Head, pronotum & scutellum, dorsal view. b. Head & pronotum, lateral view.
c. Harpago. d. Pygophore, dorsal view.

Allied to *Opistoplatys drescheri* MILLER (1940, Journ. F.M.S. Mus. 18: 438-439), but is smaller and differs in colouration, the membrane being entirely dark infumate without suffused testaceous spots and parts of the veins testaceous. The genitalia also differ.

Sub-family Stenopodinae

Pygolampis consors sp.n. (fig. 3)

Colour. Antennae brown; basal segment with suffused pale testaceous spots. Head and body light brown; head dorsally and laterally suffused with piceous; lower half of propleura, meso- and metapleura testaceous; mesosternum with a shining piceous stripe laterally extending to and becoming paler on acetabula; humeral angles and sub-dorsal elevations on posterior lobe of pronotum with a pale stramineous spot. Apical half of segment 5, segments 6 and 7 of abdomen dorsally suffused

with piceous. Corium, except costal area, membrane hyaline, light infumate; remainder brown. Femora light brown with suffused, pale testaceous spots; tibiae testaceous; anterior and median tibiae with suffused brown annulations basally, medially and apically; posterior tibiae with a basal annulation and suffusion in basal half brown.

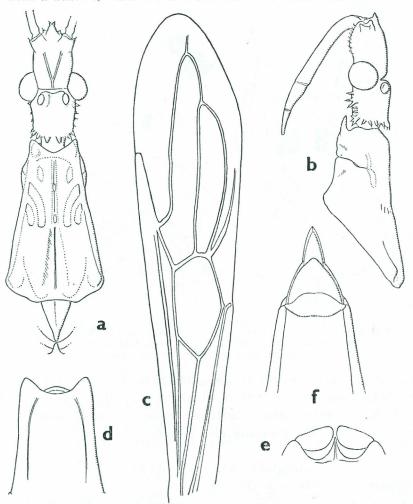


Fig. 3. Pygolampis consors sp.n. a. Head, pronotum, scutellum & postscutellum, dorsal view. b. Head & pronotum, lateral view. c. Hemelytron. d. Apex of abdomen, o. dorsal view. e. Apex of pygophore, terminal view. f. Apex of abdomen, o. dorsal view.

Structure. Basal segment of antennae a little longer than pronotum. Anteocular feebly convex laterally. Ocelli large, directed outwards; interspace a little less than twice as wide as an ocellus. Humeral angles

moderately strongly elevated; posterior lobe of pronotum with a rounded elevation sub-dorsally, sub-basally. Hemelytra extending to basal third of 7th abdominal segment.

Total length 3 14.0, 9 15.5 mm. Hemelytra 3 8.5, 9 8.5 mm. Greatest pronotal width 3 1.5, 9 1.6 mm.

1 & (type), W. Java, Bogor, 250 m, 25.ii.1949; 1 $\mbox{$^\circ$}$ same locality, 15.ix.1949, F. C. Drescher.

Allied to *Pygolampis macera* WALK. (1873, Cat. Hem. Brit. Mus. 8:37) from which it differs in somewhat larger size, larger and more strongly elevated ocelli, more acute humeral angles, shape of 7th abdominal segment which is somewhat concave laterally and with the produced portions more broadly rounded.

Sastrapada olthofi sp.n. (fig. 4)

Colour. Pale testaceous. Head dorsally and laterally, anterior femora with suffused brown spots. Posterior lobe of pronotum, humeral angles, pleura and sterna with brown suffusion. Segments 2 and 3 of abdomen mid-ventrally with strong suffusion, segments 4 and 5 with feeble suffusion, piceous; segments 4-6 basally with a crescentic piceous spot; segment 7 with a piceous stripe with a pale testaceous stripe within it; connexival segments with a small piceous spot at external apical angle. Anterior tibiae with an obscure basal, median and apical annulation, median tibiae apically narrowly brown; tarsi brown; anterior and median coxae strongly suffused with piceous; posterior coxae with linear brown suffusion; large spines on femora whitish, apically brown. Membrane of hemelytra with a piceous spot at base of internal cell and an elongate piceous spot in external cell.

Structure. Basal segment of antennae a little longer than head, somewhat constricted basally and apically. Head twice as long as posterior lobe or pronotum; inter-antennal spines slender, acute; lateral margins of postocular feebly rounded anteriorly; postocular medially broadly, feebly sulcate; ocelli moderately large, oblique; lower and posterior margin of postocular with numerous setigerous tubercles; median sulcus with a short, acute tubercle on each side posteriorly. Hemelytra extending to middle of 7th abdominal segment; apically narrowly rounded with apical margin feebly concave. Anterior femora with three moderately long spines on inner and outer surface and numerous short spines of varying length.

Total length 18.0 mm. Hemelytra 10.0 mm. Greatest pronotal width 2.0 mm.

 $1\ \mbox{d}$ (holotype), W. Java, Bandung, $700\ \mbox{m}$, $9.\mbox{vi.}1940$, J. Olthof (at lamp).

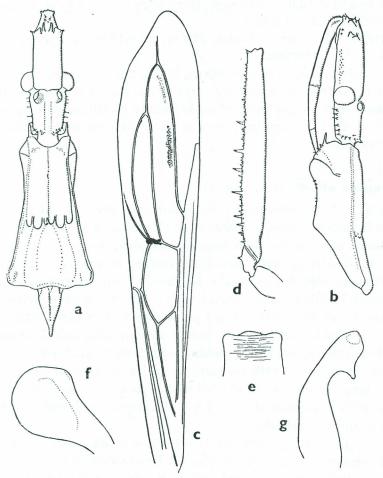


Fig. 4. Sastrapada olthofi sp.n. a. Head, pronotum & scutellum, dorsal view. b. Head & pronotum, lateral view. c. Hemelytron. d. Anterior coxa, trochanter & femur. e. Apex of abdomen, dorsal view. f. Harpago, lateral view. g. idem, dorsal view.

Allied to Sastrapada singaporiensis MILLER (1940, Journ. F.M.S. Mus. 18: 471) but differs in larger size, in the armature of anterior femora in which the shorter spines are much shorter. The prosternal spines are more slender, the tubercles on postocular more robust and the genitalia are different.

1

Sub-family Salyavatinae

Lisarda ostenta sp.n. (fig. 5)

Colour. Basal segment of antennae brown; remaining segments stramineous. Head, anterior lobe of pronotum, lateral spines on posterior lobe of pronotum, scutellum, pleura, sterna, piceous; posterior lobe of pronotum, propleural epimeron brown, the former with posterior margin narrowly stramineous; abdomen blackish brown, ventro-laterally, particularly basally with light brown suffusion. Area between ocelli and eyes with stramineous suffusion. Base of head with light brown suffusion.

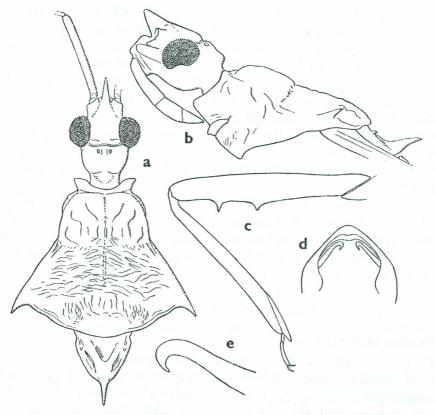


Fig. 5. Lisarda ostenta sp.n. a. Hcad, pronotum & scutellum, dorsal view. b. idem, lateral view. c. Anterior leg. d. Pygophore, dorsal view. e. Harpago.

Rostrum light brown, except apical segment dark brown. Legs stramineous; anterior and median femora and tibiae with dark brown suffusion; posterior femora piceous, except base; coxae piceous; anterior and median coxae with light brown suffusion; posterior tibiae with an elongate spot

on outer surface basally and a sub-basal suffused annulation, dark brown. Hemelytra dark stramineous with dark brown suffusion mainly on clavus and in area between claval suture and Cu; membrane with confluent infumate spots.

Structure. Basal segment of antennae sub-equal in length to head. Interantennal spines from above slender, narrowly rounded apically; from the side narrowly triangular. Basal segment of rostrum sub-equal in length to remaining segments together. Ocelli small, feebly elevated, oblique; interspace four times as wide as an ocellus. Postocular behind ocelli feebly transversely sulcate. Posterior lobe of pronotum strongly transversely rugose with sub-dorsal, longitudinally rugose feeble elevations sub-basally. Disc of scutellum feebly depressed medially and with a deep sulcus laterally posterior to a short, sub-lateral spine; apical spine oblique, acute. Connexival segments 2-6 with a short, acute spine at external apical angle. Hemelytra extending to apex of abdomen. Anterior and median femora with a moderately long, acute spine in apical half and a very short median spine on lower surface; posterior femora with a moderately long, acute spine sub-apically.

Total length 11.0 mm. Hemelytra 7.5 mm. Greatest pronotal width (including spines) 3.0 mm.

1 & (holotype), S. Java, Banjumas, Babakan, 10 m, 7.ix.1940, K. Benner.

Allied to *Lisarda abscondita* MILLER (1940, Journ. F.M.S. Mus. 18:515-516) from which it differs in colouration, more slender and longer interantennal spine, thicker lateral angles of collar, strongly rugose posterior lobe of pronotum, the lateral spines of which are relatively longer and more acute, also in longer and more acute scutellar spine and in genitalia.

Sub-family Acanthaspinae

Psophis geniculata sp.n. (fig. 6)

Colour. Light red. Antennae and femora piceous, the latter broadly brick red apically; tibiae dark brown, basally brick red; tarsi light brown; coxae and trochanters light red. Abdomen with a wide black stripe ventrolaterally. Corium brick red with an elongate dark infumate area on clavus and also along outer margin of claval suture; membrane dark infumate.

Structure. Head sub-equal in length to pronotum. Basal antennal segment somewhat longer than anteocular. Posterior lobe of pronotum with obscure short, longitudinal striae. Scutellar spine rounded apically, feebly recurved; disc feebly depressed and with obscure irregular sulci.

Hemelytra extending to apex of abdomen. Stridulatory furrow absent. (This is a generic character to which attention has not been drawn hitherto).

Total length 10.0 mm. Hemelytra 6.1 mm. Greatest pronotal width 2.8 mm.

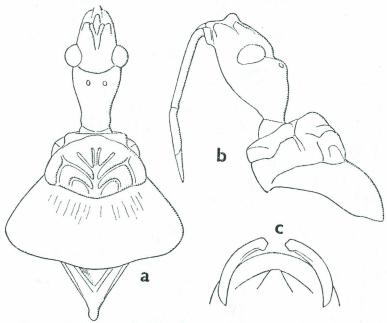


Fig. 6. Psophis geniculata sp.n. a. Head, pronotum & scutellum, dorsal view. b. Head & pronotum, lateral view. c. Apex of pygophore, dorsal view.

1 & (holotype), N. Central Java, Mt Ungaran, 500 m, v.1936, F. C. Drescher.

Differs from all other known species in colouration, sculpture of the pronotum and genitalia.

Sminthus drescheri sp.n. (fig. 7)

Colour. Basal segment of antennae piceous; segment 2 brownish suffused with piceous basally. Rostrum light brown. Head and thorax, except meso- and metasternum, brown, piceous; postocular with a yellowish spot laterally. Abdomen light brown, except connexivum light red; ventrally with a wide, longitudinal piceous stripe laterally with yellowish suffusion along outer margin; segment 9 piceous. Corium pale reddish, except greater part of clavus and area between claval suture and Cu,

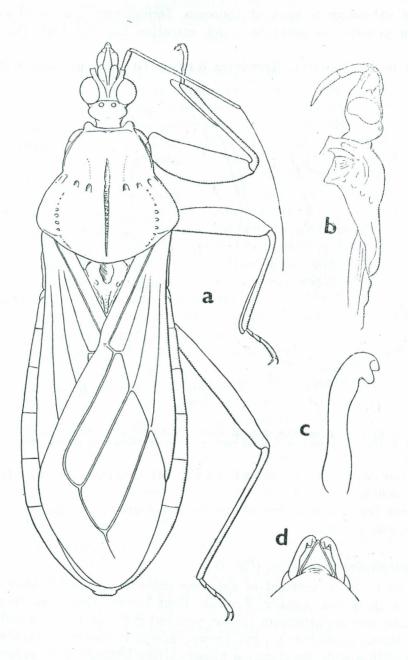


Fig. 7. Sminthus drescheri sp.n. a. Whole insect, dorsal view. b. Head, pronotum & scutellum, lateral view. c. Harpago. d. Apex of abdomen & pygophore, dorsal view.

pale stramineous; apex of corium suffused with piceous; membrane infumate with pale stramineous area basally near anal margin and broad piceous suffusion in basal half; venation piceous. Tarsi light brown; tibiae pale reddish brown with piceous suffusion apically; femora stramineous; anterior and median femora with apical half and lower surface piceous; posterior femora with a wide apical piceous annulation and apex narrowly reddish.

Structure. Basal segment of antennae not extending to apex of head; segment 2 a little more than four times as long as 1. Vertex subequal in width to an eye with arcuate sulci converging to transverse sulcus; ocellar interspace about twice as wide as an ocellus. Rostrum extending to posterior margin of eyes. Pronotum smooth; anterior lobe with very feebly sulci; median sulcus on posterior lobe deep, foveolate and extending almost to posterior margin of lobe. Hemelytra extending almost to apex of abdomen. Fossula spongiosa on anterior tibiae half as long, on median tibiae less than half as long as tibia.

Total length 17.5 mm. Hemelytra 11.5 mm. Greatest pronotal width 4.0 mm.

1 & (holotype), Central Java, Mt Slamet, Baturraden, 800 m, iv.1937, F. C. Drescher.

Allied to *Sminthus zonatus* STAL (1874, Enum. Hem.: 68) Differs in colouration, shape of membranal cells and genitalia.

Tiarodes convivus sp.n. (fig. 8)

Colour. Antennae piceous. Head bluish black, except base, dark yellow. Rostrum piceous. Pronotum and propleura light red. Scutellum bluish black. Corium light red, except apical two-thirds of clavus, apical half of area between claval suture and Cu fuscous; membrane fuscous; venation greyish. Connexival segments 2 and 7 piceous with metallic blue suffusion; segments 3-5 yellowish suffused with piceous; segment 6 pale yellow; segments 2-5 of abdomen ventrally reddish with metallic blue suffusion laterally; segments 6 and 7 yellowish with piceous suffusion laterally; segment 9 piceous. Meso- and metasternum bluish black; meso- and metapleura bluish black, except acetabula reddish; mesopleura with a reddish spot. Anterior and median tibiae light red; femora light red with apical fifth piceous; basal two-thirds of anterior and median tibiae piceous; posterior tibiae piceous; tarsi light brown.

Structure. Basal segment of antennae extending to apex of head. Head, except base, strongly transversely striate. Ocelli very small; inter-

space a little less wide than distance between an ocellus and an eye. Pronotum smooth; collar not sharply defined; anterior area of anterior lobe with diagonal sulci; lobe also with a diagonal sulcus on disc extending

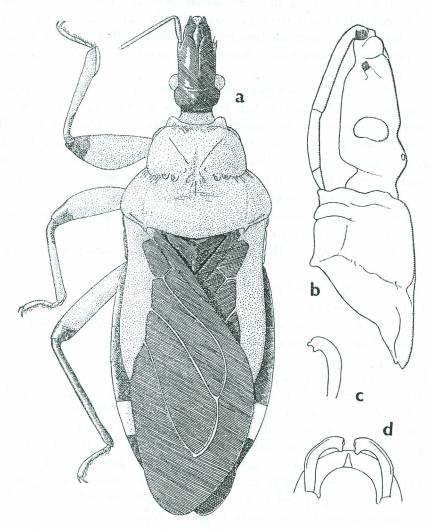


Fig. 8. Tiarodes convicus sp.n. a. Whole insect, dorsal view. b. Head and pronotum, lateral view. c. Harpago. d. Apex of pygophore, dorsal view.

to median basal sulcus; posterior lobe with foveoles and diagonal sulci anteriorly. Hemelytra extending just beyond apex of abdomen.

Total length & 17.0, \S 18.0 mm. Hemelytra & 11.0, \S 11.0 mm. Greatest pronotal width & 5.0, \S 5.5 mm.

(

2 \circ (one of which the type), 2 \circ Engano I., Meok, 5.vii.1936, J. K. DE JONG.

This new species differs in colouration from all other known species. In colouration, however, it has some resemblance to *Tiarodes fruhstorferi* Breddin (1899, Mitt. Mus. Hamburg 16, no. 2: 180), but differs in having the anterior and median tibiae partly red, the abdomen ventrally strongly suffused with black laterally, whereas in *fruhstorferi* the abdomen is entirely red ventrally except segments 7 and 8 which are bluish black. This new species is smaller than *fruhstorferi*. It also resembles *ovatulus* MILLER (1941, Ent. Meded. Ned.-Ind. 7: 5) as regards the colouration of the head, pronotum and hemelytra, but differs in the colouration of the legs and abdomen; it is smaller than *ovatulus*.

Drescherocoris gen. nov.

Size small. Basal segment of antennae shorter than head; segment 2 one and a half times longer than 1. Head shorter than pronotum; antennal tubercles adjacent to eyes; anteocular somewhat declivous; vertex medially sulcate; interantennal projections present. Eyes prominent. Ocelli on a rounded elevation; vertex with elevation behind antennal tubercles. Basal segment of rostrum sub-equal in length to segment 2. Both lobes of pronotum transverse; anterior lobe shorter than posterior lobe and with carinae; posterior lobe with lateral angles spinously produced. Scutellum with an apical spine. Venation of corium obscure; vein Cu of membrane obsolete. Anterior and median femora moderately incrassate; anterior and median tibiae moderately incrassate apically and with a fossula spongiosa. Whole insect abundantly setae.

Drescherocoris horridus sp.n. (fig. 9)

Colour. Segments 1, 3 and 4 of antennae piceous; segment 2 stramineous with faint piceous suffusion apically. Head and body, except posterior lobe of pronotum piceous. Postocular with a large spot laterally and medially basally pale stramineous. Diagonal and sub-lateral carinae on anterior lobe of pronotum stramineous; posterior margin of posterior lobe suffused with piceous. Corium pale stramineous with piceous and black suffusion as in fig. 9; membrane dark infumate with blackish suffusion. Femora piceous with a spot on internal and external lateral surface and a stripe on upper surface apically, pale stramineous; tibiae pale stramineous with a sub-basal, median and apical piceous annulation. Connexivum pale stramineous with a piceous spot at base of each segment. Setae piceous.

Structure. Basal segment of antennae thick, feebly curved. Elevation on vertex behind antennal tubercles feeble. Ocellar interspace about twice as wide as an ocellus. Anterior lobe of pronotum smooth, except carinae obscurely rugulose; posterior lobe of pronotum transversely rugose; lateral spines sub-acute. Scutellar spine sub-acute, oblique; disc of scutellum feebly depressed and with irregular sulci within depression. Hemelytra extending just beyond apex of abdomen. Fossula spongiosa on tibiae about one fourth as long as tibia.

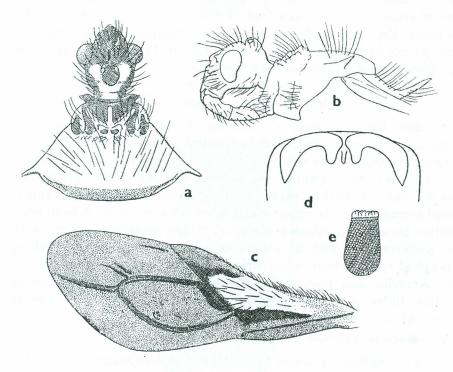


Fig. 9. Drescherocoris horridus gen. et sp.n. a. Head & pronotum, dorsal view. b. Head, pronotum & scutellum, lateral view. c. Hemelytron. d. Apex of pygophore, dorsal view. e. Ovum.

Total length 3 7.0, % 7.0 mm. Hemelytra 3 5.0, % 2.0 mm. Greatest pronotal width (including spines) 3 3.0, % 3.0 mm.

1 & (type), W. Java, Priangan, Mt Kadu (Sumedang), 2 $^{\circ}$ same district, Mt Telu, 750 m, ix.1939, F. C. Drescher.

This new genus would appear to be allied to *Acanthaspis* Amyor & Serville (1843, Hist.: 336) as at present constituted. However, when a

revision of the genus *Acanthaspis* is carried out, it will, in my opinion, be found that it will have to be split into several genera. To one of these this new genus may possibly be allied.

The absence of vein Cu of the membrane and the obsolescent venation of the corium are striking features of this new genus.

In the female paratypes the posterior lobe of the pronotum is relatively narrower and the hemelytra extend to the apical margin of the 4th abdominal segment.

The ovum of *Drescherocoris horridus* (dissected from one of the paratypes) measures 1.2 mm in length. The chorion is cylindrical, very strongly reticulate, somewhat broadly rounded basally and feebly narrowed apically. The differentiated portion of the chorion is foveolate and the operculum covered with irregular alveolate elevations.

In view of the small size of this Reduviid, the ovum is relatively large.

Kopsteinia gen. nov.

Size small. Basal segment of antennae longer than anteocular; segment 2 twice times as long as basal segment. Head sub-equal in length to pronotum; juga terminated by a short projection; vertex narrower than an eye, medially longitudinally sulcate; ocelli small; inter-antennal projections narrowly separated; from the side rotundato-angulate; antennal tubercles long with apex nearer to eye than to apex of head; postocular globose, constricted basally; eyes large, subprominent; space between lower margins of eyes equal in width to second segment of rostrum. Basal segment of rostrum extending to anterior margin of eye, shorter than segment 2; segment 3 moderately slender. Anterior lobe of pronotum shorter than posterior lobe; lateral angles of collar produced; lobe medially, longitudinally sulcate and with low carinae; posterior lobe medially depressed and with a median sulcus within depression; lateral angles rounded; lateral sulci obsolescent; posterior margin broadly rounded. Posterior margin of prosternum rounded; stridulatory furrow shallow and wide. Metasternum with a median, longitudinal carina and with all margins elevated. Scutellum with an apical spine. Vein M of hemelytron meeting Cu at middle of base of internal cell; external cell narrower at base than internal cell. Anterior femora moderately incrassate; remaining femora and tibiae slender; anterior and median tibiae with a fossula spongiosa. Entire insect setose; head and thorax with dense, tomentose pubescence; abdomen ventrally sparsely setose.

(

Kopsteina variegata sp.n. (fig. 10)

Colour. Antennae, legs and abdomen, posterior lobe of pronotum, scutellum, pale testaceous. Head, rostrum, anterior lobe of pronotum, pleura, sterna, median sulcus on posterior lobe of pronotum, piceous. Corium testaceous with a wide median fuscous suffusion; membrane stramineous with cells dark brown and with suffused brown spots at basal

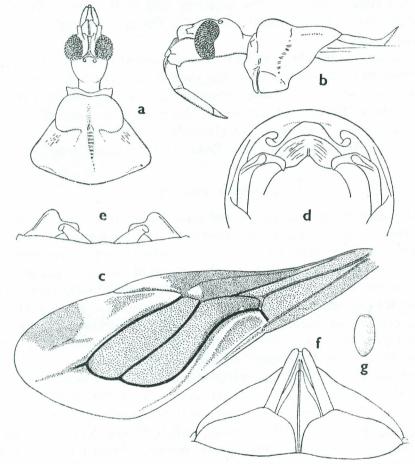


Fig. 10. Kopsteinia variegata gen. et sp.n. a. Head & pronotum, dorsal view. b. Head, pronotum & scutellum, lateral view. c. Hemelytron. d. Pygophore, dorsal view. e. idem, apex, terminal view. f. Apex of abdomen, o. ventral view. g. Ovum.

angle, basal sub-costal angle and sub-apically on costa. Coxae testaceous suffused with piceous; femora narrowly basally and with a wide, median annulation, tibiae broadly apically and narrowly basally, brown. Connexivum with brownish suffusion intersegmentally; abdomen ventrally suffused with brown.

Structure. Apical segments of antennae filiform with abundant, fine setae. Median sulcus on vertex deep, wider anteriorly and posteriorly; transverse sulcus very deep; vertex about half as wide as an eye. Ocellar interspace sub-equal in width to vertex measured across middle. Median sulcus on anterior lobe of pronotum shallow; median sulcus on posterior lobe transversely carinulate. Disc of scutellum moderately deeply depressed and with shallow, longitudinal sulci within depression; apical spine acute, sub-erect. Segments 2 and 3 of abdomen mid-ventrally carinate. Fossula spongiosa on anterior tibiae about one third as long, on median tibiae about one-fifth as long as tibia.

Total length 3 11.0, \circ 13.0 mm. Hemelytron 3 8.0, \circ 9.0 mm. Greatest pronotal width 3 2.5, \circ 2.8 mm.

 $1\ \mbox{\it d}$ (type), $1\ \mbox{\it Penandjung}$ Bay, iv.1928, Great Penandjung, F. Kopstein.

Allied to *Reduvius* Lamarck (1801, Syst. An. saus vertèbres: 294). Differs in having the postocular globose, the antennal tubercles relatively long and more remote from the eyes, small non-elevated ocelli, relatively shorter second segment of rostrum and shorter anterior pronotal lobe, juga with a short projection apically. The venation of the hemelytra is different in that the external cell of the membrane is not much wider than the internal cell and vein M of the corium meets Cu about the middle of the basal part enclosing the internal cell. The ovum of *Kopsteinia variegata*, dissected from the female paratype measures 1.0 mm in length and is elongate ovate, glabrous.

Neervoortia gen. nov.

Size moderate. Basal segment of antennae shorter than head. Antennal tubercles situated close to eyes. Head twice as long as anterior lobe of pronotum. Vertex narrower than an eye, medially sulcate. Interantennal projections not greatly elevated. Ocelli elevated, moderately narrowly separated. Anterior lobe of pronotum shorter than posterior lobe, medially sulcate and with low carinae; posterior lobe medially sulcate, the sulcus foveolate; lateral sulci wide; posterior margin rounded. Scutellum with an apical spine. Prosternum not produced anteriorly and with a lateral elevation; mesosternum laterally carinate. Hemelytra with veins R and M concurrent with internal and external veins of external cell respectively; internal cell of membrane narrower than external but strongly narrowed medially. Abdomen carinate mid-ventrally. Legs relatively slender; anterior and median tibiae with a fossula spongiosa. Whole insect abundantly setose.

Neervoortia gedeana sp.n. (fig. 11)

Colour. Segments 1 and 2 of antennae stramineous; segment 1 with piceous annulation in apical half. Head piceous with a light brown area on neck. Rostrum brown. Anterior lobe of pronotum piceous with collar,

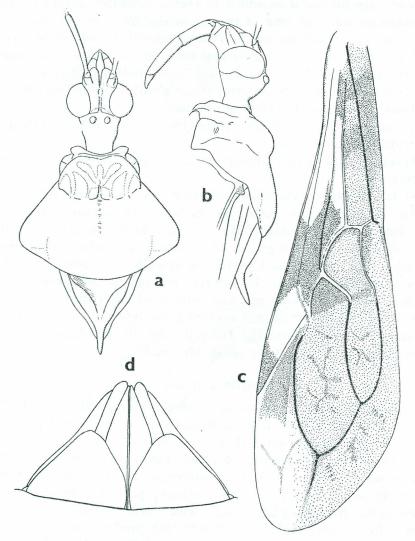


Fig. 11. Neervoortia gedeana gen. et sp.n. a. Head, pronotum & scutellum, dorsal view. b. idem, lateral view. c. Hemelytron. d. Apex of abdomen, o. ventral view.

except lateral angles, and greater part of carinae testaceous; posterior lobe brown with anterior area, lateral sulci and posterior margin strami-

neous. Propleura piceous with upper margin and acetabula suffused with stramineous; meso- and metapleura piceous; mesopleura with a pale stramineous spot posteriorly; acetabula suffused with stramineous. Abdomen stramineous; connexival segments with a small spot apically; ventrally, except mid-ventrally, piceous. Corium whitish; membrane and clavus testaceous with piceous pattern as shown in fig. 11. Legs pale stramineous; femora with apex and a wide median annulation, tibiae with apex and a sub-basal annulation piceous; tarsi stramineous with faint piceous suffusion. Setae pale fulvous.

Structure. Basal segment of antennae moderately slender and feebly curved; segment 2 about one-third longer than 1. Vertex sulcate throughout; transverse sulcus deep. Ocellar inter-space about half as wide as vertex. Lateral angles of collar rounded. Scutellar spine sub-acute, oblique; disc damaged. Abdominal segments 2 and 3 and basal half of 4 mid-ventrally carinate. Fossula spongiosa on anterior tibiae about half as long as tibia, on median tibiae a little more than one third as long. Apical segment of posterior tarsi sub-equal in length to basal segment.

Total length 15.0 mm. Hemelytra 10.5 mm. Greatest pronotal width 3.5 mm.

 $1\ \mbox{\ensuremath{\,^\circ}}$ (holotype), W. Java, Mt Gede-Pangrango, Tjibodas, 1400 m, iv.1949, A. M. Neervoort.

Very closely allied to *Reduvius* (loc. cit.) but it is with some diffidence that I erect a new genus to receive it. However, the differences appear to me to be sufficiently great to support my action.

Neervoortia differs from Reduvius in having the basal rostral segment a little shorter only than segment 2, the inter-antennal projections hardly at all elevated, the prosternum not produced anteriorly and with an elevation laterally, the mesosternum carinate laterally. In the hemelytra the most striking difference is that veins M and R are concurrent with the internal and external veins respectively of the external cell, thus the veins M-Cu and R-M of the typical R-duvius hemelytron are absent. The internal cell of the membrane is narrower than the external cell as in R-duvius but is strongly narrowed or constricted medially.

Reduvius sericeus MILLER (1940, Journ. F.M.S. Mus. 18: 562-563) should, I think be transferred to this new genus. There is however, a minor difference in that vein M is not exactly concurrent with the internal vein of the external cell of the membrane, thus an extremely short R-M is present. The mesosternum also is not carinate.

Sub-family Ectrichodiinae

Santosia relata sp.n. (fig. 12)

Colour. Segments 1 and 2 of antennae reddish brown; remaining segments brown. Head, body, legs shining light red; tarsi light brown with reddish suffusion. Abdomen ventro-laterally, acetabula, propleural epimeron, meso- and metapleura, meso- and metasternum laterally strongly suffused with piceous. Anterior coxae piceous; median and posterior coxae stramineous suffused with red. Clavus and area between claval suture and Cu greyish infumate; remainder of corium fuscous with costal margin narrowly reddish; vein AI and M reddish; membrane dark infumate.

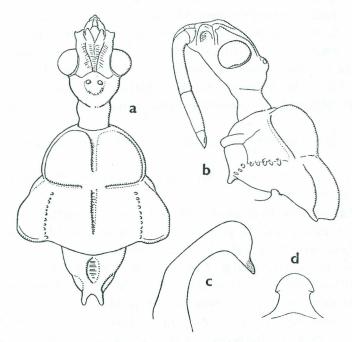


Fig. 12. Santosia relata sp.n. a. Head, pronotum & scutellum, dorsal view. b. Head & pronotum, lateral view. c. Harpago. d. Median apical process of pygophore.

Structure. Vertex one and a half times wider than an eye; obscurely transversely and obliquely striate; ocelly small, feebly elevated; interspace a little wider than ocellus. Disc of scutellum with an elliptical depression with transverse sulci within it. Hemelytra extending just beyond apex of abdomen. Head, body and legs with moderately abundant setae.

1

Total length 10.0 mm. Hemelytra 6.5 mm. Greatest pronotal width 2.5 mm.

1 & (holotype), Central Java, Mt Slamet, Baturraden, 800 m, i.1937, F. C. Drescher.

Allied to Santosia aliena MILLER (1941, Journ. F.M.S. Mus. 18: 609). Differs in smaller size, colouration, shorter and less acute scutellar spines, shorter posterior lobe of pronotum in relation to anterior lobe, in genitalia, particularly in the shape of the median apical process of the pygophore.

Cimbus drescheri sp.n. (fig. 13)

Colour. Dull reddish yellow. Corium and membrane dark infumate, except costal area of corium reddish and venation yellowish. Rostrum stramineous. Abdomen ventro-laterally suffused with piceous.

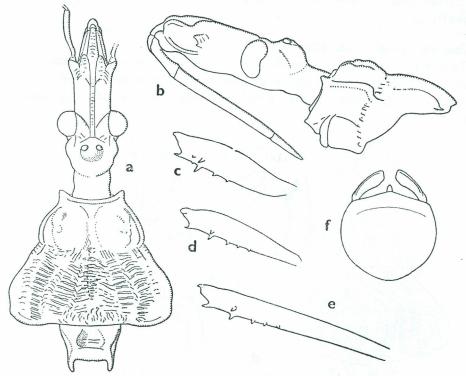


Fig. 13. Cimbus drescheri sp.n. a. Head, pronotum & scutellum, dorsal view. b. Head & pronotum, lateral view. c. Anterior leg, lower surface. d. Median leg, lower surface. e. Posterior leg, lower surface. f. Pygophore, posterior view.

Structure. Head a little more than twice as long as posterior lobe of pronotum. Ocelli small, feebly elevated; interspace a little wider than an ocellus. Vertex with a shallow arcuate sulcus from transverse sulcus

to anterior margin of eyes. Anterior lobe of pronotum smooth with low, rounded elevations; posterior lobe strongly transversely rugose, somewhat deeply depressed medially; rugosities mostly transverse, except posteriorly more or less longitudinal. Disc of scutellum strongly excavate with a strong transverse carina. Hemelytra extending just beyond middle of 7th abdominal segment. Abdomen ventrally smooth with irregular striae and some punctures laterally; connexivum dorsally minutely rugose, except laterally smooth and longitudinally sulcate. Mesosternum with three transversely striate depressions; metasternum smooth.

Total length & 14.0, \circ 15.5 mm. Hemelytra & 8.5, \circ 9.0 mm. Greatest pronotal width & 3.5, \circ 3.6 mm.

5 ♂ (one of which the type), 1 ♀ W. Java, Mt Tangkuban Prahu, Priangan, 1200-1500 m, x.1937, i. and ii.1938, F. C. Drescher.

Differs from all other known species in size, sculpture of pronotum and genitalia.

Caecina venosa sp.n. (fig. 14)

Colour. Light red; pronotum somewhat yellowish. Corium and membrane infumate; veins and costal area of corium yellowish red. Eyes dark vinaceous. Antennae, except basal segments, tarsi, rostrum, stramineous.

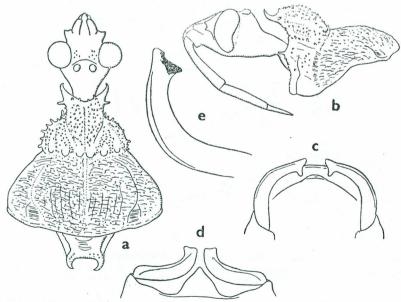


Fig. 14. Caecina venosa sp.n. a. Head, pronotum & scutellum, dorsal view. b. Head & pronotum, lateral view. c. Pygophore, dorsal view. d. idem, terminal view. e. Harpago.

Structure. Vertex smooth with two feeble, diagonal sulci and some granules basally laterally. Ocelli moderately large, elevated; interspace somewhat wider than an ocellus. Eyes a little shorter than height of head. Anterior lobe of pronotum medially sulcate and with wide, smooth, sulci sub-laterally; rest of lobe with low tubercles; posterior lobe rugose, the rugosities longitudinal posteriorly; anteriorly laterally with shallow sulci. Scutellar spines acute, curved downwards. Hemelytra extending to apex abdomen; veins of corium prominent.

Total length 9.0 mm. Hemelytra 6.0 mm. Greatest pronotal width 2.4 mm.

1 & (holotype), W. Java, Tjideres, Res. Cheribon, 100 m, ix.1936, F. C. Drescher.

Allied to *Caecina javana* MILLER (1948, Trans. R. ent. Soc. Lond. 99, no. 13: 447) with which it agrees more or less in colouration but differs in somewhat smaller size, relatively larger eyes, shape of anterior margin of collar, the spines being curved and not directed straight outwards, and in the genitalia.

Caecina nubila sp.n. (fig. 15)

Colour. Testaceous. Basal segment of antennae, tylus, faintly suffused with red. Eyes dark vinaceous. Posterior lobe of pronotum strongly suffused with brown medially. Corium fuscous; costal margin narrowly

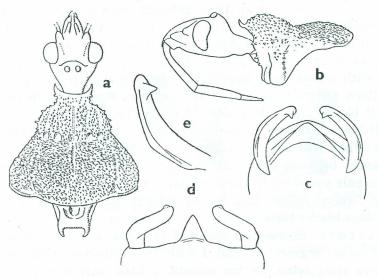


Fig. 15. Caccina nubila sp.n. a. Head, pronotum & scutellum, dorsal view. b. Head & pronotum, lateral view. c. Pygophore, dorsal view. d. idem, terminal view. e. Harpago.

testaceous; membrane infumate. Meso- and metasternum, abdomen ventrally brown; connexivum testaceous. Apex of spines on collar piceous.

Structure. Vertex smooth with a feeble sulcus from base of antennal tubercles to transverse sulcus. Ocelli large, moderately elevated; interspace sub-equal in width to an ocellus. Eyes about three-quarters as long as height of head. Pronotum rugose tuberculate; anterior lobe with a shallow median, longitudinal sulcus terminated basally in a deep fove-ole; posterior lobe medially longitudinally sulcate for more than half its length, the margins of the sulcus irregular. Scutellar spines moderately slender, acute, curved downwards and inwards. Hemelytra extending just beyond apex of abdomen.

Total length 7.5 mm. Hemelytra 5.0 mm. Greatest pronotal width 2.2 mm.

1 & (holotype), N. O. Sumatra, Sibolangit, 400 m, 17.ii.1950, M. A. LIEFTINCK.

Allied to Caecina spinulosa STAL (Ann. Soc. ent. Fr. 14 (4), no. 3: 48) with which it agrees more or less in size, but differs in colouration, in the shape of the head which is more elongate and the rostrum more slender, in the shape of the anterior lobe of the pronotum which is less arcuate in profile and less strongly tuberculate and in the shorter median sulcus on the posterior lobe.

Schottus luctuosus sp.n. (fig. 16)

Colour. Segments 1 and 2 of antennae pale testaceous; segment 1 strongly suffused with black; segments 3 and 4 black. Head and thorax, except scutellum, shining black; rostrum piceous; tylus and vertex medially, anterior lobe of pronotum laterally, propleural episternum, suffused with yellow. Scutellum dark yellow. Abdomen pale yellow with black pattern ventrally as in fig. 16, abdomen dorsally with connexival segment 2 black; segments 3 and 4 dark yellow with more or less the basal half black; segment 5 black; segments 6 and 7 pale yellow with a little more than half apically black. Corium fuscous with pale yellowish hyaline areas between claval suture and Cu and between Cu and M; membrane pale yellowish hyaline; venation fuscous. Anterior and median tibiae and femora yellow, basally and apically black; coxae, trochanters, posterior legs black; tarsi piceous.

Structure. Segments 1 and 2 of antennae with very dense, short, adpressed setae; segments 3 and 4 with sub-recumbent short setae and longer more erect setae. Vertex smooth, a little narrower than an eye. Ocelli large, elevated; interspace a little wider than an ocellus and wider

than distance between an ocellus and an eye. Anterior lobe of pronotum broadly depressed medially basally, the depression concurrent with depression on posterior lobe, the latter foveolate and posteriorly produced to a narrow sulcus. Hemelytra extending to apex of abdomen.

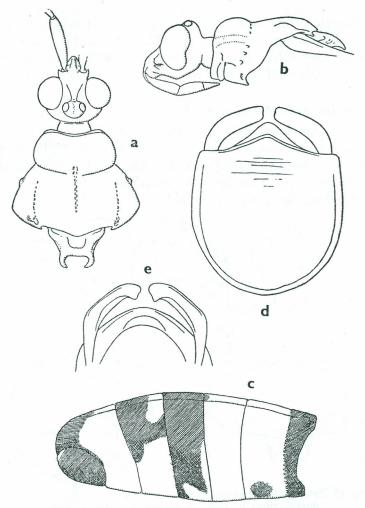


Fig. 16. Schottus luctuosus sp.n. a. Head, pronotum & scutellum, dorsal view. b. idem, lateral view. c. Abdomen, ventro-lateral view. d. Pygophore, posterior view. e. Apex of pygophore, dorsal view.

Total length $11.5 \ \mathrm{mm}$. Hemelytra $8.0 \ \mathrm{mm}$. Greatest pronotal width $3.0 \ \mathrm{mm}$.

2 d (one of which the type), E. Borneo, 50 m, Balikpapan, Mentawir River, 30.vii.1950, A. M. R. WEGNER.

Closely allied to *Schottus gracilis* MILLER (1941, Journ. F.M.S. Mus. 18: 652) from which it differs in colouration, the relatively wider and flat vertex, relatively shorter segments 1 and 2 of antennae, very large eyes, less strongly foveolate sulci on posterior pronotal lobe and in the genitalia.

The following three new species of *Ectrychotes* belong to the *cupreus* group (*Ectrychotes cupreus* REUTER; 1883, Act. Soc. Sci. Fenn. 303) from which species they differ in colouration. They differ from each other in colouration, sculpture of the head and pronotum and in the genitalia.

Ectrychotes geniculatus sp.n. (fig. 17)

Colour. Antennae light red. Head and body, except connexivum, cupreus. Connexivum and greater part of segment 7 of abdomen reddish. Femora cupreus, reddish apically; tibiae and tarsi light red. Hemelytra black, except base and two-thirds of costal area dull yellow with faint reddish suffusion. Setae pale fulvous.

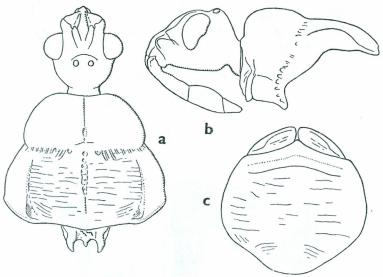


Fig. 17. Ectrychotes geniculatus sp.n. a. Head, pronotum & scutellum, dorsal view. b. Head & pronotum, lateral view.
c. Pygophore, posterior view.

Structure. Vertex twice as wide as an eye, smooth except for very feeble transverse striae anteriorly. Ocelli moderately large on a feeble elliptical elevation. Anterior lobe of pronotum a little shorter than posterior lobe, transverse with anterior margin feebly concave; sub-median depression short and deep; transverse sulcus deep and strongly carinulate;

median depression on posterior lobe deep and foveolate; lateral sulci moderately deep, very feebly foveolate; lobe obscurely transversely rugose; posterior margin almost straight. Scutellum broadly depressed, the depression not enclosed apically and with irregular carinulae; median spine narrowly conical. Abdomen inter-segmentally ventrally strongly carinulate. Hemelytra extending to apex of abdomen. Femora with a broadly conical elevation on lower surface sub-apically.

Total length 9.0 mm. Hemelytra 6.0 mm. Greatest pronotal width 2.5 mm.

1 ♂ (holotype), E.Borneo, 50 m, Balikpapan, Mentawir River, x.1950, A.M.R. WEGNER.

Ectrychotes planifrons sp.n. (fig. 18)

Colour. Antennae light brown. Rostrum light brown with faint reddish suffusion. Head and pronotum reddish with faint coppery lustre, except on humeral angles; meso- and metapleura dark cupreus brown.

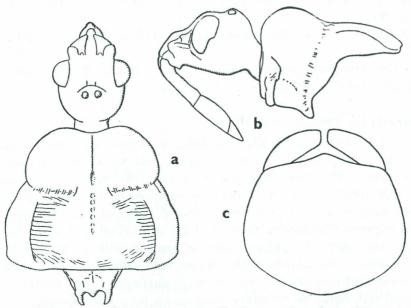


Fig. 18. Ectrychotes planifrons sp.n. a. Head, pronotum & scutellum, dorsal view. b. Head & pronotum, lateral view. c. Pygophore, posterior view.

Abdomen light red with a cupreus spot on connexivum of segments 5 and 6 and a faint yellowish suffusion on all segments laterally; ventrally with a wide, lateral cupreus stripe on apical half of segment 3 and on all remaining segments and inter-segmentally; segment 2 laterally and segment 7 mid-ventrally with cupreus suffusion. Corium fuscous except base

widely, costal area and apex of costa pale red; apically sub-costally with a greyish blue suffusion; membrane dark infumate with a narrow, pale yellow stripe on external basal margin. Legs light red. Setae pale fulvous.

Structure. Vertex a little more than twice as wide as an eye, smooth and very feebly convex. Ocelli moderately large, feebly elevated; interspace sub-equal in width to an ocellus; postocular globose, transverse. Both lobes of pronotum transverse; anterior lobe shorter than posterior lobe; median sulcus narrow widening to a deep foveole basally; transverse sulcus deep, carinulate; posterior lobe obscurely transversely rugose; median sulcus deep, foveolate extending to middle of lobe; lateral sulci deep, very feebly foveolate; posterior margin straight. Scutellum broadly depressed, the depression not enclosed posteriorly and with median and lateral irregular sulci; median spine broadly conical. Abdomen intersegmentally ventrally strongly carinulate. Hemelytra extending to apex of abdomen. Posterior femora with very feeble elevation on lower surface sub-apically.

Total length $9.5\text{-}10.5\,\mathrm{mm}$. Hemelytra $5.7\text{-}7.0\,\mathrm{mm}$. Greatest pronotal width $2.5\text{-}3.0\,\mathrm{mm}$.

- $1\ \mbox{\o}$ (type) Java, Preanger, Mt
 Tangkuban Prahu, 1200-1500 m, xii.1937.
- 1 ♂ Preanger, Mt Geggerbuntang, 1500 m, v.1937, 2 ♂ Preanger, Mt Burangrang, 1600 m, ii.1936, F. C. Drescher.

Ectrychotes venator sp.n. (fig. 19)

Colour. Antennae, head, pronotum, scutellum and legs testaceous with faint coppery lustre; humeral angles pale testaceous; pleura and sterna cupreus. Abdomen dark yellow; connexival segments 4-6 with a piceous spot apically; segment 7 dorsally suffused with piceous; abdomen ventro-laterally with a stripe on segments 4-6, segment 7 intersegmentally greenish cupreus. Hemelytra fuscous; base of corium and three-fourths of costal area narrowly, yellow; apex of corium with a faint yellowish suffusion; base of membrane with a linear pale yellowish spot connecting with a somewhat obscure narrow yellowish suffusion along external vein of external cell. Setae on antennae piceous, on legs pale fulvous.

Structure. Vertex a little more than twice as wide as an eye, smooth with obscure transverse striae anteriorly. Postocular globose but not abruptly narrowed posteriorly; ocelli small; interspace sub-equal in width to an ocellus. Both lobes of pronotum more or less transverse; anterior margin of anterior lobe strongly concave; lobe smooth; posterior lobe with the median sulcus foveolate; lateral sulci very feebly foveolate,

(

shallow; transverse sulcus feebly carinulate. Disc of scutellum feebly depressed and with short, irregular sulci; apical spine short, broadly conical. Abdomen inter-segmentally ventrally strongly carinulate. Hemelytra extending to apex of abdomen. Posterior femora with a very feeble, conical elevation on lower surface sub-apically.

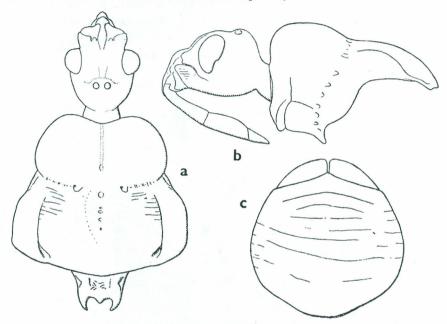


Fig. 19. Ectrychotes venator sp.n. a. Head, pronotum & scutellum, dorsal view. b. Head & pronotum, lateral view. c. Pygophore, posterior view.

Total length 10.0 mm. Hemelytra 6.0 mm. Greatest pronotal width 2.6 mm.

1 & (type) Java, Mt Slamet, Baturraden, 800 m, ii.1937. 1 & R. O. Miramare, Preanger, 400 m, 13.x.1937. F. C. Drescher.

Sub-family Tegeinae

Nannotegea gibbosa sp.n. (fig. 20)

Colour. Antennae testaceous; segments 3 and 4 suffused with piceous. Rostrum brown. Head piceous, except base, light brown. Thorax piceous; acetabula suffused with testaceous; postero-lateral margin of pronotum luteous; posterior lobe of pronotum with faint testaceous suffusion laterally. Hemelytra fuscous. Abdomen yellow; connexivum of segment 3 with a small spot, segments 4-7 with a large spot apically piceous; segments 4-7 ventro-laterally with suffusion, segment 7 mid-ventrally and apical segments piceous. Legs piceous, except trochanters stramineous.

Structure. Head twice as long as anterior lobe of pronotum. Anterior lobe of pronotum smooth, very deeply and widely sulcate, the sulcus narrowed but very deep posteriorly; posterior lobe strongly rugose tuberculate with an irregular carina sub-dorsally diverging towards produced portion of postero-lateral margin and with an irregular median carina; postero-lateral and posterior margins smooth. Elevation on scutellum from the side broadly rounded; spine sub-spherical apically. Discal cell of corium as long as wide. Hemelytra extending almost to apex of abdomen. Spine on femora short, conical, sub-acute.

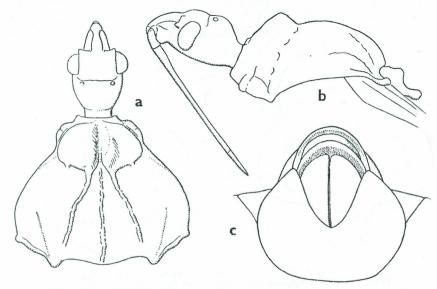


Fig. 20. Nannotegea gibbosa sp.n. a. Head & pronotum, dorsal view. b. Head, pronotum & scutellum, lateral view. c. Apex of abdomen, ventral view.

Total length 9.5 mm. Hemelytra 6.0 mm. Greatest pronotal width 3.0 mm.

1 ? (holotype), W. Java, Radjamandala, ix.1939, R. W. BECKING.

Differs from Nannotegea distincta MILLER (1953, Comm. Biol. 13, 17, 67) in colouration, sculpture of pronotum, shape of scutellum, discal cell of corium and relatively longer posterior lobe of pronotum.

Sub-family Ectinoderinae

Ectinoderus celebensis sp.n. (fig. 21)

Colour. Antennae shining black; basal third of segments 2 and 3 and intercalary segments whitish yellow. Head shining black with a whitish yellow spot on postocular laterally below ocelli. Anterior lobe of

pronotum, pleura, prosternum reddish yellow; meso- and metapleura suffused with piceous on upper margin; mesosternum yellowish with a piceous spot anteriorly; metasternum yellowish with a piceous spot anteriorly; posterior lobe of pronotum piceous with a pyriform whitish

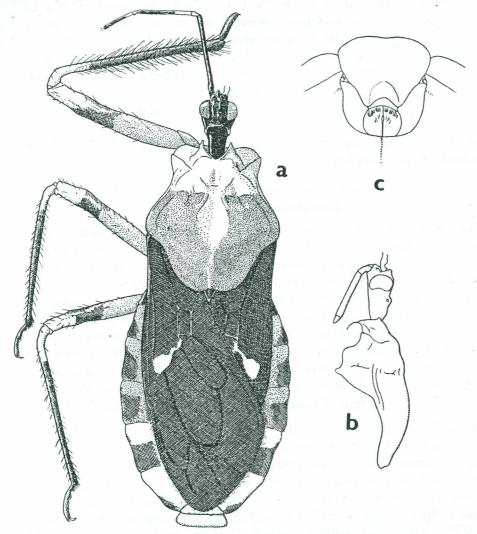


Fig. 21. Ectinoderus celebensis sp.n. a. Whole insect, dorsal view. b. Head & pronotum, lateral view. c. Apex of abdomen, ventral view.

spot medially. Scutellar spine brown. Corium shining black with an irregular white spot on apical margin; membrane dark infumate with a violaceous lustre. Coxae, trochanters, femora reddish yellow; femora with

apex broadly whitish and with a wide piceous annulation in apical half; tibiae and tarsi piceous, the former with the base whitish. Allied to *Ectinoderus bipunctatus* A. & S. (Hist.: 355, *Pristhevarma*), from which it differs in colouration as follows, segments 2 and 3 of antennae and the median and posterior tibiae are not entirely black, the posterior lobe of the pronotum is piceous and has a median whitish spot and the corium is black not piceous with whitish areas. In structure the principal differences are the angulate, not rounded anterior margin of the collar, the less strong median incision on the posterior margin of the pronotum and the deeper depressions on both pronotal lobes.

Total length 28.0 mm. Hemelytra 18.0 mm. Greatest pronotal width 9.0 mm.

2 % (one of which the type), Celebes, Malili, Golf of Boni, iii.1939, (no collectors name on label).

Sub-family Harpactorinae Komodocoris gen. nov.

Size moderate. Basal segment of antennae longer than head. Basal segment of rostrum shorter than segment 2, extending beyond anterior margin of eyes. Head long, narrow, longer than pronotum; anteocular shorter than postocular; base narrowly globose; vertex wider than an eye. Ocelli small, widely separated, feebly elevated. Anterior lobe of pronotum glabrous, shorter than posterior lobe; lateral angles of collar produced; posterior lobe rugose. Scutellum wider than long with a bifurcate apical spine. Hemelytra somewhat narrow; vein M coalescing with Cu at external basal angle of discal cell; internal cell of membrane wider than external cell. Abdomen laterally expanded, without elevations on dorsal surface and with external margin of connexivum entire. Legs moderately slender.

Komodocoris pallidus sp.n. (fig. 22)

Colour. Segments 1 and 2 of antennae stramineous with faint fuscous suffusion apically; segments 3 and 4 piceous. Head ferruginous; anterior half of postocular suffused with piceous; circumocellar area suffused with yellow. Anterior lobe of pronotum, pleura, sterna, coxae, scutellum light reddish brown; posterior lobe testaceous, suffused marginally with light reddish brown. Corium stramineous with light reddish brown suffusion on apical vein of discal cell and with apex piceous; apical half of clavus, membrane hyaline. Abdomen dark brown; ventrally blackish. Legs light brown; apical segment of tarsi blackish.

Structure. Basal segment of antennae a little less than three times as long as segment 2. Basal segment of rostrum half as long as

segments 2 and 3 together. Ocellar interspace wider than distance between an ocellus and an eye and somewhat less wide than vertex. Anterior lobe of pronotum with a narrow, longitudinal sulcus basally; posterior lobe strongly rugose; postero-lateral and posterior margins thickened. Scutellar spine short, robust, erect, the bifurcations widely divergent. Hemelytra extending just beyond apex of abdomen.

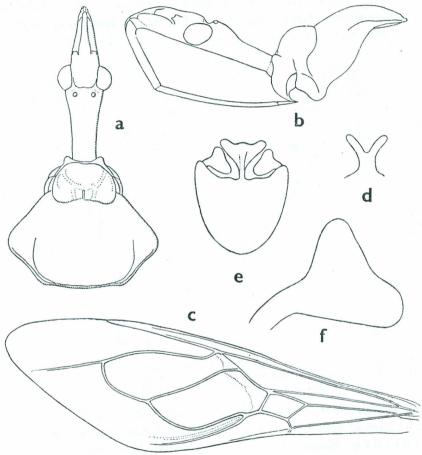


Fig. 22. Komodocoris pallidus gen. et sp.n. a. Head & pronotum, dorsal view. b. idem, lateral view. c. Hemelytron. d. Scutellar spine. e. Pygophore, terminal view. f. Harpago.

Total length 18.5 mm. Hemelytra 13.0 mm. Greatest pronotal width 5.0 mm.

1 & (holotype), W. Flores, Komodo I., 1.vii.1937, J. K. DE JONG.

Resembles Sycanus Amyot and Serville (1843, Hist.: 360) but is more robust. Other differences are the relatively shorter basal rostral segment, the short, robust scutellar spine, less expanded connexivum the

external margin of which is entire and the dorsal surface is without elevations.

Paracydnocoris macgillavryi sp.n. (fig. 23)

Colour. Antennae and legs, except anterior coxae, piceous. Head, pronotum, scutellum, corium, abdomen dorsally brick red. Rostrum piceous; basal segment suffused with red basally. Pleura, sterna, abdomen ventrally, except segments 7 and 9 black; anterior coxae, stridulatory furrow, connexivum, lateral spots fused with connexivum, segments 7 and 9 of abdomen brick red; segments 5 and 6 mid-ventrally with red

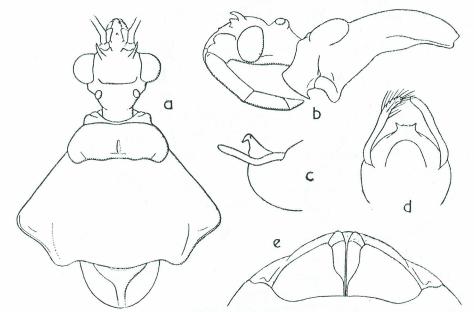


Fig. 23. Paracydnocoris macgillavryi sp.n. a. Head, pronotum & scutellum, dorsal view. b. Head & pronotum, lateral view. c. Pygophore, lateral view. d. idem, dorsal view. e. Apex of abdomen, o. ventral view.

suffusion. Membrane infumate with faint coppery lustre and apex narrowly whitish; base of cells brick red. Setae and pubescence greyish.

Structure. Spine at base of antennal tubercles acute, feebly curved. Ocelli large, elevated; interspace wider than distance between an ocellus and an eye. Lateral angles of collar somewhat deeply transversely sulcate; pronotum smooth; anterior lobe with a deep, wide depression with a deep, median, longitudinal sulcus within it and shallow depressions. Scutellum with a Y-shaped carina, obsolescent apically and very feebly transversely depressed basally. Hemelytra extending beyond apex of abdomen by about one third of their length.

Total length 3 15.0, ? 17.0 mm. Hemelytra 3 11.5, ? 14.5 mm. Greatest pronotal width 3 5.0, ? 5.5 mm.

1 & (type), Java, Preanger, Mt Tangkuban Prahu, 1200-1500 m, 23.i.1929; 1 $^{\circ}$ same locality, 17.x.1918, F. C. Drescher (MacGillavry collection).

Allied to Paracydnocoris distinctus Miller (1953, Comm. Biol. 13, 17, 47).

Differs in somewhat paler colouration and much smaller red spots on abdomen ventrally. It is smaller, the ocelli are larger and more prominent, the anterior lobe of the pronotum is more deeply depressed and the lateral angles of the posterior lobe are less broadly rounded.

Vesbius wegneri sp.n. (fig. 24)

Colour. Antennae missing. Head shining black, except base yellow; ocellar interspace with a suffused yellow spot; rostrum piceous. Thorax, abdomen, corium, base of membrane shining light red; red area of membrane covering about two-thirds of internal cell and about one third of external cell; remainder of membrane hyaline, yellowish with a wide transverse violaceous infumate stripe. Coxae and trochanters red; femora and tibiae shining black; approximately basal third of anterior femora, basal fourth of median femora and extreme base of posterior femora red; tibiae apically broadly dull yellow.

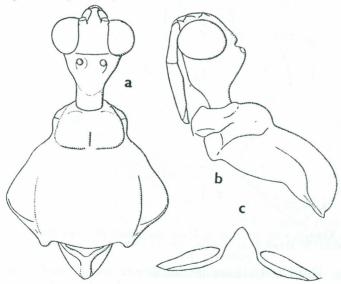


Fig. 24. Vesbius wegneri sp.n. a. Head, pronotum & scutellum, dorsal view. b. Head & pronotum, lateral view. c. Apex of pygophore, posterior view.

Structure. Head three times as long as anterior lobe of pronotum; vertex almost flat, about two-thirds as wide as an eye; length of eyes sub-equal to height of head. Hemelytra extending beyond apex of abdomen by about one fourth of their length; discal cell of corium almost twice as long as wide.

Total length 9.0 mm. Hemelytra 7.5 mm. Greatest pronotal width 2.5 mm.

1 & (holotype), E. Borneo, 50 m, Balikpapan, Mentawir River, x.1950, A. M. R. Wegner.

Allied to *Vesbius sanguiniosus* STAL (1874, Enum. Hem.: 36), but differs in colouration and in having the red area of the membrane covering a smaller part of the internal cell. It differs in structure in the more prominent eyes, thicker rostrum, less elongate discal cell of corium, more broadly angulate apex of membranal cells and in the genitalia.

Vesbius walshae sp.n. (fig. 25)

Colour. Antennae and rostrum piceous. Head, except base, legs, except coxae shining black. Base of head yellow. Thorax, abdomen, corium, basal fourth of external cell of membrane, almost half of internal cell, coral red. Remainder of membrane violaceous infumate, except apical third hyaline very faintly infumate. Coxae coral red.

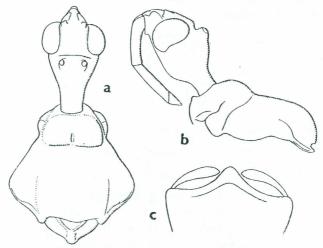


Fig. 25. Vesbius walshae sp.n. a. Head, pronotum & scutellum, dorsal view. b. Head & pronotum, lateral view. c. Pygophore, posterior view.

Structure. Head three times as long as anterior lobe of pronotum; vertex about one fourth wider than an eye; posterior margin of eyes feebly concave; length of eye considerably shorter than height of head. Hemely-

tra extending beyond apex of abdomen by one third of their length, discal cell of corium two and a half times longer than wide.

Total length & 7.5, % 8.0 mm. Hemelytra & 5.8, % 5.5 mm. Greatest pronotal width & 2.0, % 2.0 mm.

1 & (type), 1 ♀ W. Java, Djampang Tengah, Mt. Malang, i.1940, M. E. WALSH.

Somewhat larger than *Vesbius purpureus* THUNBG. (1784, M. ins. 57, *Cimex*), and differs also in the shape of the membranal cells and in the genitalia.

Vesbius flavescens sp.n. (fig. 26)

Colour. Antennae and rostrum piceous. Head, except base, legs, except coxae, shining black. Base of head yellow. Thorax red. Abdomen, corium basal fourth of external cell of membrane, almost half of internal cell, yellow; remainder of membrane violaceous infumate, except apical third hyaline, faintly yellowish infumate. Coxae red.

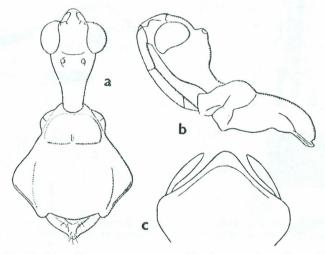


Fig. 26. Vesbius flavescens sp.n. a. Head, pronotum & scutellum, dorsal view. b. Head & pronotum, lateral view. c. Pygophore, posterior view.

Differs in colouration from *Vesbius walshae* sp.n. In structure it differs in smaller size, the relatively more slender basal rostral segment, smaller ocelli, relatively narrower vertex, less deep transverse sulcus on vertex and in the genitalia.

Total length 3 7.0, % 6.8 mm. Hemelytra 3 5.5, % 5.2 mm. Greatest pronotal width 3 1.8, % 1.7 mm.

1 & (type), 1 $^{\circ}$ W. Java, Bogor, 250 m, 5.ii.1951 (in Cop.), F. C. Drescher.

1

Endochus socius sp.n. (fig. 27)

Colour. Antennae black. Head and pronotum dark yellow with black patern as in fig. 27. Basal segment of rostrum yellow with piceous suffusion on outer surface; remaining segments piceous. Pleura and sterna dark yellow; meso- and metapleura with a black spot near upper margin and on acetabula. Segments 2-4 of abdomen pale stramineous with piceous spots; segment 4 mid-ventrally and remaining segments piceous. Corium fuscous with base and costal area narrowly, a faint suffusion on Cu, yellow; membrane infumate with a coppery lustre. Tibiae, median and

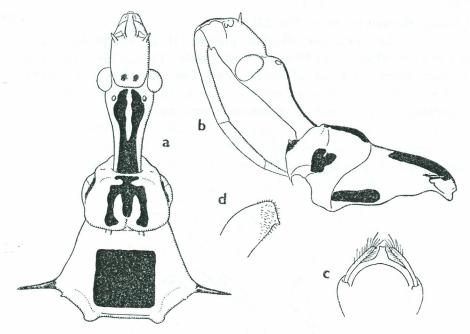


Fig. 27. Endochus socius sp.n. a. Head & pronotum, dorsal view. b. idem, lateral view. c. Pygophore, dorsal view. d. Median apical process of pygophore, lateral view.

posterior femora piceous; anterior femora dark yellow with linear suffusion and an irregular sub-apical annulation piceous; anterior and posterior coxae yellow with a large piceous spot; median coxae yellow with suffused brownish spot.

Structure. Spines on antennal tubercles short, slender, acute, directed forwards and outwards. Lateral angles of collar broadly rounded with an obscure elevation medially. Anterior lobe of pronotum smooth, sulcate in basal half, the sulcus much wider anteriorly; posterior lobe rugose; anteriorly sub-dorsally with a feebly defined short, rounded

carina; postero-lateral margin with a short tubercle adjacent to spine. Disc of scutellum triangularly depressed. Hemelytra extending to apex of abdomen.

Total length 17.5 mm. Hemelytra 12.0 mm. Greatest pronotal width 3.0 mm.

1 & (holotype), E.Borneo, 50 m, Balikpapan, Mentawir River, x.1950, A.M.R. WEGNER.

Belongs to the *nigricornis* STAL group, but differs from all known species in that group namely *nigricornis* STAL, *cameronicus* MILLER, *indigens* MILLER, *kiauensis* MILLER, *hutan* MILLER and *antennatus* MILLER in colouration, size and shape of spines on antennal tubercles and pronotum, size and shape of discal cell of corium, cells of membrane and genitalia.

Endochus propinquus sp.n. (fig. 28)

Closely resembles Endochus socius sp.n. but is smaller. It differs also in the colour pattern of the head and pronotum and in having the abdomen ventrally almost entirely piceous and the anterior femora suffused with brown. Vein Cu and the veins of the discal cell are much paler than those of socius.

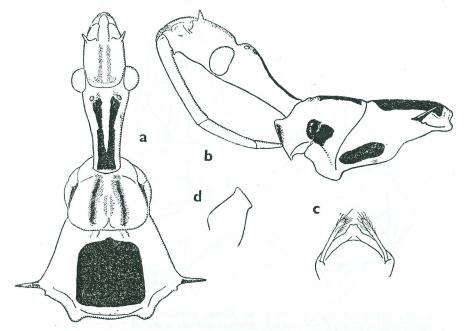


Fig. 28. Endochus propinquus sp.n. a. Head & pronotum, dorsal view. b. idem, lateral view. c. Pygophore, dorsal view. d. Median apical process of pygophore, lateral view.

In structure it differs in the relatively narrower and more strongly transversely rugose posterior lobe of the pronotum, in the absence of a tubercle medially on the prosternum and in the genitalia.

Total length 16.0 mm. Hemelytra 12.0 mm. Greatest pronotal width (excluding spines) 2.6 mm.

1 ♂ (holotype), W. Java, Bogor, Bolang Leuwiliang, 25.ii.1940, M. A. LIEFTINCK.

Rhinocoris nigricollis (DALLAS) (1850, Trans. Ent. Soc. Lond.: 8, pl. 2 (Arilus).

This species is incorrectly placed in *Rhinocoris*, and belongs to *Biasticus*.

Rhinocoris nigricollis Dallas var. rubescens Miller (1941, Journ. F.M.S. Mus. 18: 680) is synonymic with the following new species of Biasticus.

Biasticus insignis sp.n. (fig. 29)

C o l o u r. Head, anterior lobe of pronotum, propleura except acetabula and epimeron, meso- and metapleura, sterna, scutellum, legs, black. Rostrum piceous. Posterior lobe of pronotum, propleural epimeron, abdomen, red. Corium red except clavus, area between claval suture and Cu and

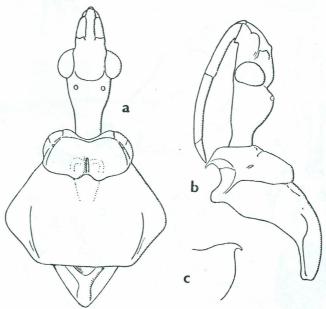


Fig. 29. Biasticus insignis sp.n. a. Head, pronotum & scutellum, dorsal view. b. Head & pronotum, lateral view. c. Apex of pygophore, lateral view.

within discal cell, hyaline; base of corium suffused with black. Ventral surface of head whitish yellow. Membrane hyaline, yellowish. Ocellar area with reddish suffusion around ocelli and a reddish median spot.

Structure. Head sub-equal in length to pronotum; tylus basally feebly elevated, rounded. Ocelli moderately elevated; interspace wider than distance between an ocellus and an eye. Anterior lobe of pronotum half as long as posterior lobe; median sulcus deep and narrow; median anterior elevation on posterior lobe wide but feeble; posterior margin of posterior lobe straight. Discal cell of corium twice as long as wide. Posterior lobe of pronotum abundantly setose. Hemelytra extending beyond apex of abdomen.

Total length & 11.5, ? 13.5 mm. Hemelytra & 8.5, ? 9.5 mm. Greatest pronotal width & 3.3, ? 3.6 mm.

1 & (type), Java, Mt Slamet, Baturraden, 300 m, x.1937; 1 $^{\circ}$, same locality, F. C. Drescher; 1 $^{\circ}$ W. Java, Mt Gede-Pangrango, 1400 m, Tjibodas, iii.1952, Soekarto.

Differs from all other known species of Biasticus in colour and size.

Paloptus armillatus sp.n. (fig. 30)

Colour. Dark stramineous. Disc of scutellum black; spine whitish. Femora with a wide piceous annulation.

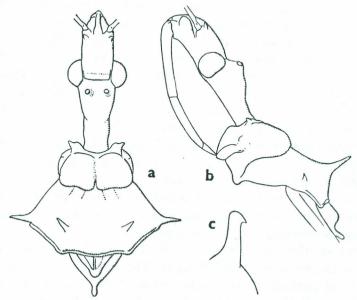


Fig. 30. Paloptus armillatus sp.n. a. Head, pronotum & scutellum, dorsal view. b. idem, lateral view. c. Apical process of pygophore, lateral view.

-

Structure. Head twice as long as posterior lobe of pronotum; spine at base of antennal tubercles sub-conical, feebly curved. Anterior lobe of pronotum with a short conical tubercle laterally sub-basally (this tubercle is present on one side only). Lateral angles of collar produced, sub-acute; lateral spines on posterior lobe directed feebly upwards; discal spines erect. Disc of scutellum feebly depressed and with a narrow median sulcus; spine rounded apically. Discal cell of corium about four times as long as wide; hemelytra extending beyond apex of abdomen by about one-third of their length.

Total length 3 11.0, 9 12.0 mm. Hemelytra 3 8.0, 9 8.5 mm. Greatest pronotal width (excluding spines) 3 2.5, 9 3.0 mm.

1 & (type), 1 $^{\circ}$ N. W. New Guinea, Sorong, 8.vii.-14.viii.1948, M. A. LIEFTINCK.

Allied to *Paloptus sulphurellus* Distant (1903, Ann. Mag. Nat. Hist. 2: 362), from which it differs in colouration, less robust habitus, narrower abdomen, shorter and less acute spines on posterior lobe of pronotum but longer spines on collar. The posterior lobe of the pronotum in *Paloptus armillatus* sp.n. is not longitudinally and shallowly depressed and the spine at base of antennal tubercles is shorter.

Graptoclopius lieftincki sp.n. (fig. 31)

1

Colour. Basal segment of antennae brown; remaining segments piceous. Head and rostrum reddish brown; postocular dorsally almost entirely black; base of head yellowish. Thorax, abdomen, corium, median and posterior legs black; abdomen ventro-laterally basally with suffused yellowish spots. Anterior coxae, trochanters and basal two-thirds of anterior femora reddish brown; apical third of femora and basal half of anterior tibiae whitish yellow; remainder of tibiae piceous, but apex light brown; reddish brown area on anterior femora suffused with black apically; anterior tarsi light brown. Membrane metallic blackish blue basally; remainder infumate. Pubescence on anterior legs and pronotum whitish yellow; on median and posterior legs black.

Structure. The pronotum and scutellum of this new species has a dense clothing of thick secretory setae. Setae of a similar type are also present among the simple setae on the legs.

The ovum of *Graptoclopius lieftincki* (obtained by dissection) is ampulliform with one side almost straight. The chorion is yellowish and the differentiated portion of the chorion white. Total length 3.0 mm.

 $Grap to clopius\ lie ftincki$ differs from all other known species in colouration. It is allied to $G.\ helluo$ STAL (1867, Oef. Vet. Ak. Förh. 23:

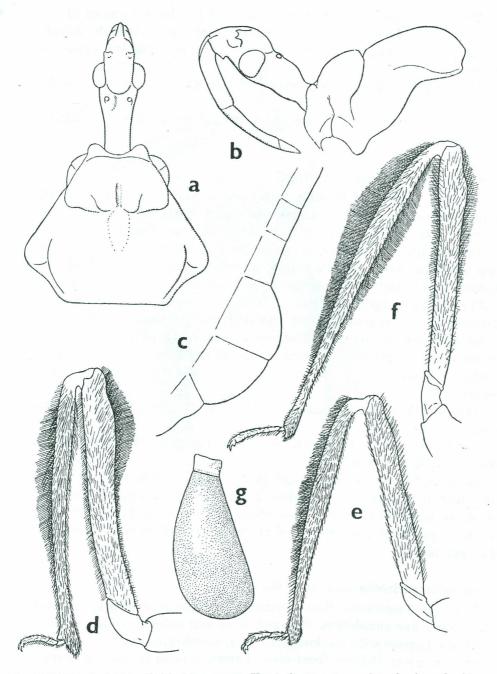


Fig. 31. *Graptoclopius lieftincki* sp.n. a. Head & pronotum, dorsal view. b. idem, lateral view. c. Connexivum. d. Anterior leg. e. Median leg. f. Posterior leg. g. Ovum.

283-291) from which it differs in the shape of the lateral angles of the collar which are rounded and not conical, in the less strongly sulcate posterior pronotal lobe, the less convex scutellum and in the less expanded connexivum.

Total length 21.0 mm. Hemelytra 17.0 mm. Greatest pronotal width 6.0 mm.

1 ♀ (holotype), N. W. New Guinea, Sorong, 28.viii.-6.ix.1948, M. A. LIEFTINCK.

Astinus intermedius sp.n. (fig. 32)

Colour. Antennae missing. Head, meso- and metapleura, sterna, femora, piceous. Pronotum, anterior coxae and trochanters, median and posterior coxae, abdomen black. Segment 2 and basal half of segment 3 of connexivum, apical margin of segment 7 whitish yellow. Corium brown suffused with reddish yellow apically; membrane hyaline pale yellowish. Tibiae and tarsi and segments 2 and 3 of rostrum brown.

Structure. Spine at base of antennal tubercles short, conical. Anterior lobe of pronotum deeply medially sulcate basally and with a rounded elevation on each side of sulcus. Elevations on posterior lobe with posterior margin irregularly crenulate. Disc of scutellum feebly depressed. Pronotum, corium and abdomen ventrally with patches of white wax-like substance.

Total length 18.0 mm. Hemelytra 12.0 mm. Greatest pronotal width 5.5 mm.

1 & (holotype), E. Borneo, 50 m, Balikpapan, Mentawir River, x.1950. A. M. R. Wegner.

Allied to Astinus nebulo MILLER (1941, Journ. F.M.S. Mus. 18: 757) from which it differs in colouration, larger elevations on both pronotal lobes shape of membranal cells and discal cell of hemelytra, longer and more acute produced portions of collar, more greatly expanded abdomen and in genitalia.

Veledella variabilis sp.n. (fig. 33)

Colour. Testaceous. Basal segment of antennae with a pale stramineous sub-median annulation. Eyes red. Head and anterior tibiae suffused with brown. Corium with blackish suffusion; membrane hyaline, yellowish.

Structure. Differs from other known species in having obscure tubercles and not spines on vertex, very short tubercles adjacent to ocelli and two spines only on lower surface of anterior femora.

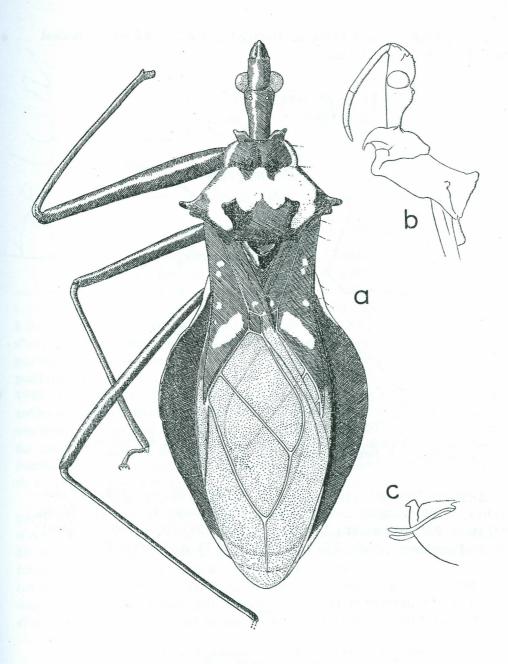


Fig. 32. Astinus intermedius sp.n. a. Whole insect, dorsal view. b. Head, pronotum & scutellum, lateral view. c. Pygophore, lateral view.

Total length 3 8.5, ? 11.0 mm. Hemelytra 3 5.3, ? 6.5 mm. Greatest pronotal width 3 1.5, ? 2.0 mm.

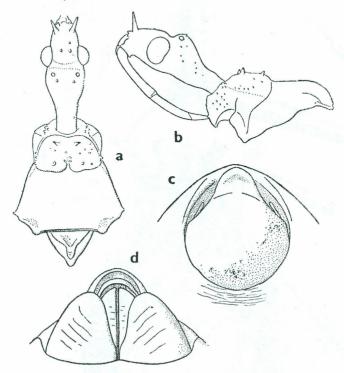


Fig. 33. Veledella variabilis sp.n. a. Head, pronotum & scutellum, dorsal view. b. Head & pronotum, lateral view. c. Apex of abdomen, \$\mathcal{S}\$, ventral view; d. idem, \$\varphi\$.

3 & (one of which the type), W. Java, Bogor, 250 m, x.1939, 1 % same locality, R. W. Becking. 1 &, 2 % Mt Kadu, Preanger, Res. Sumedang, 18.ii.1939, F. C. Drescher; 1 &, Bogor, 24.iii.1940 (no collectors name); 1 % Mt Pangrango, South Tjisarua, 2.ii.1941, M. A. LIEFTINCK.