New and poorly known Chrysomelidae (Coleoptera) from Borneo

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Abstract

Sixteen new chrysomelid species from Borneo are described: *Cryptocephalus sabahensis* **n. sp.**, *Coenobius cyclops* **n. sp.** (Cryptocephalinae); *Goniopleura fulva* **n. sp.**, *Cleorina borneoensis* **n. sp.**, *Abirus vaksovi* **n. sp.**, *Colaspoides elenae* **n. sp.**, *C. circumdatus* **n. sp.**, *C. trusmadiensis* **n. sp.**, *C. bicoloricollis* **n. sp.**, *C. volkovi* **n. sp.**, *C. klimenkoi* **n. sp.**, (Eumolpinae); *Itylus mohamedsaidi* **n. sp.** (Galerucinae); *Acrocrypta cruciata* **n. sp.**, *A. sabahensis* **n. sp.**, *A. quadrimaculata* **n. sp.**, and *Aphthonoides sabahensis* **n. sp.** (Alticinae).

Keys to species of the genera *Cleorina* Lefèvre, 1885 and *Itylus* Jacoby, 1904 from Borneo are given, as well as additional information on a few poorly known species of Eumolpinae and Galerucinae.

Keywords: Chrysomelidae, Borneo, new species, keys.

Zusammenfassung

Sechzehn neue Blattkäfer-Arten von Borneo werden beschrieben: *Cryptocephalus sabahensis* **n. sp.**, *Coenobius cyclops* **n. sp.** (Cryptocephalinae); *Goniopleura fulva* **n. sp.**, *Cleorina borneoensis* **n. sp.**, *Abirus vaksovi* **n. sp.**, *Colaspoides elenae* **n. sp.**, *C. circumdatus* **n. sp.**, *C. trusmadiensis* **n. sp.**, *C. bicoloricollis* **n. sp.**, *C. volkovi* **n. sp.**, *C. klimenkoi* **n. sp.**, (Eumolpinae); *Itylus mohamedsaidi* **n. sp.** (Galerucinae); *Acrocrypta cruciata* **n. sp.**, *A. sabahensis* **n. sp.**, *A. quadrimaculata* **n. sp.** und *Aphthonoides sabahensis* **n. sp.** (Alticinae).

Bestimmungs-Schlüssel für die Arten der Gattungen *Cleorina* Lefèvre, 1885 und *Itylus* Jacoby, 1904 von Borneo werden vorgestellt. Für einige wenig bekannte Arten der Eumolpinae und Galerucinae werden zusätzliche Informationen gegeben.

Contents

1 Introduction

Leaf beetles of Borneo have been intensively investigated in the last 30 years, especially from the Malaysian part (Mohamedsaid 2004), nevertheless the study of this area is still far from complete.

The present paper is based mostly on materials collected by Pavel Romantsov in Borneo (Sabah) during an expedition in the vicinity of Trus Madi. This place is situated about 70 km southeast of Kota Kinabalu and reaches an altitude of 2640 m; it is the second highest mountain in Sabah. The slopes of Mount Trus Madi with its rich forest vegetation are a habitat for many insects. This expedition took place in March 2012. Collecting of insects was carried out mainly by means of light traps and hand-picking at an altitude from 1160 to 1250 m.

As a result of this investigation, 16 species are described as new for science, and a few notes can be made on several poorly known species of Eumolpinae and Galerucinae. Keys to the Bornean species of the genera *Cleorina* Lefèvre, 1885 and *Itylus* Jacoby, 1904 are given.

Acronyms of depositories

LM	Collection of L. Medvedev, Moscow, Russia
PR	Collection of P. Romantsov, Sankt-Petersburg, Russia
SMNS	Staatliches Museum für Naturkunde, Stuttgart, Germany
ZIN	Collection of Zoological Institute RAN, Sankt-Petersburg, Russia

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2 Taxonomy

2.1 Subfamily Cryptocephalinae

Cryptocephalus (s. str.) *sabahensis* **n. sp.**
(Fig. 1)

Holotype (♀): Malaysia, N Borneo, Sabah, Keningau distr., Trus Madi Mt., 1250 m, N05°26′35″, E116°27′5″, 16.–18.III.2012, leg. P. Romantsov (ZIN).

Paratypes: Same data as holotype, 1 ♀ (LM); same locality, 6.IV.2013, 1 ♀ (PR).

Etymology

The name of this species is connected with its collecting locality.

Description

Head and antennae fulvous, pronotum pale flavous with black teeth along the base, scutellum pale flavous with basal margin and extreme apex black, elytra pale flavous with basal margin black and all rows piceous, pygidium flavous, underside and legs fulvous except black apex of claws. General view see Fig. 1.

Clypeus impunctate, frons and vertex finely punctate on sides, impunctate and slightly impressed in the middle, interocular and interantennal spaces equal in width. Antennae thin, reaching anterior third of elytra, proportions of segments are as 8-3-7-8-8-8-8-9-9-10, preapical segments about 4 times as long as wide. Pronotum 1.6 times as wide as long, broadest at base, with full row of equal teeth on basal margin, surface shining, with very fine and sparse punctures. Scutellum triangular with rounded apex, 1.2 times as long as wide, not incised on anterior margin, indistinctly punctate. Elytra 1.2 times as long as wide, with regular rows of punctures, mostly distinctly impressed, interspaces impunctate and convex, especially on sides. Pygidium broadly rounded on apex, feebly convex, punctate. Prosternal process as long as wide, bidentate on hind margin.

Body length 7.0 mm.

Differential Diagnosis

The new species is very near to *C. cinnabarinus* Suffrian, 1854 from Peninsular Malaysia, Sumatra and Sulawesi, but it has the elytral rows not grooved and all interspaces flat, the upperside is fulvous with a more pale scutellum and pronotum with rows of small piceous spots (not punctures!) along the basal margin.

Coenobius cyclops **n. sp.**
(Figs. 2, 3, 58)

Holotype (♂): Malaysia, N Borneo, Sabah, Keningau distr., Trus Madi Mt., 1250 m, N05°26′35″, E116°27′5″, 16.–18.III.2012, leg. P. Romantsov (ZIN).

Paratypes: Same data as holotype, 1 ♂, 2 ♀♀ (PR, LM); same locality, 13.IV.2013, 2 ♀♀ (PR).

Etymology

The name of this species refers to the unusual structure of the eyes.

Description

Black, head fulvous before eyes except eye excavation, 5 basal antennal segments and legs fulvous.

Body cylindrical, broadest at humeri. General view see Fig. 3. Head with large eyes contiguous along almost the entire inner margin (Fig. 2). Clypeus deeply and rather sparsely punctured. Antennae almost reaching middle of elytra, proportions of segments are as 7-4-5-5-6-7-6-6-6-6-8, the two basal segments thick, segments 3–5 thin, 6–11 thickened, about 1.5 times as long as wide. Pronotum 1.7 times as wide as long, broadest at base, conical with almost straight side margins, surface without distinct impressions, anterior margin with sharp collar bearing a row of punctures, hind margin angularly produced in the middle and with a row of punctures, remaining surface with fine and sparse punctures, more dense and strong in basal area. Scutellum lanceolate, more than twice as long as wide, impunctate. Elytra 1.25 times as long as wide, slightly narrowed posteriorly and broadly rounded on apex, with quite regular rows and flat broad interspaces except 2 or 3 lateral ones, which are more or less convex. Pygidium moderately convex and distinctly punctate. Prosternum wide, sparsely punctured. Segment 1 of tarsi not widened in male. Aedeagus see Fig. 58.

Female: Head more or less darkened before eyes. Central portion of abdominal sternites 2–4 constricted and almost invisible. Last abdominal sternites with a deep wide depression occupying a large part of it.

Body length 1.9 mm.

Differential Diagnosis

The new species resembles in color *C. imadatei* Chûjo, 1964 from Borneo, which, however, has the eyes contiguous only at the top of the upper lobe, a black head and a different form and sculpture of the pronotum.

2.2 Subfamily Eumolpinae

Abirus vaksovi **n. sp.**
(Figs. 5, 70)

Holotype (♀): [Malaysia], Borneo, Sabah, Keningau distr., Trus Madi mountains area, 1400 m, 1.–9.V.2008, leg. K. M. Vaksov (ZIN).

Etymology

This species is named after its collector.

Description

Metallic green, only 3 basal antennal segments more or less fulvous on extreme apices, labrum black. General view see Fig. 5.

Body elongate ovate. Head strongly and densely punctate, only anterior part of clypeus with small, but also dense punctures, all interspaces narrower than diameter of punctures and mostly convex; there is an obtuse elevation in the middle between frons and vertex; labrum microsculptured, with irregular row of 15–16 punctures along anterior margin. Antennae reaching humeral tubercle, proportions of length and maximal width of segments are as 10/4-5/2-7/3-7/2-9/3-8/4-11/8-10/9-9/8-10/8-10/6. Pronotum 1.6 times as wide as long, broadest near base, side margins feebly arcuate and slightly flattened, especially in the anterior half, fore angles long and acute, hind angles quadrangular, distinct; surface strongly and densely punctate, without rugosities, interspaces narrow. Scutellum triangular with rounded apex, convex, very finely punctate. Elytra 1.45 times as long as wide, very strongly and roughly punctate, with transverse and oblique rugosities and round or ovate tubercles practically on entire surface, without pubescence. Pygidium pubescent, with broad and deep central groove, narrowed towards apex. Propleurae shining, strongly and densely punctate, prosternum with dense erect hairs. Spermatheca strongly curved, with thin ductus (Fig. 70).

Body length 9.3 mm.

Differential Diagnosis

Most species of this genus have thin antennae, including apical segments, but a few species from islands, including Borneo and the Philippines, have more or less thickened apical segments. Currently two species are known from Borneo: *Abirus coerulea* (Jacoby, 1877) with nitidiform antennae and *A. apicalis* (Baly, 1867) with preapical segments 6–8 about 1.65–1.75 times as long as wide. We place *A. vaksovi* n. sp. near *A. apicalis* from which it clearly differs in its more widened apical antennal segments and its very roughly sculptured elytra, which are comparable only with *A. tuberculipennis* Lefevre, 1885 from the Philippines.

Cleorina borneoensis **n. sp.**
(Figs. 6, 51, 52)

Holotype (♂): Malaysia, N Borneo, Sabah, Keningau distr., Trus Madi Mt., 1250 m, N05°26′35″, E116°27′5″, 17.–27.III.2012, leg. P. Romantsov (ZIN).

Paratypes: Same locality, 17.–27.III.2012, leg. P. Romantsov, 6 ♂♂, 3 ♀♀; same locality, 2.–8.VII.2011, 1 ♂, 12.–22.VIII.2012, 1 ♂, 1 ♀, leg. A. Klimenko (PR, LM, SMNS).

Etymology

The name refers to the collecting locality.

Description

Reddish fulvous, 5–11 antennal segments black, elytra bright metallic green. General view see Fig. 6.

Body ovate. Clypeus trapezoidal with arcuate anterior margin, impunctate, divided from frons by a shallow suture; frons and vertex impunctate, frons with a short longitudinal impression. Antennae reaching anterior third of elytra, nitidiform with apical segments slightly flattened, proportions of segments are as 15-9-13-13-13-12-15-15-15-14-16, preapical segments about 2.5 times as long as wide. Pronotum 1.7 times as wide as long, broadest at base and strongly narrowed anteriorly, anterior margin collared only on sides, side margins rounded, hind angles with a short protuberance, bearing a large pore, surface finely and sparsely punctate, on sides practically without punctures. Scutellum parallel-sided with rounded apex, impunctate. Elytra 1.25 times as long as wide, with trace of postbasal impression, all rows regular, but almost disappearing on apical slope, interspaces flat and impunctate. Propleurae impunctate and shining. Aedeagus see Figs. 51, 52.

Body length of ♂ 4.8–5.6 mm, of ♀ 5.0–6.3 mm.

Differential Diagnosis

Cleorina borneoensis n. sp. resembles *C. collaris* (Baly, 1867) from Borneo, but differs from it by the coloration of elytra, underside and legs. The three species of *Cleorina* known from Borneo can be recognized as follows:

1 Body black except fulvous basal joints of antennae, tibiae and tarsi. ..... ***C. nigrita*** Jacoby, 1895
– Head and pronotum reddish fulvous..... **2**
2 Underside, elytra and legs black. ..... ***C. collaris*** (Baly, 1867)
– Underside and legs fulvous, elytra bright metallic green (Fig. 6)..... ***C. borneoensis* n. sp.**

Colaspoides bicoloricollis **n. sp.**
(Figs. 4, 56, 57, 69)

Holotype (♂): Malaysia, N Borneo, Sabah, Keningau distr., Trus Madi Mt., 1250 m, N05°26′35″, E116°27′5″, 17.–27.III.2012, leg. P. Romantsov (ZIN).

Paratypes: Same data as holotype, 41 specimens (PR, LM, SMNS, ZIN).

Etymology

The species name refers to the bicolored pronotum.

Description

Head red fulvous, antennae fulvous with segments 7–11 black, pronotum red fulvous with black triangular area at base which varies in size and is almost indistinct in one paratype, elytra and scutellum black with feeble metallic green sheen, pygidium and legs fulvous, underside black with hind part of apical sternite fulvous. General view see Fig. 4.

Body ovate. Clypeus impunctate, frons and especially vertex punctate. Antennal segment 3 about 1.5 times as

long as 2, segments 4–6 subequal to 3, next segments moderately widened. Pronotum 1.7 times as wide as long, broadest at base and strongly narrowed anteriorly, with side margins almost straight, surface finely and not densely punctate. Scutellum triangular with rounded apex, without distinct punctures. Elytra 1.25 times as long as wide, with narrowly rounded apex, surface shining, with moderately dense punctures, arranged in rows on apical slope and along lateral margins, two lateral interspaces convex, others flat, mostly larger than punctures. Furrow of pygidium broad, practically parallel-sided, without ridge on bottom. Propleurae impunctate, shining. Abdominal sternite 5 not serrate at the sides, its hind margin with deep and wide semicircular emargination. Femora not toothed, segment 1 of fore and mid tarsi widened in male. Aedeagus (Figs. 56, 57) with truncated apex having a very small middle tooth, underside without impressions. Spermatheca see Fig. 69.

Body length 2.0–2.4 mm.

Differential Diagnosis

Colaspoides bicoloricollis n. sp. differs from all Oriental species of *Colaspoides* in the bicolored pronotum.

Colaspoides klimenkoi **n. sp.**

(Figs. 7, 26–28, 62)

H o l o t y p e (♂): Malaysia, N Borneo, Sabah, Keningau distr., Trus Madi Mt., 1250 m, N05°26′35″, E116°27′5″, 17.–27.III.2012, leg. P. ROMANTSOV (ZIN).

P a r a t y p e s : Same data as holotype, 33 ♂♂, 5 ♀♀, leg. P. ROMANTSOV; same locality, 2.–8.VII.2011, leg. A. KLIMENKO, 1 ♀; same locality, V.2012, leg. K. M. VAKSOV, 1 ♀ (PR, LM, SMNS).

Etymology

The new species is named after one of its collectors, A. KLIMENKO (Tver, Russia).

Description

Head metallic green with fulvous labrum, antennae fulvous with the 5 apical segments more or less black, pronotum metallic blue, scutellum and elytra purple red, underside and legs black. General view see Fig. 7.

Body elongate ovate. Clypeus impunctate, frons and vertex punctate. Antennae nitidiform, thin, segment 3 about 2.5 times as long as segment 2, next segments subequal to segment 3, preapical segments about 4 times as long as wide. Pronotum 1.8 times as wide as long, broadest in basal third, with rounded side margins, surface shining, with dense large punctures. Scutellum elongate triangular, impunctate. Elytra 1.25 times as long as wide, with dense and moderately strong punctures, interspaces about as wide as punctures. Furrow of pygidium shallow, broad, narrowed towards apex, not ridged on bottom. Propleurae shining, impunctate except a few punctures near anterior angles. Abdominal sternites 4 and 5 serrate on sides, sternite 5 with a slightly concave posterior margin. Segment 1 of fore and mid tarsi not widened in male. All femora not toothed. Aedeagus (Figs. 26–28) with acute triangular apex, in apical half of underside with longitudinal unsclerotized area. Spermatheca see Fig. 62.

Body length 4.6–4.7 mm.

Differential Diagnosis

The new species belongs to group 7 of MEDVEDEV (2010) and is near to *C. violacea* Baly, 1867, *C. insignis* Baly, 1867, and *C. shuteae* L. Medvedev, 2010, but differs in its larger size, distinctly bicolored upperside and different shape of the aedeagus with a narrow transparent stripe on the underside.

Colaspoides trusmadiensis **n. sp.**

(Figs. 8, 48)

H o l o t y p e (♂): Malaysia, N Borneo, Sabah, Keningau distr., Trus Madi Mt., 1250 m, N05°26′35″, E116°27′5″, 17.–27.III.2012, leg. P. ROMANTSOV (ZIN).

P a r a t y p e : Same data as holotype, 1 ♂ (PR).

Etymology

The species name is derived from its type locality.

Description

Fulvous, antennal segments 6–11 black, sides and base of pronotum and sides of elytra narrowly margined with metallic green color. General view see Fig. 8.

Body elongate. Head practically impunctate except a few punctures near eyes. Antennal segment 3 about 1.5 times as long as segment 2 and slightly shorter than segment 4, preapical segments thin, about 5 times as long as wide. Pronotum 2.3 times as wide as long, broadest in the middle, side margins rounded, surface finely and sparsely punctate. Scutellum as long as wide, with rounded apex, impunctate. Elytra 1.5 times as wide as long, parallel-sided, without postbasal impression, densely and moderately strongly punctate, interspaces about as wide as punctures. Furrow of pygidium not widened apically and without ridge on bottom. Propleurae impunctate. Abdominal segments 2–4 with hairy brushes in the middle, segment 5 not serrate on sides. Anterior femora with distinct tooth. Segment 1 of fore and mid tarsi feebly widened in male. Aedeagus (Fig. 48) with transparent area on underside before apex.

Body length 3.9–4.0 mm.

Differential Diagnosis

The new species is similar to *C. gorbunovi* L. Medvedev, 2010, but differs in its smaller size, different color of

the upperside, presence of abdominal brushes of hairs and a different form of the aedeagus.

Colaspoides elenae **n. sp.**
(Figs. 9, 32–34, 63)

Holotype (♂): Malaysia, N Borneo, Sabah, Keningau distr., Trus Madi Mt., 1250 m, N05°26′35″, E116°27′5″, 17.–27.III.2012, leg. P. ROMANTSOV (ZIN).

Paratypes: Same data as holotype, 3 ♂♂, 3 ♀♀ (PR, LM); same locality, 10.IV.2013, 1 ♀ (PR).

Etymology

The second author dedicates this new species to his wife ELENA VITYUKOVA (Sankt-Petersburg, Russia).

Description

Male: Entirely fulvous without metallic luster, only apical antennal segment piceous. General view see Fig. 9.

Body elongate ovate. Clypeus impunctate, vertex with a few punctures and a groove in the middle. Preapical segments of maxillary palpus short, apical segment long with narrow triangular apex. Antennal segment 3 almost twice as long as segment 2 and equal to segment 4, preapical segments about 2.5 times as long as wide. Pronotum 1.85 times as wide as long, broadest in the middle, side margins rounded, surface finely and moderately dense punctate. Scutellum triangular with rounded apex, impunctate. Elytra 1.4–1.5 times as long as wide, almost parallel-sided, surface without postbasal impression, densely and moderately strongly punctate, punctures partly arranged in rows on apical slope, interspaces mostly smaller than punctures, but not rugose. Furrow of pygidium not widened on apex and not ridged on bottom. Propleurae impunctate except a few punctures near anterior angles. Abdominal sternites 1–4 with long hairs in the middle, moderately dense on sternites 1 and 2, rather feeble on sternite 5 which is not serrate on sides, without any concavity at posterior margin. All femora not toothed. Segment 1 of fore and mid tarsi feebly widened in male. Aedeagus (Figs. 32–34) widened in apical third, this widened area practically not sclerotized on underside.

Female: Fulvous, apical antennal segment piceous, apices of femora and tibiae black, tarsi more or less darkened, in one paratype elytra with black stripe in the middle of the side margin. Elytra elongate ovate. Spermatheca (Fig. 63) almost ring-like, ductus in the basal third thick, in the middle third more widened, spear-like, in the apical third very thin.

Body length of ♂ 4.5–5.2 mm, of ♀ 5.6–6.2 mm.

Differential Diagnosis

The smooth and shining propleurae and the long hairs on the underside of the abdominal sternites of the new species resemble members of the *Colaspoides* group 6 of MEDVEDEV (2010), but these hairs are not arranged in dense brushes (as in the mentioned group), and the body is fulvous. *Colaspoides elenae* n. sp. is similar to *C. sandakana* L. Medvedev, 2010 and *C. rubra* L. Medvedev, 2010 from group 3, but differs in having a hairy abdomen and a different shape and sculpture of the aedeagus.

Colaspoides volkovi **n. sp.**
(Figs. 10, 29–31)

Holotype (♂): Malaysia, N Borneo, Sabah, Keningau distr., Trus Madi Mt., 1250 m, N05°26′35″, E116°27′5″, 27.III.2012, leg. P. ROMANTSOV (ZIN).

Paratypes: Same data as holotype, 14 ♂♂ (PR, LM, SMNS).

Etymology

This species is dedicated to ANATOLY VOLKOV (Moscow, Russia), well-known doctor and a great lover of insects and animals, who co-sponsored the 2012 expedition to Borneo.

Description

Black with more or less distinct metallic blue tint, head with two dark fulvous spots, ridges of pronotum and elytra sometimes with green-blue sheen, antennae fulvous with slightly darkened apical segments, tarsi fulvous. General view see Fig. 10.

Head shining, clypeus distinctly punctate, with slightly emarginated anterior margin, frontovertex with shallow punctures, vertex with thin impressed line in the middle. Preapical segments of maxillary palpus short, apical segment very long with acuminate apex. Antennal segments 3–11 about 5 times as long as wide. Pronotum 1.6 times as wide as long, broadest near middle, with rounded side margins, surface with moderately large and dense punctures and shining flat interspaces. Scutellum triangular with rounded apex, impunctate. Elytra 1.25 times as long as wide, almost parallel-sided, with moderately strong and dense punctures which are distinctly larger than on pronotum, interspaces flat and shining. Furrow of pygidium practically parallel-sided, not ridged on bottom. Propleurae lustrous, with a few punctures near the upper front angles. Abdominal sternites 4 and 5 serrate at the sides, sternite 5 with a slightly concave posterior margin. All femora not toothed. Segment 1 of fore and mid tarsi feebly widened in male. Aedeagus (Figs. 29–31) with subtruncate apex, having a small central tooth, sculpture of underside somewhat resembling *C. schawalleri* L. Medvedev, 2010.

Body length 4.0–4.7 mm.

Differential Diagnosis

A few species of the genus *Colaspoides* from Borneo have black females (*C. brevicollis* Jacoby, 1898, *C. balyana* L. Medvedev, 2007), but males of black color were unknown (MEDVEDEV 2010).

Colaspoides circumdatus **n. sp.**
(Figs. 11, 53–55, 64, 65)

Holotype (♂): Malaysia, N Borneo, Sabah, Keningau distr., Trus Madi Mt., 1250 m, N05°26′35″, E116°27′5″, 17.–27.III.2012, leg. P. Romantsov (ZIN).

Paratypes: Same data as holotype, 8 ♂♂, 6 ♀♀ (PR, LM, SMNS, ZIN).

Etymology

The species name refers to the color of the elytra.

Description

Fulvous, 6 apical antennal segments and narrow sutural and lateral margins of elytra black, but sometimes only interior margin of epipleurae black. General view see Fig. 11.

Body almost parallel-sided. Head shining, impunctate, anterior margin of clypeus straight, vertex evenly convex. Preapical segment of maxillary palpus short, apical segment large with obliquely truncated apex. Antennae with segments 2–5 thin, next segments moderately thickened, about 3 times as long as wide. Pronotum 1.7 times as wide as long, broadest just behind the middle, with rounded side margins, surface shining, with distinct sparse punctures. Scutellum trapezoidal with rounded apex. Elytra 1.4 times as long as wide, parallel-sided, with distinct and moderately dense punctures, partly arranged in rows on apical slope, interspaces flat and shining. Furrow of pygidium parallel-sided, not ridged on bottom. Propleurae impunctate, shining. All femora not toothed. Abdominal sternites 1–4 with long sparse hairs in the middle, sternite 4 not serrate at the sides, sternite 5 very weakly serrate with straight posterior margin. Aedeagus (Figs. 53–55) widened in apical fourth, underside of this widened area deep concave, not sclerotized in the middle. Spermatheca see Figs. 64, 65.

Body length of ♂ 3.3–3.5 mm, of ♀ 3.5–4.0 mm.

Differential Diagnosis

Colaspoides circumdatus n. sp. belongs to the *Colaspoides* group 3 of Medvedev (2010) and must be placed near *C. pleuralis* L. Medvedev, 2010; it differs in the impunctate propleurae, smaller size, different coloration of the upperside and shape of the aedeagus.

Colaspoides viridimarginata Baly, 1867
(Figs. 12, 49, 50, 68)

Material examined: Malaysia, N Borneo, Sabah, Keningau distr., Trus Madi Mt., 1250 m, N05°26′35″, E116°27′5″, 27.III.2012, leg. P. Romantsov, 3 ♂♂, 1 ♀ (PR, LM).

Remarks

This species is widely distributed on Borneo (Medvedev 2010). It was also found in Trus Madi and we add figures of this material: general view (Fig. 12), aedeagus (Figs. 49, 50) and spermatheca (Fig. 68).

We can add also that the sides of the abdominal sternites 4 and 5 are serrate and that the abdominal segments 3 and 4 of the males have a bunch of long hairs which is especially well developed on sternite 4.

Colaspoides punctipleuris L. Medvedev, 2003
(Figs. 13, 35–37, 67)

Material examined: Malaysia, N Borneo, Sabah, Keningau distr., Trus Madi Mt., 1250 m, N05°26′35″, E116°27′5″, 17.–27.III.2012, leg. P. Romantsov, 3 ♂♂, 5 ♀♀ (PR, LM).

Remarks

The description of this species was based on a single female, which has a specific form of the spermatheca, fulvous antennae and fulvous or piceous tibiae and tarsi. The series collected in 2012 belongs without doubt to *C. punctipleuris*, having the same form of spermatheca (Fig. 67) and sculpture of upperside, but it differs from the holotype by the entirely metallic green legs and by the metallic antennae with fulvous segments 2–4. General view see Fig. 13. It is possible that the holotype is a not fully sclerotized specimen. The aedeagus of this species is figured for the first time (Figs. 35–37).

Colaspoides malayana Jacoby, 1894
(Figs. 14, 45–47)

Material examined: Malaysia, N Borneo, Sabah, Keningau distr., Trus Madi Mt., 1250 m, N05°26′35″, E116°27′5″, 17.–27.III.2012, leg. P. Romantsov, 1 ♂ (PR).

Remarks

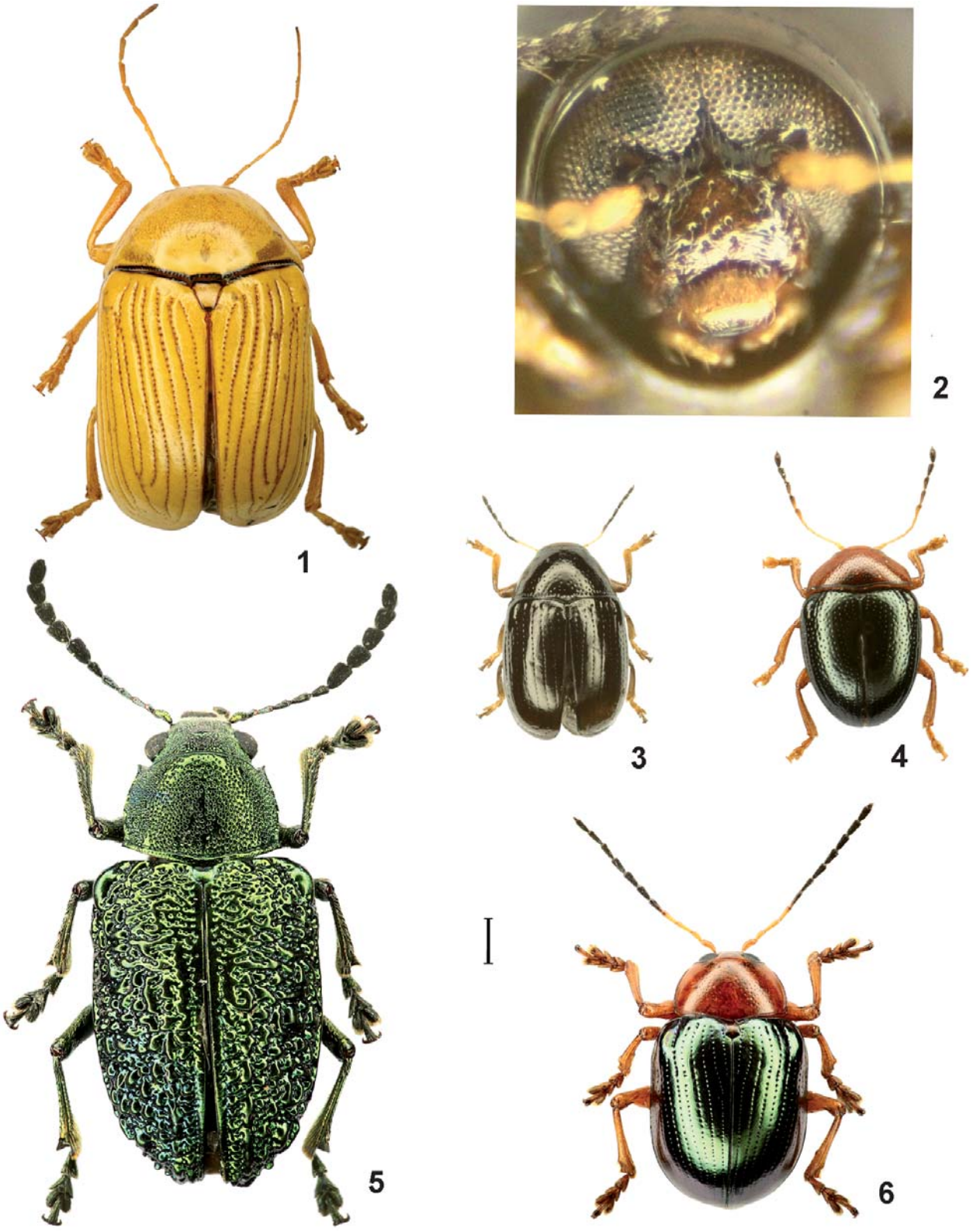
This species was described from Kalimantan (Indonesian part of Borneo). In the studied material from Trus Madi we found one male which differs from the original description only by the finely punctate head and a rather feeble impression on the vertex. General view see Fig. 14, aedeagus see Figs. 45–47.

Goniopleura fulva **n. sp.**
(Figs. 16, 38, 39)

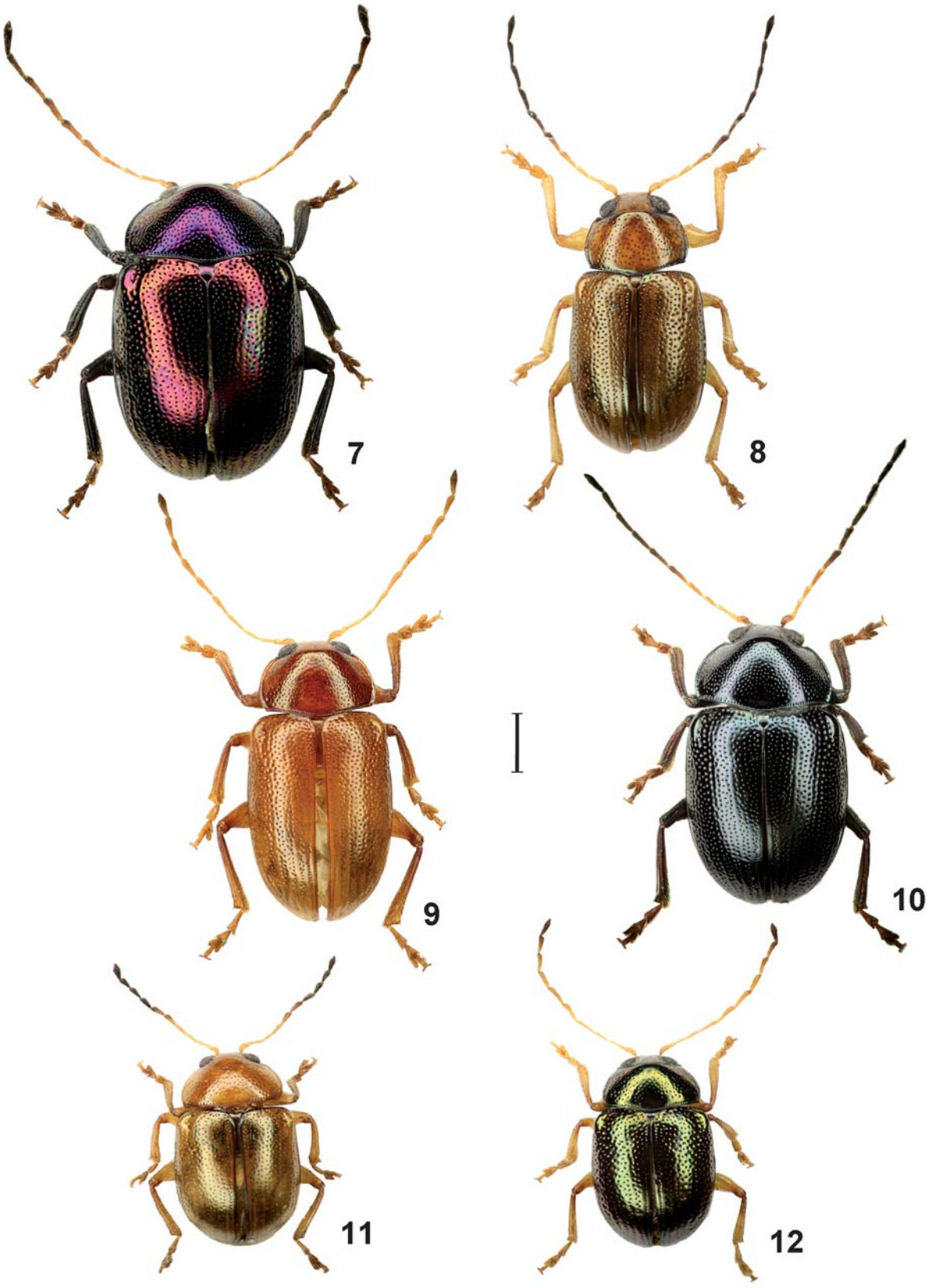
Holotype (♀): Malaysia, N Borneo, Sabah, Keningau distr., Trus Madi Mt., 1250 m, N05°26′35″, E116°27′5″, on light, 1.–3.V.2006, leg. K. M. Vaksov (ZIN).

Etymology

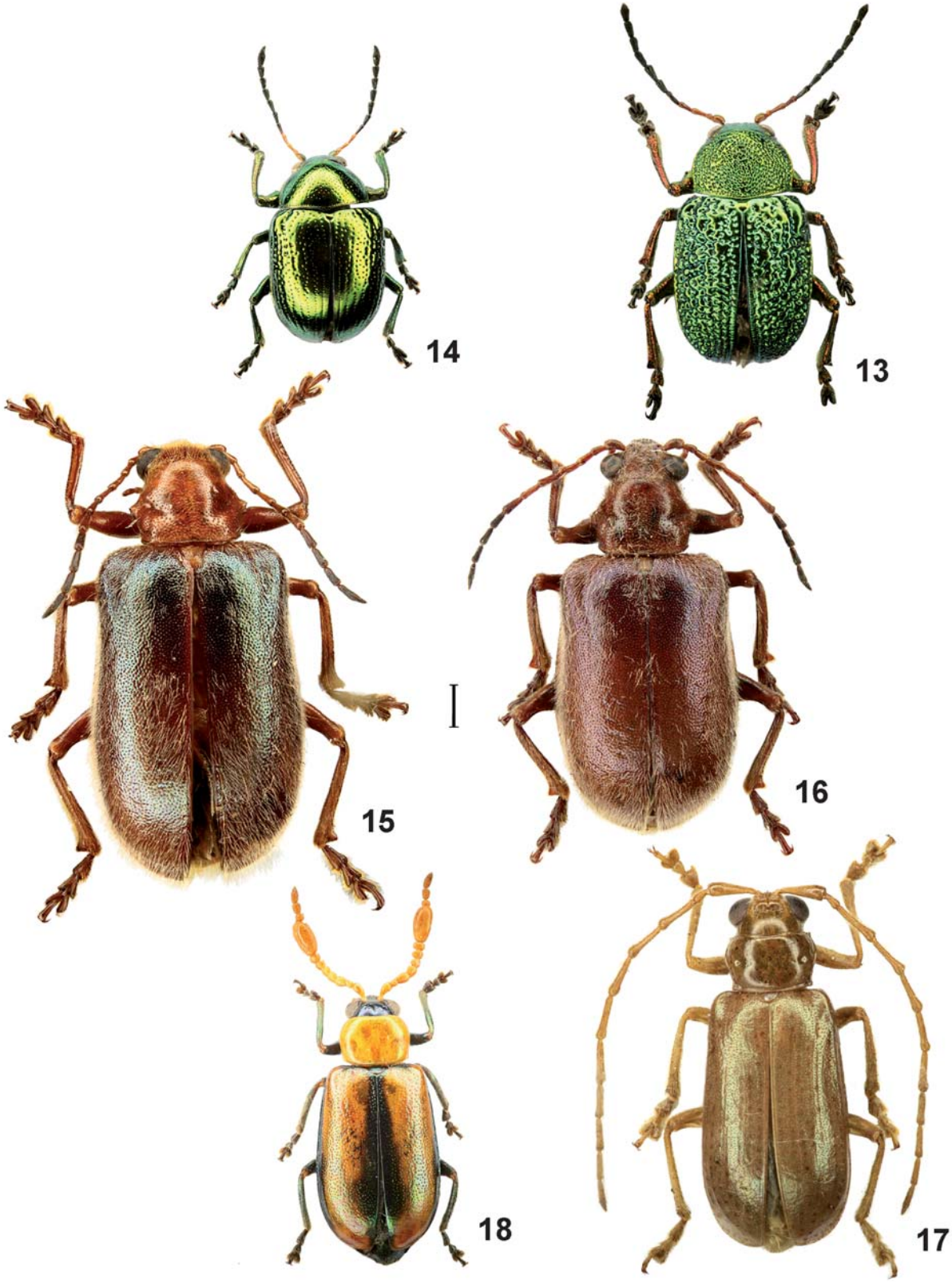
The name of the new species refers to the color of the body.



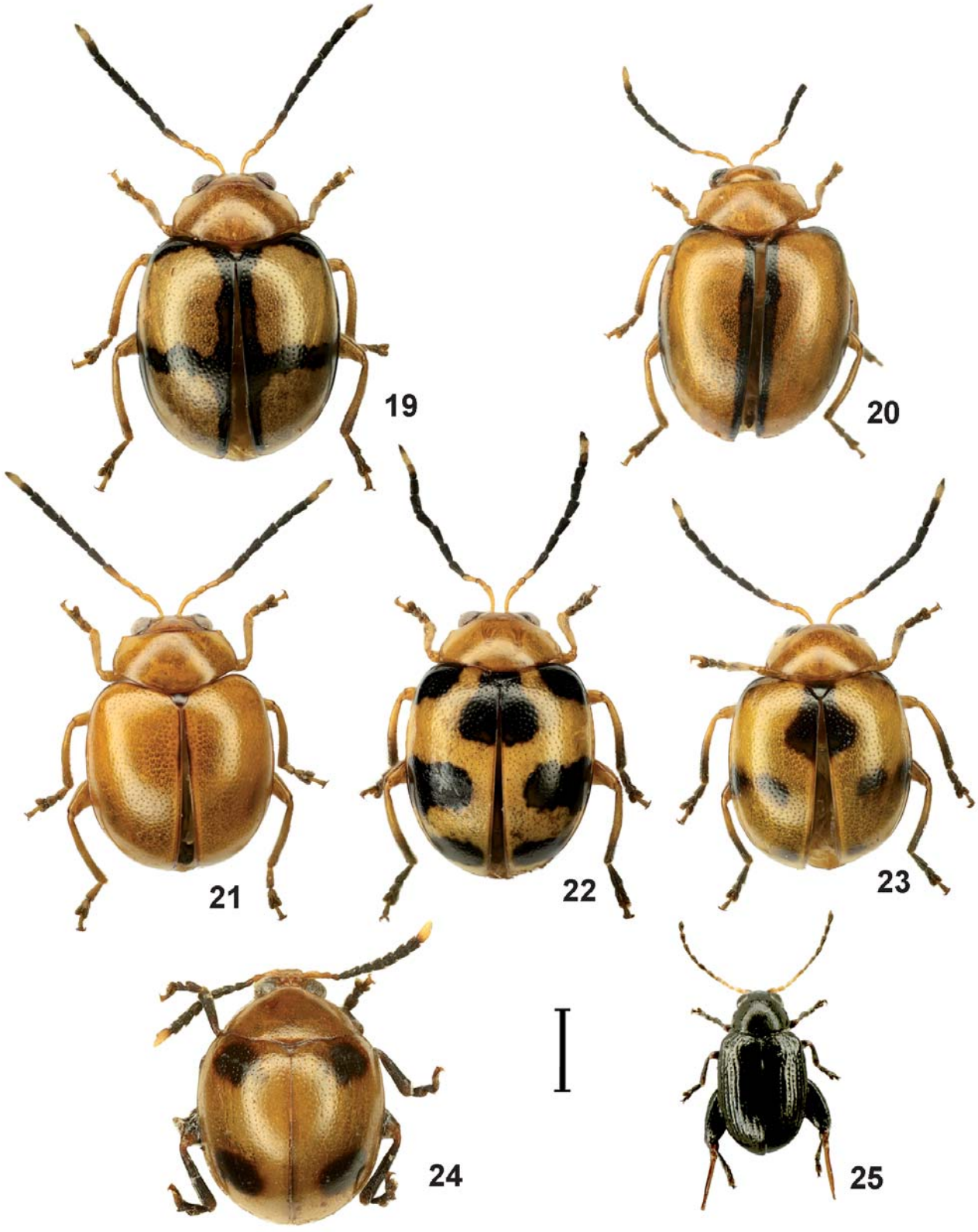
Figs. 1–6. Chrysomelidae from Borneo, dorsal view (1, 3–6), head (2). – **1**. *Cryptocephalus* (s. str.) *sabahensis* n. sp. **2–3**. *Coenobius cyclops* n. sp. **4**. *Colaspoides bicoloricollis* n. sp. **5**. *Abirus vaksovi* n. sp. **6**. *Cleorina borneoensis* n. sp. – Scale: 1 mm (1, 3–6).



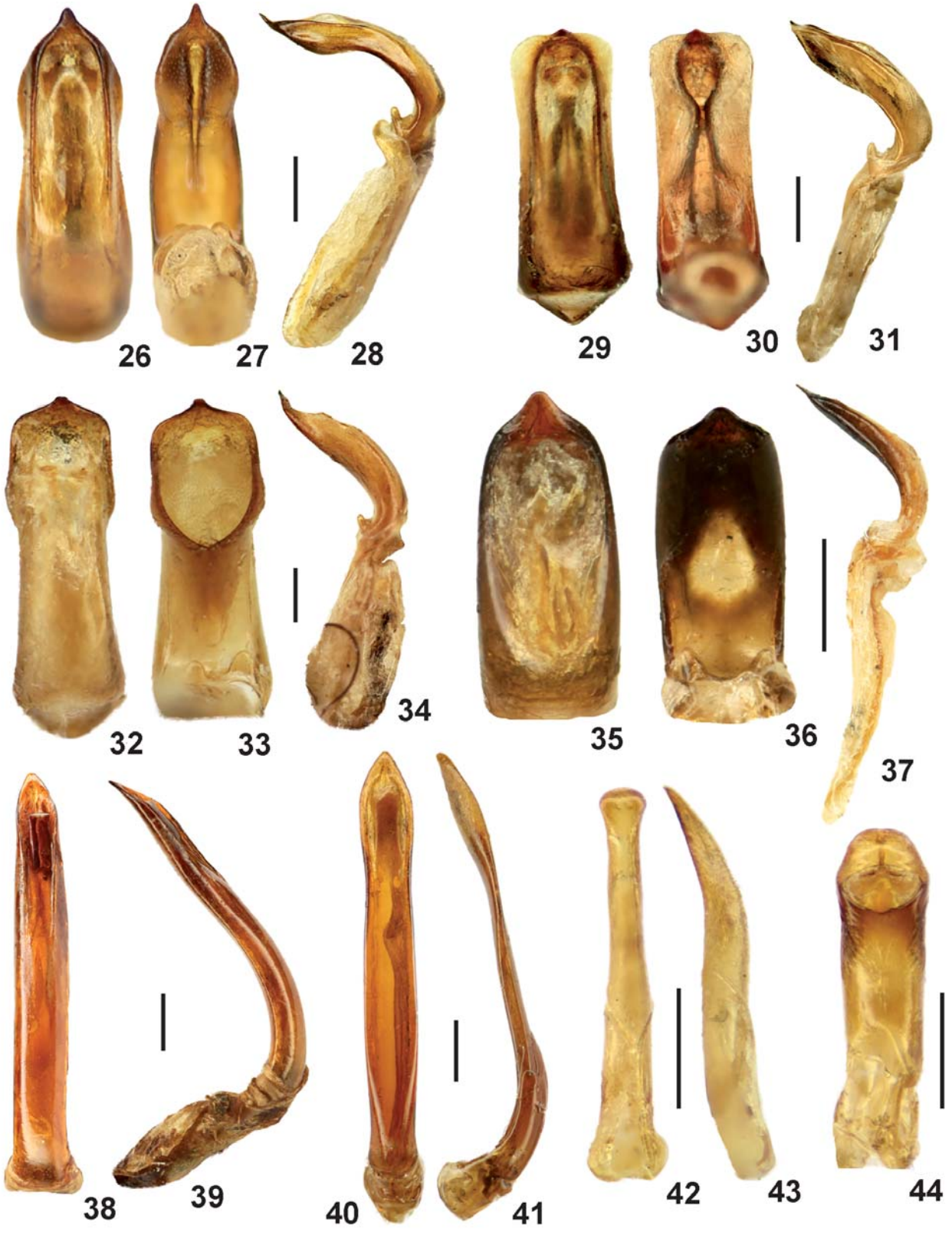
Figs. 7–12. *Colaspoides* spp. from Borneo, dorsal view. – **7**. *C. klimenkoi* n. sp. **8**. *C. trusmadiensis* n. sp. **9**. *C. elenae* n. sp. **10**. *C. volkovi* n. sp. **11**. *C. circumdatus* n. sp. **12**. *C. viridimarginata* Baly, 1867. – Scale: 1 mm.



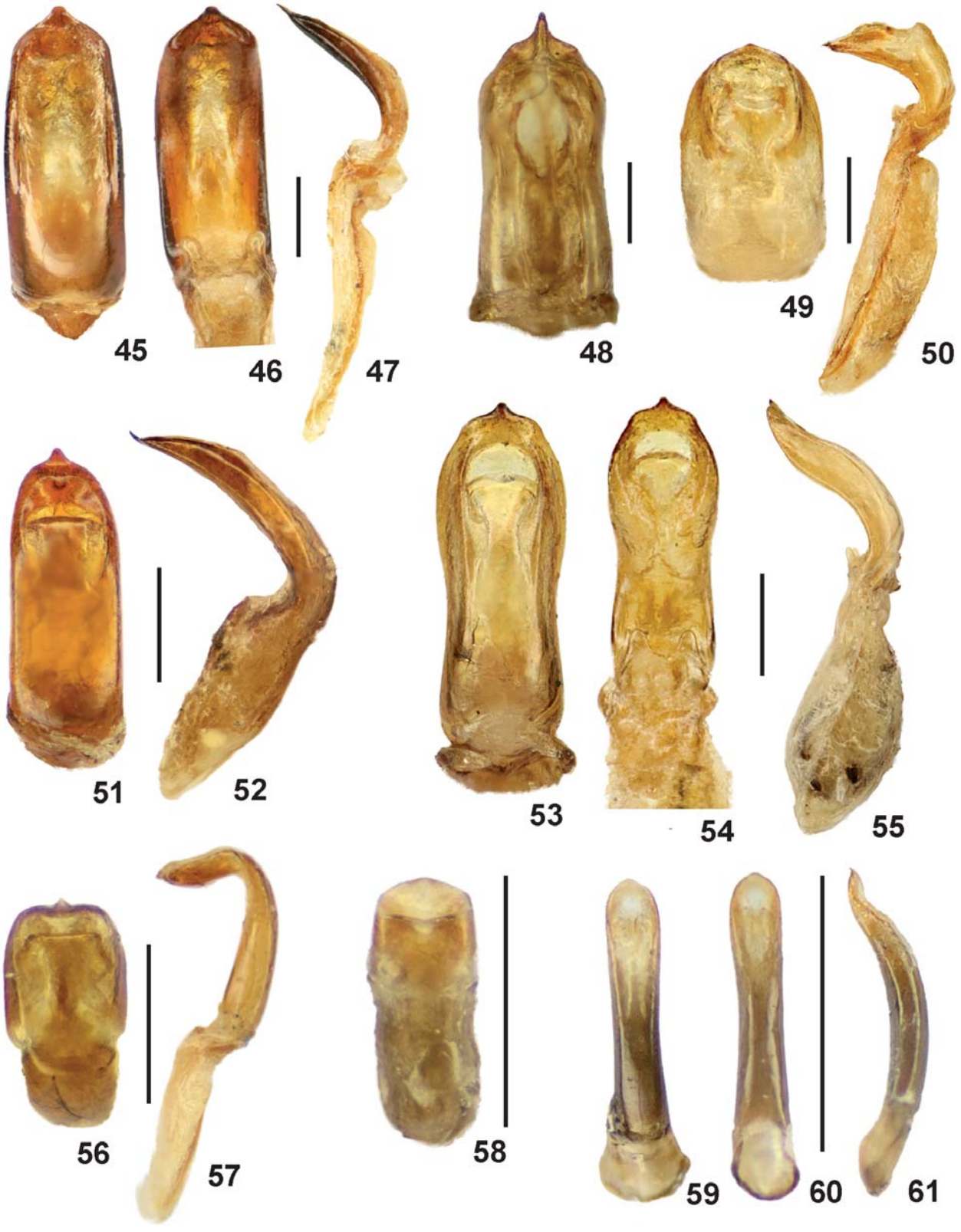
Figs. 13–18. Chrysomelidae from Borneo, dorsal view. – **13**. *Colaspoides punctipleuris* L. Medvedev, 2003. **14**. *C. malayana* Jacoby, 1894. **15**. *Goniopleura viridipennis nigripes* L. Medvedev, 1998. **16**. *G. fulva* n. sp. **17**. *Itylus mohamedsaidi* n. sp. **18**. *Cerophysa flava* Baly, 1886. – Scale: 1 mm.



Figs. 19–25. Chrysomelidae from Borneo, dorsal view. – **19**. *Acrocrypta cruciata* n. sp. **20–21.** *A.* sp. (possibly a form of *A. cruciata*). **22**. *A. sabahensis* n. sp. **23**. *A. sabahensis* n. sp. (color form). **24**. *A. quadrimaculata* n. sp. **25**. *Aphthonoides sabahensis* n. sp. – Scale: 1 mm.



Figs. 26–44. Chrysomelidae from Borneo, aedeagi. – **26–28**. *Colaspoides klimenkoi* n. sp. **29–31**. *C. volkovi* n. sp. **32–34**. *C. elenae* n. sp. **35–37**. *C. punctipleuris* L. Medvedev, 2003. **38–39**. *Goniopleura fulva* n. sp. **40–41**. *Itylus mohamedsaidi* n. sp. **42–43**. *Acrocrypta sabahensis* n. sp. **44**. *A. quadrimaculata* n. sp. – Scales: 0.5 mm.



Figs. 45–61. Chrysomelidae from Borneo, aedeagi. – **45–47**. *Colaspoides malayana* Jacoby, 1894. **48**. *C. trusmadiensis* n. sp. **49–50**. *C. viridimarginata* Baly, 1867. **51–52**. *Cleorina borneoensis* n. sp. **53–55**. *Colaspoides circumdatus* n. sp. **56–57**. *C. bicoloricollis* n. sp. **58**. *Coenobius cyclops* n. sp. **59–61**. *Aphthonoides sabahensis* n. sp. – Scales: 0.5 mm.

Figs. 62–70. Chrysomelidae from Borneo, spermatecae. **62**. *Colaspoides klimenkoi* n. sp. **63**. *C. elenae* n. sp. **64–65**. *C. circumdatus* n. sp. **66**. *Itylus mohamedsaidi* n. sp. **67**. *Colaspoides punctipleuris* L. Medvedev, 2003. **68**. *C. viridimarginata* Baly, 1867. **69**. *C. bicoloricollis* n. sp. **70**. *Abirus vaksovi* n. sp. – Scale: 0.2 mm.

Description

Dark fulvous, 4 apical antennal segments black, pubescence white, elytra with traces of metallic luster. General view see Fig. 16.

Body elongate. Head practically not pubescent, clypeus not divided from frons, its anterior margin with two teeth and deep semicircular emargination between them, interantennal space broad, ridged on sides and longitudinally concave, punctate on sides and smooth in the middle, vertex strongly and densely punctate, with shallow oblique impression from middle of frons to upper margin of eye, middle of vertex with traces of a longitudinal elevation. Antennae thin, reaching anterior fourth of elytra, proportions of segments are as 16-10-12-17-17-14-16-13-15-14-20, segments 1–7 shining, 8–11 dull, with short adpressed pubescence, segment 10 about 3 times as long as wide. Pronotum 1.4 times as wide as long, narrowed anteriorly, lateral protuberance comparatively feeble and rounded, surface shining, densely punctate, with oblique impressions on each side behind the middle. Scutellum trapezoidal, as long as wide, with truncate apex, shining, finely punctate. Elytra 1.6 times as long as wide, almost parallel-sided, surface shining, very densely punctate, mostly with short adpressed hairs except erect and longer hairs on apices. Legs with erect or suberect hairs, especially dense on tibiae. Aedeagus see Figs 38, 39.

Body length 14.0 mm.

Differential Diagnosis

The new species *G. fulva* n. sp. differs from all known species of *Goniopleura* in its entirely fulvous body. In the key to this genus of Medvedev (2011) it would be placed near *Goniopleura* sp., also from Borneo, and is very possibly identical with that species.

Goniopleura viridipennis nigripes L. Medvedev, 1998.
(Fig. 15)

Material examined: Malaysia, N Borneo, Sabah, Keningau distr., Trus Madi Mt., 1250 m, N05°26′35″, E116°27′5″, 17.–27.III.2012, leg. P. Romantsov, 1 ♂, leg. K. M. Vaksov (PR, LM).

Remarks

General view see Fig. 15. Only a single specimen of this species was known before.

2.3 Subfamily Galerucinae

Itylus mohamedsaidi **n. sp.**
(Figs. 17, 40, 41, 66)

Holotype (♂): Malaysia, N Borneo, Sabah, Keningau distr., Trus Madi Mt., 1250 m, N05°26′35″, E116°27′5″, 17.–27.III.2012, leg. P. Romantsov (ZIN).

Paratypes: Same data as holotype, 15 ♂♂, 12 ♀♀; same locality, 2.–8.VII.2011, leg. A. Klmenko, 1 ♂, 1 ♀ (PR, LM, SMNS, ZIN).

Etymology

This new species is dedicated to Dr. M. Mohamedsaid (Kuala Lumpur, Malaysia), well known specialist on leaf beetles, who revised this genus.

Description

Fulvous, tibiae piceous or black. General view see Fig. 17.

Male: Body narrow, elongate, shining. Head impunctate, frontal tubercles convex, subquadrangular, eyes small, with interocular space twice as broad as transverse diameter of eye. Antennae a little longer than body with segment 1 widened to apex and segments 3–6 swollen at apex, proportions of segments are as 15-5-13-12-12-12-11-8-8-7-7, preapical segments about 3.0–3.5 times as long as wide, segments 3–6 with long erect hairs which are longer on inner sides. Pronotum 1.6 times as wide as long, broadest before middle, slightly concave behind the middle, all angles acute, surface shining, with very sparse fine punctures, with a small round impression on each side, connected with flattened area. Anterior and posterior corners of pronotum sharp, each with a long seta. Scutellum triangular, microsculptured, impunctate. Elytra twice as long as wide at shoulders, with distinct lateral ridge from humerus to almost apical slope and with longitudinal flattening inside this ridge, surface with dense and moderately strong punctures, sparsely covered with erect hairs, mostly on sides and apical slope, with feeble basal convexity; apical margin broadly rounded. Segment 1 of fore and mid tarsi moderately widened in male, triangular, as long as wide. Aedeagus see Figs. 40, 41.

Female: Antennae slightly shorter than body, thinner than in male, all segments simple, segment 1 small, widened to apex, segments 3–6 either not swollen at the top or very slightly swollen and without long hairs. Spermatheca see Fig. 66.

Body length of ♂ 8.4–10.2 mm, of ♀ 9.8–10.5 mm.

Differential Diagnosis

This genus includes four species, mostly from Borneo (Mohamedsaid 1995). They can be separated as follows:

1 Eyes large, with interocular space 1.5 times as broad as transverse diameter of eye. – In male antennal segments 3–6 covered with very long hairs on internal sides and segment 1 of fore tarsus as broad as long..... **2**

– Eyes small, with interocular space at least twice as broad as transverse diameter of eye. – Species from Borneo (Sabah)...**3**

2 Elytra fulvous; head, pronotum, underside and legs black. Body length 7.5–8.5 mm. – Peninsular Malaysia..... .....***I. bicolor*** (Jacoby, 1895)

– Elytra greenish blue, head and pronotum brownish, underside fulvous, legs bicolored. Body length 8.5 mm. – Borneo (Sarawak).....***I. biru*** Mohamedsaid, 1995

3 In male fore tarsal segment 1 triangular, as wide as long. Antennal segments 3–6 with long erect hairs which are longer on inner sides. Body fulvous with tibiae piceous or black (Fig. 17). – Body length of ♂ 8.4–10.2 mm, of ♀ 9.8–10.5 mm. ..... ***I. mohamedsaidi* n. sp.**

– In male fore tarsal segment 1 cylindrical, twice as long as wide. Antennal segments 3–6 not covered with long hairs on inner sides. Elytra not entirely fulvous..... **4**

4 Elytra black, brownish on extreme apex, head and pronotum reddish brown, underside brownish. Body length 7.0–8.2 mm. .....***I. terminatus*** Mohamedsaid, 1995

– Elytra fulvous, blackish on apical margin, head and pronotum fulvous, underside black. Body length 5.8–7.0 mm. .... ***I. testaceus*** Mohamedsaid, 1995

Cerophysa flava Baly, 1886
(Fig. 18)

Material examined: Malaysia, Borneo, Sarawak, Semondok, 12 mi. S Kuching, 10.XII.1974, leg. A. Earnshaw, 1 ♂ (LM); Sabah, Keningau distr., Trus Madi Mt., 1250 m, N05°26′35″, E116°27′5″, 17.–27.III.2012, leg. P. Romantsov, 2 ♂♂ (PR); 2.–8.VII.2011 and 12.–22.VIII.2012 leg. A. Klimenko, 3 ♂♂ (PR).

Remarks

The coloration of this species is very variable color. A specimen from Sarawak is fulvous with metallic green underside, the specimens from Sabah have a few color forms: fulvous with metallic green laterally, on sutural margins of the elytra and in part on the legs; or fulvous with metallic green head (except fulvous labrum), lateral and sutural margins of elytra, underside and legs (Fig. 18); or fulvous with metallic green head (except fulvous labrum), underside and legs. Antennae and aedeagus are identical in all specimens.

2.4 Subfamily Alticinae

Acrocrypta cruciata **n. sp.**
(Fig. 19)

Holotype (♂): Malaysia, N Borneo, Sabah, Keningau distr., Trus Madi Mt., 1160 m, N5°25′58″, E116°26′2″, 24.–26.III.2012, leg. P. Romantsov (ZIN).

Paratypes: Same data as holotype, 3 ♂♂, 2 ♀♀ (PR, LM).

Etymology

The species name refers to the cross-like elytral pattern.

Description

Fulvous with elytra more pale than pronotum, antennae black with 3 basal segments fulvous and apical segment white with black extreme tip (♂) or with two white apical segments (♀), elytra with black basal and sutural margin and a narrow transverse band just behind the middle (Fig. 19); apices of tibiae and tarsi blackish. In addition, we have three specimens without transverse black band on elytra (Fig. 20) and seven specimens with entirely fulvous elytra (Fig. 21) which are possibly only color variations, however we do not include them as paratypes.

Body ovate, 1.4 times as long as wide. Head shining, vertex finely and sparsely punctate, interantennal space almost flat, frontal tubercles triangular, flat and delimited posteriorly with straight impressed line. Antennae reaching anterior third of elytra, proportions of segments are as 16-5-7-10-10-10-10-9-8-8-11, preapical segments about twice as long as wide, apical segment symmetrical. Pronotum twice as wide as long, broadest at base, side margins almost straight, all angles rectangular, surface shining, with very fine and sparse punctures. Scutellum triangular, impunctate. Elytra 1.5 times as long as wide, shining, punctures sparse, much larger than on pronotum. Segment 1 of fore and mid tarsi not noticeably widened. Aedeagus with broadly rounded apex.

Body length of ♂ 3.5–3.7 mm, of ♀ 3.7–4.3 mm.

Differential Diagnosis

The new species slightly resembles *A. ornata* (Baly, 1876) from Java, but is almost twice as small, with different elytral pattern and a different form of the aedeagus.

Acrocrypta sabahensis **n. sp.**
(Figs. 22, 23, 42, 43)

Holotype (♂): Malaysia, N Borneo, Sabah, Keningau distr., Trus Madi Mt., 1160 m, N5°25′58″, E116°26′2″, 24.–27.III.2012, leg. P. Romantsov (ZIN).

Paratypes: Same data as holotype, 5 ♂♂, 6 ♀♀; Kota Kinabalu, N5°59′, E116°09′, ~1500 m, 26.–30.XII.2011, leg. N. Vikhrev, 1 ♂ (PR, LM, SMNS).

Etymology

The species name is derived from Sabah.

Description

Fulvous, antennae black with 3 basal segments fulvous, in ♂ apical segment white with black extreme tip and sometimes segment 10 partly fulvous, in ♀ two apical segment white, scutellum black, elytra with pear-shaped spot on suture basally, humeral area, transverse band in the middle (interrupted on suture) and transverse spot near apex black (Fig. 22). We also have several specimens in which part of the black spots are less developed (Fig. 23). Underside with large black mark occupying the middle part of first abdominal sternite and all of metasternum except episternum and epimeres, apices of tibiae and tarsi blackish.

Body ovate, 1.4 times as long as wide. Head shining, impunctate, interantennal space almost flat, frontal tubercles triangular, flat, and delimited behind with straight impressed line. Antennae reaching middle of elytra, proportions of segments are as 13-5-8-10-10-11-10-9-9-7-10, preapical segments about twice as long as wide, apical segment symmetrical. Pronotum 1.8 times as wide as long, broadest at base, side margins feebly rounded, all angles obtuse, surface impunctate. Scutellum triangular, impunctate. Elytra 1.5 times as long as wide, rather densely and moderately strongly punctate. Segment 1 of fore and mid tarsi not widened. Aedeagus (Figs. 42, 43) thin and long, with rounded apex, longitudinally concave in apical part of underside.

Body length of ♂ 3.3–3.5 mm, of ♀ 3.5–4.0 mm.

Differential Diagnosis

The new species is similar to *A. novemmaculata* Döberl, 2001, but differs in its much smaller size, elongate preapical antennal segments, slightly different elytral pattern and a different shape of the aedeagus.

Acrocrypta quadrimaculata **n. sp.**
(Figs. 24, 44)

Holotype (♂): E. Malaysia, Borneo, Sabah, Kinabalu Mt., N6°0′, E116°33′, 1500 m, 27.–31.VII.2009, leg. O. Gorbunov (ZIN).

Etymology

The species name refers to the number of elytral spots.

Description

Fulvous, antennae black with 3 basal segments fulvous and apical segment white, elytra each with basal and preapical round black spots, legs black. General view see Fig. 24.

Body ovate, 1.4 times as long as wide. Head shining, impunctate, interantennal space moderately convex, frontal tubercles convex, triangular, delimited posteriorly with angulate impressed line. Antennae reaching anterior fifth of elytra, proportions of segments are as 15-5-4-5-5-5-5-7-7-7-11, preapical segments about as long as wide, apical segment asymmetrical. Pronotum twice as wide as long, broadest at base, side margins almost straight, anterior angles rounded, hind angles obtuse, surface shining, finely punctate. Scutellum triangular, impunctate. Elytra 1.1 times as long as wide, finely punctate, interspaces with thin microsculpture. Segment 1 of fore and mid tarsi feebly widened. Aedeagus (Fig. 44) parallel-sided with rounded apex, underside with groove before apex.

Body length 3.1 mm.

Differential Diagnosis

The new species is similar to *A. quadripunctata* (Jacoby, 1885) from Borneo, but is much smaller (3.1 versus 5.1 mm), with tricolored antennae and differently placed black spots on the elytra.

Aphthonoides sabahensis **n. sp.**
(Figs. 25, 59–61)

Holotype (♂): Malaysia, N Borneo, Sabah, Keningau distr., Trus Madi Mt., 1250 m, N5°26′35″, E116°27′5″, 17.III.2012, leg. P. Romantsov (ZIN).

Paratype: Same data as holotype, but 10.IV.2013, 1 ♂ (PR).

Etymology

The species name is derived from Sabah.

Description

Black, upperside with distinct metallic luster, 4 basal antennal segments, apices of femora, tibiae, tarsi and spur of hind tibiae fulvous to dark fulvous.

Body elongate ovate, winged, upperside not pubescent. Frons and vertex transversely microsculptured and sparsely punctate, frontal lines sharply impressed. Antennae reaching anterior fourth of elytra, proportions of segments are as 7-4-3-3-4-4-5-5-5-5-7 (distinctly shorter than in preceding species), preapical segments about 3 times as long as wide. Pronotum 1.35 times as wide as long, side margins feebly rounded and broadest near middle, anterior angles obtuse and thickened, hind angles obtuse, surface densely and mostly longitudinally strigose and very finely microsculptured. Scutellum moderately transverse, with broadly rounded hind margin. Elytra 1.65 times as long as wide, elongate and almost parallel-sided in the middle, very narrowly rounded apices, humeral tubercle convex, small, feebly delimited on innerside, scutellar rows with 8 punctures, other rows regular, with well impressed punctures, interspaces narrow, flat, but a few lateral ones moderately convex. Aedeagus (Figs. 59–61) with triangular acute apex, underside without transparent area in apical part.

Body length 1.8 mm.

Differential Diagnosis

Only a single species of this genus, *Aphthonoides burckhardi* Döberl, 2005, was described from Borneo (Döberl 2005); it is entirely fulvous and without metallic luster. *Aphthonoides sabahensis* n. sp. is similar to *A. fulmeki* Heikertinger, 1940, from Sumatra, but differs well in the shape of the pronotum, the metallic luster of the upperside and the shape of the aedeagus.

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