MEZIRINAE OF THE ORIENTAL REGION AND SOUTH PACIFIC, SUPPLEMENT

(Hemiptera-Heteroptera: Aradidae)¹

By Nicholas A. Kormilev²

Abstract: The following new species are proposed: Arbanatus angustus and A. antennatus (New Guinea); Arictus gamma (New Guinea); Artabanus brevipennis (New Guinea); Chinessa wauensis (New Guinea); Mastigocoris philippinensis (Philippines); Mezira (M.) sinensis (China); Mezira (Zemira) modesta (New Guinea); Paraartabanus n. g., type species P. tuberculatus, (New Guinea); Scironocoris baliensis (Java), and Strigocoris bishopi (New Guinea).

This paper is a supplement to my monograph on Mezirinae from the Oriental Region and South Pacific (Kormilev, 1971). Additional material of Aradidae received from the Bishop Museum, Honolulu, Hawaii, contained one new genus and 10 new species. Among them, particularly interesting were a new genus related to Artabanus Stål, 1865, with a micropterous species which has an open labial atrium and lacks the stridulatory apparatus which I propose to name Parartabanus; new species of Strigocoris Usinger, 1954, with a curious stridulatory apparatus, a genus so far recorded only from tropical Africa and Madagascar, and the presence of which in New Guinea was completely unexpected. A new species of Mastigocoris Matsuda and Usinger, 1957, from Philippines, has fully developed wings, and so far, this genus had only brachypterous species. A new species of the genus Mezira A. S., 1843, from the collections of the American Museum of Natural History, New York, N. Y., was interesting because of its rather pronounced brachypterism, rather a rare case in this genus.

In measurements the length of abdomen was taken from the tip of scutellum to the tip of hypopygium (δ), or segment IX (φ) respectively. In ratios the first figure represents the length, and the second the width of measured portion. Drawings Nos. 1 to 12, and 16 to 17 were made at a scale of 25 units = 1 mm; and Nos. 13 to 15 at a scale of 10 units=1 mm.

Aknowledgments: I want to express my sincere thanks to Dr J. Linsley Gressitt, Chairman Department of Entomology, Bernice P. Bishop Museum, Honolulu, Hawaii, for the privilege of studying additional material of Aradidae from the collections under his care. Thanks are also extended to Dr Peter Wygodzinsky, Acting Chairman Department of Entomology, American Museum of Natural History, New York, N. Y., for the privilege to study a curious, brachypterous Mezira from the mainland China.

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Subfamily MEZIRINAE Oshanin, 1908 Genus Mastigocoris Matsuda and Usinger

Mastigocoris Matsuda and Usinger, 1957, Insects of Micronesia, Heteroptera: Aradidae; 7 (3): 143.

Mastigocoris philippinensis Kormilev, new species Fig. 1-2.

9. Elongate ovate, hind lobe of pronotum granulate. Macropterous.

Head shorter than width across eyes (16: 18); anterior process moderately stout, reaching slightly over 1/2 of antennal segment I; antenniferous tubercles dentiform, subparallel, reaching basal 1/3 of antennal segment I; eyes semiglobose, protruding; postocular spines minute, reaching outer border of eyes; vertex with 2 (1+1), parallel, stout carinae; infraocular carinae practically absent; infraocular callosities minute, ovate. Antennae strong, twice as long as head (31: 16); relative length of antennal segments I to IV:8:6:9:8. Labial atrium widely, open; labium reaching base of head, labial groove open posteriorly.

Pronotum trapezoidal, less than half as long as its maximum width (18:39); fore lobe narrower than hind lobe (27.5:39); collar thin, slightly sinuate anteriorly; antero-lateral angles carinate, rounded, and very finely serrate, produced forward as far as collar; lateral borders of hind lobe convex, converging anteriorly, and also very finely serrate; hind border straight. Fore disc with 4(2+2) ridges and 3 thin, short carinae between ridges; hind disc granulate.

Scutellum triangular, shorter than its basal width (16: 22); all borders carinate; basal border with 2 (1+1) teeth superimposed over hind border of pronotum; lateral borders sinuate before tip, the latter acute; median carina thin, cruciform, tapering backward; disc very roughly punctured.

Hemelytra complete, reaching over fore border of tergum VII; basolateral borders of corium slightly sinuate and thinly carinate, posterolateral straight and converging; apical angle acute, apical border widely sinuate; membrane without veins.

Abdomen ovate, longer than its maximum width across segment IV (50: 44); connexivum wide and slightly reflexed, separated from the narrow midlateral glabrous area by a thin carina; connexiva II and III fused together; PE-angles II to VI not protruding, PE-VII (\$\phi\$) forming slightly blunt angle; midlateral glabrous area separated from disc by a thin, but high carina; hind border of tergum VII truncate. Paratergites subtriangular, shorter than tricuspidate segment IX. Spiracles II to VI ventral, placed far from border; VII and VIII lateral and visible from above.

Meso- and metasterna flat; metathoracic scent gland openings small, but open.

Legs unarmed.

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

Total length 4.12 mm; width of pronotum 1.56 mm; width of abdomen 1.76 mm.

Holotype Q (BISHOP 9755), PHILIPPINES, Palawan, 3 km NE Tinabog; 8.V.1962, H. Holtmann coll.

Both other known species of *Mastigocoris* are brachypterous, but this one is macropterous. It is larger than both brachypterous species and with different relative length of antennal segments.

Genus Parartabanus Kormilev, new genus

Aspect of a small Artabanus from "bilobiceps group", but labial atrium is widely open; legs unarmed; and stridulatory apparatus absent.

Head shorter than its width across eyes; anterior process robust, short, cleft anteriorly, reaching 1/2 of antennal segment I; antenniferous tubercles short, robust, blunt, slightly diverging; eyes almost globose, protruding; postocular borders unarmed and converging posteriorly; vertex raised; infraocular callosities elongate ovate. Antennae 1 ½ times as long as head's width across eyes; antennal segment II shortest, III longest, and IV longer than II, but shorter than I. Labium arising from an open atrium, not reaching hind border of a shallow and wide labial groove, which is closed posteriorly.

Pronotum short and wide, separated into two lobes by arcuate depression; collar greatly reduced; fore border with 2 (1+1) small tubercles; antero-lateral angles dentiform and upturned; disc with 2 (1+1) high tubercles in middle, and 2 (1+1) laterally, on the hind lobe. Hind lobe reduced to narrow strip, widening a little laterally.

Scutellum triangular, shorter than its basal width; lateral borders sinuate, disc with a strong hump medially.

Metanotum consisting of 2 (1+1) subtriangular plates, raised medially and along lateral borders, and fused with tergum I posteriorly.

Hemelytra reduced to 2 (1+1) small pads, raised laterally like small, vertical teeth.

Abdomen subrectangular, constricted in middle (segments III to IV), widening again from V to VI, considerably narrowed on VII. Segments V and VI laterally, forming pointed and slightly curved lobes; Segment VII laterally produced backward as 2 (1+1) pointed lobes, reaching as far as tip of hypopygium; paratergites much shorter, reaching 3/4 of hypopygium. Spiracles large, II to VI ventral, placed far from border, VII lateral and visible from above, VIII terminal. Central dorsal plate consisting of terga II to VI, completely fused, and raised medially on terga IV, and again on VI; tergum IV laterally with 6 (3+3) small tubercles. Hypopygium large, with median ridge extending to tip of disc.

Metathoracic gland openings oblique and slightly visible from above. Legs unarmed.

Type-species: Parartabanus tuberculatus, n. sp.

Parartabanus tuberculatus Kormilev, new species Fig. 3.

 \eth . Micropterous. Borders and raised portions of the body covered with short, curled, rust-colored hairs.

Measurements: head shorter than its width across eyes (22:25); relative length of antennal segments I to IV: 10:7:14:8; pronotum much shorter than its maximum width (13:38); scutellum shorter than its basal width (15:26); abdomen slightly longer than its maximum width (52:50); hypopygium shorter than its maximum width (13:15).

Color: dark brown; elevated portion of vertex, infraocular callosities, hind border of pronotum, elevated portions of scutellum and terga IV and V, tips of lobes of segments V to VII, and paratergites, reddish brown; labium, antennal segments II to IV, and legs, yellow brown.

Total length 4.20 mm; width of pronotum 1.52 mm; width of abdomen 2.00 mm.

Holotype & (BISHOP 9756), NEW GUINEA, Lae, Busu River, 16.IV.1969, J. Sedlacek coll.

Genus Artabanus Stål

Artabanus Stål, 1865, Hemiptera Africana 3: 31.

Artabanus brevipennis Kormilev, new species Fig. 4.

9. Elongate ovate, granulate; body without tubercles ventrally; brachypterous.

Head almost as long as width across eyes (32:33); anterior process strong, tapering, reaching 1/2 of antennal segment I; antenniferous tubercles dentiform, subparallel, reaching basal 1/4 of antennal segment I; eyes semiglobose, protruding; postocular borders unarmed, straight, converging; vertex raised, granulate. Antennae twice as long as head's width across eyes (64:33); relative length of antennal segments I to IV: 18:12.5:21:12.5. Labium reaching base of head; labial groove open posteriorly.

Pronotum much shorter than its maximum width (26:70); fore lobe narrower than hind lobe (55:70); collar thin, sinuate anteriorly; anterolateral angles with 3 lobes; interlobal depression deep, sinuate; lateral borders of hind lobe strongly convex, rounded; hind border straight. Fore disc with 4 (2+2) round ridges, separated by 3 deep and narrow sulci; hind disc granulate.

Scutellum shorter than its basal width (32: 40); lateral borders carinate, tip angular; disc granulate, median ridge widening at base.

Hemelytra with abbreviated membrane, reaching hind border of tergum V; baso-lateral border of corium carinate and sinuate; apical angle rounded, apical border straight; membrane with anastomosed veins.

Abdomen ovate, almost as long as its maximum width across segment IV (89:90); lateral borders convex and slightly raised; PE-angles II to VI barely protruding, round; PE-VII forming small, rounded protuberances; exterior borders of connexiva II to VI straight, VII sinuate; posterior borders of connexiva III to VI raised; connexiva II and III fused. Paratergites short, rounded posteriorly, produced as far as truncate segment IX. Spiracles II to VI ventral, placed far from border; VII and VIII lateral and visible from above. Stridulation apparatus consisting of 1 long and mesad of it 3 short carinae on sternites III and IV; its counterpart a file-like carina on hind tibiae interiorly.

Legs: hind femora with a tooth posteriorly.

Total length 7.32 mm; width of pronotum 2.80 mm; width of abdomen 3.60 mm.

Holotype Q (BISHOP 9757), NEW GUINEA, NE, Wau, Bulolo R., 900-1100 m; 25.IX. 1965. J. & M. Sedlacek coll.

Artabanus brevipennis n. sp. runs in my key for Artabanus species (1971:13) to A. brachypterus Kormilev, 1971, but differs from it by shorter anterior process of head and different shape of pronotum.

Genus Strigocoris Usinger

Strigocoris Usinger, 1954, Ann. Mus. Congo, Tervuren, Zool. 1: 540.

Strigocoris bishopi Kormilev, new species Fig. 5-7.

3. Elongate ovate; granulate and covered with sparse, rusty, curled hairs. General aspect of a sturdy *Mezira*.

Head shorter than its width across eyes (26; 28); anterior process constricted medially, slight-

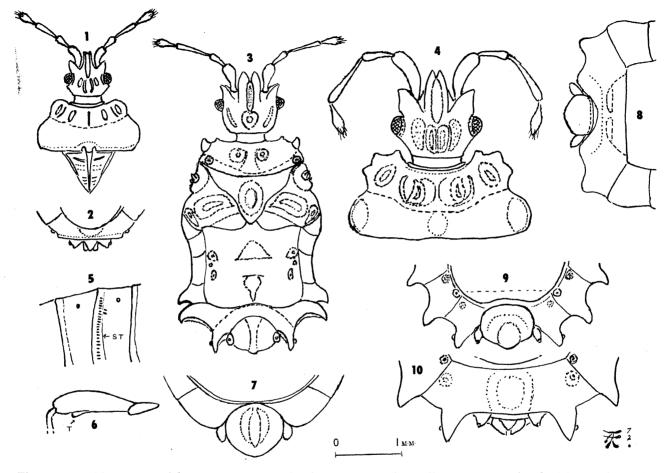


Fig. 1-10. 1, Mastigocoris philippinensis n. sp., \mathcal{P} , head, pronotum and scutellum; 2, same, tip of abdomen from above; 3, Parartabanus tuberculatus n. g., n. sp., \mathcal{P} , dorsal aspect; 4, Artabanus brevipennis n. sp., \mathcal{P} , head and pronotum; 5, Strigocoris bishopi n. sp., \mathcal{P} , portion of sterna IV and V, with a row of stridulatory teeth (ST); 6, same, femur with tooth-like enlargement (T); 7, same, tip of abdomen from above; 8, Scironocoris baliensis n. sp., \mathcal{P} , tip of abdomen from above; 9, Chinessa wauensis n. sp., \mathcal{P} , tip of abdomen from above; 10, same, \mathcal{P} , tip of abdomen from above.

ly notched anteriorly, reaching tip of antennal segment I; antenniferous tubercles short, sub-parallel, blunt, reaching basal 1/4 of antennal segment I; eyes semiglobose, moderately protruding; postocular tubercles blunt, slightly produced beyond outer border of eyes; postocular borders behind tubercles are rounded; vertex moderately raised, granulate; infraocular carinae stout, arcuate, produced behind eyes and converging. Antennae strong, relative length of antennal segments I to IV: 10.5:13:12:12. Labium arising from closed atrium and reaching base of head; labial groove very deep, open posteriorly.

Pronotum trapezoidal, shorter than its maximum width (35:65); collar robust, sinuate anteriorly, with convex, rounded lateral borders; anterolateral angles rounded, reflexed, serrate and slightly produced anteriorly, but not reaching fore border of collar. Lateral borders parallel at humeri, straight, strongly converging, reflexed and serrate anteriorly; lateral notch absent; hind border convex in middle, sinuate sublaterally. Fore disc with 2 (1+1) robust, high, granulate ridges, fused with 2 (1+1) smaller ridges laterally; median sulcus deep and narrow; interlobal depression deep and narrow. Hind disc strongly convex and roughly granulate.

Scutellum triangular, shorter than its basal width (25: 35); lateral borders carinate and slightly sinuate subapically; apex not raised. Median ridge robust, with parallel sides, granulate and evanescent posteriorly; disc roughly granulate.

Hemelytra reaching hind border of tergum VII; baso-lateral border of corium straight, reflexed; postero-lateral slightly sinuate; apical angle widely rounded, apical border deeply sinuate interiorly; veins with conspicuous granulation; membrane with ramified veins.

Abdomen with parallel sides from II to V, then rounded and converging. Connexivum relatively narrow; PE-angles II to VI not protruding, PE-VII rounded; discs of connexiva finely granulate. Paratergites small, reaching 3/4 of a large, posteriorly rounded hypopygium; the latter with median ridge not reaching tip of disc, flanked by 2 (1+1) depressions. Spiracles II to VIII ventral and not visible from above.

Venter with a row of fine, erect teeth along hind border of sternum IV (fig. 5), and with 2 small teeth in the 2nd row laterally. The counterpart is a tooth-like enlargement on hind femora interiorly (fig. 6).

Legs other legs unarmed.

Color: black; femora dark brown; tip of antennal segment IV, labium, trochanters, tibiae and tarsi, are yellow brown.

Total length 7.00 mm; width of pronotum 2.60 mm; width of abdomen 3.00 mm.

Holotype & (BISHOP 9758), NEW GUINEA, NE, East Highlands, Kainantu, 1500 m; 20.I.1966, J. & M. Sedlacek coll. (M. V. Light trap).

This new species is dedicated to the Bernice P. Bishop Museum, whose personnel have done outstanding collecting during last 20 years in South East Asia and all over the Pacific, which has significantly contributed to our knowledge of the Oriental and South Pacific fauna.

Strigocoris Usinger had 5 species distributed in the Tropical Africa, from Congo to Ghana, and Madagascar.

Genus Scironocoris Kormilev

Scironocoris Kormilev, 1957, The Philip. J. Sci. 85 (3): 401.

Scironocoris baliensis Kormilev, new species Fig. 8.

3. Elongate, with subparallel sides; granulate; brachypterous.

Head shorter than its width across eyes (31: 35); anterior process robust, cleft anteriorly, reaching beyond middle of antennal segment I; antenniferous tubercles strong, dentiform, slightly divaricating; eyes semiglobose, strongly protruding; postocular borders unarmed, converging. Vertex with 2 (1+1) fused, longitudinal rows of granules. Antennae strong; relative length of antennal segments I to IV: 15:11:17:-(IV is missing). Labium reaching base of head, labial groove open posteriorly.

Pronotum less than half as long as its maximum width (27:60); fore lobe narrower than hind lobe (50:60); collar thin, slightly sinuate anteriorly and granulate; fore borders sinuate laterad of collar; anterolateral angles slightly expanded and rounded, produced forward as far as collar; lateral borders of fore lobe parallel; lateral borders of hind lobe angularly raised; hind border sinuate in middle. Fore disc with 2 (1+1) high, round tubercles laterally; hind disc much shorter than fore disc medially (9:18), flat, granulate, raised laterally.

Scutellum triangular, shorter than its basal width (23:32); basal border bisinuate; lateral borders straight, tip rounded; disc granulate and strongly raised medially, forming a large hump.

Hemelytra reduced, without clavus and membrane; exterior borders convex and reflexed at base, then straight and converging; disc convex and granulate, reaching as far as scutellum.

Abdomen rectangular, longer than its maximum width across segment IV (83: 72); lateral borders parallel, hind border bisinuate and produced backward medially (hypopygium). Tergum I split into 2 (1+1) plates by the tip of scutellum and transversely raised. Central dorsal plate, consisting of terga II to VI, is slightly, transversely raised on tergum II, and longitudinally raised on tergum IV; tergum VII strongly raised posteriorly for the reception of hypopygium. Connexivum is relatively narrow; connexiva II and III fused, other separated; PE-II to V barely protruding, PE-VI more protruding, PE-VII forming rounded lobed, their lateral and posterior borders sinuate. Paratergites small, conical, reaching 1/2 of a semiglobose hypopygium. Spiracles II to VII ventral, distant from border, VIII terminal.

Metathoracic scentgland openings long, slightly curved, not visible from above.

Legs each femur with a strong tooth interiorly.

Color: sepia brown to black.

Total length 6.48 mm; width of pronotum 2.40 mm; width of abdomen 2.88 mm.

Holotype & (Bishop 9759), Bali I., Near Dadjan Danu; 29.III.1965, J. Winkler coll.

Scironocoris baliensis n. sp. runs in my key for Scironocoris species (1971: 26) to S. armigerus Kormilev, 1957, but differs from it by the distinctly cleft anterior process of the head, the head being shorter than its width across the eyes, and by the larger size.

Genus Chinessa Usinger and Matsuda

Chinessa Usinger and Matsuda, 1959, Classification of Aradidae; p. 269.

Chinessa wauensis Kormilev, new species Fig. 9-10.

& Elongate ovate, granulate.

Head longer than its width across eyes (32.5: 30); anterior process long, deeply cleft, genae parallel, or subparallel, pointed, sometimes bent downward, produced beyond tip of an-

tennal segment I; antenniferous tubercles dentiform, acute, divaricating; eyes semiglobose, protruding; postocular tubercles small, acute, or sometimes forming right angle, not reaching outer border of eyes. Vertex granulate. Antennae less than twice as long as width of head across eyes; relative length of antennal segments I to IV: 3-11.5:10.5:15:13, 9-13:13:18:15; labium reaching hind border of a shallow labial groove, which is open posteriorly.

Pronotum trapezoidal, without lobes, shorter than its maximum width $(3-28:68, \varphi-33:78)$; collar thin; anterior border laterad of collar straight and receding; antero-lateral angles forming an obtuse angle with rounded tip; lateral borders of fore lobe short, parallel; lateral borders of hind lobe parallel, converging anteriorly; fore disc with a median depression, and with 4(2+2) moderately large ridges laterad of it; hind disc roughly granulate and twice (1+1) depressed.

Scutellum shorter than its basal width (3-30:35, 9-37:46); lateral borders carinate; 2 (1+1) tubercles in baso-lateral angles: median ridge tapering posteriorly; disc roughly granulate.

Hemelytra reaching hind border (3), or fore border (9) of tergum VII; baso-lateral border of corium reflexed and slightly sinuate; apical angle acute, apical border twice sinuate.

Abdomen shorter than its maximum width across segment III (\Im -79:85, \Im -102:105); PE-angles II to VII forming progressively larger lobes; PE-VII produced backward beyond tip of paratergites and reaching tip of hypopygium (\Im), or slightly extending beyond tip of segment IX (\Im). Paratergites shorter than hypopygium, or segment IX. Hypopygium globose, shorter than its maximum width (15:18), deeply, transversely depressed along basal border; segment IX incised posteriorly. Spiracles II to VI ventral, placed far from border; VII ventral, but placed near border on a tubercle, and slightly visible from above; VIII terminal.

Color: black.

Total length: 3-6.84, 9-8.56 mm; width of pronotum: 3-2.72, 9-3.12 mm; width of abdomen: 3-3.24, 9-4.20 mm.

Holotype & (Bishop 9760), NEW GUINEA, NE, Wau, 1750 m; 18.V.1969, J. Sedlacek coll.

Allotype ♀ (Bishop), same locality, 14.V.1969, J. Sedlacek coll.

Paratypes: 10 강강 & 5 우우, New Guinea, NE, Wau, 1750 m, 14.V.-19.VI.1969, J. Sedlacek coll.; 4 강강 & 3 우우, N. Guinea, NE, Eloa R., 1050 m; 30 km S of Wau, 22-31.V. 1969, J. Sedlacek coll.; 4 강강 & 5 우우, N. Guinea, NE, Bulolo-Vatut, 700-800 m, 1-7.VI. 1969, J. Sedlacek coll.; 5 nymphs of various instars, Wau.

Chinessa wauensis n. sp. runs in my key for Chinessa species (1971:117) to C. ferox Kormilev, 1971, but is much smaller, the anterior process of head is more slender and shorter, and spiracles VII are sublateral and visible from above.

Genus Arbanatus Kormilev

Arbanatus Kormilev, 1955, Quart. J. Taiwan Mus. 8 (3): 180. Pictinellus Usinger & Matsuda, 1959, Class. Aradidae; p. 288.

Arbanatus antennatus Kormilev, new species Fig. 11.

9. Elongate, slightly widening posteriorly; head, antennae, pronotum, base of scutellum, terga VII and VIII, and femora, granulate and covered with extremely short bristles.

Head almost as long as its width across eyes (15: 15.5); anterior process constricted in middle and notched apically, reaching 3/5 of antennal segment I; antenniferous tubercles short, acute,

diverging; eyes semiglobose, protruding; postocular tubercles tiny, acute, not reaching outer border of eyes; vertex granulate; infraocular carinae with a row of granules. Antennae robust; relative length of antennal segments I to IV:7.5:4:7.5:8. Labium reaching hind border of labial groove, which is closed posteriorly.

Pronotum half as long as its maximum width (17: 33); collar granulate; antero-lateral angles produced forward beyond collar and widely rounded; lateral borders convex at humeri, strongly converging, reflexed and straight anteriorly; lateral notch absent; hind border widely sinuate. Fore disc depressed medially, obliquely raised lateral of depression and with 2 (1+1) granulate ridges sublaterally; interlobal depression deep; hind disc roughly granulate.

Scutellum long, almost as long as its basal width (16: 17); lateral borders sinuate subapically; tip angular; median ridge cruciform; disc granulate at base, transversely rugose posteriorly.

Hemelytra reaching fore border of tergum VII; baso-lateral borders of corium parallel, granulate, then converging in a sinuate line; apical angle of corium acute, apical border convex outside, sinuate inside; membrane wrinkled.

Abdomen elongate ovate, longer than its maximum width across segment IV (63: 37); lateral borders evenly convex; PE-angles not protruding, PE-VII rounded. Connexiva II and III semifused; discs of connexiva scabrous; tergum VII raised and deeply sinuate on hind border; tergum VIII more deeply sinuate posteriorly. Paratergites short, segment IX protruding, tricuspidate posteriorly. Spiracles II and VIII lateral, III to VII ventral and not visible from above.

Color: sepia brown; base of membrane lighter.

Total length 4.56 mm; width of pronotum 1.32 mm; width of abdomen 1.48 mm.

Holotype ♀ (BISHOP 9761), NEW GUINEA, NE, Ambunti, Sepik R., 150 m; 29.IV. 1963, R. Straatman coll.

Arbanatus antennatus n. sp. is related to A. subparallelus Kormilev, 1971, from New Britain and New Hebrides, but is slightly larger, the anterolateral angles of pronotum are rounded anteriorly, spiracles VII are ventral and not visible from above, the paratergites are shorter and segment IX is relatively longer.

Arbanatus angustus Kormilev, new species Fig. 12.

우. Elongate; head, pronotum and scutellum finely granulate.

Head almost as long as its width across eyes (12.5:13); anterior process slightly constricted in middle, subtruncate apically, reaching 1/2 of antennal segment I; antenniferous tubercles short, acute, divaricating; eyes moderately protruding; postocular borders rounded; vertex raised medially, and granulate. Antennae twice as long as width of head across eyes (26:13); relative length of antennal segments I to IV: 6.5:4.5:7.5:7.5. Labium reaching hind border of labial groove.

Pronotum half as long as its maximum width (14:28); antero-lateral angles angularly produced forward far beyond collar and rounded apically; lateral borders of fore lobe convex, rounded; interlobal notch shallow, but distinct; lateral borders of hind lobe subparallel at humeri converging anteriorly. Fore disc with thin median sulcus, flanked by 2 (1+1) longitudinal ridges sublaterally; hind disc granulate.

Scutellum as long as its basal width (15:15); all borders carinate; tip narrowly rounded; disc with a thin median carina, transversely rugose laterad of it.

Hemelytra reaching fore border of tergum VII; corium and clavus finely, transversely rugose

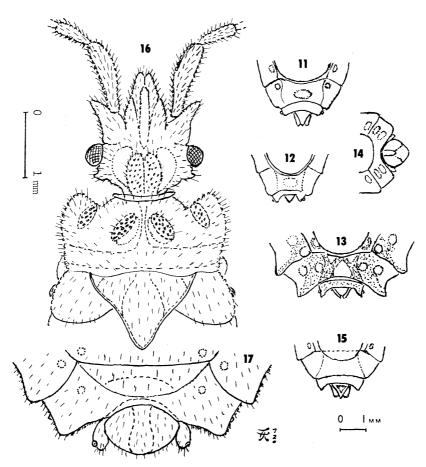


Fig. 11-17. 11, Arbanatus antennatus n. sp., \mathcal{P} , tip of abdomen from above; 12, Arbanatus angustus n. sp., \mathcal{P} , tip of abdomen from above; 13, Arictus gamma n. sp., \mathcal{P} , tip of abdomen from above; 14, Mezira (Zemira) modesta n. sp., \mathcal{E} , tip of abdomen from above; 15, same, \mathcal{P} , tip of abdomen from above; 16, Mezira (M.) sinensis n. sp., \mathcal{E} , head, pronotum, scutellum and wing pads; 17, same, tip of abdomen from above.

between veins; baso-lateral borders of corium straight, parallel, then converging; apical angle rounded, apical border convex exteriorly, sinuate interiorly; membrane with few, diverging veins.

Abdomen elongate ovate, longer than its maximum width across segment V (56: 31); lateral borders slightly convex, rounded; PE-angles II to IV not protruding, V very slightly protruding, VI more protruding, and VII rounded; exterior borders of connexiva II to VI straight, VII slightly sinuate; connexiva II and III fused. Paratergites as large as segment IX, subtriangular, reaching tip of the latter; segment IX triangular, so that tip of abdomen looks tricuspidate. Spiracles II and VIII lateral and visible from above, III to VII ventral and not visible from above.

Color: brown; antennae, labium, connexivum and legs, reddish brown; membrane black, whitish at base.

Total length 4.00 mm; width of pronotum 1.12 mm; width of abdomen 1.24 mm.

Holotype Q (BISHOP 9762), NEW GUINEA, NE, Wau, 1750 m; 11.VIII.1965, J. & M. Sedlacek coll.

Arbanatus angustus n. sp. is related to A. longicornis Kormilev, 1971, from New Guinea and Solomon Is., but is smaller, with the triangular paratergites as long as the triangular segment IX.

Genus Arictus Stål

Arictus Stål, 1865, Hemiptera Africana 3: 31.

Arictus gamma Kormilev, new species Fig. 13.

9. Elongate ovate; partially covered with wooly, curled hairs; granulate.

Head longer than its width across eyes (52.5: 48); anterior process robust, reaching 1/2 of antennal segment I; antenniferous tubercles long, acute, reaching basal 1/3 of antennal segment I; eyes almost globose, strongly protruding; postocular spines strong, curved, produced far beyond outer borders of eyes; postocular borders behind them rounded and converging. Vertex raised and densely granulate. Antennae more than twice as long as width of head across eyes (102: 48); relative length of antennal segments I to IV: 32: 16: 36: 18. Labium reaching hind border of labial groove, which is closed posteriorly.

Pronotum less than half as long as its maximum width across humeri (50: 110); fore lobe only slightly narrower than hind lobe (108: 110); collar deeply sinuate anteriorly; anterior angles small, concealed under wooly hairs; antero-lateral angles produced as large, rounded lobes; interlobal notch very deep, rounded; humeri also rounded. Fore lobe transversely raised in middle, woolly hairs forming M-shaped pattern; sublateral ridges high, covered with woolly hairs; hind disc raised at humeri.

Scutellum shorter than its basal width (55: 70); baso-lateral angles with 2 (1+1) tubercles, covered with woolly hairs; median ridge cleft anteriorly and overlaps hind border of pronotum; tip narrowly rounded, disc transversely rugose.

Hemelytra reaching hind border of tergum VI; baso-lateral borders of corium roundly expanded, reflexed and carinate, produced beyond outer border of pronotum, then straight and converging; apical angle of corium acute; apical border deeply, angularly notched; veins of corium with woolly hairs.

Abdomen shorter than its maximum width across segment IV (150: 158); lateral borders convex, rounded; PÈ-angles II to VI progressively more protruding, VII produced obliquely backwards as triangular, acute lobes; their exterior border almost straight, and interior convex, tip reaching tips of paratergites and segment IX. Connexiva roundly raised at postero-interior angle, with a zig-zag pattern of woolly hairs on disc. Midlateral glabrous areas depressed on fore half and raised on hind half of each segment, raised portion with woolly hairs. Spiracles II to VII ventral, placed far from border; VIII lateral and visible from above.

Color: dark brown; woolly hairs rusty.

Total length 12.28 mm; width of pronotum 4.40 mm; width of abdomen 6.32 mm.

Holotype Q (BISHOP 9763), NEW GUINEA, SE, Milne Bay, 14-28.II.1969, J. Sedlacek coll.

Arictus gamma n. sp. is the largest known species of the genus Arictus Stål. It is related to A. beta (Kormilev), 1955, to which it runs in my key for Arictus species (1971: 106), but may be separated from it by the strong postocular tubercles, produced far beyond outer borders of eyes; by longer PE-VII, reaching the tips of the paratergites and segment IX, and by the different proportions of the antennal segments.

Genus Mezira Amyot and Serville

Mezira Amyot and Serville, 1843, Hémiptères, p. 305. Brachyrhynchus Laporte, 1832, in Guerin, Mag. Zool. 2: 54. Dusius Bergroth, 1894, Ent. Tidskr. 15: 104.

Brachyrhynchus Laporte was preoccupied in the Coleoptera and Aves.

Mezira (M.) sinensis Kormilev, new species Fig. 16-17.

3. Elongate ovate; roughly granulate on head, antennae, pronotum and legs; covered with sparse, erect, stiff bristles. Brachypterous.

Head shorter than its width across eyes (43:46); anterior process robust, tapering and incised anteriorly, reaching 3/5 of antennal segment I; antenniferous tubercles dentiform, acute, divaricating; eyes protruding; postocular tubercles small, dentiform, placed at a distance from eyes, and not reaching outer border of the latter. Vertex raised medially and granulate. Antennae strong, relative length of antennal segments I to IV: 28: 15:-:-(III and IV are missing). Labium reaching hind border of head, labial groove open posteriorly.

Pronotum less than half as long as its maximum width (30:70); fore lobe wider than hind lobe (70:68). Collar thin, granulate; antero-lateral angles rounded and directed anteriorly, reaching fore border of collar; lateral borders straight at humeri, convex on fore lobe, granulate; hind border sinuate medially. Fore lobe with 4 (2+2) granulate ridges and a thin median sulcus; interlobal depresson shallow; interlobal notch absent. Hind lobe abbreviated, shorter than fore lobe; thin sulcus extending along hind border.

Scutellum shorter than its basal width (15: 20); lateral borders finely carinate and sinuate in middle; disc raised medially forming a hump.

Hemelytra abbreviated, reaching 2/3 of scutellum; clavus not discernible, membrane absent; disc granulate.

Abdomen longer than its maximum width across segment IV (120: 103); lateral borders convex and granulate; PE-angles of connexiva II to IV not protruding, V slightly protruding, VI more protruding, VII angularly rounded, not reaching tip of paratergites. Tergum I transversely raised and fused with metanotum anteriorly; central dorsal plate consisting of terga II to VI is raised medially and separated from terga I and VII by thin, but deep sulci; it is semifused laterally with connexivum; terga II to VI separated from each other by thin carinae, each segment bearing 4 (2+2) round callous spots; tergum VII raised posteriorly for reception of a large, subglobose hypopygium. Paratergites clavate, almost reaching tip of the latter; hypopygium with a stout, but low median ridge constricted near base Spiracles II to VI ventral, placed far from border, VII sublateral and slightly visible from above, VIII lateral.

Metathoracic scent gland openings thin, elongate, their upper borders slightly visible from above

Legs roughly granulate, but unarmed.

Color: dark brown.

Total length 9.20 mm; width of pronotum 2.80 mm; width of abdomen 4.12 mm.

Holotype & (AMNH), CHINA, Anhwei, Taipingshien; X.1932, G. Liu coll.

Paratopotype: 1 δ , collected with holotype (collection of the author).

Mezira sinensis n. sp. is distantly related to other known species. It is somewhat similar to Mezira (Zemira) hispida Kormilev, 1971, from Borneo, but belongs to Mezira s. str., not to Zemira Kormilev, 1971. Because of its brachypterism, resulting in reduction of the hind lobe of pronotum, it is difficult to place it more closely systematically.

Subgenus Zemira Kormilev

Zemira Kormilev, 1971, Pacif. Ins. Monogr. 26: 31.

Mezira (Zemira) modesta Kormilev, new species Fig. 14-15.

- 3. Closely related to M. (Z) subtriangula Kormilev, 1957, but much smaller, and relatively narrower; 3 distinctly widening posteriorly, maximum width across segment VI. Granulation of the body finer, partially blurred not so conspicuously as in M. subtriangula. Hypopygium of the 3 relatively longer, ratio length: width as 5:6 (in M. subtriangula 3:4); median ridge with subparallel borders, reaching 1/2 of disc (ovate, reaching 3/4 M. subtriangula).
- 9. Abdomen with almost parallel sides, maximum width across segment IV, paratergites triangular with blunt tips, reaching 1/3-1/2 of segment IX (in *M. subtriangula* abdomen widens posteriorly, paratergites relatively shorter and rounded apically).

Measurements: head 3-30:35, 9-34:39; relative length of antennal segments I to IV: 3-14:15:14:15, 9-15:17:15:18, but in Mezira (Zemira) species relative length of antennal segments rather variable; pronotum 3-29:63, 9-40:75; scutellum 3-32:35, 9-40:41; abdomen 3-102:78, across segment VI, 9-122:85, across segment IV; hypopygium 25:30.

Color: ferrugineous, membrane black.

Total length: 3-7.88, 9-9.28 mm; width of pronotum: 3-2.52, 9-3.00 mm; width of abdomen: 3-3.12, 9-3.40 mm.

Holotype & (BISHOP 9764), NEW GUINEA, NE, May R. Patrol Sta., 250 m; 3.VI. 1963, R. Straatman coll. (Dry forest).

Allotopotype ♀ (Bishop), collected with holotype.

Paratopotypes: 1 ♂ & 1 ♀, collected with holotype; 2 우우, same locality and collector, 6.VI.1963. (BISHOP & author's collection).

REFERENCE

Kormilev, N. A. 1971. Mezirinae of the Oriental Region and South Pacific (Hemiptera-Heteroptera: Aradidae); *Pacif. Ins. Monogr.* 26: 1-165.