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New and little known species of Tenebrionidae (Coleoptera) from Borneo (7)

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New and little known species of Tenebrionidae (Coleoptera) from Borneo (7)

Roland Grimm

Abstract

The following new species from Malaysia/Borneo are described: *Microbolitonaeus loebli* **n. sp.**, *Thesilea bosuangi* **n. sp.**, and *T. convexicollis* **n. sp.** New combination: *Zophophilus bosuangi* (Grimm, 2016) **n. comb.** = *Promethis bosuangi* Grimm, 2016. The male of *Ceropria speciosissima* Gebien, 1914 is described. *Platydema becvari* Schawaller, 2004 is recorded for the first time from Borneo. New faunistic data of five further species are added.

Keywords: Tenebrionidae, Borneo, Malaysia, Sabah, Sarawak, new species, new records.

Zusammenfassung

Folgende neue Arten von Malaysia/Borneo werden beschrieben: *Microbolitonaeus loebli* **n. sp.**, *Thesilea bosuangi* **n. sp.** und *T. convexicollis* **n. sp.** Neue Kombination: *Zophophilus bosuangi* (Grimm, 2016) **n. comb.** = *Promethis bosuangi* Grimm, 2016. Das Männchen von *Ceropria speciosissima* Gebien, 1914 wird beschrieben. *Platydema becvari* Schawaller, 2004 wird erstmals für Borneo gemeldet. Neue Funde von fünf weiteren Arten werden mitgeteilt.

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1 Introduction

In the present seventh part of the series concerning new and little known species of Tenebrionidae from Borneo, three new species are described. New faunistic data of several other species and some taxonomic notes are added.

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Cordial thanks for loans are due to Drs. Giulio Cuccodoro and Ivan Löbl (Genève), Wolfgang Schawaller (Stuttgart), and Eva Sprecher (Basel). Laurent Soldati (Montferrier/Lez cedex) drew attention to the fact that *Promethis bosuangi* is probably just a member of *Zophophilus*. I am grateful to Johannes Reibnitz (Stuttgart) for producing the photographs and arranging them on plates. Drs. Ottó Merkl (Budapest) and Wolfgang Schawaller (Stuttgart) reviewed the manuscript.

Acronyms of depositories

CRG	Collection Dr. Roland Grimm, Neuenbürg, Germany
MHNG	Muséum d'Histoire Naturelle, Genève, Switzerland (Dr. Giulio Cuccodoro, Dr. Ivan Löbl)
NHMB	Naturhistorisches Museum Basel, Switzerland (Dr. Eva Sprecher)
SMNS	Staatliches Museum für Naturkunde, Stuttgart, Germany (Dr. Wolfgang Schawaller)

2 The species

2.1 Tenebrioninae Latreille, 1802
Bolitophagini Kirby, 1837

Bolitonaeus neleae Grimm, 2014

Material examined

Borneo, Malaysia, Sarawak, Santubong Peninsula, Gunung Santubong, 80–300 m, 18.–20.IV.2016, R. Grimm leg., 22 ex. (CRG), 7 ex. (SMNS).

Distribution

E Malaysia/Sabah (Grimm 2014), E Malaysia/Sarawak (new record).

Microbolitonaeus loebli **n. sp.**
(Figs. 1, 1a–c)

Holotype ♂: Borneo, E. Malaysia, Sarawak, confl. Sun Oyan and Mujong riv., E. Kapit, 50 m, 18.V.1994, I. Löbl & D. Burckhardt leg. (MHNG).

Paratypes: Same data as holotype, 1 ex. (CRG), 1 ex. (MHNG).

Etymology

Microbolitonaeus loebli n. sp. is named in honour of Dr. I. Löbl (Genève), one of the collectors of the type specimens.

Description

Oblong, subcylindrical, brown, matt; antennae, palps, clypeus, and legs paler, rufous. Body length 2.9–3.0 mm, body width 1.3–1.5 mm.

Head densely and coarsely punctured, punctures larger than interspaces. Clypeus slightly shining, elevated, minutely punctured, punctures may be larger frontally and laterally. Frontoclypeal suture moderately distinct. Eyes completely divided by genal canthus. Supraocular ridge weak. Antennae 10-segmented, antennomeres 7–10 forming a moderate club. Underside of head with antennal groove. Mentum subcordate with longitudinal median carina.

Pronotum transverse, width/length ratio 1.3–1.4, strongly convex transversely, widest near middle, without horns or protuberances. Surface densely and coarsely punctured, punctures separated by small ridges forming reticulation; punctures intermingled with a few scattered, small tubercles. Anterior border nearly straight, slightly emarginate before anterior corners; lateral margins shallowly arcuate, denticulate; basal margin arcuate to shallowly bisinuate; anterior corners tooth-like, moderately projecting; posterior corners obtusely rounded. Propleura coarsely punctured. Prosternal process declivous behind coxae.

Elytra transversely convex, subparallel-sided, with rows of coarse, deeply impressed punctures. Crenulate lateral borders only basally visible in dorsal view.

Whole underside coarsely punctured. Mesoventrite weakly excavate with tubercle in the middle of anterior border.

Outer margin of meso- and metatibiae with distinct tooth near the middle; protibiae only bluntly toothed.

Aedeagus as in Figs. 1b, 1c. Lateral tooth of apicale obliquely directed posteriad.

Differential diagnosis

Microbolitonaeus loebli n. sp. is similar to *M. armatus* Grimm, 2014, the only known species of the genus until now. However, in the latter the surface of clypeus is distinctly tuberculate (Fig. 2), and the lateral tooth of the apicale (parameres) of the aedeagus is directed horizontally outwards (compare Fig. 1b with Grimm 2014: fig. 7a).

2.2 Diaperinae Latreille, 1802
Diaperini Latreille, 1802

Ceropria speciosissima Gebien, 1914
(Figs. 4, 4a, 4b)

Type material examined

Holotype: ♀ / Borneo, Limbang, IV.[19]10 (Moulton) / Type! No. 277/ *Ceropria speciosissima* Geb./ Sammlung H. Gebien (NHMB).

Additional material examined

Borneo, Malaysia, Sabah, Mt. Kinabalu Nat. Park, Poring Hot Springs, 525 m, 18.–21.II.2014, R. Grimm leg, 1 ♂ (CRG).

Distribution

E Malaysia/Sarawak, Sumatra (Gebien 1914, 1925; Masumoto 1994), E Malaysia/Sabah (new record).

Remarks

Ceropria speciosissima Gebien, 1914 was described on the basis of a single female (Gebien 1914) so he could not give details on sexual dimorphism, and Gebien (1925), and Masumoto (1994) had also only females present. The above mentioned male generally coincides with the female type, but is distinguished by dilated protarsi, and incurved and at the middle notched mesotibiae. The elytra are terminating in a distinct, 5 mm long mucro which is shallowly arcuate at tip, flattened and somewhat impressed apicolaterally at inner extend. The last abdominal ventrite is equipped with a pit at apex, flanked by shallow longitudinal impressions; margin of ventrite laterally of pit with cilia few setae. Aedeagus as in Figs. 4a, 4b.

Platydema becvari Schawaller, 2004

Material examined

Borneo, Malaysia, Sarawak, Santubong Peninsula, Permai Rainforest Resort, 10–150 m, 15.–21.IV.2016, R. Grimm leg., 1 ex. (CRG).

Distribution

W Malaysia (Schawaller 2004), E Malaysia/Sarawak (new record).

Platydema saundersi Schawaller, 2012

Material examined

Borneo, Malaysia, Sarawak, Santubong Peninsula, Permai Rainforest Resort, 10–150 m, 15.–21.IV.2016, R. Grimm leg., 4 ex. (CRG).

Distribution

Singapore, Sulawesi (Schawaller 2012), E Malaysia/Sabah (Grimm 2016), E Malaysia/Sarawak (new record).

2.3 Stenochiinae Kirby, 1837
Cnodalonini Gistel, 1856

Camptobrachys sarawakensis Grimm, 2011

Material examined

Borneo, Malaysia, Sarawak, Santubong Peninsula, Permai Rainforest Resort, 10–150 m, 29.III.–3.IV.2016, R. Grimm leg., 1 ♂, 2 ♀♀ (CRG), 1 ♀ (SMNS) – Same data, but 15.–21.IV.2016, R. Grimm leg., 8 ♀♀, 2 ♂♂ (CRG), 2 ♀♀ (SMNS). – Borneo, Malaysia, Sarawak, Santubong Peninsula, Gunung Santubong, 80–300 m, 18.–20.IV.2016, R. Grimm leg., 2 ♀♀ (CRG).

Distribution

E Malaysia/Sarawak (GRIMM 2011).

Remarks

So far only the holotype of *Camptobrachys sarawakensis* Grimm, 2011 was known (cf. GRIMM 2011, 2013). *C. sarawakensis* can be easily separated from *C. andoi* Grimm, 2013 by the different shapes of the aedeagus (compare GRIMM 2011: fig. 13 with GRIMM 2013: fig. 10), but apart from that both species are extremely similar. In *C. sarawakensis* the body colouration is darker blackish brown, the dorsal side, especially the pronotum, is somewhat more shining. The disc of pronotum is slightly more convex and the lateral borders in dorsal view are invisible in the apical part before the anterior corners, but are concealed by the disc of pronotum. The hind body of *C. sarawakensis* is broader (length/combined width ratio of elytra = 1.04 to 1.13) than in *C. andoi* (length/combined width ratio of elytra = 1.18 to 1.23). According to the newly collected material of *C. sarawakensis* the body length varies between 9.0 to 11.0 mm, the body width between 4.3 to 5.5 mm.

Cryptobrachys crassecostatus (Fairmaire, 1898)
(Figs. 3, 3a, 3b)

Material examined

[Borneo], Malaysia, Sarawak, Santubong, 32 km N Kuching, 0–100 m, 11.–16.V.1994, LÖBL & BURCKHARDT leg., 1 ex. (SMNS). – Borneo, Malaysia, Sarawak, Santubong Peninsula, Permai Rainforest Resort, 10–150 m, 29.III.–3.IV.2016, R. GRIMM leg., 1 ex. (CRG) – Same data, but 15.–21.IV.2016, R. GRIMM leg., 2 ex. (CRG).

Distribution

Brunei (KASZAB 1941), E Malaysia/Sabah: Labuan (FAIRMAIRE 1898 under *Cryptobates*), E Malaysia/Sarawak (new record).

Remarks

Cryptobrachys crassecostatus (Fairmaire, 1898) including aedeagus is figured for the first time.

Thesilea bosuangi **n. sp.**
(Figs. 5, 5a, 5b)

Holotype ♂: Borneo, Malaysia, Sabah, Crocker Range, Kipandi Butterfly Park, 700 m, 10.II.2015, S. BOSUANG leg. (CRG).

Paratype ♀: Same data as holotype, but 16.II.2015, S. BOSUANG leg. (CRG).

Etymology

Thesilea bosuangi n. sp. is named in honour of Dr. STEVEN BOSUANG (Kota Kinabalu), the collector of the type specimens.

Description

Elongate, body length 10.0–11.0 mm, body width 3.8 mm, shining; head, pronotum and legs dark metallic green or blue; antennae black; elytra coppery, apico-laterally with blue tinge.

Head shortened, inclined forward; densely covered with setigerous punctures, interspaces microreticulated. Clypeus almost flat, slightly raised medially, with anterior margin shallowly emarginate; frontoclypeal suture vestigial. Genae tapering toward clypeus at sides; clypeogenal meeting continuous, not notched. Frons between eyes narrower than anterior margin of clypeus. Inner ocular sulcus deeply impressed. Antennae with distal 6 antennomeres forming moderate club. Mentum subhexagonal, with few long setae; medially convex, laterally flattened, apically emarginate with protruding anterior corners.

Pronotum anteriorly strongly convex transversely; subquadrate, width/length ratio (both measured in the middle) 1.11, widest at base. Apical and basal margin shallowly bisinuate; lateral margins subparallel, in basal half shallowly drawn inwards, basally diverging towards posterior angels. Apical margin not bordered, basal margin and lateral margins finely bordered. Anterior corners obtusely rounded, posterior corners acute. Surface densely setigerously punctured. Propleura densely and coarsely punctured. Prosternum strongly roughened punctured. Prosternal process declivous behind coxae, terminating in a tubercle. Mesoventrite roughly punctured. Metaventrite with fine wrinkles, nearly smooth.

Elytra elongate, subparallel-sided, strongly convex transversely, less convex longitudinally, length/width ratio 1.69–1.77. Each elytron with 9 striae densely punctured with fine but distinct punctures; intervals flat, microscopically punctured. Abdominal ventrites densely and coarsely punctured.

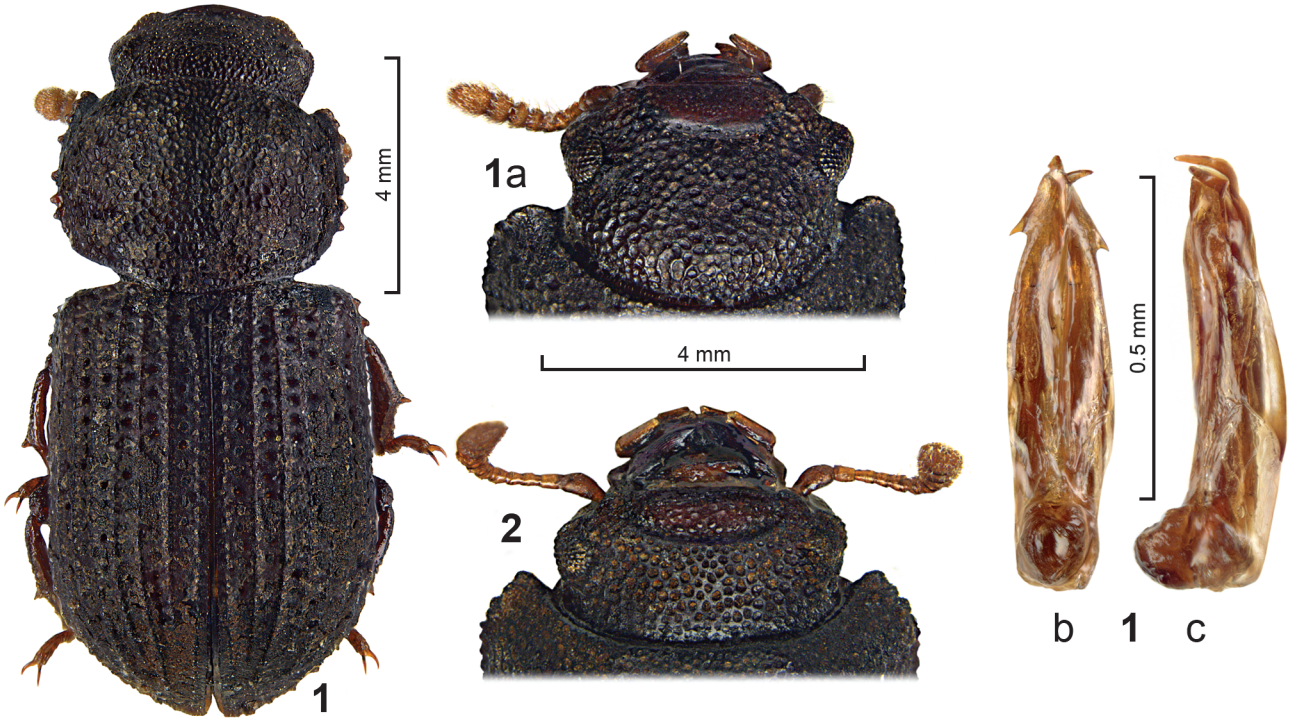
Legs slender and simple; tibiae straight, not widened towards apex.

Aedeagus as in Figs. 5a, 5b.

Differential diagnosis

Thesilea bosuangi n. sp. is similar to *T. chrysoptera* Kulzer, 1951 from Sumatra. The latter species is somewhat smaller (length 8.0–9.0 mm, width 3.0–3.3 mm). The lateral margins of the pronotum are shallowly arcuate towards apex, nearly straight towards base, and the basal margin is shallowly arcuate; anterior and posterior angles are obtuse, and the punctation is finer and denser. The species differs also in the shape of apicale of the aedeagus (Fig. 7).

The shape of pronotum *Thesilea bosuangi* n. sp. is very similar to *T. shibatai* Miyata & Ando, 2008 known from Mt. Kinabalu, but in this species the pronotum and elytra are unicoloured, the tibiae are slightly widened from base to apex, and both species differ in the shape of the



Figs. 1–2. *Microbolitonaeus* spp., dorsal view (1), dorsal views of head (1a, 2), aedeagus, ventral (1b) and lateral (1c). – **1, 1a–c.** *Microbolitonaeus loebli* n. sp. ♂ holotype. – **2.** *M. armatus* Grimm.

aedeagus (compare Figs. 5a, 5b with Miyata & Ando 2008: fig. 2).

The pronotum of *T. ariharai* Masumoto, 1985 is also similar in shape to that of *T. bosuangi* n. sp. (see Masumoto 1985: fig. 20), but the two species clearly differ in the shape of the aedeagus (compare Figs. 5a, 5b with Masumoto 1985: figs. 21–22).

Thesilea convexicollis **n. sp.**
(Figs. 6, 6a, 6b)

Holotype ♂: Borneo, [Malaysia], Sabah, Tawau Hills Park, Tawau River, 8.VI.1998, J. Kodada & F. Čiampor leg. (SMNS).

Etymology
The species name refers to the strongly convex pronotum.

Description
Elongate, body length 7.5 mm, width 2.6 mm, shining; head, pronotum and legs dark metallic green; antennae with basal 6 antennomeres rufous, terminal antennomeres black; elytra coppery, with apex and humeral callosity metallic green.

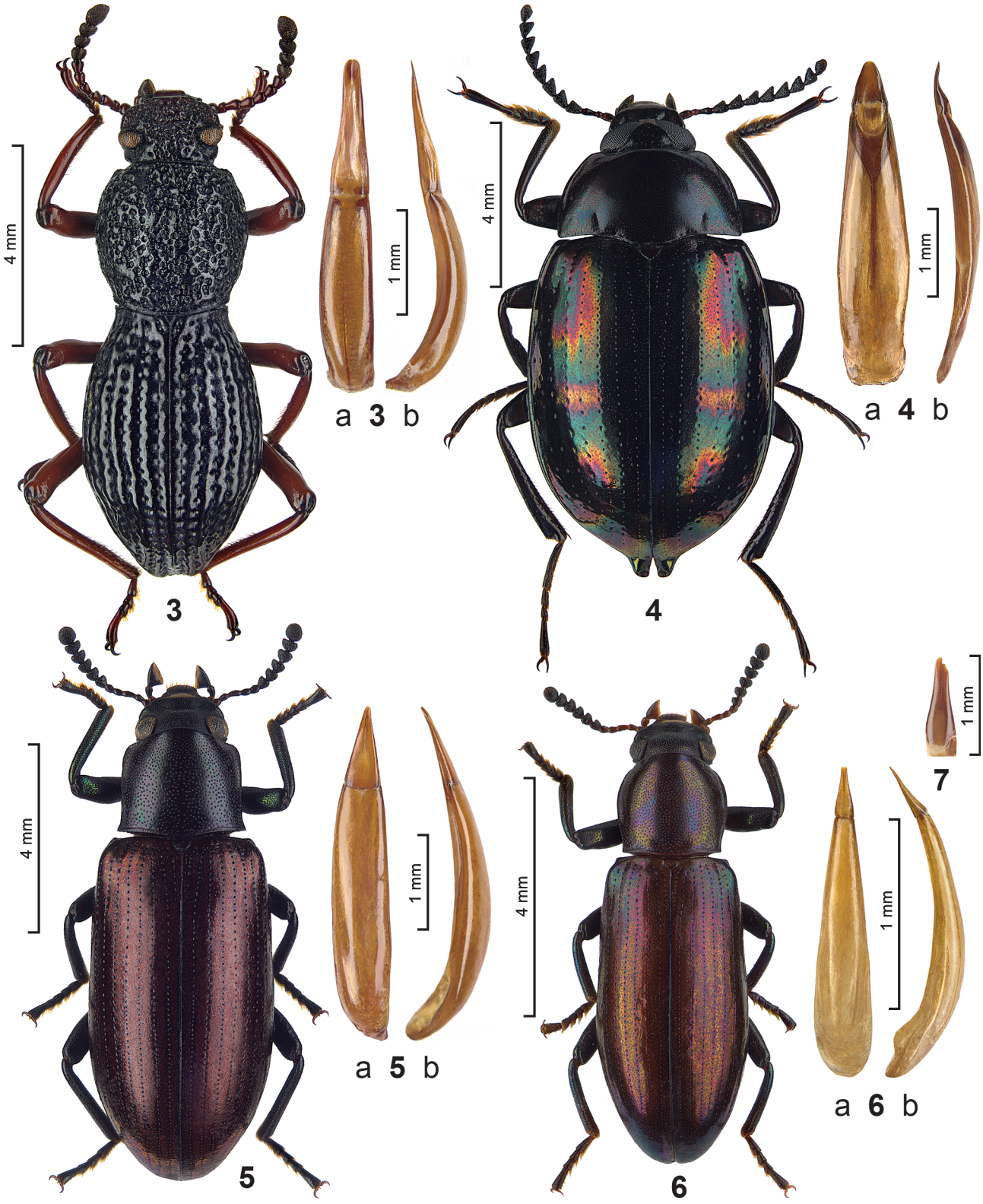
Head shortened, inclined forward, densely covered with setigerous punctures. Clypeus with anterior margin straight; frontoclypeal suture moderately distinct. Genae tapering towards clypeus at sides; clypeogenal meeting continuous, not notched. Frons between eyes as wide as anterior margin of clypeus. Inner ocular sulcus deeply impressed. Antennae with distal 6 antennomeres forming moderate club. Mentum subquadrate, with some long setae; medially convex, laterally flattened, apically shallowly emarginate.

Pronotum strongly convex transversely; quadrate, width/length ratio 1.07, widest before middle. Apical and basal margins shallowly arcuate; lateral margins shallowly arcuate in apical half, nearly straight in basal half, shallowly drawn inwards, basally faintly diverging towards posterior corners. Apical margin not bordered, basal margin and lateral margins distinctly bordered. Anterior corners obtusely rounded, posterior corners subrectangular. Surface densely setigerously punctured. Propleura densely and coarsely punctured. Prosternum strongly coarsely punctured. Prosternal process coarsely sculptured, declivous behind coxae, terminating in flat elevation. Mesoventrite coarsely punctured. Metaventrite finely wrinkled.

Elytra fusiform, widest at apical three-fifths, strongly convex transversely, length/width ratio 1.96. Each elytron with 9 striae densely punctured with fine but distinct punctures; intervals flat, microscopically punctured. Abdominal ventrites densely and coarsely punctured.

Legs slender and simple; tibiae straight, not widened towards apex.

Aedeagus as in Figs. 6a, 6b.



Figs. 3–7. Tenebrionidae spp., dorsal views (3–6), aedeagi, dorsal (3a–6a) and lateral (3b–6b), apicale of aedeagus dorsal (7). – **3.** *Cryptobrachys crassecostatus* (Fairmaire). **4.** *Ceropria speciosissima* Gebien. – **5.** *Thesilea bosuangi* n. sp. ♂ holotype. **6.** *Thesilea convexicollis* n. sp. ♂ holotype. – **7.** *Thesilea chrysoptera* Kulzer ♂ type.

Differential diagnosis

Thesilea convexicollis n. sp. is very similar to *T. chrysoptera* Kulzer, 1951, but in the latter species the pronotum is blue, less convex, the lateral margins are less drawn inwards and are basally not diverging towards posterior corners. The humeral callosity and apex of elytra are without green colouration. The two species differ also in the shape of apicale of the aedeagus (Fig. 7).

Thesilea shibatai Miyata & Ando, 2008

Material examined

Borneo, Malaysia, Sabah, Mt. Kinabalu Nat. Park, HQ area, 1500–1650 m, 23.–26.III.2015, R. Grimm leg., 1 ex. (CRG).

Distribution

E Malaysia/Sabah (Miyata & Ando 2008).

Remarks

This species was described by Miyata & Ando (2008) from the same locality.

Zophophilus bosuangi (Grimm, 2016) **n. comb.**

Promethis bosuangi Grimm, 2016.

Type material examined

Borneo, Malaysia, Sabah, NW Danum Valley Conservation Area, Kuamat, 700 m, 22.I.2015, S. Bosuang leg., holotype (CRG).

Remarks

This species was erroneously described by Grimm (2016) in the genus *Promethis* Pascoe, 1869, but belongs to *Zophophilus* Fairmaire, 1881. According to Matthews & Bouchard (2008) species of *Zophophilus* are known from Australia (Northern Territory, eastern Australia, Tasmania), New Guinea, and Borneo with a body length between 9 and 19 mm. From Borneo so far only *Z. longimanus* (Gebien, 1914) was known, described under *Sphenothorax* Gebien, 1906 (Gebien 1906). According to Gebien (1914) *Z. longimanus* has a body length of 14 to 16 mm and a body width of 5 to 5.25 mm. *Z. bosuangi* is clearly distinguished by its body size (length 28 mm, width 10 mm) and by the semicircular basal protuberance of the elytra (Grimm 2016: fig. 1).

Distribution

E Malaysia/Sabah (Grimm 2016).

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