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Five new Aradidae from the oriental region
(Insecta: Heteroptera)

by

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Fünf neue Aradidae aus der orientalischen Region
(Insecta: Heteroptera)

Zusammenfassung: Zwei Arten von Aradidae, welche der Zweitautor während eines kurzen Aufenthaltes in Singapore sammeln konnte, erwiesen sich als neu und werden nachstehend beschrieben: *Arictus wagneri* n. sp. und *Mastigocoris truncatus* n. sp. Für die bisher bekannten fünf Arten der Gattung *Mastigocoris* MATS. et US. wird ein Bestimmungsschlüssel gegeben.

Als weitere neue Arten werden *Aneurus bimaculatus* n. sp. und *Neuroctenus luteomaculatus* n. sp. von Taiwan und *Mezira (Zemira) stolidi* von Java beschrieben.

Synopsis: During a brief stop at Singapore, the second author had the possibility to collect a few Aradidae. Two species were new and are described in this paper: *Arictus wagneri* n. sp. and *Mastigocoris truncatus* n. sp. A key is given for the five known species of the genus *Mastigocoris* MATS. et US.

Further new species are *Aneurus bimaculatus* n. sp. and *Neuroctenus luteomaculatus* n. sp. from Taiwan and *Mezira (Zemira) stolidi* n. sp. from Java.

Subfamily ANEURINAE

Genus ANEURUS CURTIS, 1825

***Aneurus bimaculatus* n. sp. (Fig. 1)**

Male: Elongate ovate, very finely granulate; corium with 2 (1 + 1) large, ovate, yellow spots behind scutellum laterally.

Head shorter than its width across eyes (15 : 17); anterior process with parallel sides, not reaching tip of antennal segment I; genae seen from above as 2 (1 + 1) thin,

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parallel carinae along clypeus and not reaching tip of the latter. Antenniferous tubercles short, acute exteriorly; postocular tubercles blunt, not reaching outer borders of eyes. Eyes large, semiglobose. Vertex with 2 (1 + 1) large, ovate callosities, transversely rugose behind them. Antennae moderately stout, 1.65 x as long as width of head across eyes; antennal segment I obovate, II clavate, III tapering toward base, IV fusiform; relative length of antennal segments I to IV are: 5:6:7:10. Labium reaching line connecting hind borders of eyes.

Pronotum less than half as long as its maximum width (16:35); collar very narrow, sinuate anteriorly; anterior borders straight; antero-lateral angles rounded, neither produced forward, nor sideways; lateral borders of fore lobe diverging backward; lateral notch sinuate, shallow; lateral borders of hind lobe very finely crenulate, rounded and strongly converging anteriorly; hind border shallowly sinuate. Fore disc with 2 (1 + 1) curved callosities and flattened granulation around them; interlobal depression blurred, only laterally it is deeper; hind disc with a wide, extremely finely granulate, transverse belt.

Scutellum shorter than its basal width (16:20); lateral borders evenly convex, tip more convex; median spot extending from basal border to middle of disc, is finely, transversely striate; disc concentrically granulate around median spot.

Hemelytra reaching 1/2 of tergum VII; scutellum reaching 1/2 of corium exteriorly; base of hemelytra and ovate, yellow spots, are extremely finely and densely granulate; finely wrinkled else where, also membrane.

Abdomen ovate, longer than its maximum width across segment IV (67.5:48); PE-angles (postero-exterior) of connexiva II to VI angularly protruding; PE-VII rounded; discs of connexiva III to VII obliquely striate interiorly, granulate exteriorly and with 2 callous spots. Paratergites triangular, with rounded corners, reaching 2/3 of hypopygium. The latter conical, with rounded tip, longer than its maximum width (10:8), concentrically granulate on disc. Spiracles II, VII and VIII lateral and visible from above; III to VI ventral.

Legs: femora and tibiae with a row of sharp granules on upper and lower borders.

Color: testaceous, ovate spots on corium yellow.

Total length 4.50 mm; width of pronotum 1.35 mm; width of abdomen 1.88 mm.,

Holotype ♂, Formosa (Taiwan), Kosempo, leg. Sauter, coll. Heiss.

Aneurus bimaculatus n. sp. runs in our key for the oriental *Aneurus* species (1973: 142) to *A. sublobatus* KORMILEV, 1968, from Hainan, but may be separated from it by: antennal segment IV shorter than II + III, exterior borders of connexiva VI not roundly produced, and by corium with 2 (1 + 1) large, ovate, yellow spots.

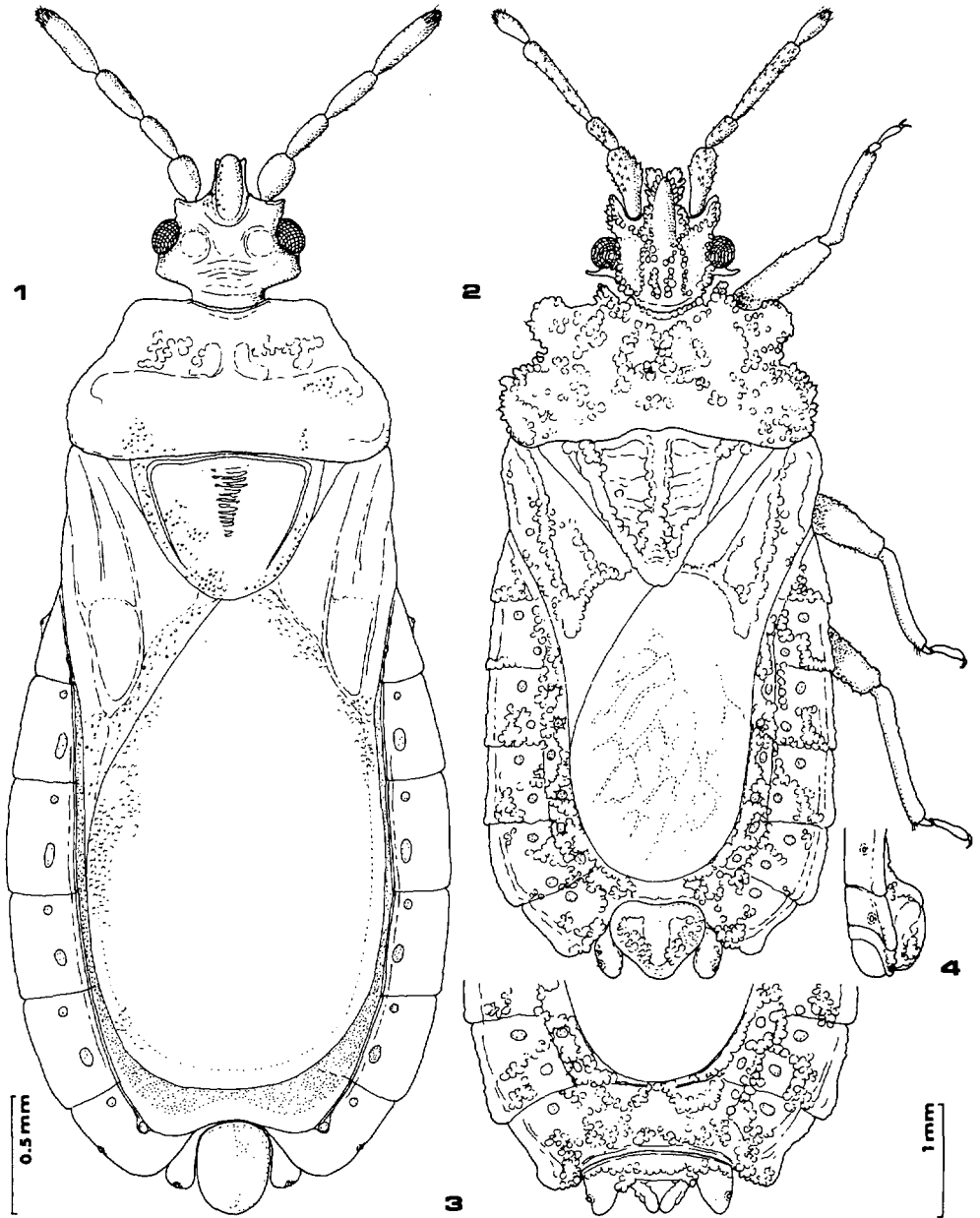


Fig. 1 *Aneurys bimaculatus* n.sp., ♂ Holotype dorsal;
Figs.2-4 *Arictus wagneri* n.sp., 2: ♂ Holotype dorsal; 3: ♀ Allotype, terminal segments dorsal; male terminalia lateral

Subfamily MEZIRINAE

Genus *Arictus* STÅL, 1865

*Arictus wagneri**) n. sp. (Figs. 2 - 4)

Male: Elongate ovate; sparsely, but roughly granulate; granules setigerous, with very short, curled hairs.

Head. Anterior process robust, covered with incrustated hairs laterally, reaching 1/2 of antennal segment I. Antenniferous tubercles acute, with parallel outer borders. Eyes large, semiglobose. Postocular spines thin, curved, produced far beyond outer borders of eyes. Vertex with M-shaped rows of granules.

Pronotum. Collar sinuate anteriorly; antero-lateral angles produced forward beyond collar, forming lobes, concave interiorly and convex exteriorly; anterior angles also produced beyond collar and covered with incrustated hairs; fore border between them is sinuate. Lateral notch nearly rectangular. Lateral borders of hind lobe convex, converging anteriorly and less so posteriorly. Hind border bisinuate medially, convex laterally. Fore disc with 2 (1 + 1) large callosities, separated by a double row of granules; lateral of them with 2 (1 + 1) granulate ridges. Hind disc sparsely granulate, mostly at humeri.

Scutellum. Basal border carinate, convex, but slightly sinuate medially; lateral borders carinate and granulate along borders; basal angles with 2 (1 + 1) clusters of dense, small granules. Disc with a flat, cross-shaped median ridge; its longitudinal bar with a double row of small granules; lateral of median ridge roughly, transversely rugose; tip rounded.

Hemelytra reaching nearly 1/2 of tergum VII, corium reaching 1/2 of connexivum: III; its apical angle acute, apical border sinuate, baso-lateral border reflexed and roundly produced. Veins granulate, a few scattered granules between veins.

Abdomen ovate; PE-angles (postero-exterior) of connexiva II to V angularly protruding, PE-VI rounded, PE-VII forming small, rounded, diverging lobes, reaching 1/2 of paratergites. Discs of connexiva each with 2 large, rounded, callous spots and a twisted row of small granules between them. Tergum VII raised backward. Paratergites clavate, produced as far as cordate hypopygium; median ridge of the latter not reaching tip of disc. Spiracles II to VII ventral, placed far from border; VIII lateral and visible from above.

Legs granulate, but not armed.

Color: yellow brown to brown; granulation yellow brown.

Measurements: head 29:32 (the first figure in ratios represents the length, and the second the width of measured portion; 25 units = 1 mm); relative length of antennal

*) It is a pleasure to dedicate this species to Mr. Eduard Wagner, eminent German Hemipterist, in occasion of his 80th birthday.

segments I to IV are: 16:8:21:10; pronotum 26:70; ratio width of fore lobe: width of hind lobe as 57:70; scutellum 35:42; abdomen 86:79 (across segment IV); hypopygium 16:20.

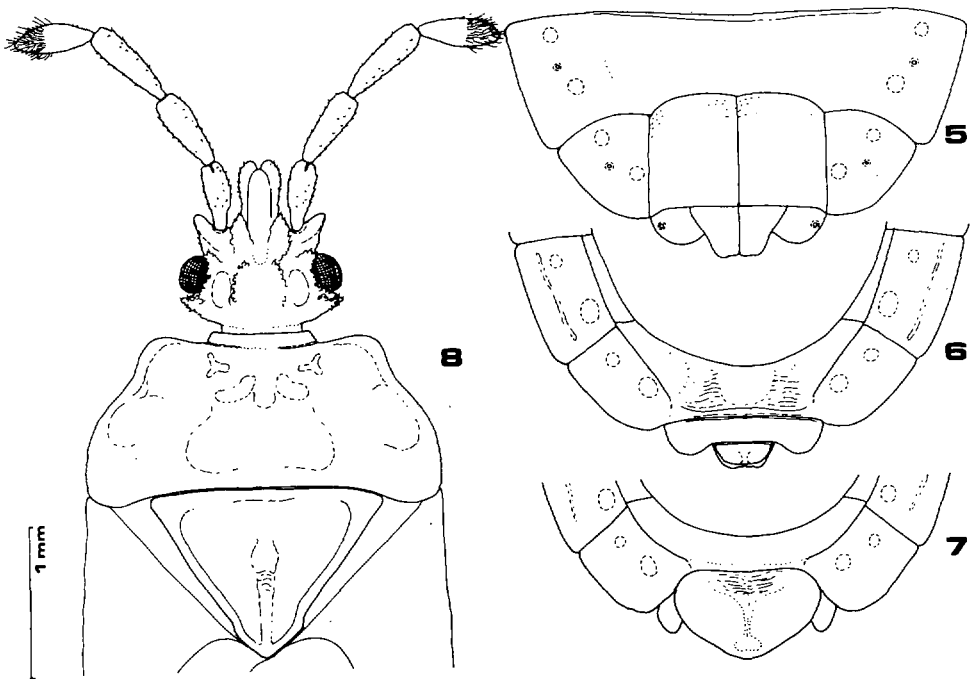
Female: Similar to male; paratergites subtriangular, rounded apically, reaching tip of a small, rounded posteriorly, segment IX.

Measurements: head 30:33; relative length of antennal segments I to IV are: 18:9:27:10; pronotum 28:74; scutellum 39:44; abdomen 100:87; width of segment VIII 31.

Total length: ♂-7.20, ♀-8.15 mm; width of pronotum: ♂-2.80, ♀-2.96 mm; width of abdomen: ♂-3.16, ♀-3.48 mm.

Holotype ♂, Singapore, under dry bark of *Hevea* sp., 4. IV.1976, leg. et coll. Heiss Allotype ♀ (Coll. Kormilev) and 1 Paratype ♀ collected with Holotype.

Arictus wagneri n. sp. is related to *A. brachypterus* KORMILEV, 1968, from New Guinea, but is slightly smaller, antennae relatively shorter, 1.72 x as long as width of head across eyes (1.86 x in *A. brachypterus*); antennal segments II to IV are relatively shorter and PE-VII forming rounded lobes directed obliquely sideways, reaching 1/2 of paratergites.



Figs.5-8 *Neuroctenus luteomaculatus* n.sp., ♂. ♀ Allotype, terminal segments ventral; 6 : ditto dorsal; 7 : ♂ Holotype, terminal segments dorsal; 8 : ♂ Holotype, dorsal.

Genus *Mastigocoris* Matsuda et Usinger, 1957

Mastigocoris truncatus n. sp. (Figs. 9 - 11)

Male: Elongate, with subparallel sides. Brachypterous. Pilosity extremely short and yellow.

Head. Anterior process constricted laterally, rounded and slightly incised anteriorly, reaching $3/5$ of antennal segment I. Antenniferous tubercles short, slightly divaricating and blunt. Eyes small, semiglobose, protruding. Postocular tubercles minute, not reaching outer borders of eyes. Vertex with 2 (1 + 1) longitudinal carinae. Antennae strong, almost twice as long as width of head across eyes. Labium reaching hind border of labial groove. Labial atrium open.

Pronotum. Collar narrow, granulate. Antero-lateral angles rounded, neither produced forward, nor sideways; lateral notch small; lateral borders of hind lobe rounded, converging anteriorly; hind border slightly, evenly convex. Fore disc with median sulcus, flanked by 4 (2 + 2) spaced, small ridges. Interlobal depression deep, sinuate. Hind disc abbreviated.

Scutellum. Anterior border with 2 (1 + 1) small teeth overlapping hind border of pronotum. Lateral borders straight and carinate; median carina high, tapering toward tip; disc transversely rugose.

Hemelytra abbreviated, without membrane. Clavus greatly reduced to a small triangle at base of scutellum. Corium reaching $1/2$ of connexivum II. Veins of corium raised, making a loop; baso-lateral and lateral borders carinate; hind border inflated; disc deeply punctured.

Abdomen longer than its maximum width; lateral borders parallel from II to VI; PE-angles II to IV not protruding, V very slightly protruding, VI rounded, VII also rounded. Central dorsal plate pentagonal, slightly convex and deeply punctured; raised medially on IV and then on V-VI; its lateral borders carinate on III to V; tergum VII strongly raised backward. Paratergites small, clavate, reaching $3/5$ of a large, subglobose hypopygium. Spiracles II to VI ventral, VII and VIII lateral and visible from above. Seventh ventral segment with a median wedge-like elevation posteriorly, with oval callosity.

Color: testaceous; legs yellow brown, labium and tarsi yellow.

Measurements: head 15:16.5; relative length of antennal segments I to IV are: 7:5:8:7.5; pronotum 12:28; scutellum 12.5:16; abdomen 40:33 (across segment V); hypopygium 11:14.

Total length 3.37 mm; width of pronotum 1.12 mm; width of abdomen 1.32 mm.

Holotype ♂, Singapore (under bark of *Hevea* sp.), 4.IV.1976; E. Heiss leg. (coll. Heiss).

Paratypes: 3♂♂, collected with holotype, (coll. Kormilev and Heiss).

Mastigocoris truncatus n. sp. is intermediate in size between *M. angulatus* MATSUDA et USINGER, 1957, from Saipan I. (Marianas) and *M. usingeri* KORMILEV, 1971, from Java. Antennal segment III is relatively longer than in both

other species; pronotum is truncate anteriorly and hypopygium is subglobose, without median depression on disc.

Key to the species of *Mastigocoris* MATSUDA et USINGER:

1. Macropterous species; anterolateral angles of pronotum rounded and produced forward as far as collar (Philippines) . . . *philippinensis* KORMILEV, 1972
— Brachypterous species; anterolateral angles of pronotum different . . . 2
2. Anterolateral angles of pronotum rounded, neither produced forward, nor sideways 3
— Anterolateral angles of pronotum angularly produced forward 4
3. Antennal segment I as long as III (7.5 : 7.5), (Malay Peninsula) *malayensis* KORMILEV, 1967
— Antennal segment I shorter as III (7 : 8), (Singapore) . *truncatus* n. sp.
4. Larger species, ♂ — 3.5 mm; ratio length of antennal segment II: length of antennal segment III as 1 : 1.67 (South Marianas) *angulatus* MATSUDA et USINGER, 1957
— Smaller species, ♂ — 3.0 mm; ratio length of antennal segment II: length of antennal segment III as 1:1.5 (Java, Borneo) *usingeri* KORMILEV, 1971

Genus *Neuroctenus* FIEBER, 1861

Neuroctenus luteomaculatus n. sp. (Figs. 5 - 8)

Male: Elongate ovate, finely but densely granulate and covered with extremely short, curled, whitish hairs.

Head slightly longer than its width across eyes (28:27); anterior process slightly constricted at base, rounded and incised apically, reaching tip of antennal segment I; antenniferous tubercles short, rounded and diverging apically. Postocular tubercles reaching, or almost reaching, outer borders of eyes. Eyes moderately large, protruding. Vertex raised and sharply granulate. Antennae twice as long as width of head across eyes (53:27); relative length of antennal segments I to IV are: 12:13:15:13. Labium reaching hind border of labial groove, which is closed posteriorly.

Pronotum less than half as long as its maximum width (26:58); collar produced forward and truncate anteriorly; antero-lateral angles slightly expanded, rounded and produced forward, but not reaching fore border of collar; lateral notch shallow; lateral borders of hind lobe parallel, converging anteriorly; hind border widely sinuate. Fore disc with 2 (1 + 1) curved callosities, and lateral of them with 2 (1 + 1) curved, oblique ridges; interlobal depression consisting of 4 (2 + 2) depressions; hind lobe with semicircular depression.

Scutellum shorter than its basal width (28:38); all borders carinate; tip angularly rounded; disc with a thin median carina; granules on disc arranged into transverse rows.

Hemelytra reaching $3/4$ of tergum VII, corium reaching beyond fore border of connexivum III; its apical angle acute, apical border twice sinuate, exterior sinus is very shallow.

Abdomen ovate, longer than its maximum width across segment IV (92:85); PE-angles of connexiva III to VI barely protruding, PE-VII rounded. Paratergites small, clavate, reaching half of a large, cordate hypopygium, which is shorter than its maximum width (15:23). All spiracles ventral and not visible from above.

Color: ferrugineous; membrane sepia brown, whitish at base; connexiva partially blackish, round callous spots pale yellow. Labium, coxae and tarsi yellow brown.

Female: Similar to male; hemelytra reaching $1/2$ of tergum VII; paratergites large, rounded, reaching $1/2$ of truncate segment IX.

Measurements: head 31:29; relative length of the antennal segments I to IV are: 12:13:15:13; pronotum 28:61; scutellum 31:40; abdomen 100:77; width of tergum VIII - 27.

Total length: ♂-7.00, ♀-7.68 mm; width of pronotum: ♂-2.32, ♀-2.44 mm; width of abdomen: ♂-2.80, ♀-3.08

Holotype ♂, Formosa (Taiwan), Kosempo, leg. Sauter, coll. Heiss.
Allotype ♀, collected with Holotype.

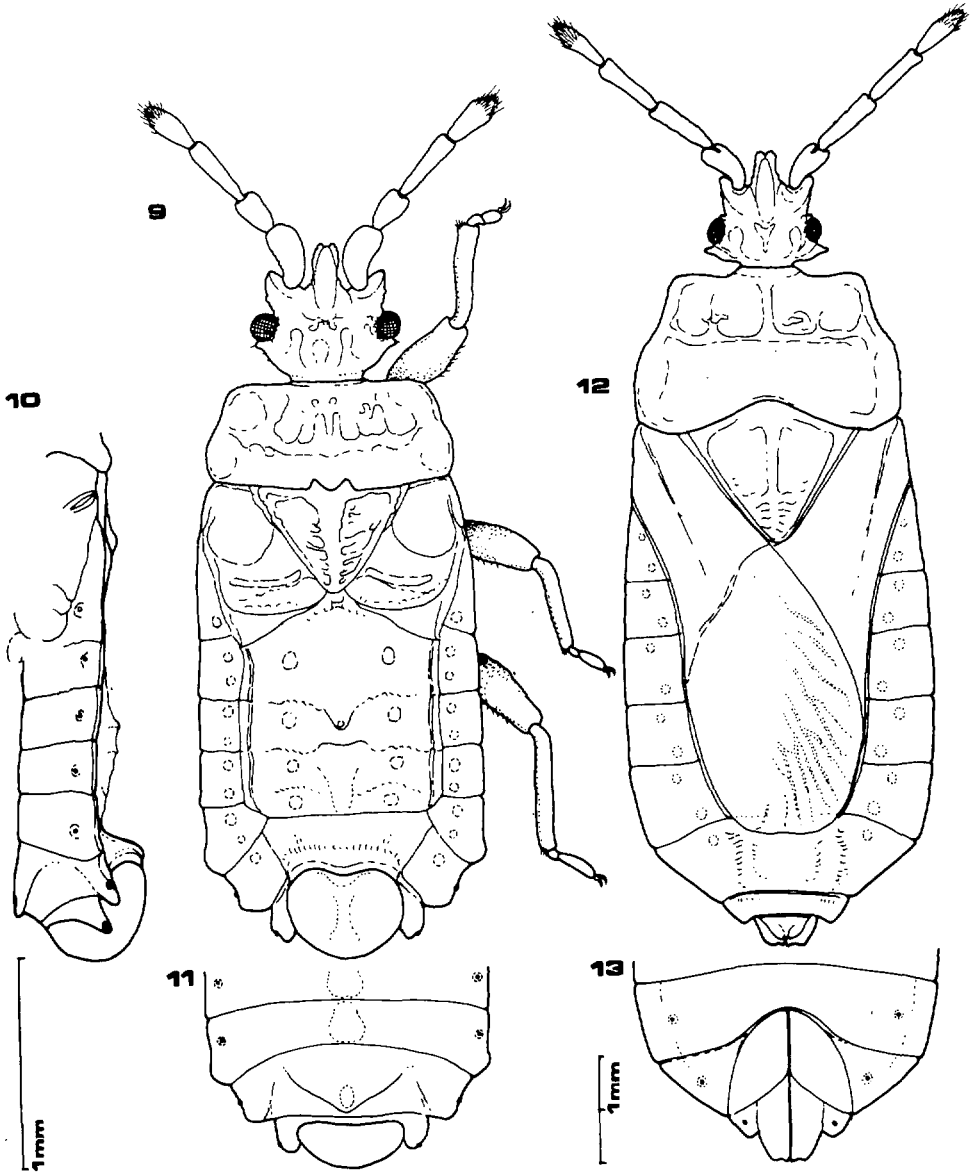
Neuroctenus luteomaculatus n. sp. runs in the key for the oriental and Australian *Neuroctenus* species (KORMILEV, 1971: 63) to *N. par* BERGROTH, 1887, but antero-lateral angles of pronotum are more rounded and slightly more produced forward; abdomen less widening backward; and hypopygium subangular posteriorly, not so widely rounded.

Genus **Mezira** AYMOT et SERVILLE, 1843

Mezira (Zemira) stolida n. sp. (Figs. 12, 13)

Female: Elongate with subparallel sides, slightly widening backward; granulation partially obliterated on pronotum.

Head shorter than its width across eyes (50:53); anterior process constricted laterally, subtruncate anteriorly, reaching $3/4$ of antennal segment I; antenniferous tubercles stout, blunt, diverging; postocular thin, distinctly produced beyond outer borders of eyes. Eyes moderately large, semiglobose. Vertex raised and granulate. Antennae 1.96 x as long as width of head across eyes (104:53); relative length of an-



Figs.9-11 *Mastigocoris truncatus* n.sp., 9 : ♂ Holotype, dorsal; 10 : ditto, abdomen lateral; 11 : ditto, ventral terminal segments;
Figs.12-13 *mezira stolidus* n.sp., 12 : ♀ Holotype, dorsal; 13 : ditto, ventral terminal segments.

tennal segments I to IV are: 20:30:29:25. Labium reaching hind border of labial groove, which is open posteriorly; labial atrium split-like.

Pronotum half as long as its maximum width (65:123); collar truncate anteriorly; anterior borders lateral of collar slightly sinuate; antero-lateral angles rounded and crenulate, very slightly produced forward; lateral notch shallow; lateral borders of hind lobe subparallel, slightly convex; hind border deeply sinuate medially (*Zemira* type), angularly produced sublaterally. Fore disc with 4 (2 + 2) elevations; median depression shallow; interlobal depression deep; hind disc with shiny granulation anteriorly, obliterated in the middle.

Scutellum shorter than its subbasal width (65:70); lateral borders carinate, disc roughly granulate.

Hemelytra reaching beyond fore border of tergum VII; corium reaching hind border of connexivum III; apical angle of corium acute, apical border straight.

Abdomen with parallel sides from segment III to V, then roundly converging; longer than its maximum width across segment IV (190:143). Exterior borders of connexiva VI and VII together forming an obtuse angle; PE-angles not protruding. Paratergites triangular, reaching basal 1/4 of segment IX. Venter irregularly rugose on lower portions of sternites; very finely punctured on higher portions along hind borders and on the prongs. By its large sizes this species somewhat resembles species of *Chrysodaspis*, KORMILEV, 1971, but it lacks characteristic shiny, glabrous posterior borders of sternities III to V, with three prongs directed forward.

Legs: femora with a double row of granules on lower side, but not teeth, or spines.

Color: black; eyes greyish brown, apical half of antennal segment IV, labium, trochanters and tarsi, are brown; coxae yellow; membrane brown, black at base.

Total length 14.80 mm; width of pronotum 4.92 mm; width of abdomen 5.72 mm.

Holotype ♀ (coll. Heiss) Java, leg. O. Beccari.

Mezira (Zemira) stolida n. sp. is one of the biggest species in this genus, in the key for the oriental and Australian *Zemira* species (KORMILEV, 1971: 31) it runs to *M. (Z.) teter* (BERGROTH, 1894), but may be separated by: subparallel sides of the body, much finer and partially obliterated granulation, by postocular spines produced beyond outer borders of eyes; ridges of pronotum much lower: PE-angles not protruding and connexiva less uneven.

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