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New species of Chrysomelidae (Coleoptera) from Sulawesi

by **Lev N. Medvedev**

Abstract. 23 new species are described: *Pseudocrioceris nigripennis* (Criocerinae), *Aulexis bosi*, *Pagellia quadrimaculata*, *Cleorina bosi*, *C. buechei*, *C. gorbunovi*, *C. sulawensis*, *C. punctipleuris*, *C. fulvicornis*, *C. verrucosa*, *Colaspoides sulawensis*, *C. buechei* (Eumolpinae), *Hyphaenia sulawesiana* (Galerucinae), *Clavicornaltica buechei*, *Aphthona carinipennis*, *Trachyaphthona sulawesiana*, *Chabria bosi*, *C. nigroviolacea*, *Erystus gorbunovi*, *Manobia rectisulcata*, *M. buechei*, *M. sulawesiana*, *M. torayana* (Alticinae) spp.nov. Keys for the genera *Cleorina* Lefèvre, 1885 and *Manobia* Jacoby, 1885 are given.

Key words. Coleoptera – Chrysomelidae – Sulawesi – new species – keys

Introduction

The chrysomelid fauna of Sulawesi is still rather poorly studied when compared with that of neighbouring islands. It is not surprising, therefore, that 23 new species were found in the comparatively small body of material in my hands.

The majority of the material described below, which I received from Dr. Boris Büche (Berlin), was collected by fogging the lower canopy within a 3-km radius centred upon the village of Toro, Donggala district in Central Sulawesi Province, 120 km. S of Palu, on and around cacao plantations. Digital images of this material are available on http://www.beetle-diversity.com.

An additional small amount of material was collected this year in Sulawesi Utara by my colleague Dr. Oleg Gorbunov.

Material

All holotypes from Dr. Büche's material are deposited in the Naturhistorisches Museum in Basel (NHMB), while other types are divided between NHMB, the Zoological Museum Bogor/Cibinang, Indonesia (MZB) and the author's collection (LM).

Taxonomy

Pseudocrioceris nigripennis sp.nov.

Material examined. Holotype (male): Indonesia, Central Sulawesi, W. Lore Lindu NP, 120 km. S of Palu, 800–1000 m, 30.XII.2003, *Theobroma cacao*, under forest remnants, leg. M. M. Bos (NHMB).

Description. Red-fulvous, antennae except basal segment, elytra and tarsi black.

Clypeus convex, finely punctate, not pubescent. Vertex nearly impunctate, frontal grooves deep, divergent at an angle of about 70°. Antennae thickened and pubescent

from the 5th segment onwards, proportions: 13–7–13–13–16–14–14–14 (following segments absent), segments 6–8 about 1.15–1.2 times as long as wide. Prothorax 1.2 times as wide as long, with side margins rounded and very feebly constricted before base, surface impunctate except for two parallel rows of sparse, feeble punctures in middle. Scutellum triangular with acute apex. Elytra 1.4 times as long as wide, almost parallel-sided and broadly rounded at apices, surface without basal convexity, with regular uniform rows of punctures and flat interspaces, scutellar rows short, with 9 or 10 punctures. Metasternum bare except for pubescent pleurae. Aedeagus (Fig. 1) with triangular apex.

Length of body 8.5 mm.

Differential diagnosis. Differs well from the single Oriental species of the genus, *P. discoideus* Guerin, 1844, known from Java, in clypeus not pubescent and more convex, basal segment of antennae red, elytra black and entirely without any metallic lustre, femora and tibiae entirely reddish-fulvous, elytra broader and size larger.

Aulexis bosi sp.nov.

Material examined. Holotype (male): Indonesia, Central Sulawesi, Kab. Donggola Toro (1°30′S, 120°2′E), 750–1000 m, 5.V.2005, natural forest, understorey tree, leg. M.Bos (NHMB). Paratypes: Indonesia, Central Sulawesi, Kab. Donggola Toro (1°30′S, 120°2′E), 750–1000 m, cacao plantation (off cacao trees), 19.IV.2005, leg. M. Bos, 2 females (MZB, LM); – Indonesia, Central Sulawesi, W. Lore Lindu NP, 120 km. S of Palu, 800–1000 m, 27.IV.2005, natural forest, understorey tree, leg. M. M. Bos 1 male (LM); – Indonesia, Central Sulawesi, W. Lore Lindu NP, 120 km. S of Palu, 800–1000 m, 30.XII.2003, cacao, plantation, under forest remnants, leg. M. M. Bos, 1 female (MZB).

Description. Reddish-fulvous, elytra usually a little paler than head and prothorax, pubescence of upperside light.

Body elongate. Head finely and densely punctate except clypeus, which is nearly smooth, lustrous, quadrangularly excavate on anterior margin. Antennae reach middle of elytra, proportions of segments: 10–6–11–12–12–11–15–11–11–11–14, preapical segments slightly thickened, about 3 times as long as wide. Prothorax 1.5 times as wide as long, side margins with rather large, obtuse tubercle near middle, but without lateral teeth, surface with dense, fine punctures, dense erect and suberect hairs of more or less equal length and oblique impression on each side before hind angles. Scutellum triangular with obtuse apex. Elytra 1.6 times as long as wide, slightly widened posteriad, surface finely and densely punctate, with rather dense, short, semi-erect hairs and sparser long, erect hairs. Segment 1 of fore-tarsi not widened in male. Aedeagus with apical half cuneal, base very thick and broad (Fig. 2).

Length of male 4.5–4.7 mm, female 4.5–5.3 mm.

Derivatio nominis. The species is named after its collector.

Differential diagnosis Near *A. pallida* Lefèvre, 1887 from Sumatra, but latter species is smaller (4 mm), pale flavous, with sides of prothorax distinctly tridentate.

Pagellia quadrimaculata sp.nov.

Material examined. Holotype (male): Indonesia, Central Sulawesi, W Lore Linda NP, 120km. S of Palu, 800–1000 m, 19.IV.2005, cacao plantation, under forest remnants, leg. M. M. Bos (NHMB). Paratypes: Indonesia, Central Sulawesi, Kab. Dorggala, Toro, 1°30′S, 120°02′E, 750–1000 m, 19.IV.2005, cacao plantation, leg. M. M. Bos, 2 females (MZB, LM); same locality, 28.XII.2003, leg. M. M. Bos, 1 male (LM). Species determined by C. Reid as *Pagria* sp.

Description. Red-fulvous, middle of prothorax darker, rust-red, elytra with basal convexity pale fulvous, each with two black spots: one on humerus, the other just behind postbasal impression, equidistant from lateral and sutural margin (Fig. 12).

Head with strong and moderately dense punctures, frontoclypeus microsculptured, vertex divided from frontoclypeus by shallow impression, ocular grooves very deep and sharply delimited, impunctate in the trough. Proportions of antennal segments: 7–5–7–8–8–9–10–10–9–9–12, preapical segments about 3 times as long as wide. Prothorax 1.35 times as wide as long, broadest before base, strongly narrowed at the front, surface convex, with very dense longitudinal punctures, almost strigose; with narrow smooth (impunctate) strip along base. Scutellum trapeziform with rounded apex, microsculptured, impressed at centre. Elytra 1.2 times as long as wide, with feeble basal convexity and postbasal impression, with regular rows and costate interspaces, especially laterally. Propleurae impunctate, finely microsculptured. Femora not toothed below. Aedeagus (Fig. 3) with rounded-triangular apex, concave on underside.

Length of male 3.5–3.8 mm, female 4.0–4.1 mm.

Differential diagnosis. Genus *Pagellia* Lefèvre, 1885 includes 6 species, all from the Philippines. The species in question is very alike at *P. signata* Weise, 1913, but the elytral costate interspaces of rows are much less convex, not acute, and the black elytral pattern is strongly reduced. Aedeagi of both species are practically identical in form, but the underside of the *P. signata* aedeagus is flat, while in the new species it is distinctly concave.

Cleorina bosi sp.nov.

Material examined. Holotype (male): Indonesia, Central Sulawesi, Kab. Dorggala, Toro, 1°30′S, 120°02′E, 750–1000 m, 26.IV.2005, cacao plantation, leg. M.M.Bos (NHMB). Paratypes: same locality, 14.XI.2004, 1 male (LM),10.II.2004, 1 male, 1 female (MZB), 4.v.2005, 1 male (MZB), Palu, 4.v.2005, 1 female (LM).

Description. Black; 3 to 5 basal segments of antennae, labrum and palpi fulvous, tarsi dark fulvous.

Head lustrous, with large punctures, anterior margin of clypeus with feebly angulate emargination. Antennae reach middle of elytra, proportions of segments: 7–4–6–5–7–7–7–7–5–4–6, preapical segments about 3 times as long as wide. Prothorax 1.8 times as wide as long, broadest before base, strongly and closely punctate, interspaces narrow, partly convex, lustrous; anterior collar sharply delimited, not punctate. Scutellum triangular with rounded apex, smooth.

Elytra 1.1 times as long as wide, with feeble basal convexity and regular rows of punctures, which are mostly smaller than on prothorax and very feeble on basal convexity and apical slope. Propleurae lustrous, without punctures, with straight anterior margin. Metasternum impunctate, lustrous. Aedeagus (Fig. 5) with truncate apex, concave on underside.

Length of body 2.6–3.0 mm.

Derivatio nominis. The species is named after its collector.

Differential diagnosis. Near *C. fulvipes* Lefèvre, 1890, differs in black legs and dark fulvous tarsi, strongly punctate prothorax and truncate apex of aedeagus.

Cleorina buechei sp.nov.

Material examined. Holotype (male): Indonesia, Central Sulawesi, W Lore Linda NP, 120km. S of Palu, 800–1000 m, 27.XII.2003, cacao plantation, under forest remnants, leg. M. M. Bos (NHMB). Paratype (female): Indonesia, Central Sulawesi, Kab. Dorggala, Toro, 1°30′S, 120°02′E, 750–1000 m, 4.V.2005, cacao plantation, leg. M. M. Bos,1 female (LM).

Description. Black; antennae, all palpi and labrum fulvous, tarsi dark fulvous, female with very feeble metallic sheen on elytra.

Head lustrous, with large, moderately dense punctures. Anterior margin of clypeus feebly angular- emarginate. Antennae reach anterior third of elytra, proportions of segments: 7–6–6–7–7–7–7–7–7–7–9, preapical segments about 2.5 times as long as wide. Prothorax 1.8 times as wide as long, broadest before base, surface lustrous, with strong punctures, dense at the sides and sparse towards centre, anterior collar sharply delimited, without punctures. Scutellum trapeziform with rounded apex, smooth. Elytra 1.2 times as long as wide, lustrous, with distinct basal convexity, and with regular rows of punctures that are moderately large in middle part, especially on postbasal impression and very fine on basal convexity and apical slope; interspaces flat. Propleurae with feebly convex anterior margin, microsculptured, impunctate (except a few punctures), slightly rugose. Metasternum impunctate. Apex of aedeagus narrowly rounded, almost cuneal, not decurved downwards, underside lacks impression (Fig. 6).

Length of body 2.9–3.3 mm.

Derivatio nominis. The species is named after Dr. B. Büche, who provided me with this interesting material.

Differential diagnosis. Resembles *C. gestroi* Jacoby, 1896, from Sumatra in elytral sculpture, but differs in almost completely black upperside, fulvous antennae and smaller size.

Biology. Several specimens were observed feeding on *Rubus moluccana* (Rosaceae) (Büche, *in lit.*).

Cleorina gorbunovi sp.nov.

Material examined. Holotype (male): Indonesia, Sulawesi Utara, Tomohon, Kakaskesen Dua, 1°22′N, 124°51′E, 15–16.IV.2008, leg. O. Gorbunov (LM). Paratypes: same locality, 2 males, 4 females (LM; 2 ex. – NHMB).

Description. Head and upperside metallic dark blue, antennae black with 5 basal segments fulvous, maxillar and labial palpi fulvous, labrum and mandibles, except apices, reddish, underside and legs black.

Head lustrous, finely and sparsely punctate. Anterior margin of clypeus feebly arcuate. Antennae almost reach middle of elytra, proportions of segments: 7–5–6–6–6–6–6–6–6–6–9, preapical segments about 3 times as long as wide. Prothorax 1.7 times as wide as long, broadest before base, surface lustrous with moderately strong punctures, not dense, interspaces flat, anterior collar sharply delimited, impunctate. Scutellum triangular with rounded apex, impunctate. Elytra 1.15 times as long as wide, with very feeble basal convexity and regular rows of punctures that are everywhere distinct; the punctures in rows are much larger than these on prothorax, interspaces flat and lustrous. Propleurae convex at anterior margin, with dense microsculpture, but without punctures. Metasternum densely punctate on sides, almost smooth in middle. Hind femora with small, acute tooth below. Apex of aedeagus rounded with acute tip (Fig. 7), not decurved downwards, underside with shallow impression which has a feeble longitudinal ridge.

Length of body 2.7–3.2mm.

Derivatio nominis. The species is named after its collector.

Differential diagnosis. Near *C. buechei* sp.nov., distinguished by different colour of antennae, metallic colour of upperside, distinctly punctate sides of metasternum and different form of aedeagus.

Cleorina sulawensis sp.nov.

Material examined. Holotype (male): Indonesia, Sulawesi Utara, Tomohon, Kakaskesen Dua, 1°22′N, 124°51′E, 15–16.IV.2008, leg. O. Gorbunov (LM). Paratype: same locality, 1 female (LM).

Description. Bronze (holotype) or green (paratype), antennae black with 3 basal segments fulvous, maxillar and labial palpi fulvous with black apical segment, labrum black or piceous, underside and legs black with feeble metallic lustre.

Head strongly and densely punctate, anterior margin of clypeus with angular emargination. Antennae almost reach middle of elytra, proportions of segments: 8–7–7–7–7–8–8–7–7–6–10, preapical segments about 2.5 times as long as wide. Prothorax 1.8 times as wide as long, broadest beyond centre, surface lustrous, strongly and densely punctate, interspaces flat, anterior collar interrupted at centre, impunctate. Scutellum triangular with rounded apex, impunctate. Elytra 1.15 times as long as wide, with distinct basal convexity and regular rows of rather strong punctures, more feeble on basal convexity and apical slope and with curved short ridge behind humerus, interspaces flat and lustrous. Propleurae with dense punctures and impunctate space near hind angles. Metasternum impunctate, lustrous. Aedeagus with triangular apex, ridged on underside (Fig. 8).

Length of body 3.4–3.7 mm.

Differential diagnosis. Difference from the nearest species given in the key below.

Cleorina punctipleuris sp.nov.

Material examined. Holotype (male): Indonesia, Sulawesi Utara, Tomohon, Kakaskesen Dua, 1°22′N, 124°51′E, 15–16.IV.2008, leg. O. Gorbunov (LM).

Description. Dark metallic green, antennae black with 4 basal segments fulvous, maxillar and labial palpi fulvous, labrum piceous, underside black with feeble metallic lustre.

Head strongly punctate, with microsculptured interspaces. Anterior margin of clypeus arcuately emarginate. Antennae reach middle of elytra, proportions of segments: 9–9–10–10–10–10–10–9–9–9–11, preapical segments about 3 times as long as wide. Prothorax 1.5 times as wide as long, broadest beyond centre, with side margins distinctly rounded, surface lustrous, strongly punctate, interspaces flat, anterior collar sharply delimited, with a few punctures. Scutellum triangular with rounded apex, impunctate. Elytra 1.25 times as long as wide, with distinct basal convexity and regular rows of punctures, which are moderately strong behind basal convexity and feeble actually upon it beyond centre. Propleurae straight on anterior margin, microsculptured, with punctured stripe in middle and impunctate space along side margin. Metasternum finely microsculptured and with a few fine punctures on sides. Apex of aedeagus decurved downwards, rounded, with acute extreme tip, underside with large shallow impression (Fig. 9).

Length of body 3.6mm.

Differential diagnosis. Difference from the nearest species given in the key below.

Cleorina fulvicornis sp.nov.

Material examined. Holotype (female): Indonesia, Central Sulawesi, W Lore Linda NP, 120km. S of Palu, 800–1000 m, 18.IV.2005, cacao plantation, under forest remnants, leg. M. M. Bos (NHMB).
Paratype: Indonesia, Central Sulawesi, Kab. Dorggala, Toro, 1°30′S, 120°02′E, 750–1000 m, 4.V.2005, cacao plantation, leg. M. M. Bos,, 1 female (LM).

Description. Black; antennae, maxillar and labial palpi fulvous, labrum and mandibles except apices reddish-fulvous, tarsi piceous to dark fulvous.

Head microsculptured, strongly and densely punctate, anterior margin of clypeus angularly emarginate. Antennae almost reach middle of elytra, proportions of segments: 10–10–9–9–9–9–9–9–9–9–10, preapical segments about 2.5 times as long as wide. Prothorax 1.7 times as wide as long, broadest before base, strongly and densely punctate, with a few punctures elongated to a greater or lesser extent, interspaces narrow, lustrous, partly convex, anterior collar interrupted at centre, impunctate. Elytra 1.15 times as long as wide, with very feeble basal convexity and regular rows of moderately strong punctures, which are everywhere distinct, interspaces lustrous, mostly flat; there is also a short, curved ridge behind the humerus. Propleurae with straight anterior margin, not microsculptured, with glabrous space near hind angles. Metasternum lustrous, smooth in middle, punctate at sides.

Length of body 3.6–3.7 mm (female). Male unknown.

Differential diagnosis. Very near to *C. sulawensis* sp.nov., but upperside without metallic lustre, antennae, maxillar palpi and labrum fulvous, metasternum punctate on sides, sculpture of prothorax and elytra different.

Cleorina verrucosa sp.nov.

Material examined. Holotype (female): Indonesia, Sulawesi Utara, Tomohon, Kakaskesen Dua, 1°22´N, 124°51´E, 15–16.IV.2008, leg. O. Gorbunov (LM).

Description. Lustrous black; two basal antennal segments fulvous below, maxillar palpi fulvous with black apical segment, labrum black.

Head strongly punctate, with microsculptured interspaces. Anterior margin of clypeus arcuately emarginate. Antennae almost reach middle of elytra, proportions of segments: 9–7–8–8–10–9–9–8–8–7–9, preapical segments about 2.5 times as long as wide. Prothorax 1.7 times as wide as long, broadest before base, with side margin feebly rounded, surface lustrous, strongly and deeply punctate, with interspaces narrow, convex and partly longitudinally strigose, anterior collar sharply delimited, with a few punctures. Scutellum pentagonal, practically impunctate. Elytra 1.2 times as long as wide, very roughly sculptured, without distinct punctures, but with rounded and elongate tubercles and elevations. Propleurae punctate, with straight anterior margin. Metasternum punctate, lustrous.

Length of body 3.8 mm.

Differential diagnosis. Differs well from all species of the genus in its roughly sculptured and verrucose elytra.

Key to the Sulawesian species of *Cleorina* Lefèvre, 1885

1(8) Propleurae not punctate or sometimes with a few punctures near base. Labrum fulvous. Collar of prothorax sharp. Maxillar palpi fulvous (sometimes extreme apex of last segment darkened in *C. buechei*).

2(5) Propleurae without microsculpture, lustrous, with straight anterior margin. Metasternum not punctate. Anterior margin of clypeus broadly angulate.

3(4) Legs fulvous. Antennae fulvous or with darkened apical segments. Prothorax finely punctate. Apex of aedeagus rounded (Fig. 4). Length 3.0–3.5 mm ..... ***C. fulvipes* Lefèvre, 1890**

4(3) Legs black with dark fulvous tarsi. Antennae black with 2 to 4 basal segments fulvous. Prothorax strongly and densely punctate. Apex of aedeagus truncate (Fig.5). Length 2.6–3.0 mm. ..... ***C. bosi* sp.nov**.

5(2) Propleurae dull with fine microsculpture and more or less convex anterior margin. Legs black, often with dark fulvous tarsi.

6(7) Antennae entirely fulvous. Metasternum impunctate. Anterior margin of clypeus feebly angulate. Prothorax with fine punctures at centre and dense ones on sides. Apex of aedeagus rounded (Fig. 6). Hind femora not toothed. Length 2.9–3.3 mm. ..... ***C. buechei*** **sp.nov.**

7(6) Antennae black with fulvous basal segments (mostly 5). Metasternum distinctly punctate at sides. Anterior margin of clypeus feebly arcuate. Prothorax finely punctate. Apex of aedeagus rounded with acute tip (Fig. 7). Hind femora with small acute tooth. Length 2.7–3.2 mm. .... ***C. gorbunovi*** **sp.nov.**

8(1) Propleurae distinctly punctate, with straight anterior margin.

9(14) Elytra with regular rows of punctures.

10(11) Apical segment of maxillar palpi black. Antennae black with 3 basal segments fulvous. Collar sulcus on prothorax interrupted at centre, collar without punctures. Upperside metallic blue. Legs black or dark metallic blue. Sides of metathorax without punctures. Aedeagus with specific sculpture on underside (Fig. 8). 3.4–3.7 mm. .... ***C. sulawensis*** **sp.nov**.

11(10) Apical segment of maxillar palpi fulvous. Collar of prothorax with punctures. Sides of metathorax at least finely punctate.

12(13) Antennae black with 4 basal segments fulvous. Upperside metallic green. Collar sulcus on prothorax entire. Metathorax with a few fine punctures on sides. Aedeagus slightly concave on underside (Fig. 9). Length 3.7 mm. ... . ***C. punctipleuris*** **sp.nov**.

13(12) Antennae fulvous, apical segments slightly darkened. Upperside black with feeble metallic lustre. Collar sulcus on prothorax interrupted at centre. Metathorax distinctly punctate on sides. Male unknown. Length 3.6–3.7 mm. ..... ***C. fulvicornis*** **sp.nov**.

14(9) Elytra verrucose, with rounded and elongate tubercles, rows of punctures distinct only on apical slope and partly along suture. Upperside black with very feeble metallic sheen, antennae black with 2 basal segments fulvous, apical segment of maxillar palpi black. Collar sulcus on prothorax entire, collar with punctures. Sides of metathorax punctate. Male unknown. Length 3.8 mm. ..... ***C. verrucosa*** **sp.nov**.

Colaspoides sulawensis sp.nov.

Material examined. Holotype (male): Indonesia, Central Sulawesi, Kab. Donggola Toro (1°30′S, 120°2′E), 750–1000 m, cacao plantation (off cacao-trees), 4.XI.2004, leg. M. Bos (NHMB). Paratypes: same locality and date, 2 males , 3 females (MZB, 1ex. – NHMB, , 2 ex.– LM).

Description. Metallic green with fulvous labrum, antennae black with fulvous basal segments, but segment 1 more or less metallic above, legs dark metallic, upperside of abdomen soft and fulvous.

Male. Body broadly ovate, broadest at shoulders. Clypeus finely punctate, with almost straight margin, frons and vertex more strongly and densely punctate, with longitudinal groove on vertex. Antennae thin, segments 3–11 subequal, segment 9 about 3 times as long as wide. Prothorax widest near centre, very distinctly narrowed at the front, with all angles acute, surface strongly and densely punctate. Elytra 1.55 times as long as wide, with very feeble basal convexity, strongly and densely punctate, with regular rows just beyond centre and 3 outermost interspaces distinctly convex. Furrow of pygidium widened basally, without ridge along the bottom. Propleurae impunctate, lustrous. Abdominal sternites 2 and 3 with brushes of erect bristles, sternite 4 not serrate at the sides, sternite 5 feebly undulate at the sides, with straight hind margin. Femora not toothed. Segment 1 of fore- and mid-tarsi strongly widened. Aedeagus with truncate apex bearing a short, acute tooth at centre; underside feebly sclerotized except rather narrow apical area (Fig. 10).

Female. Abdominal segments without bristles, segment 1 of fore- and mid-tarsi not widened. Spermatheca C-shaped with long, thin ductus, not spiralled (Fig. 13).

Length of male 4.9–5.3mm., of female 4.7–5.9 mm.

Differential diagnosis. This species belongs to group 6 (MEDVEDEV 1993a), having brushes and/or armament on abdomen of male. To date, this entire group has only been known in the continental fauna. The species in question differs well from all continental species in having metallic coloured legs and truncate apex of aedeagus.

Colaspoides buechei sp.nov.

Material examined. Holotype (male): Indonesia, Central Sulawesi, W Lore Linda NP, 120km. S of Palu, 800–1000 m, 25.IV.2005, cacao plantation, under leguminous cover, leg. M. M. Bos (NHMB).

Description. Metallic green; mouthparts, anterior margin of clypeus, upperside of abdomen including pygidium and legs fulvous, antennae black with 6 basal segments fulvous.

Body elongate-ovate, elytra except apical third parallel-sided. Head lustrous, finely and sparsely punctate, especially on clypeus and vertex, anterior margin of clypeus feebly incised. Antennae thin, reach apical slope of elytra, segments 3–11 subequal, 7–11 slightly thickened, segment 9 about 4 times as long as wide. Prothorax 1.8 times as wide as long, widest beyond centre, moderately narrowed towards the front, fore-angles obtuse, hind angles acute, surface lustrous, finely and sparsely punctate. Elytra 1.45 times as long as wide, with very feeble, hardly distinct basal convexity, strongly and densely punctate, especially on sides, with more or less regular rows beyond centre and on sides, lateral interspaces strongly convex, almost costate. Furrow of pygidium widened basally, with thin ridge along the bottom. Propleurae impunctate, lustrous. Abdominal sternites of male without any modifications. Sternites 1, 4 and 5 feebly serrate at the sides. Femora not toothed. Segment 1 of fore- and mid-tarsi moderately

widened and narrower than segment 3. Aedeagus (Fig. 11) with long acute apex, very thin in lateral view.

Length of body 4.2mm.

Derivatio nominis. The species is dedicated to Dr. B. Büche.

Differential diagnosis. This species belongs to group D (MEDVEDEV 2003) and might be placed near *C. simplicipennis* Jacoby, 1885 from Australia, but differs immediately in a different form of the aedeagus, which also has an entirely sclerotized underside.

Hyphaenia sulawesiana sp.nov.

Material examined. Holotype: Indonesia, Central Sulawesi, Kab. Darggala, Toro, 1°30′S, 120°02′E, 750–1000 m, 12.II.2004, cacao plantation, leg. M. M. Bos (NHMB). Paratypes: same locality and date, 1 male (LM); – same locality, 30.XII.2003, 4 males, 1 female (MZB); Indonesia, Central Sulawesi, W Lore Linda NP, 120 km S of Pola, 800–1000 m, 30.XII.2003, cacao plantation, leg. M. M. Bos, 1 male (LM).

Description. Entirely pale fulvous.

Male. Body narrow, elongate, parallel-sided, 2.8 times as long as wide. Head impunctate, vertex microsculptured, labrum emarginated in middle, clypeus strongly transverse, with groove on each side, frontal tubercles transverse with anterior angles produced to convex interantennal space, frons 2.6 times as wide as transverse diameter of eye.

Antennae almost reach apex of elytra, proportions of antennal segments: 10–1–9–10–10–10–10–10–9–9–9, preapical segments about 6–7 times as long as wide, segments 3–11 with short and dense erect hairs. Prothorax 1.2 times as wide as long, broadest behind anterior angles and narrowed to base, with almost straight side margins, surface lustrous, very sparsely and indistinctly punctate, with two grooves in middle. Scutellum small, semicircular. Elytra 2.1 times as long as wide, densely microsculptured, finely and densely punctate, distinctly plicate along side margin with another, feebler fold alongside within, delimited from the first by feeble impression. Segment 1 of fore-tarsi thickened, cylindrical, about twice as long as wide. Mid- and hind tibiae with spurs. Aedeagus (Fig. 15) with characteristic sculpture on underside.

Length of body (male) 4.3–4.7 mm.

Female. Antennae shorter, with segment 1 of fore-tarsi not thickened, body length 4.2 mm.

Differential diagnosis. Differs well from all continental species, except *H. fulva* Kimoto, 1989, with entirely fulvous body, dull upperside and more or less distinct ridge along side margin. From *H. fulva* the new species differs in its smaller size, other proportions of antennal segments and lateral plica on elytra.

Chabria bosi sp.nov.

Material examined. Holotype (male): Indonesia, Central Sulawesi, Kab. Dorggala, Toro, 1°30′S, 120°02′E, 750–1000 m, 28.IV.2005, cacao plantation, leg. M. M. Bos (NHMB). Paratype: Indonesia, Central Sulawesi, W. Lore Lindu NP, 120 km. S of Palu, 800–1000 m, 19.IV.2005, cacao plantation, 1 male, leg. M. M. Bos (LM).

Description. Pale flavous, antennal segments 6–10 black.

Body short ovate, 1.4 times as long as wide. Head impunctate, frontal tubercles rounded, very feeble and poorly delimited. Antennae reach humeral tubercle, proportions of segments: 8–4–4–3–4–4–3–3–3–3–6, preapical segments about as long as wide, apical segment short ovate with rounded apex.

Prothorax 2.4 times as wide as long, basal margin rounded, anterior margin straight, side margins arcuate, with a pore before middle and another one on posterior angles, surface with convex lateral callus feebly delimited interiorly, impunctate and slightly widened posteriad, remainder of surface lustrous; extremely finely and sparsely punctate. Scutellum triangular, lustrous. Elytra 1.25 times as long as wide, with hardly distinct humeral tubercle and fine, dense punctures, interspaces flat and lustrous. Wings present. Hind tibiae curved, with long spur. Aedeagus (Fig. 18) with impression on each side of underside before apex.

Length of body 2.2–2.3 mm.

Derivatio nominis. The species is named after its collector.

Differential diagnosis.. Very near to *Chabria pusilla* L. Medvedev, 1996 from the Philippines, which, however, has fulvous antennae with segments 5–8 black.

Chabria nigroviolacea sp.nov.

Material examined. Holotype (female): Indonesia, Central Sulawesi, Kab. Dorggala, Toro, 1°30´S, 120°02´E, 750–1000 m, 28.XII.2003, cacao plantation (NHMB). Paratype (female): Indonesia, Central Sulawesi, W. Lore Lindu NP, 120 km. S of Palu, 800–1000 m, 3.V.2005, cacao plantation, leg. M. M. Bos (LM)

Description. Metallic dark violaceous, underside piceous with metallic tint, antennae fulvous with segments 5–10 black, legs piceous.

Body short ovate, 1.3–1.4 times as long as wide. Head impunctate, lustrous, frontal tubercles subquadrate, but very feeble and almost indistinct. Antennae short, reach elytral humera, proportions of segments: 9–4–4–3–4–4–4–4–4–4–7, preapical segments as long as wide, apical segment short ovate with rounded apex. Prothorax twice as wide as long, hind margin broadly rounded, anterior margin straight, side margins slightly arcuate, surface with distinct callus, broad at the front, strongly narrowed posteriorly and sharply delimited interiorly by vertical wall, with 3 deep punctures (? pores) along side margin; main surface finely and sparsely punctate, with a group of large punctures near anterior angles. Scutellum triangular, lustrous. Elytra 1.15 times as long as wide, with very feeble humeral tubercle and dense, fine punctation, interspaces flat, partly with very thin microsculpture. Wings present. Spur of hind tibia long.

Length of body 2.8–3.1 mm.

Differential diagnosis. This is the single species within the genus, in which the lateral callus of the prothorax is sharply divided by a vertical wall.

Aphthona carinipennis sp.nov.

Material examined. Holotype (male): Indonesia, Central Sulawesi, W. Lore Lindu NP, 120 km. S of Palu, 800–1000 m, 3.V.2005, cacao plantation, leg. M. M. Bos (NHMB).

Description. Metallic greenish-blue, antennae black with 4 basal segments fulvous (segment 1 darkened at base), underside black, legs piceous, hind femora practically black.

Head impunctate, frons and vertex microsculptured, frontal tubercles elongate-ovate, obliquely placed, interantennal space narrow, acute. Antennae reach beyond middle of elytra, proportions of antennal segments: 7–4–4–5–6–6–7–6–6–6–9, preapical segments about 3 times as long as wide. Prothorax 1.4 times as wide as long, broadest in middle, side margins rounded, prothorax lustrous, flattened (but not impressed) at base, very finely and sparsely punctate. Scutellum triangular, microsculptured. Elytra 1.5 times as long as wide, surface with moderately strong, dense punctures, microsculptured interspaces and very high and sharp ridge along side margin from humerus to apical slope, delimited interiorly by deep impression. Segment 1 of fore- and mid-tarsi not widened. Aedeagus (Fig. 17) with rounded apex, feebly curved in lateral view.

Length of body 2.0 mm.

Differential diagnosis. Differs from all known species of the genus in having a sharp and acute ridge along side margin of elytra, delimited interiorly by deep impression (same structure of elytra as in *Altica quercetorum* Foudras, 1860).

Trachyaphthona sulawesiana sp.nov.

Material examined. Holotype (female): Indonesia, Central Sulawesi, W. Lore Lindu NP, 120 km. S of Palu, 800–1000 m, 29.IV.2005, natural forest, leg. M. M. Bos (NHMB).

Description. Piceous with clypeus, frons, 4 basal segments of antennae and legs dark fulvous.

Body elongate ovate. Clypeus flat and impunctate, interantennal space convex, frontal tubercles elongate triangular, vertex punctate, grooved in middle. Antennae reach anterior third of elytra, proportions of segments: 9–6–6–7–7–7–7–6–6–6–9, preapical segments about 1.5 times as long as wide. Prothorax 1.5 times as wide as long, practically not narrowed anteriorly, side margins straight, anterior angles acute, surface microsculptured, with very dense punctures. Scutellum semicircular, microsculptured. Elytra 1.55 times as long as wide, with low humeral tubercle and traces of postbasal impression, very densely punctate, with narrow, lustrous interspaces. Hind tibiae longitudinally concave, with sharp ridges and long, thick spur.

Length of body 3.2 mm.

Differential diagnosis. Near *T. leyteana* L. Medvedev, 1993 and *L. palawanica* L. Medvedev,1996, differs from both in long and broad triangular spur of hind tibia. All species of this genus are known from the continental mass, except for 3 species described from the Philippines.

Clavicornaltica buechei sp.nov.

Material examined. Holotype (male): Indonesia, Central Sulawesi, Kab. Dorggala, Toro, 1°30′S, 120°02′E, 750–1000 m, 5.V.2005, natural forest, leg. M. M. Bos (NHMB). Paratype (sex not determined): Indonesia, Central Sulawesi, W. Lore Lindu NP, 120 km. S of Palu, 800–1000 m, 5.V.2005, natural forest understorey tree, leg. M. M. Bos (LM).

Description. Dark brown to piceous.

Body ovate, 1.6 times as long as wide. Head impunctate, lustrous, clypeus sharply divided from frons. Antennae almost reach basal margin of prothorax, clava as long as basal part of antennae, almost 4 times as long as wide, apical segment broadly truncate on apex, preapical segments transverse, 1.3–1.5 times as wide as long. Prothorax 2.25 times as wide as long, broadest at base and narrowed anteriad, with rounded anterior angles and arcuate side margin, having large pore with long bristle in basal third, surface lustrous with microscopic and very sparse punctures. Scutellum small, triangular. Elytra 1.1 times as long as wide, with regular rows of punctures, deeper laterally. Abdomen with distinctly elevated anterior abdominal process, sternite 1 with high acute central ridge, widened posteriorly;. Hind tibia broad with long, thin spur. Segment 1 of fore-tarsus not widened. Aedeagus rather broad, parallel-sided, with rounded apex (Fig. 16).

Length of body 1.4 mm.

Derivatio nominis. The species is dedicated to Dr. Boris Buche, who kindly provided me with this interesting material.

Differential diagnosis. Near *C. iriana* L. Medvedev, 1996, and *C. tarsalis* L. Medvedev, 1996, but differs from both in abdominal ridge not widened anteriorly, from *C. iriana* also with broad hind tibiae, from *C. tarsalis* with segment 1 of fore-tarsus not widened.

Erystus gorbunovi sp.nov.

Material examined. Holotype (male): Indonesia, Sulawesi Utara, Tomohon, Kakaskesen Dua, 1°22′N, 124°51′E, 15–16.IV.2008, leg. O. Gorbunov (LM).

Description. Fulvous, 4 apical antennal segments black except at the base.

Body short ovate, 1.25 times as long as wide. Head with very feeble and poorly delimited frontal tubercles, vertex with very fine, sparse punctures and traces of microsculpture. Antennae reach humeral tubercle, with segment 9 on the level of the prothoracic base, proportions of segments: 10–5–5–5–6–6–6–6–6–6–10, preapical segments 1.5 times as long as wide. Prothorax twice as wide as long, broadest near centre, side margins and anterior angles rounded, surface with microsculpture and very fine, moderately dense punctures, sides without a row of large punctures. Scutellum triangular, small, microsculptured. Elytra as long as wide, with regular rows of punctures, interspaces flat or feebly convex, expanded lateral margin (between row 10 and side margin) as wide as 4 neighbouring interspaces together, row 11 very distinct, with large punctures, removed from lateral margin (Fig. 14), divides expanded area at a proportion of 1:1.5. Aedeagus – Fig. 19.

Length of body 3.7 mm.

Derivatio nominis. The species is named after its collector.

Differential diagnosis. Near *E. celebensis* Jacoby, 1885, but much smaller, with feeble but distinct frontal tubercles, prothorax with rounded anterior angles, without a row of large punctures along side margin, elytra with large punctures and the 11th row at distinct distance from lateral margin.

Manobia rectisulcata sp.nov.

Material examined. Holotype (male); Indonesia, Central Sulawesi, W Lore Linda NP, 120 km, S of Palu, 800–1000 m, 5.V.2003, natural forest, leg. M. M. Bos (NHMB).

Description. Black; frons and clypeus dark fulvous, antennae fulvous with 3 apical segments black, tarsi piceous.

Head impunctate, frons 1.4 times as wide as transverse diameter of eye, frontal tubercles small, triangular, poorly delimited from each other, interantennal space with thin ridge, partly prolonged on clypeus. Antennae reach middle of elytra, proportions of segments: 13–9–10–10–12–12–12–13–14–14–19, preapical segments about 2.5 times as long as wide. Prothorax 1.15 time as wide as long, anterior angles slightly oblique, with weak acumination, basal lobe very feeble, antebasal transverse impression moderately deep, almost straight, not widened at centre, with a row of fine punctures, surface before and behind impression with sparse, fine punctures. Elytra 1.5 times as long as wide, basal convexity, postbasal impression very feeble, elytral rows with strong punctures in anterior half and much smaller posteriorly. Segment 1 of fore- and mid-tarsi distinctly widened. Aedeagus (Fig. 20) long and thin, parallel-sided with rounded apex, feebly curved in lateral view.

Length of body 2.8 mm.

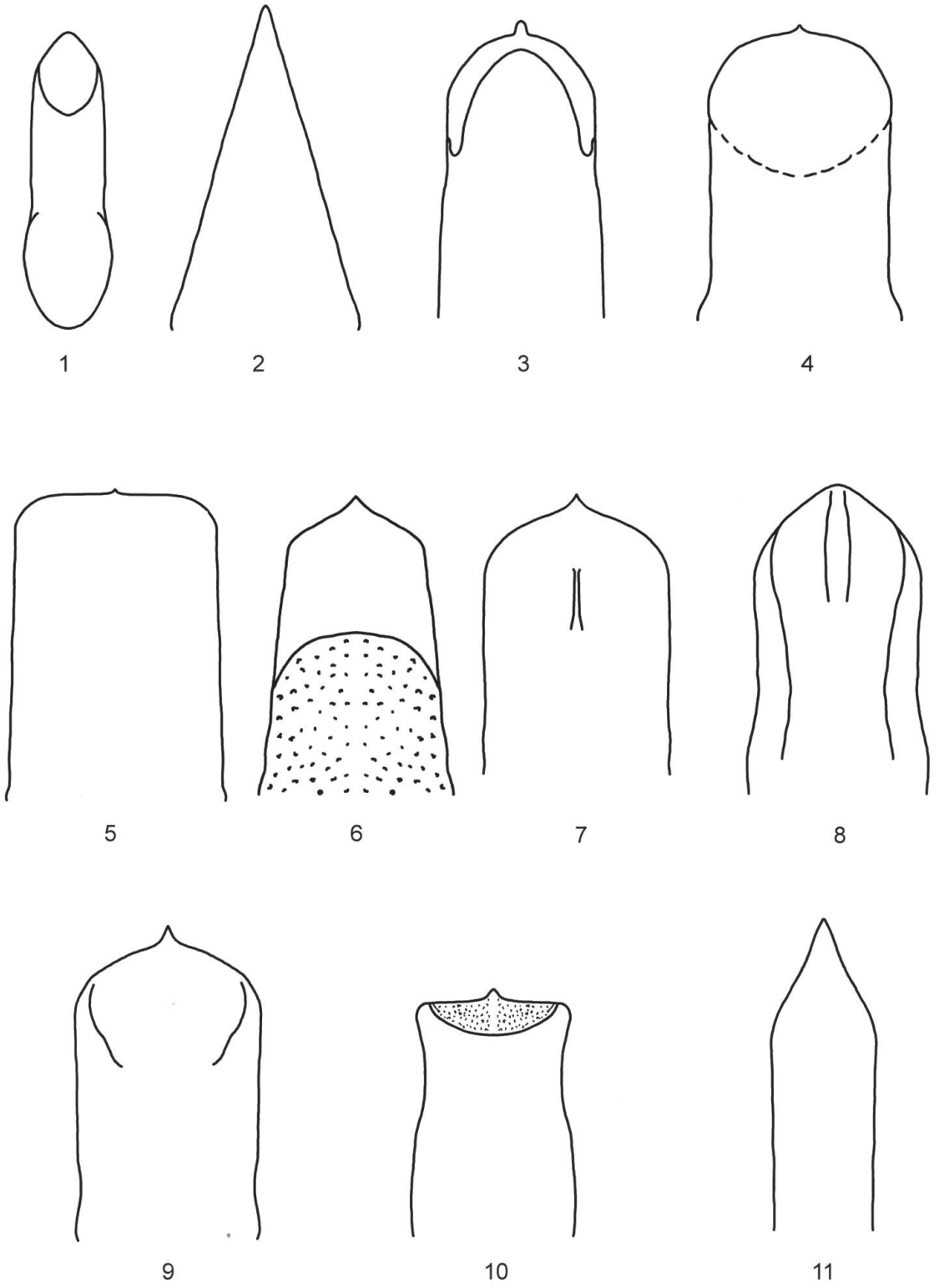
Differential diagnosis. Resembles *M. dohertyi* Jacoby, 1893 from Malaya, but differs in colour of antennae and especially in straight basal impression of prothorax.

Manobia buechei sp.nov.

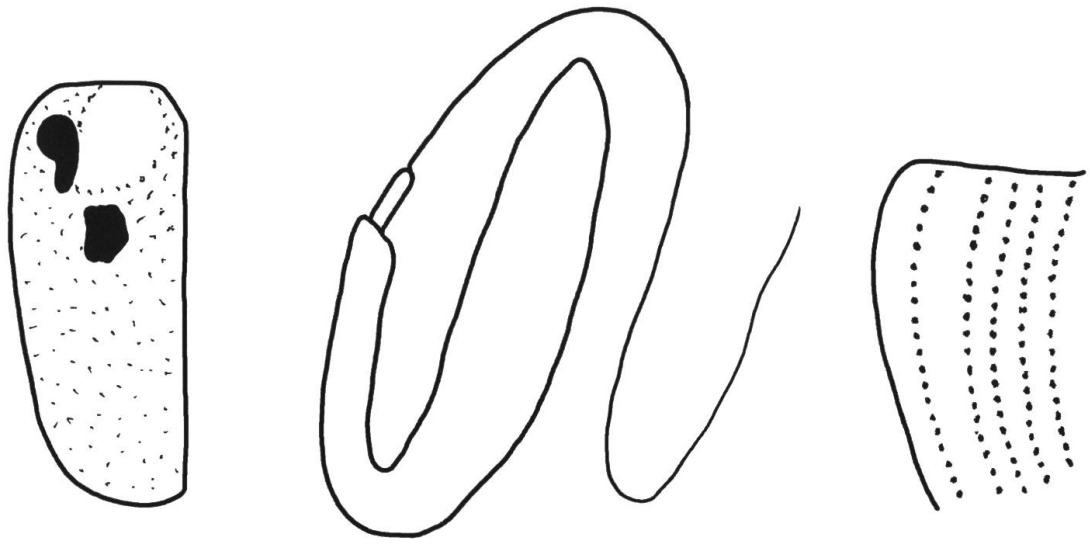
Material examined. Holotype (male): Indonesia, Central Sulawesi, W Lore Linda NP, 120 km. S. of Pala, 800–1000 m, 12.II.2004, cacao plantation, leg. M.M. Bos (NHMB). Paratypes: Indonesia, Central Sulawesi, Kab. Dorggala, Toro, 1°30′S, 120°02′E, 750–1000 m, 3.V.2005, planted Fabaceae on cacao plantation, leg. M. M. Bos, 1 female, (MZB); same locality, 28.XII.2003, cacao plantation, leg. M. M. Bos, 1 male (LM).

Description. Black; head and prothorax dark red, antennae and legs fulvous, elytra black or piceous.

Head impunctate, frons about twice as wide as transverse diameter of eye, frontal tubercles small, obliquely placed, delimited from each other and posteriorly, interantennal space with sharp ridge prolonged on clypeus. Antennae reach anterior third of elytra, proportions of segments: 10–6–6–7–7–7–7–7–8–8–10, preapical segments about 2.5 times as long as wide. Prothorax 1.4 times as wide as long, broadest in anterior third, side margins straight, anterior angles oblique and acute, basal lobe distinct and rounded, antebasal transverse impression arcuate and widened at centre, with a row of



Figs 1–11. Aedeagus: 1 – *Pseudocrioceris nigripennis* sp.nov., 2 – *Aulexia bosi* sp.nov., 3 – *Pagellia quadrimaculata* sp.nov., 4 – *Cleorina fulvipes* Lefèvre, 5 – *C. bosi* sp.nov., 6 – *C. buechei* sp.nov., 7 – *C. gorbunovi* sp.nov., 8 – *C. sulawensis* sp.nov., 9 – *C. punctipleuris* sp.nov., 10 – *Colaspoides sulawensis* sp.nov., 11 – *C. buechei* sp.nov.v



Figs 12–14. 12 – *Pagellia quadrimaculata* sp.nov., pattern of elytra; 13 – *Colaspoides sulawensis* sp.nov., spermatheca; 14 – *Erystus gorbunovi* sp.nov., outer part of elytron.

moderately large punctures, remainder of surface with microscopic, sparse punctures, appears impunctate. Elytra 1.25 times as long as wide, basal convexity distinct and impunctate, postbasal impression feeble, remainder of surface with rows of moderately large punctures, disappearing on apical slope; interspaces flat on dorsum, costate on sides. Segment 1 of fore- and mid-tarsi not widened. Aedeagus (Fig. 21) long and thin, about 8.8 times as long as wide, with acute apex.

Length of male 1.7–1.8 mm, female 1.9 mm.

Derivatio nominis. The species is dedicated to Dr. B. Büche.

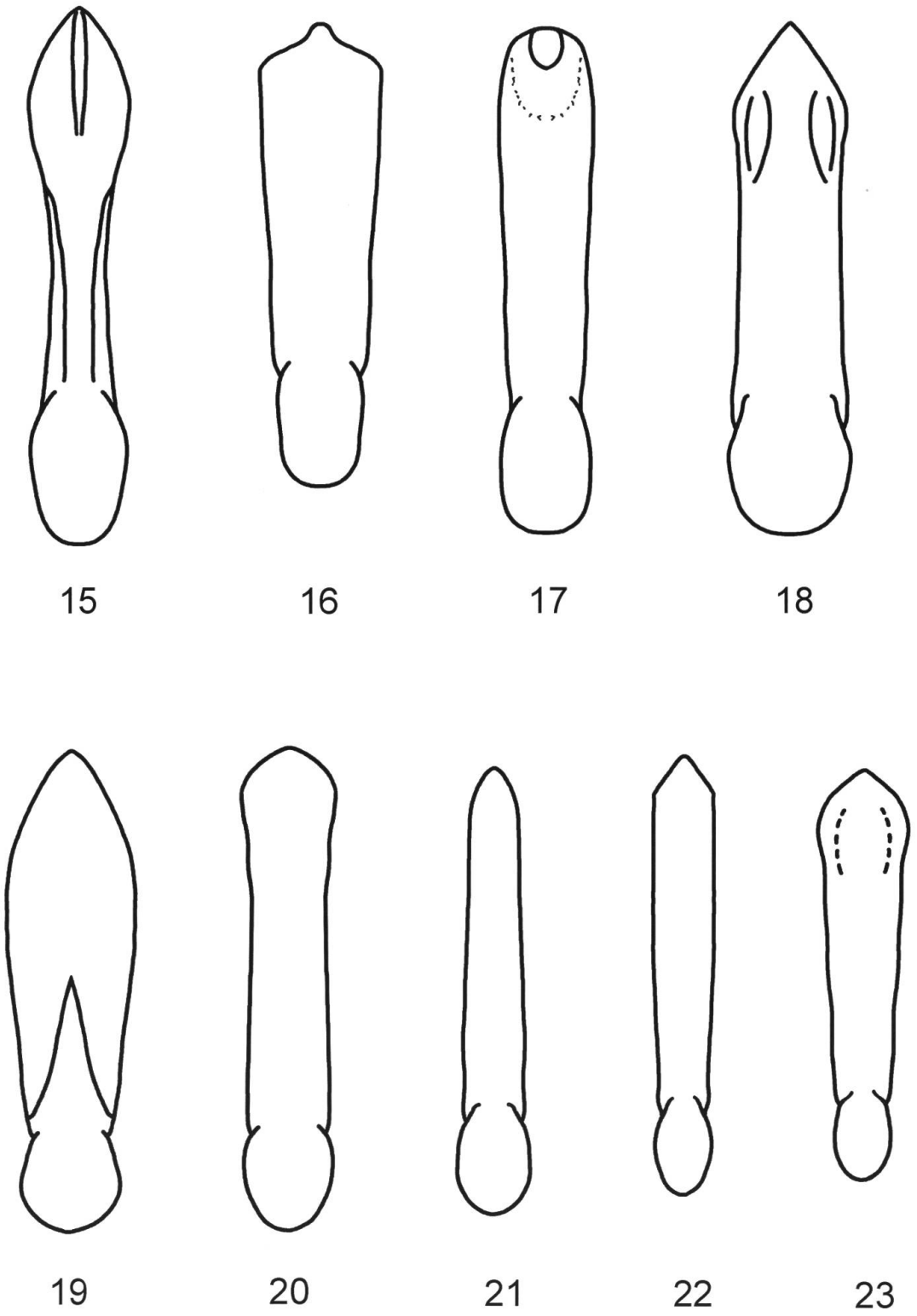
Differential diagnosis. Resembles *M. fulvicollis* Jacoby, 1885 from Sumatra, differs in colour of head and prothorax, more feeble elytral rows of punctures and smaller size.

Manobia sulawesiana sp.nov.

Material examined. Holotype (male); Indonesia, Central Sulawesi, W Lore Linda NP, 120 km S. of Palu, 800–1000 m, 26.IV.2005, *Theobroma cacao*, under forest remnants, leg. M. M. Bos (NHMB).

Description. Piceous to black, frons, clypeus, tibiae and tarsi fulvous, antennae flavous.

Head impunctate, frons about twice as wide as transverse diameter of eye, frontal tubercles small, subquadrangular, obliquely placed, sharply delimited from each other and posteriorly, interantennal space with thin ridge prolonged to clypeus. Antennae reach



Figs 15–23. Aedeagus: 15 – *Hyphaenia sulawensiana* sp.nov., 16 – *Clavicornaltica buechei* sp.nov., 17 – *Aphthona carinipennis* sp.nov., 18 – *Chabria bosi* sp.nov., 19 – *Erystus gorbunovi* sp.nov., 20 – *Manobia rectisulcata* sp.nov., 21 – *M. buechei* sp.nov., 22 – *M. sulawesiana* sp.nov., 23 – *M. torajana* sp.nov.

anterior third of elytra, proportions of segments: 14–8–9–8–7–9–10–10–10–10–14, preapical segments about 2.5 times as long as wide. Prothorax 1.3 times as wide as long, broadest near centre, side margins feebly rounded, anterior angles oblique and sharp, basal lobe well developed, rounded, antebasal transverse impression arcuate in middle, deep, with a row of rather large and very distinct punctures, remainder of surface very finely punctate. Elytra 1.3 times as long as wide, basal convexity and postbasal impression distinct, the first impunctate, the second with strong punctures, remainder of surface with rows of fine punctures, almost indistinct on apical slope. Segment 1 of fore- and mid-tarsi almost unwidened. Aedeagus (Fig. 22) long and thin, with acute triangular apex, feebly curved in lateral view.

Length of body 2.4 mm.

Differential diagnosis. Resembles *M. dimidiaticornis* Jacoby, 1896 from Sumatra and Borneo, differs in entirely fulvous antennae and pale flavous tarsi.

Manobia torajana sp.nov.

Material examined. Holotype (male): Celebes, Toraja ad Rantepao, Tambolang, 8.X.1988, leg. R. M. Holynski (LM).

Description. Fulvous, antennae pale fulvous with segment 8 piceous.

Head impunctate, frons 2.5 times as wide as transverse diameter of eye, frontal tubercles small, triangular, delimited from each other and posteriorly, interantennal space with narrow ridge widened anteriorly and prolonged to clypeus. Antennae reach middle of elytra, proportions of segments: 14–7–8–8–9–9–9–10–10–10–14, preapical segments about 2.5 times as long as wide. Prothorax 1.6 times as wide as long, broadest near sharp anterior angles, very slightly narrowed to base, with straight lateral margins, basal lobe rather small, rounded; antebasal transverse impression feebly arcuate, with a distinct row of punctures, remainder of surface with very fine and sparse punctures. Elytra 1.2 times as long as wide, basal convexity high, with a few punctures, postbasal impression shallow, remainder of surface with rows of moderately strong punctures weakening beyond centre, sutural row of punctures prolonged along basal margin, interspaces flat on dorsum, costate on sides. Segment 1 of fore- and mid-tarsi thickened, as wide as segment 3. Aedeagus (Fig. 23) thin, slightly widened to triangular apex, underside convex along central line, with impression before apex.

Length of body 2.1 mm.

Differential diagnosis. Near *M. propria* Weise, 1922 from Borneo, but sutural row of punctures on elytra prolonged along basal margin.

A key to the Sulawesian species of *Manobia* Jacoby, 1885

1(2) Basal impression of prothorax straight in middle, with scarcely distinct punctures. Black, antennae fulvous with 3 or 4 apical segments piceous. Aedeagus 5.3 times as long as wide in middle with almost rounded apex (Fig. 20). Length 2.8 mm. ..... ***M. rectisulcata* sp.nov.**

2(1) Basal impression of prothorax curved in middle, more or less triangularly widened to scutellum, with large punctures along its length.

3(8) Upperside or at least elytra black or piceous.

4(5) Antennae and legs fulvous. Prothorax dark red. Aedeagus 8.8 times as long as wide in middle (Fig. 21). Length 1.7–1.9 mm. ..... ***M. buechei* sp.nov.**

5(4) Legs piceous with pale fulvous tarsi. Prothorax and elytra piceous to black.

6(7) Antennae entirely fulvous. Aedeagus 6 times as long as wide (Fig. 22). Length 2.4 mm. ..... ***M. sulawesiana* sp.nov.**

7(6) Antennae fulvous with segments 7–9 piceous or black. Length 2.2mm. Possibly only colour form of preceding species. ..... ***Melanobia* sp. (undescribed species)**

8(3) Body entirely fulvous, only antennal segment 8 piceous. Aedeagus 6.4 times as long as wide in middle (Fig. 23). Length 2.1 mm. ..... ***M. torajana* sp.nov.**

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