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ON SOME INTERESTING NEW GENERA AND SPECIES OF MIRIDAE FROM OCEANIA (Hemiptera) [1]

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(With 20 text figures)

During his recent stay in Australia as a visiting research worker at the CSIRO, *Division of Entomology, Canberra,* through the courtesy of DOCTOR DOUGLAS F. WATERHOUSE, the author had the opportunity to study some curious species of Miridae (Hemiptera) which are herewith described and figured.

One of these species was obtained from the *South Australian Museum,* through the courtesy of my colleague GORDON F. GROSS, from material collected by him during the *Royal Society of London,* PERCY SLADEN EXPEDITION to the *New Hebrides.* Another was found in the *Collection of the University of Queensland, Brisbane,* under care of DOCTOR T. E. WOODWARD and also two others specimens in the *Australian National Insect Collection, Canberra.* A third species was obtained from the *Australian Museum, Sydney,* through the courtesy of DR. DAVID MCALPINE.

Illustration in the text were prepared by PAULO WALLERSTEIN.

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Grossicoris n. gen.

Bryocorinae, Bryocorini. Characterized by its very flat body, short rostrum, depressions on pronotum and scutellum and by the cuneus which is weakly delineated, long, wide and curved.

Body elongate oval, strongly flattened, glabrous, widest at level of claval apex. Head flat, inclined, vertex very wide, separated from frons by two transverse sulci: eyes semi-stylate, much longer than wide, placed horizontally on the head, inferior margin concave at middle, hind margin contiguous with anterior margin of pronotum; frons somewhat tumid, slightly sulcate at middle, continued in front by clypeus without a visible suture between them, separated from eyes by a wide and shallow sulci; clypeus visible from above, flat, wide and curved towards apex; jugum large, also visible from above, flat, separated from lorum by a pronounced furrow, the latter very small; rostrum very short, hardly reaching base of front coxae, incrassate.

Antenna very shortly pilose, segment I much thickre than II, tapering basally;

segments II curved and divergent from each other; segments III and IV slender and more pilose.

Pronotum flat, without apparent collar and calli, with four roundish depressions or foveae: 2 on the collar-like anterior area; 2 on the lateral sides medially; 2 on the middle of disc, paired, separated from each other by a longitudinal slender carina; lateral margins rounded and sinuate anterior to posterior angles, posterior margins deeply and widely concave, angles rounded and prominent. Mesoscutum exposed, large, with a depression at middle basally; scutellum triangular, noticeably wider at base, with four distinct longitudinal depressions or foveae, separated from each other by a longitudinal carina.

Hemelytra somewhat shallowly rugouse with nervures prominent, embolium thick, convex, cuneus large, curved; underside of body with distinct ostiolar peritreme, legs short, tarsi incrassate towards apex, claws and pseudarolia of the Bryocorini types.

TYPE SPECIES OF GENUS: *Grossicoris maculatus* n. sp.

This genus has the general facies of *Hesperolabops* Kirkaldy, 1902 and *Thaumastomiris* Kirkaldy, 1902 but can be easily differentiated by the very flat body, the foveation of pronotum and scutellum and by the very short rostrum. The genus is named after my colleague Gordon Flinders Gross, South Astralian Museum, Adelaide, in recognition of his work on the Australian Hemiptera.

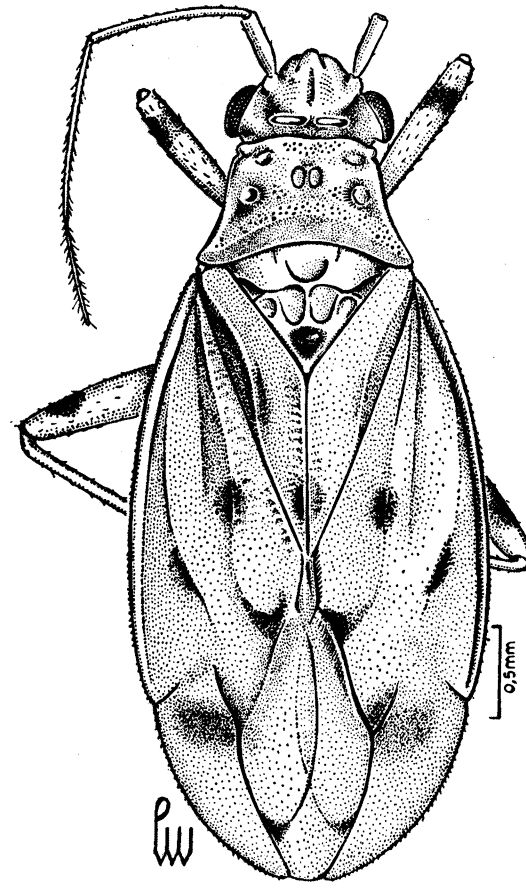
Grossicoris maculatus n. sp.

(Figs. 1-4)

Characterized by the dark brown markings of hemelytra and structure of male genitalia.

MALE: Length 4.7 mm, width 1.8 mm *Head*: length 0.5 mm, width 0.9 mm, vertex 0.62 mm. *Antenna*: segment I, length 0.2 mm; II, 0.9 mm; III, 0.9 mm; IV, 0.5 mm. *Pronotum*: length 0.5 mm, width at base 1.1 mm. *Cuneus*: length 1.1 mm, width at base 0.5 mm.

General colour-stramineous; eyes reddish brown, body above with several brown markings, spots or fasciae: 1 at the apical portion of scutellum; 3 on clavus (comissure and median portion); 8 on the corium (4 elongate ones along nervures, 2 bordering comissure and 2 v-shaped ones reaching base of cuneus internally); 2 more evident ones on membrane near apex of cuneus; the latter slightly infuscate basally; femora with a spot

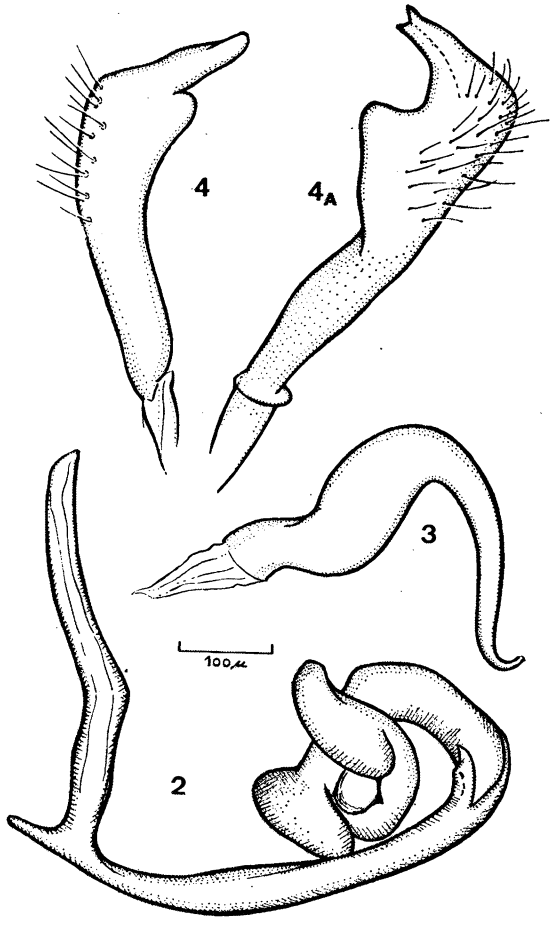


Grossicoris maculatus n. sp. Fig. 1 — male, paratype.

on anterior margin subapically and tibiae with a sub-basal band, fuscous to black.

Morphological characters as described for genus.

Genitalia — Penis (fig. 2) characteristic, as shown in figure. Left paramere (fig. 3) strongly curved and tapering towards apex. Right paramere (fig. 4) enlarged subapically, with several dorsal setae.



Grossicoris maculatus n. sp.; fig. 2 — penis; fig. 3 — left paramere; fig 4 — right paramere.

FEMALE: Unknown.

Holotype — Male, Malao Village in Bay area, Espirito Santo, new Hebrides, 28 Aug. 1971, C. F. GROSS, *Royal Soc.* PERCY SLADEN *Exp.*, in the *South Australian Museum, Adelaide.*

Paratypes — 10 males, same data as type (some taken at light), in the *Australian National Insect Collection, Canberra; British Museum of Natural History* and author's Collection.

The species is easily separated from *Grossicoris nigroculatus* n. sp., by its colour and structure of male genitalia. Its specific name is after the brown markings present on the hemelytra.

Grossicoris nigroculatus n. sp

(Figs. 5-7)

Characterized by its pale colour and structure of male genitalia.

MALE: Length 4.4 mm. width 1.8 mm. *Head*: length 0.5 mm, width 0.9 mm, vertex 0.64 mm. *Antenna*: segment I, length 0.2 mm; II, 0.7 mm; III, 0.6 mm; IV, mutilated. *Pronotum*: length 0.5 mm, width at base 1.1 mm. *Cuneus*: length 0.5 mm, width at base 1.0 mm.

General colour stramineus to pale yellow; eyes reddish brown to black, femora with dark spots subapically, tibiae pale or with only vestiges of a dark ring sub-basally, base of cuneus and apex of membrane with vestige of dark spots, as in the preceding species, apices of tarsi and apex of rostrum fuscous.

Morphological characters a given for genus.

Genitalia — Penis (fig. 5) similar to preceding species but with smaller arm much longer. Left paramere (fig. 6) long, slender, with two curvatures. Right paramere (fig. 7) falciform, with a lateral lobe on the apical third and branched extreme apex.

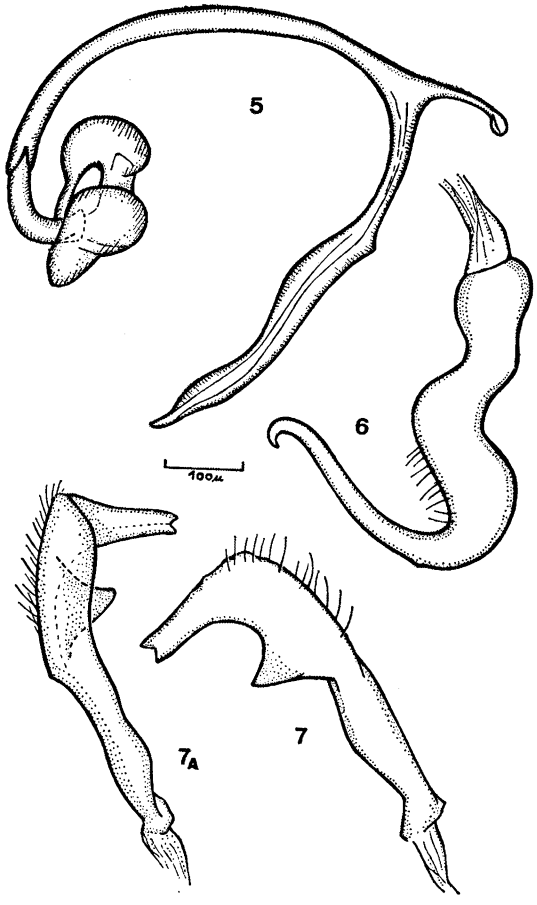
FEMALE: Similar to male in morphology and colour.

Holotype — Male, Noumea, New Caledonia, A. M. Lea, in the *South Australian Museum,* Adelaide.

This species is near *Grossicoris maculatus* n. sp., but differs in the uniform pale colour and in the structure of the male genitalia. Its specific name is after the reddish brown to black eyes.

Waterhouseana n. gen.

Phylinae, Hallodapini. Body elongate, mymecomorphic, strongly constricted on pronotum and hemelytra, with scattered long erect hairs or setae.



Grossicoris nigroculatus n. sp. Fig. 5 — penis; fig 6 — left paramere; fig. 7 — right paramere.

Head much wider than long, vertex marginate, curved and overlapping anterior margin of pronotum, frons also broadly curved and rounded in front, eyes following curvatures of frons and vertex, strongly depressed, overlapping pronotum laterally, seen from side oblique, much longer than wide, occupying almost the whole head, jugum, lorum and clypeus flat, depressed, placed about same level, gula, gena and buccula hidden under the head together with front coxal cleft, covered with long erect setae, rostrum reaching middle coxae, segment I not reaching beyond buccula. Antenna inserted level with middle of eye, segment I short, less than half the width of vertex, segment II about 6 times longer than I, slightly incrassate towards apex, III and IV mutilated; pubescence with hairs about as long as width of segments.

Pronotum very strongly constricted behind coxal cleft I, smooth, shining, first coxal cleft and coxa placed under head, collar and calli absent, lateral margin rounded, hind margin truncate, posterior angles rounded disc of pronotum prominent, strongly inclined towards head, mesoscutum covered, scutellum flat, small.

Hemelytra noticeably constricted at middle, punctate, covered with long erect setae, clavus much wider than corium on basal half, embolium very narrow covered at base by corium, apical portion of the latter enlarged, cuneus large, slightly longer than basal width, areolae of mebrane rounded, legs long and slender, median and hind pair mutilated, third tarsal segment the longest, arolia absent, claws of Hallodapini type.

TYPE SPECIES OF GENUS: *Waterhouseana illustris* n. sp.

The genus differs from other Hallodapini genera in its peculiar, strongly depressed head, in the very large and curved eyes and especially in the strongly narrowed pronotum.

Its name is after DOCTOR DOUGLAS F. WATERHOUSE in recognition of his research on the cuticle and digestive system of insects in general and the repugnatorial secretions of bugs and cockroaches. His other significant studies included research on the ecology, toxicology and taxonomy of sheep blowflies. His leadership of a great many scientific activities, entomological or otherwise, both inside Australia and internationally, has been outstanding.

Waterhouseana illustris n. sp
(Figs. 8-9)

Characterized by its colour and dimensions.

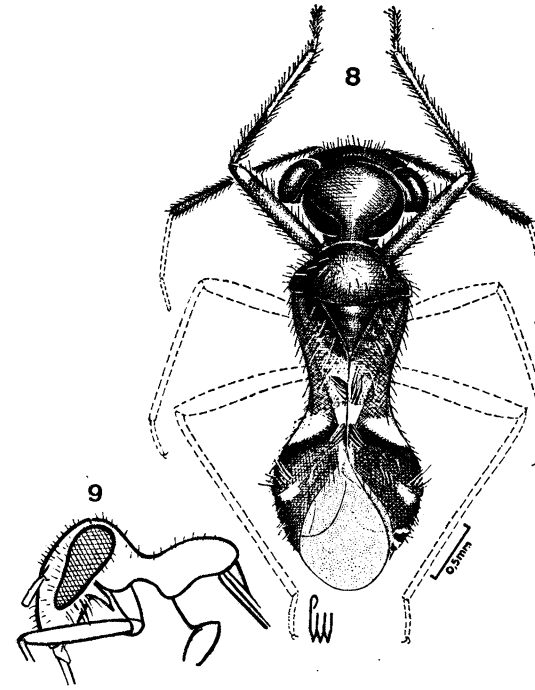
FEMALE: Length 3.4 mm, width 1.0 mm. *Head*: length 0.3 mm, width at base 1.1 mm, vertex 0.52 mm. *Antenna*: segment I, length 0.2 mm; II, 1.3 mm; III and IV, mutilated. *Pronotum*: length 1.1 mm, width at base 0.9 mm. *Cuneus*: length 0.56 mm, width at base 0.40 mm.

General colour brown with pale yellow and whitish pruinose areas; antenna (except extreme base of segment I) dark brown eye, jugum and lorum castaneus; hemelytra with four distinct whitish spots: a triangular one on embolium and exocorium in level with apex of clavus; one on apical third of clavus; one on corial commissure and one on each basal external portion of cuneus; clavus, paracuneus and cuneus suffused with whitish or silvery pruinose areas; base of clavus internally, its middle portion and extreme apex, area behind the whitish triangular spot of corium, dark brown; membrane fuscous; legs castaneus to reddish, apices of coxae, trochanters, apices of tibiae and fascia on segment III of abdomen, pale yellow to whitish.

Morphological characters as given for genus.

MALE: Unknown.

Holotype — Female, on tree trunk, 3.500 feet, Bulolo, Territory of New Guinea, Dec. 1967, B. Lowery, in the *Australian National Insect Collection*, Canberra.



Waterhouseana illustris, n. sp. Fig. 8 — female, holotype; fig 9 — side view of head.

Woodwardiola n. gen.

Orthotylinae, Orthotylini. Species of small size, body compact, elongate, smooth, with short erect pubescence intermixed with scale-like silvery hairs under incident light.

Head semi-horizontal, clypeus visible from above, vertex very wide, not carinate, eyes contiguous with anterior margin of pronotum, frons rounded, striolated, clypeus compressed, proeminent, buccula large, rostrum reaching the middle of mesosternum, segment I much thicker than II, included in the large buccal cavity, gula obsolete, gena reduced. Antenna characteristic, segments I and II very stout, the first

globose, shorter than width of vertex, tapering to base, the second thicker than first, strongly narrowed at middle, both clothed with short pubescence, segments III and IV very slender, covered by long hairs.

Pronotum rectagular, distinctly wider than long, smooth calli absolete, lateral margins straight, posterior margin slightly convex; mesoscutum exposed, scutellum flat.

Hemelytra with cuneus about twice as long as basal width (male) or rounded externally, about as long as basal width (female), membrane normal, macropterous (male) or brachypterous (female), abdomen covered by membrane (male) or exposed apically (female). Legs short, hind tibiae with hairs, spines and long setae, anterior coxal cleft large, ostiolar peritreme with a short lobe on upper margin.

TYPE SPECIES OF GENUS: *Woodwardiola monteithi* n. sp.

This genus differs from all other Orthotylini in the characteristic antenna and brachpterism of the female. It belongs to the group of genera with segments II and I of antenna noticeably and conspicuously enlarged, usually represented by black species. It can be separated from *Excentricus* Reuter, 1822 by the much shorter rostrum and by the structure of the second antennal segment.

Its name is after DOCTORS T. E. WOODWARD and GEOFF MONTEITH in recognition for their work on the Australian Hemiptera.

Woodwardiola monteithi n. sp.

(Figs. 10-15)

Characterized by its small size, colour and structure of male genitalia.

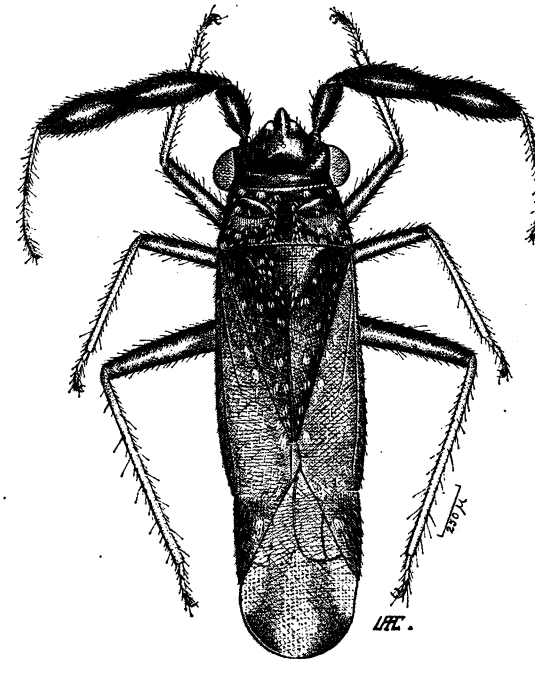
MALE: Length 2.4 mm, with 0.6 mm. *Head*: length 0.2 mm, width 0.6 mm, vertex 0.38 mm. *Antenna*: segment I, length 0.2 mm; II, 0.8 mm; III, 0.3 mm; IV, 0.3 mm. *Pronotum*: length 0.3 mm, width at base 0.6 mm. *Cuneus*: length 0.4 mm, width at base 0.2 mm.

General colour black; eyes castaneus to reddish, segments III and IV of antenna pale, membrane fuscous with a pale spot beyond reddish, segments III and IV of antenna pale, yellow towards apices, tarsi fuscous apically.

Morphological characteres as given for genus.

Genitalia — Vésica of aedeagus (figs. 11-12) with two fields of sawlike spines. Left paramere (figs. 13-14) as shown on illustrations. Right paramere (fig. 15) elongate, eding by a ball-shaped apex covered with hairs.

FEMALE: Similar to male in general aspect but brachypterous. Length 1.9 mm, width 0.6 mm. Body more compact than male, apex of



Woodwardiola monteithi n. sp. Fig. 10 — male, paratype.

abdomen exposed, cuneus 0.20 mm (length) and 0.16 mm (basal width).

Holotype — Male, F. W. Lake, 10 ml. N. of Rocky R., via Coen, N. Qld., 17.XII. 1964, G. Montheith, in the *Queensland Museum,* Brisbane.

Allotype — Female, same data as holotype.

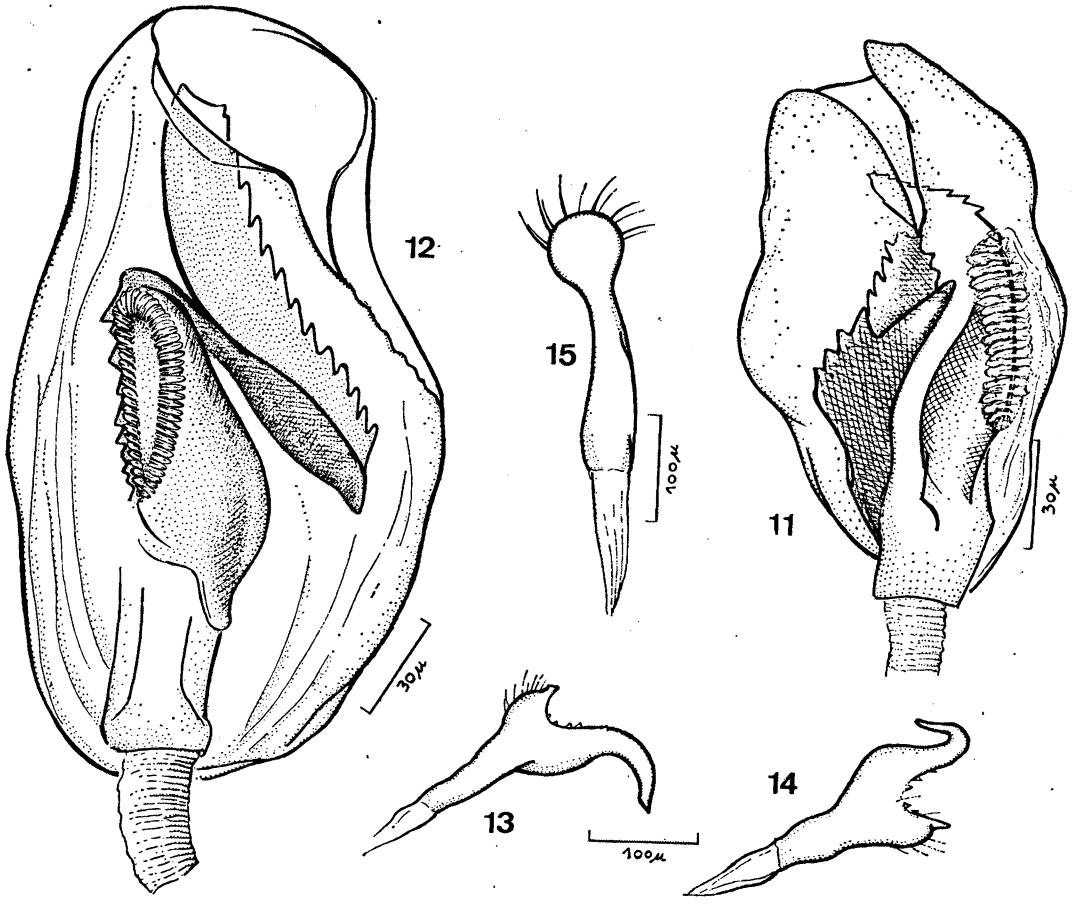
Paratypes — 5 males and 6 females, same data as type, in the *Collection of the Department of Entomology, University of Queensland,* Brisbane, Anic and the author's Collection.

According T. E. Woodward the species occurs on the plant *Lomandra banksii* R. Br. (Liliaceae). It is found only in Cape York Peninsula and is also the only species of *Lomandra* in New Caledonia. The genus is evidently Australian, with about 30 species.

Myrmecoroides grossi n. sp

(Figs. 16-20)

Characterized by its dimensions, colour and structure of male genitalia.



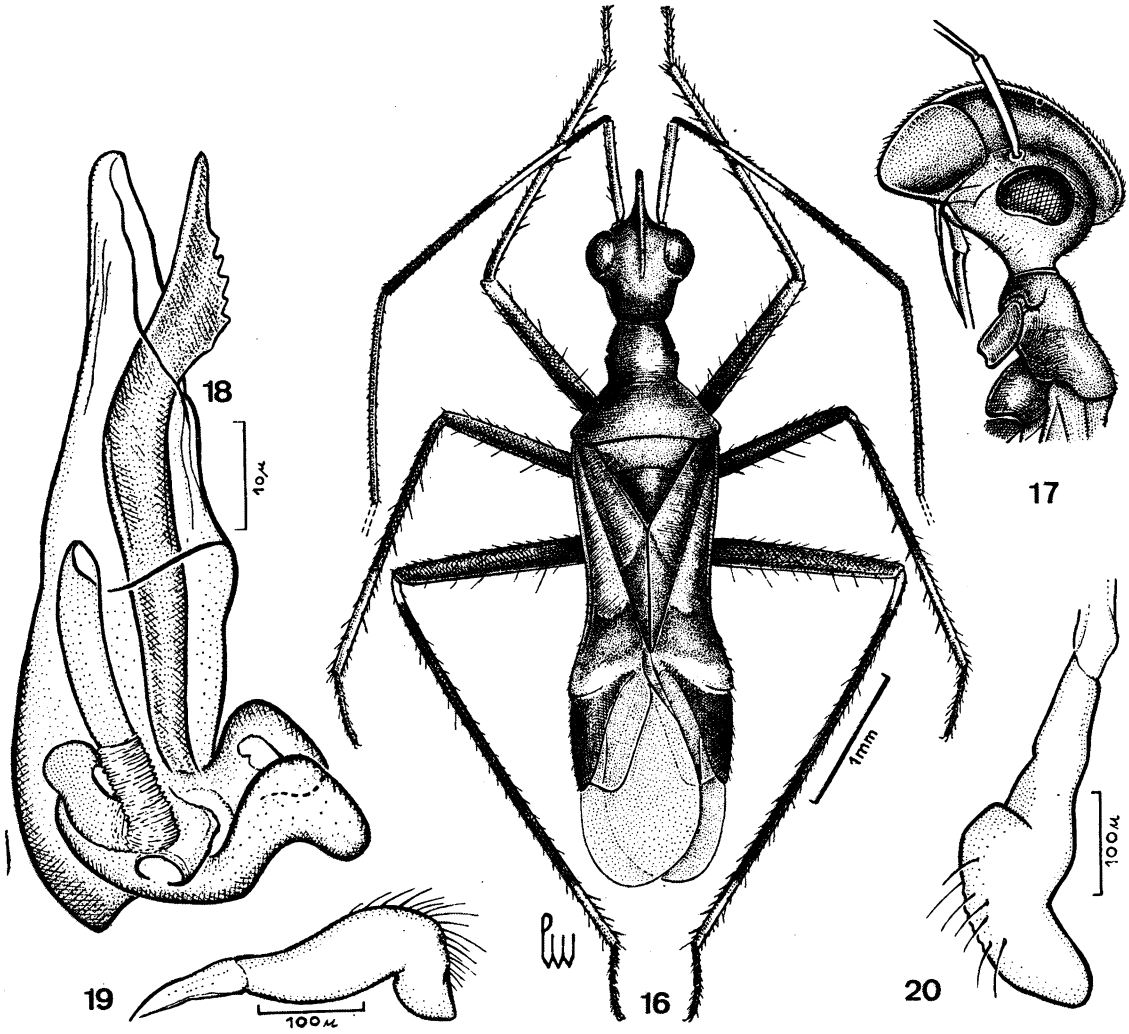
Woodwardiola monteithi, n. sp. Figs. 11 e 12 — vesica of aedeagus; figs. 13 e 14 — lefft paramere; fig. 15 — right paramere.

MALE: Length 4.1 mm, width 0.9 mm. *Head*: length 0.6 mm, width 0.8 mm, vertex 0.48 mm. *Antenna*: segment I, length 0.6 mm II, 1.9 mm; III, 1.3 mm; IV, mutilated. *Pronotum*: length 0.8 mm, width at base 0.9 mm. *Cuneus*: length 0.60 mm, width at base 0.40 mm.

General colour black with pale areas; segment I of antenna pale with lateral margins dark, segment II dark with a whitish band on basal third, eyes castaneus, rostrum pale, extreme apex of corium and extreme base of cuneus pale, extreme bases and apices of tibiae pale yellow.

Rostrum reaching apex of mesosternum, pubescence short, segment II of antenna with a few sparse hairs about as long as width of segment. Other morphological characters as described for genus.

Genitalia — Penis (fig. 18) with a sclerotized spiculum provided with teeth sub-apically. Left paramere (fig. 19) stout, recurved near apex. Right paramere (fig. 20) enlarged on apical half, where a few setae can be found.



Myrmecoroides grossi n. sp. Fig. 16 — male, paratype; fig. 17 — lateral view of head; fig. 18 — penis; fig. 19 — left paramere; fig. 20 — right paramere.

FEMALE: Brachypterous, smilar to male in colour except lateral upper margins of g-menasments III and V to IX of abdomen which are whitish. Length 4.2 mm, width 1.3 mm, vertex 0.52 mm.

Holotype — Male, Otford, New South Wales, 1 Dec. 1962, D. K. McAlpine, in the *Australian Museum,* Sydney.

Allotype — Female, same data as type.

Paratypes — Males and females, same data as type, in the *Australian Museum,* Sydney; *British Museum of Natural History,* London; *Australian National Insect Collection* and in the author's Collection.

This species is named after my coleague Gordon Flinders Gross, *South Australian Museum,* Adelaide, who described the genus *Myrmecoroides* (Mem. Nat. Mus. Vict. 26:7, 1964). It differs from carinatus *Gross,* 1964 in the much smaller size, colour of female (back tip of reduced hemelytra) and structure of the male genitalia.

SUMMARY

The autor describes new genera and species of Miridae (Hemiptera) from Oceania, as follows: *Grossicoris* n. gen., *G. maculatus* n. sp., Espírito Santo, New Hebrides; *G. nigroculatus* n. sp., Noumea, New Caledonia (Bryocorini); *Waterhouseana* n. gen., *W. illustris* n. sp., Bulolo, New Guinea (Hallodapini) *Woodwardiola* n. gen. *W. monteithi* n. sp., Queensland, Australia (Orthotylini) and *Myrmecoroides grossi* n. sp., New South Wales, Australia (Pilophorini). Illustrations are included.

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