

# Revision of the genus *Amarygmus* Dalman and related genera. LXV. The Amarygmini of the Philippines (Coleoptera: Tenebrionidae), part II

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## Abstract

Annotations are made on the genus *Lobatopezus* Pic, 1952. The following new species of Amarygmini from the Philippines are described and illustrated: *Lobatopezus schawalleri* n. sp. (Catanduanes), *Amarygmus subopacus* n. sp. (Catanduanes), *A. hesperus* n. sp. (Leyte), *A. illex* n. sp. (Leyte), and *A. pyritidis* n. sp. (Mindanao).

**Key words:** Coleoptera, Tenebrionidae, Amarygmini, *Amarygmus*, *Lobatopezus*, Philippines, new species.

## Zusammenfassung

Zu der Gattung *Lobatopezus* Pic, 1952 werden einige Anmerkungen gemacht. Die folgenden neuen Amarygmini-Arten werden beschrieben und abgebildet: *Lobatopezus schawalleri* n. sp. (Catanduanes), *Amarygmus subopacus* n. sp. (Catanduanes), *A. hesperus* n. sp. (Leyte), *A. illex* n. sp. (Leyte) und *A. pyritidis* n. sp. (Mindanao).

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## 1 Introduction

A revision of the Philippine Amarygmini was published by BREMER (2009a). 50 species are currently known of *Amarygmus* Dalman, 1823, two species of *Dalmanius* Bremer, 2001, one species of *Caudamarygmus* Bremer, 2001, one species of *Luzonoplonyx* Bremer, 2009, one species of *Euspinamarygmus* Masumoto, 1989, and one species of *Lobatopezus* Pic, 1952. Recently I received new material for identification, among them one new species of *Lobatopezus* and four new species of *Amarygmus*. These species are described and illustrated in the present paper.

The genus *Lobatopezus* Pic, 1952 was not treated by BREMER (2009a) because no type material was found in the Muséum d'Histoire Naturelle in Paris, and additional specimens or species of this genus were unknown to me. The newly collected specimen of *Lobatopezus* makes it possible to give more details for this genus.

### Abbreviations of depositories

CA	Collection of the Entomological Laboratory of Dr. Kiyoshi Ando, Osaka, Japan
NHMB	Naturhistorisches Museum, Basel, Switzerland
SMNS	Staatliches Museum für Naturkunde, Stuttgart, Germany
ZSM	Zoologische Staatssammlung, München, Germany

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## 2 Methods

### Morphometry

“Body length” represents the distance between the middle of anterior edge of the pronotum and the apices of elytra, “body width” the maximum width across the elytra, “length of elytra” the distance between the base of the scutellum and the apices of the elytra (measured in dorsal view), “length of pronotum” the distance between the middle of their anterior and posterior edges (measured in the plain through these points).

### Data on the labels

The data on the labels are given in the original language and with the abbreviations as used by the collectors.

## 3 Annotations on the genus *Lobatopezus* Pic, 1952

According to PIC's (1952) description of the genus *Lobatopezus* (type species *Lobatopezus diversecostatus* Pic,

1952) it is “voisin de *Spathulipezus* Geb., avec les articles des tarses antérieurs large, le penultième étant profondément incisé et largement bilobé. Un caractère spécial semble devoir distinguer le genre, celui des stries laterals irrégulieres aux élytres en partie interrompues près des épaules ...”. *Spathulipezus* Gebien, 1920 is a monotypic genus of Amarygmini from the island of Bougainville of the Solomon Islands. It has two tarsomeres on pro- and mesotarsomeres and one tarsomere on the metatarsomeres which are not apically linked to the preceding tarsomere, but dorsally. The respective tarsomeres appear to be bilobed at low magnification. All Amarygmini, except *Spathulipezus* Gebien and *Lobatopezus* Pic, have tarsomeres which are connected to the preceding ones at the apical position.

In *Spathulipezus* (type species *Spathulipezus miritarsis* Gebien, 1920) pro- and mesotarsomeres 1 are rather wide, pro- and mesotarsomeres 2+3 are also rather wide and prolonged apically, pro- and mesotarsomeres 3+4 are linked on the upperside to the preceding tarsomeres, protarsomere 4 is tiny and barely visible, mesotarsomere 4 is also small but less tiny than protarsomere 4, pro- and mesotarsomeres 5 are linked to the preceding tarsomeres at the normal apical point. Metatarsomere 1 is long, metatarsomere 2 is widely enlarged and prolonged apically, linked to metatarsomere 1 at the normal apical point, metatarsomere 3 is linked to metatarsomere 2 on its upperside, metatarsomere 4 is connected to metatarsomere 3 at the apex. Habitus and tarsomeres of *Spathulipezus miritarsis* are figured in BREMER (2009b: fig. 19A).

Below I describe a new species from the Philippines which probably belongs to *Lobatopezus* because of the following reasons: Pic's statement that the tarsomeres of his genus resemble those of *Spathulipezus*, the lack of this special form of tarsomeres in other genera of the Amarygmini, and the presence of both, *Lobatopezus diversecostatus* and the new species, on the Philippines. However, the assignment of the newly described species to *Lobatopezus* remains tentatively because I could not yet study the type of *Lobatopezus diversecostatus*.

If the tarsomeres of *Lobatopezus schawalleri* n. sp. (the new species described below) are examined in lateral view at high magnification (dorsal view shown in Fig. 1A), the following characters become obvious: pro- and mesotarsomeres 2 are linked to tarsomeres 1 at their apical position, pro- and mesotarsomeres 3 are prolonged apically, pro- and mesotarsomeres 4 are very small and linked to the upperside of tarsomeres 3. Metatarsomere 2 is prolonged apically, metatarsomere 3 is tiny and linked to the upperside of metatarsomere 2, metatarsomere 4 is linked to metatarsomere 3 at its apical position. The linking of the tarsomeres is difficult to study because of the brush-like pilosity of the soles. This structure, viewed at low magnification, might give the impression that the tarsomeres

are partially divided into two halves (“bilobé”). There are differences between *Spathulipezus* and *Lobatopezus* concerning the number of tarsomeres with an insertion on the upperside and the shape of the tarsomeres. Therefore, both genera should remain separated.

#### 4 Descriptions of new species

##### *Lobatopezus schawalleri* n. sp. (Fig. 1A–J)

**Holotype** (♂): Philippines, Catanduanes, Gigmoto-Nahlug falls, 7.III.2007, leg. E. COLONNELLI (SMNS).

##### Etymology

Schawalleri = dedicated to Dr. WOLFGANG SCHAWALLER (Stuttgart), honouring his friendly and constructive cooperation over years.

##### Diagnosis

Body shape wide, oval; of medium size; maximum width at the first third of elytra; elytra with rows of medium-sized, closely set punctures and flat intervals on disc; the rows of punctures do not reach the elytral base at the shoulders. Characters of tarsomeres see chapter 3.

*Lobatopezus diversecostatus* Pic, 1952, the only described species of this genus, known from Mindanao, is smaller (body length 6 mm) than *L. schawalleri* n. sp. and has irregular and partly interrupted striae (*L. schawalleri* has regular rows of punctures on the elytra).

##### Description

**Measurements:** Body length: 8.83 mm. Body width: 5.57 mm. – **Ratios:** Pronotum: Width/length 2.08; width hind corners/width front corners 2.13. Elytra: length/width 1.33; length elytra/length pronotum 3.88; maximum width elytra/maximum width pronotum 1.40.

**Colouration:** Upperside coppery, moderately lustrous; clypeus and genae lighter brown. Underside dark brown. Legs and antennae lighter brown than upper- and underside.

**Head:** Upperside relatively flat, genae slightly raised towards their lateral margins. Frons of medium width, nearly as wide as length of antennomere 3 (like 23 : 26), covered with small, somewhat irregularly set punctures. Genae less closely punctured than frons, anteriorly terminating in front of the fronto-clypeal suture. Fronto-clypeal suture slightly incised in the middle. Clypeus moderately protruded forwards, slightly convex longitudinally, nearly flat transversely, punctured as on frons. Mentum widened anteriorly, with somewhat bent sides, transition between sides and base rounded; with flat, lustrous lateral margins; space in between less lustrous, convex transversely, with

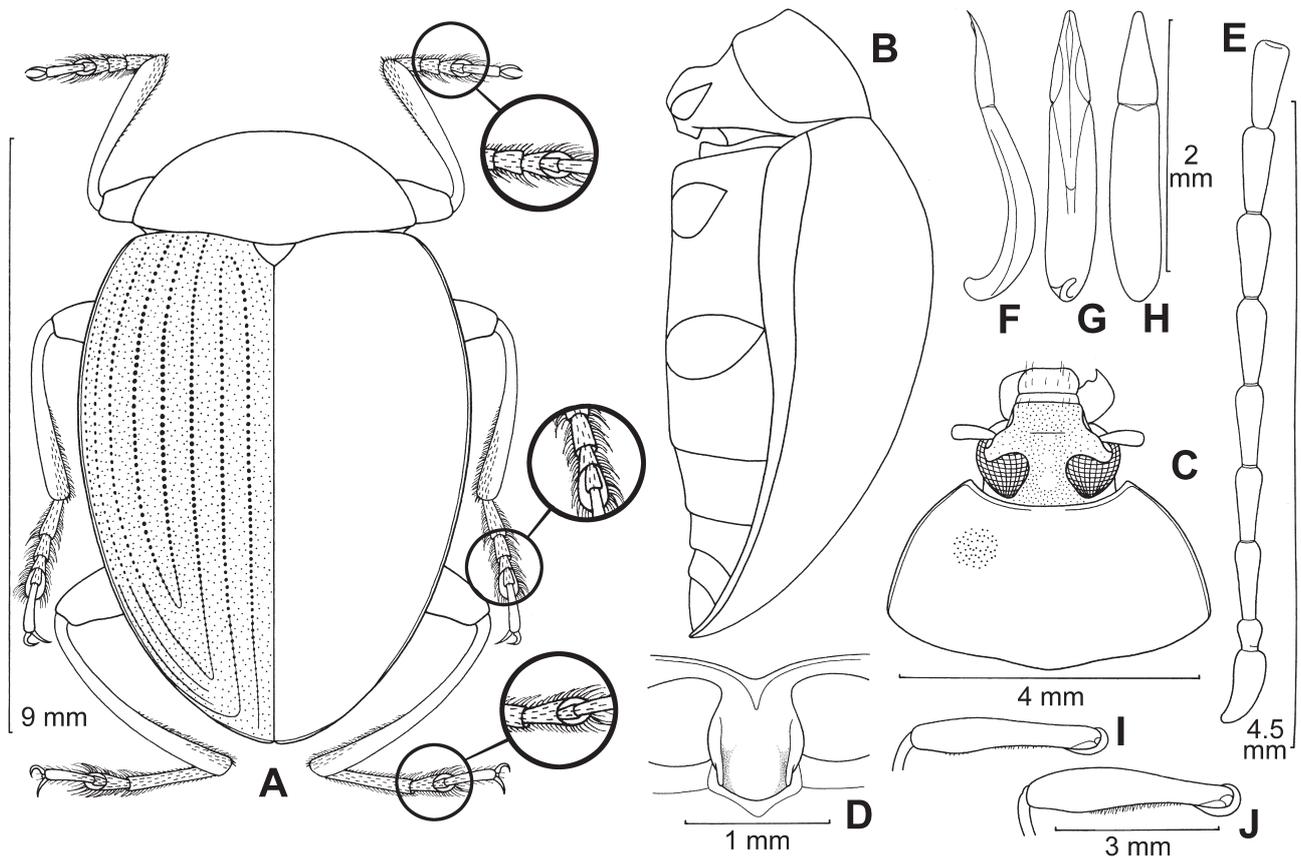


Fig. 1. *Lobatopezus schawalleri* n. sp. – A Habitus. B Body, lateral view. C Head and pronotum. D Prosternal apophysis. E Antennomeres 1–9. F Aedeagus, lateral view. G Aedeagus ventral view. H Aedeagus, dorsal view. I Mesofemur. J Metafemur.

a few small punctures and short hairs. Underside of neck with small punctures with short erect hairs. Mandibles with a longitudinal sulcus on outer surface, apically bifid.

Pronotum: Rather flat. Slightly convex transversely and longitudinally. Widest at base, anteriorly narrowing, sides nearly straight in posterior half, bent in anterior half. Front corners in dorsal view sharply angled, angle about 80°; hind corners angular, obtuse. Anterior margin markedly excavated. Posterior margin not bordered. Lateral and anterior margins bordered. Lateral borders in dorsal view well visible on their whole length. Front corners in lateral view sharp-angled, with an angle of about 90°; hind corners very obtuse, nearly rounded. Surface with distinct, small, relatively closely set punctures, leaving a median longitudinal area without punctures.

Scutellum: Triangular, impunctate.

Elytra: Wide, oval, moderately convex transversely and longitudinally. Maximum width and height at the anterior third. Shoulders not prominent. Apices of elytra mutually rounded. Lateral edges in dorsal view narrowly visible on the whole length. Surface with rows of medium-sized, closely set punctures which are slightly impressed; distance between punctures on disc in row 4 less than the

diameter of a puncture; about 60 punctures in row 4; rows 7 and 8 do not reach the elytral base. Intervals on disc flat, slightly convex laterally; with minute, distinct, relatively closely set punctures.

Prosternum: Anterior margin continuously bent upwards, with a short keel towards apophysis in the middle. Apophysis relatively flat, nearly oval, widest between procoxae where its lateral margins are slightly lifted; apex widely pointed.

Mesosternum: Anterior part depressed, with a lustrous median clasp. Anterior margin of posterior part deeply excavated in the middle; posterior part longitudinally sulcated on each side.

Metasternum: Anterior margin between mesocoxae rounded, bordered. Disc with closely set punctures of medium size and short stout hairs originating from these punctures. Median line shallowly depressed in its posterior half.

Sternites: Anterior margin of sternite 1 between metacoxae ogival, broadly bordered. Disc of sternite 1 punctured as metasternum; disc of sternite 2 only with small punctures; sternites 3–5 with tiny, widely separated punctures. Sternite 5 apically shallowly depressed.

Antennae: Of medium length. Length/width ratio of antennomeres 1–9 equals to 12:5½ / 4½:4 / 13:4 / 13:4 / 14:4 / 13:5 / 14:5 / 14:5 / 15:5 (antennomeres 10 + 11 missing).

Legs: Short. Femora thickened towards the second third, with closely set, small punctures; profemur without any tooth or interruption anteriorly; meso- and metafemora with short, closely set hairs posteriorly. Protibia slightly concave on outer side, somewhat broadened anteriorly on inner side; mesotibia moderately bent in basal two-fifths, straight in apical three-fifths, with oblique, closely set hairs of medium length in the apical half on inner side. Metatibia relatively thin, moderately bent. Characters of tarsomeres see above (chapter 3). Lengths of protarsomeres 1–5 as 9:6:6:4:16; lengths of mesotarsomeres 1–5 as 15:13:5:3:11; lengths of metatarsomeres 1–4 as 27:9:3:16 (measured in dorsal view).

Aedeagus: See Fig. 1F–H.

*Amarygmus subopacus* n. sp.  
(Fig. 2A–E)

Holotype (♀): Philippines, Catanduanes, near Bato, 13°36'57"N 124°17'49"E, 10.III.2007, E. MELONI leg. (SMNS).

Paratypes: Same data as holotype, but E. COLONNELLI leg. (1 ♀ ZSM; 1 sex not determined, head missing, SMNS).

Etymology

Subopacus (Lat.) = somewhat opaque.

Diagnosis

Relatively small; elongate oval. Elytra with rows of small punctures which are inconstantly linked by faint lines; elytral intervals flat on disc, somewhat convex laterally. Pronotal punctures widely separated and indistinct. Frons of medium width. Antennae not very long. Metatarsomere 1 very long. Upperside moderately opaque, dark brown, lateral and apical parts with some faint iridescence.

The new species keys out at couplet 14 of BREMER'S (2009a) key (*Amarygmus prolixus* Bremer, 2009, *Amarygmus iuventus* Bremer, 2009). Both species are only known from Luzon.

*Amarygmus prolixus* is smaller on average (body length 4.36–5.33 mm), and the punctures of the elytral rows are somewhat larger, but it has similarly long elytra, a similarly wide frons and also tiny, inconspicuous punctures on the pronotum. *A. subopacus* is possibly only a subspecies of *A. prolixus*.

*Amarygmus iuventus* is clearly iridescent on pronotum and elytra and its frons is narrower. Body length (5.73–6.09 mm) and length/width ratio of elytra equal that of *A. subopacus*.

Description

Measurements: Body length: 5.33–6.13 mm. Body width: 2.84–3.18 mm. – Ratios: Pronotum: width/length 1.68–1.70; width hind corners/width front corners 1.65–1.74. Elytra: length/width 1.50–1.58; length elytra/length pronotum 3.66–3.83; maximum width elytra/maximum width pronotum 1.29–1.30.

Colouration: Upperside see Diagnosis, slightly microreticulated. Underside dark brown to black. Lateral parts of pronotum in lateral view with faint blue iridescence. Head nearly black, microreticulated. Legs dark brown. Antennae dark brown to black.

Head: Frons of medium width, distinctly wider than length of antennomere 3 (like 22:11) with tiny, widely separated punctures. Genae slightly raised, anteriorly terminating in front of the level of the fronto-clypeal suture. Fronto-clypeal suture slightly incised in the middle. Clypeus moderately protruded forwards, nearly flat; with tiny, widely separated punctures. Mandibles with a longitudinal sulcus on outer surface, apically bifid.

Pronotum: Relatively narrow; moderately convex transversely, slightly convex longitudinally. Widest at base, anteriorly narrowing and bent. Front corners in dorsal view indistinctly rounded; hind corners indistinctly angular, obtuse. Anterior margin slightly excavated. Lateral and anterior margins bordered. Lateral borders in dorsal view very narrowly visible. Front corners in lateral view rounded, obtuse; hind corners angular, obtuse. Surface see Diagnosis.

Scutellum: Triangular, impunctate.

Elytra: Elongate oval, moderately convex transversely and longitudinally. Maximum width and height at the end of the anterior third. Shoulders rounded. Apices of elytra mutually rounded. Lateral edges in dorsal view narrowly visible in posterior half. Surface with rows of small to medium-sized punctures which are inconstantly connected by faint lines, apically and laterally situated in somewhat incised striae; distance between punctures on disc in row 4 about 1½ diameters of a puncture; about 23 punctures in row 4. Intervals with tiny, widely separated, inconspicuous punctures.

Prosternum: Anterior margin narrowly bent upwards, terminating in a triangular process in the middle which is continuing into a flat, median keel on the ground of the apophysis. Apophysis not very wide, somewhat widened along procoxae and its lateral margins somewhat raised; in between with a median groove. Behind procoxae the lateral margins are narrowing; apically the apophysis is rounded.

Mesosternum: Hind part rather long and narrow, with a narrow longitudinal sulcus on each side; anterior margin of hind part excavated in the middle.

Metasternum: Anterior margin between mesocoxae rounded, bordered. Surface microreticulated, nearly im-

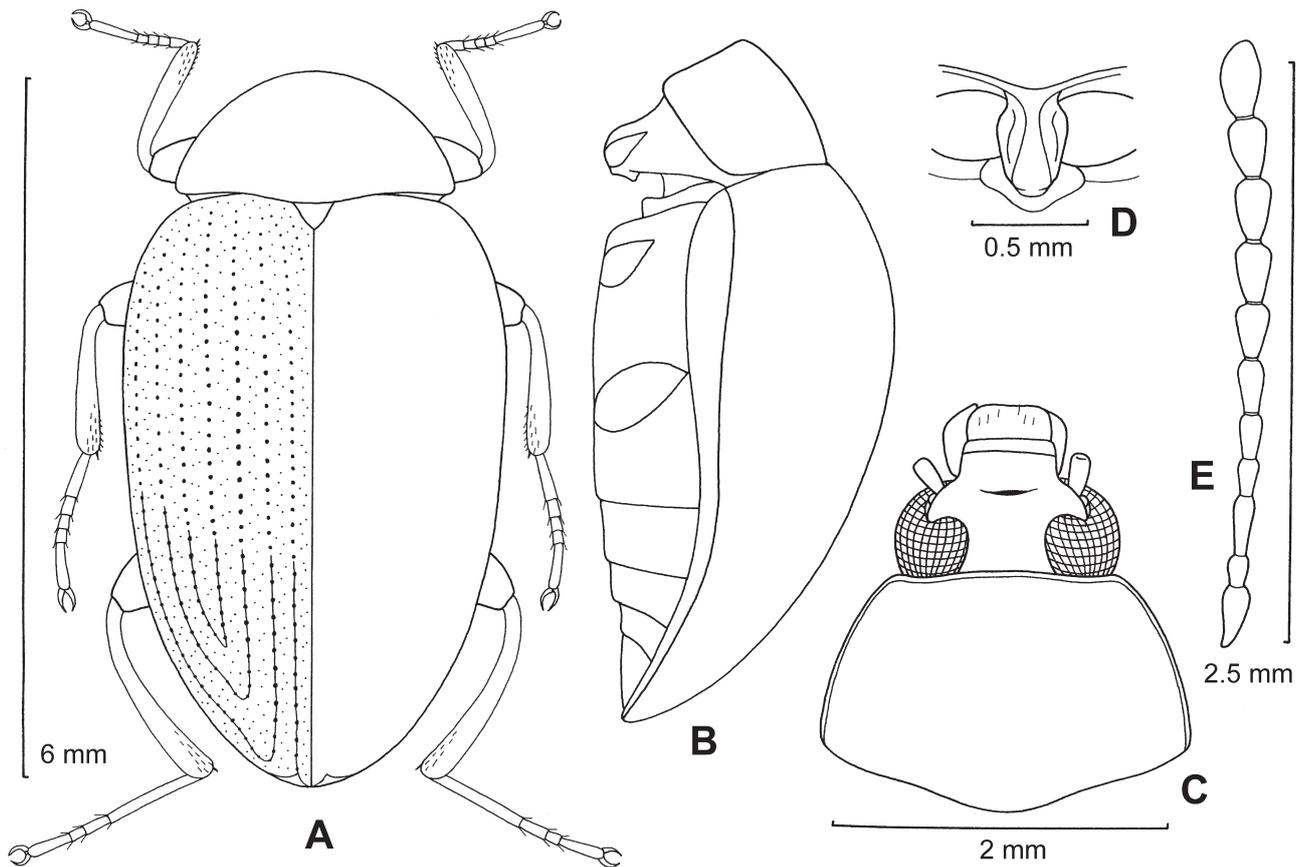


Fig. 2. *Amarygmus subopacus* n. sp. – A Habitus. B Body, lateral view. C Head and pronotum. D Prosternal apophysis. E Antenna.

punctate. Median line incised and depressed on its whole length.

Sternites: Anterior margin between metacoxae ogival, bordered. Sternites strongly microreticulated, nearly impunctate.

Antennae: Reaching to anterior third of elytra. Length/width ratio of antennomeres 1–11 equals to 11:5 / 6½:4½ / 10½:4½ / 8:4½ / 8:5 / 10:6 / 12:7 / 12½:7½ / 12:7½ / 12:7½ / 17:8.

Legs: Short. Femora thickened towards the second third. Pro- and mesotibiae on outer side slightly bent in basal third, straight in apical two-thirds, straight on more than two-thirds on inner side. Metatibia moderately bent over the whole length. Lengths of protarsomeres 1–5 as 6:6:4:3:17; lengths of mesotarsomeres 1–5 as 15:9:5:4:19; lengths of metatarsomeres 1–4 as 36:10:6:17.

*Amarygmus hesperus* n. sp.  
(Fig. 3A–H)

Holotype (♂): Mt. Balocau, Leyte Island, Philippines, VI.2006, D. MOHAGAN leg. (CA).

Paratypes: Philippines, Leyte, Mt. Balocau, VI.2006 (no collector mentioned) (1 ♀ CA, 1 ♀ ZSM).

Etymology

Hesperus, from Ἑσπερος (Greek) = evening star.

Diagnosis

Relatively large, elongate oval. Pronotum and elytra relatively flat; elytra with rows of large punctures which are slightly impressed; elytral intervals slightly convex on disc; frons narrow; antennae long; legs relatively long and thin, protarsomeres 1–3 slightly enlarged in males. Elytra reddish violet, somewhat lustrous, pronotum in two specimens golden, in one reddish violet. Head and legs black.

*Amarygmus hesperus* n. sp. belongs to a group of species with a similar shape, low convexity of the upperside, elytral rows of punctures, narrow frons, long antennae, and pro- and mesotarsomeres 1–3 slightly enlarged in males: *Amarygmus planipennis* (Kulzer, 1951), *A. spectabilis* (Gebien, 1921) and *A. jaegeri* Bremer, 2009.

*Amarygmus planipennis* and *A. spectabilis* are somewhat larger (body length of *A. planipennis* 11.4–14.1 mm, of *A. spectabilis* 11.9–12.1 mm); *A. jaegeri* has about the

same length as *A. hesperus*. *A. spectabilis* and *A. jaegeri* present the same colour on pronotum and elytra, while *A. planipennis* and *A. hesperus* show a different colouration of pronotum and elytra: the colour of the upperside of *A. jaegeri* is uniformly coppery, that of *A. spectabilis* is brown and lustrous; *A. planipennis* has a greenish-purple or blue pronotum and greenish ground colour on the elytra (*A. hesperus* a golden or reddish-violet pronotum and reddish brown elytra). *A. planipennis* and *A. spectabilis* have the punctures in the elytral rows smaller and more closely set than in *A. hesperus*. *A. jaegeri* has relatively large punctures in the elytral rows (as in *A. hesperus*), but its punctures are more elongate and mostly connected by lines on the disc.

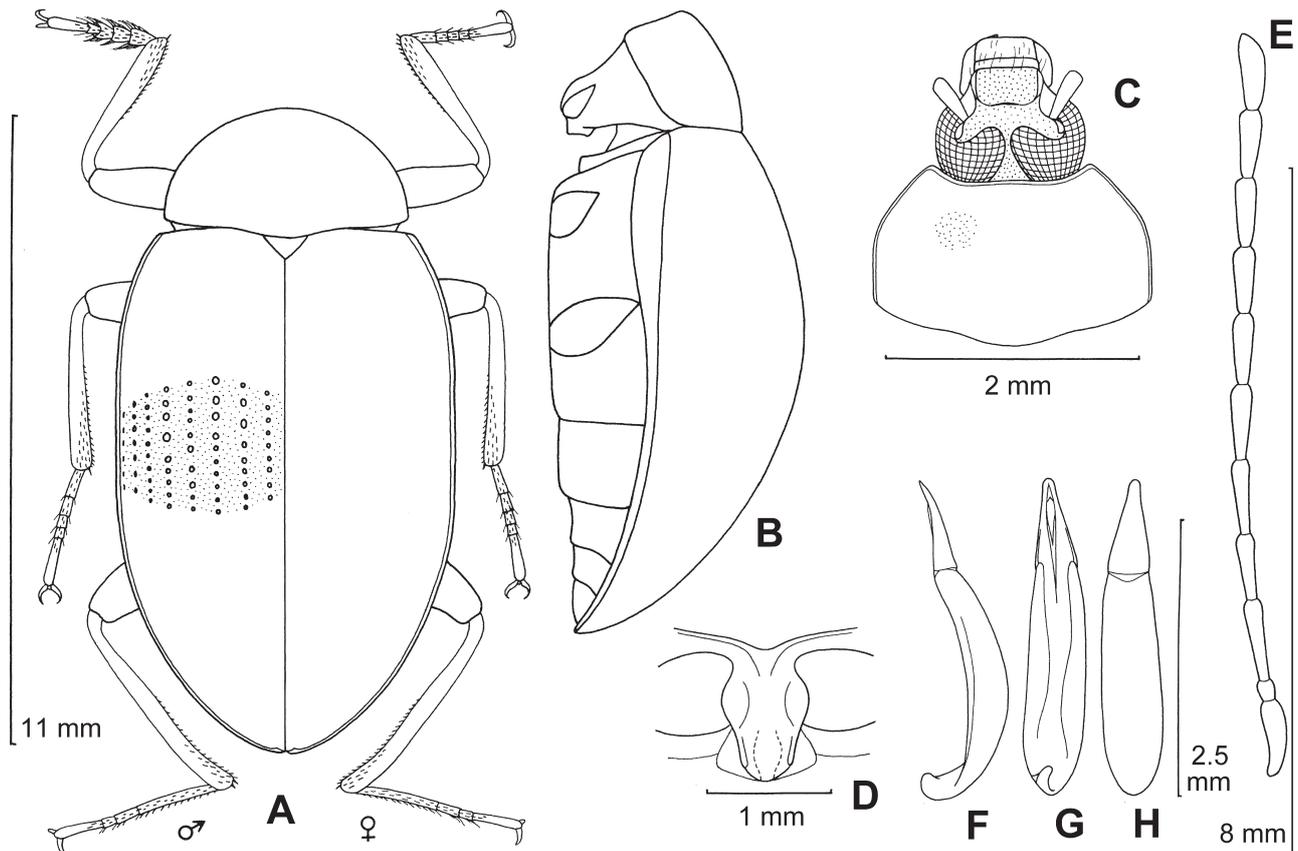
#### Description

Measurements: Body length: 10.4–11.5 mm. Body width: 5.81–6.37 mm. – Ratios: Pronotum: width/length 1.79–1.89; width hind corners/width front corners 1.77–1.81. Elytra: length/width 1.47–1.49; length elytra/length

pronotum 3.85–4.10; maximum width elytra/maximum width pronotum 1.44–1.46.

Colouration: Elytra reddish brown, somewhat lustrous, with green iridescence, pronotum in two specimens golden, in one reddish violet, with iridescence in different colours. Legs black. Ground colour of antennae black (but at lower magnification with a brownish tinge because of the short brown hairs). Underside black.

Head: Frons narrow in both sexes, about as wide as the diameter of two ocelli of the eye, with small, indistinct punctures. Eyes large, occupying a large part of the head and circumventing the genae from two sides. Genae narrow and short, directed obliquely to the front, only slightly raised, anteriorly terminating behind the level of the middle part of the fronto-clypeal suture. Fronto-clypeal suture slightly impressed in the middle, not incised. Clypeus protruded forwards, slightly convex longitudinally, punctures more distinct and more closely set than on frons. Mentum with bent sides and a rounded transition between sides and base; lateral margins flat, slightly lustrous; space in



**Fig. 3.** *Amarygmus hesperus* n. sp. – **A** Habitus; legs on left side ♂, right side ♀. **B** Body, lateral view. **C** Head and pronotum. **D** Pro-sternal apophysis. **E** Antenna. **F** Aedeagus, lateral view. **G** Aedeagus, ventral view. **H** Aedeagus, dorsal view.

between opaque, slightly convex transversely. Mandibles with a longitudinal sulcus on outer surface, apically bifid.

**Pronotum:** Relatively narrow and short when compared with elytra. Moderately convex transversely and longitudinally. Widest at base, anteriorly narrowing and bent. Front corners in dorsal view somewhat projecting forwards, rectangular; hind corners obtuse. Anterior margin excavated. Lateral and anterior margins continuously bordered. Lateral borders in dorsal view well visible on their whole length. Front corners in lateral view rectangular; hind corners angular and obtuse. Surface with tiny, inconspicuous punctures.

**Scutellum:** Triangular, with a few tiny punctures.

**Elytra:** Relatively long, oval. Maximum width and height somewhat anterior to the middle. Shoulders obtuse and scarcely prominent. Apices of elytra mutually rounded. Lateral edges in dorsal view visible on their whole length. Rows of large punctures somewhat impressed on disc, but not linked by lines; apically and laterally they are clearly impressed, appearing to be striae; rows 4 and 5 terminating free posteriorly; distance between punctures on disc in row 4 about half the diameter of a puncture; about 40 punctures in row 4. Intervals on disc slightly convex, laterally and apically distinctly convex; with tiny, inconspicuous punctures.

**Prosternum:** Anterior margin bent upwards, with a triangular process towards apophysis in the middle. Apophysis relatively narrow, somewhat widened along procoxae and the margins slightly raised; median groove in between shallow; posterior to procoxae the apophysis is horizontally prolonged and its lateral margins are somewhat narrowing, apically rounded.

**Mesosternum:** Hind part of apophysis with a rough surface, its anterior margin excavated in the middle.

**Metasternum:** Anterior margin between mesocoxae rounded, bordered. Disc with minute, distinct punctures. Median line impressed in its posterior fourth.

**Sternites:** Anterior margin between metacoxae ogival, bordered. Sternites 1 and 2 with minute, relatively closely set punctures. Punctures on sternites 3–5 tiny. Male sternite 5 slightly depressed apically.

**Antennae:** Long, reaching to the middle of elytra. Length/width ratio of antennomeres 1–11 equals to 20:6 / 7:5½ / 21:6 / 18:6 / 19:6 / 20:6½ / 19:6½ / 20:6½ / 18:6½ / 18:6½ / 21:7.

**Legs:** Of medium length, relatively narrow. Femora only slightly thickened towards the second third; meso- and metafemora posteriorly with long, mostly recumbent hairs in males. Pro- and mesotibiae straight, metatibia straight in the basal half, slightly incurved in the apical half. Lengths of protarsomeres 1–5 (female) as 7:6:5:5:21; lengths of mesotarsomeres 1–5 as 12:8:7:6:23; lengths of metatarsomeres 1–4 as 32:8:7:23.

**Aedeagus:** See Fig. 3F–H.

*Amarygmus illex* n. sp.

(Fig. 4A–I)

**H o l o t y p e** (♂): Philippines, Leyte, Mt. Balocau, VI.2006 (CA) (left foreleg missing).

**Etymology**

Illex (Lat.) = seductive.

**Diagnosis**

Of medium size; oval, markedly convex; elytra with incised striae and somewhat convex intervals; frons relatively narrow; antennae of medium length; protarsomeres 1–3 distinctly widened in males. Ground colour of upper side green, but partially with violet iridescence on intervals longitudinally; pronotum with colourful iridescence.

Body shape and male tarsomeres and sternite 5 of *Amarygmus illex* resemble *A. platolenoides* Bremer, 2009, which also occurs on Leyte, but it differs by its larger size (body length of *A. platolenoides* 4.9–5.4 mm) and the shape of the aedeagus (see BREMER 2009a: fig. 22G–H).

**Description**

**Measurements:** Body length: 8.68 mm. Body width: 5.57 mm. – **Ratios:** Pronotum: width/length 1.94; width hind corners/width front corners 1.94. Elytra: length/width 1.27; length elytra/length pronotum 3.42; maximum width elytra/maximum width pronotum 1.39.

**Colouration:** Upperside see Diagnosis. Legs and antennae black. Underside black, somewhat lustrous.

**Head:** Frons relatively narrow, narrower than length of antennomere 4 (like 7 : 9), with some tiny punctures. Genae clearly raised, anteriorly terminating somewhat in front of the level of the fronto-clypeal suture. Fronto-clypeal suture transversely narrowly incised, the incision scarcely wider than frons. Clypeus protruded forwards, slightly higher situated than frons, convex longitudinally; with tiny, widely separated punctures. Mentum widened anteriorly, with bent sides and a rounded transition between sides and base; lateral margins flat, space in between opaque, slightly convex transversely. Mandibles with a longitudinal sulcus on outer surface, apically bifid.

**Pronotum:** Convex transversely and longitudinally; widest at base, anteriorly narrowing and bent. Front corners in dorsal view nearly rectangular; hind corners angular, with an angle of about 100°. Anterior margin distinctly excavated. Lateral and anterior margins continuously bordered. Lateral borders in dorsal view narrowly visible on their whole length. Front corners in lateral view angular, with an angle of about 105°; hind corners angular and more obtuse. Surface with distinct, small, relatively closely set punctures.

**Scutellum:** Triangular, impunctate.

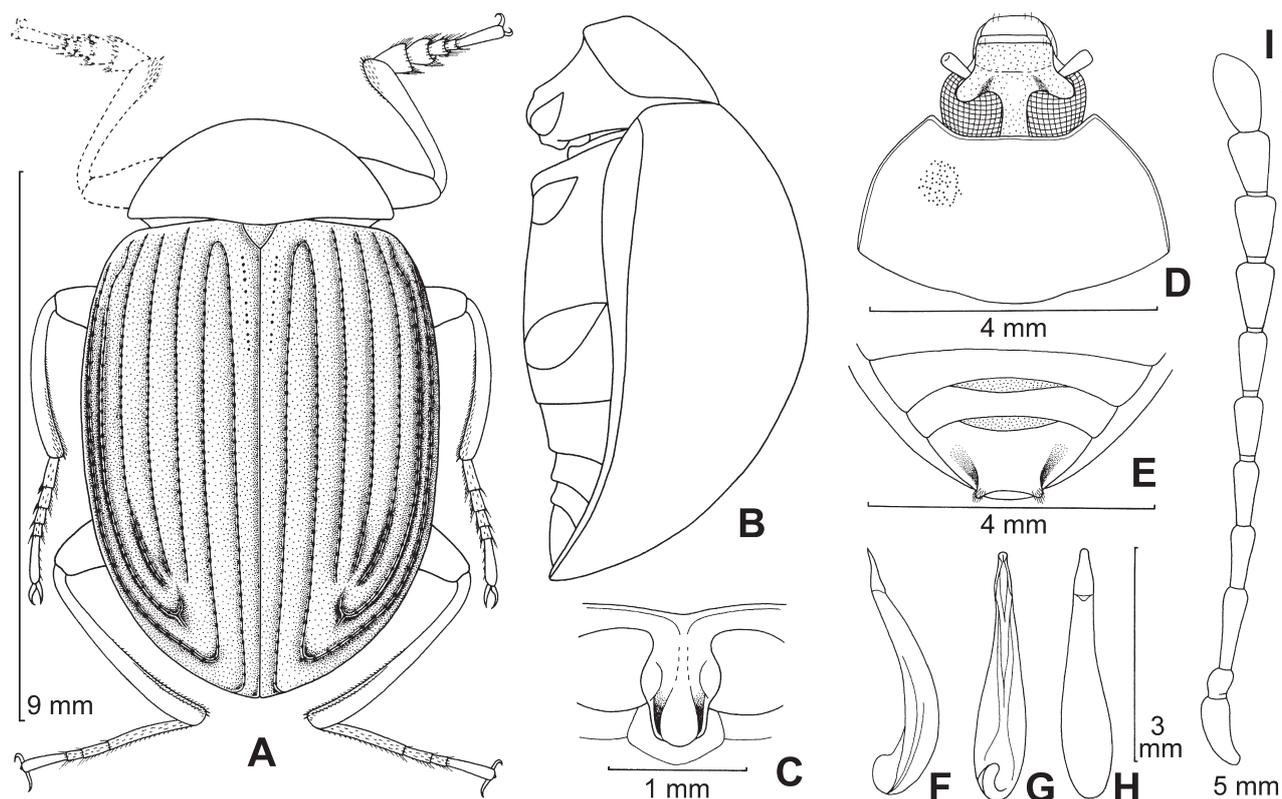


Fig. 4. *Amarygmus illex* n. sp. – A Habitus. B Body, lateral view. C Prosternal apophysis. D Head and pronotum. E Sternites 3–5. F Aedeagus, lateral view. G Aedeagus, ventral view. H Aedeagus, dorsal view. I Antenna.

Elytra: Widely oval, markedly convex transversely and longitudinally. Maximum width and height shortly anterior to the middle. Shoulders rounded and obtuse. Apices of elytra mutually rounded. Lateral edges in dorsal view narrowly visible. Surface with deeply incised striae; with small, slightly elongate punctures; striae 4 and 5 terminating freely, not connected to each other; distance between strial punctures on disc in row 4 approximately the diameter of a puncture; about 34 punctures in row 4. Intervals convex, with tiny, inconspicuous punctures.

Prosternum: Anterior margin narrowly bent upwards, with a short process towards apophysis in the middle. Apophysis widened along procoxae, with raised lateral margins, space in between with a relatively deep median groove; posterior to procoxae the apophysis is horizontally protruding, with subparallel sides, apically widely pointed.

Mesosternum: Surface of hind part smooth, its anterior margin excavated in the middle.

Metasternum: Anterior margin between mesocoxae rounded, bordered. Except some irregular punctures anteriorly the disc is covered with tiny, widely separated punctures. Median line slightly incised on its whole length.

Sternites: Anterior margin between metacoxae ogival, narrowly bordered. Sternites 1 and 2 anteriorly with super-

ficial ridges, posteriorly with minute punctures. Sternites 3 and 4 with tiny punctures. Sternite 5 apically excavated and somewhat raised in the middle (Fig. 4E).

Antennae: Reaching to anterior third of elytra. Length/width ratio of antennomeres 1–11 equals to  $9:4\frac{1}{2} / 5:4 / 12:4 / 9:4\frac{1}{2} / 10:4\frac{1}{2} / 11:5\frac{1}{2} / 11:5\frac{1}{2} / 10\frac{1}{2}:6 / 10:6 / 10:6 / 15:6\frac{1}{2}$ .

Legs: Short. Femora thickened towards the second third. Protibia straight on outer side, somewhat broadened in apical third on inner side; mesotibia moderately bent, on inner side with oblique bristle-like hairs of medium length; metatibia nearly straight in basal half, somewhat incurved in apical half. Protarsomeres 1–3 very wide, of decreasing width (Fig. 4A). Lengths of protarsomeres 1–5 as 12:9:6:4:20; lengths of mesotarsomeres 1–5 as 20:7:6:4½:20; lengths of metatarsomeres 1–4 as 29:11:9:20.

Aedeagus: See Fig. 4F–H.

*Amarygmus pyritidis* n. sp.  
(Fig. 5A–E)

Holotype (♀): Philippines, 1600 m, Mindanao, 30 km west of Maramag, 28.–30.XII.1990, BOLM leg. (NHMB).

## Etymology

Pyritus (genitive pyritidis) = name of a black precious stone in the "Naturalis historia" of PLINIUS senior. It is unknown which precious stone was meant.

## Diagnosis

Small, oval, upperside black, lustrous. Elytra with rows of distinct, medium-sized punctures and flat, well punctured intervals; frons relatively wide; antennae of medium length; protibiae slightly bent, mesotibiae moderately bent, metatibiae straight in basal half, somewhat incurved in apical half.

*Amarygmus pyritidis* n. sp. keys out at couplet 45 of BREMER'S (2009a) key (= *A. schultzei* Bremer, 2009, found on Luzon). *A. schultzei* is slightly larger (body length 5.3–6.1 mm), it is characterized by a charcoal-grey upperside markedly contrasting to the yellowish brown legs (the dark brown legs of *A. pyritidis* do not distinctly contrast to the black upperside); the punctures of the elytral rows of *A. schultzei* are distinctly smaller than those of *A. pyritidis*, and the prosternal apophysis of *A. schultzei* has a sharply pointed apex (apically rounded in *A. pyritidis*).

## Description

Measurements: Body length: 4.94 mm. Body width: 3.27 mm. – Ratios: Pronotum: width/length 2.04; width hind corners/width front corners 1.68. Elytra: length/width 1.29; length elytra/length pronotum 3.86; maximum width elytra/maximum width pronotum 1.47.

Colouration: Upperside black, lustrous. Underside, femora and tibiae dark brown, tarsomeres brown.

Head: Frons wide, wider than length of combined antennomeres 3 + 4 (like 25 : 22), with tiny, widely separated punctures. Genae barely raised, anteriorly terminating in front of the level of the middle part of the fronto-clypeal suture. Fronto-clypeal suture slightly incised in the middle. Clypeus moderately protruded forwards, nearly flat, punctation as on frons. Mentum widened anteriorly, with bent sides and rounded transition between sides and base, convex transversely. Mandibles with a longitudinal sulcus on outer surface, apically bifid.

Pronotum: Relatively wide, moderately convex transversely, slightly convex longitudinally. Widest at base, anteriorly narrowing and bent. Front corners in dorsal view rounded; hind corners strongly obtuse. Anterior margin

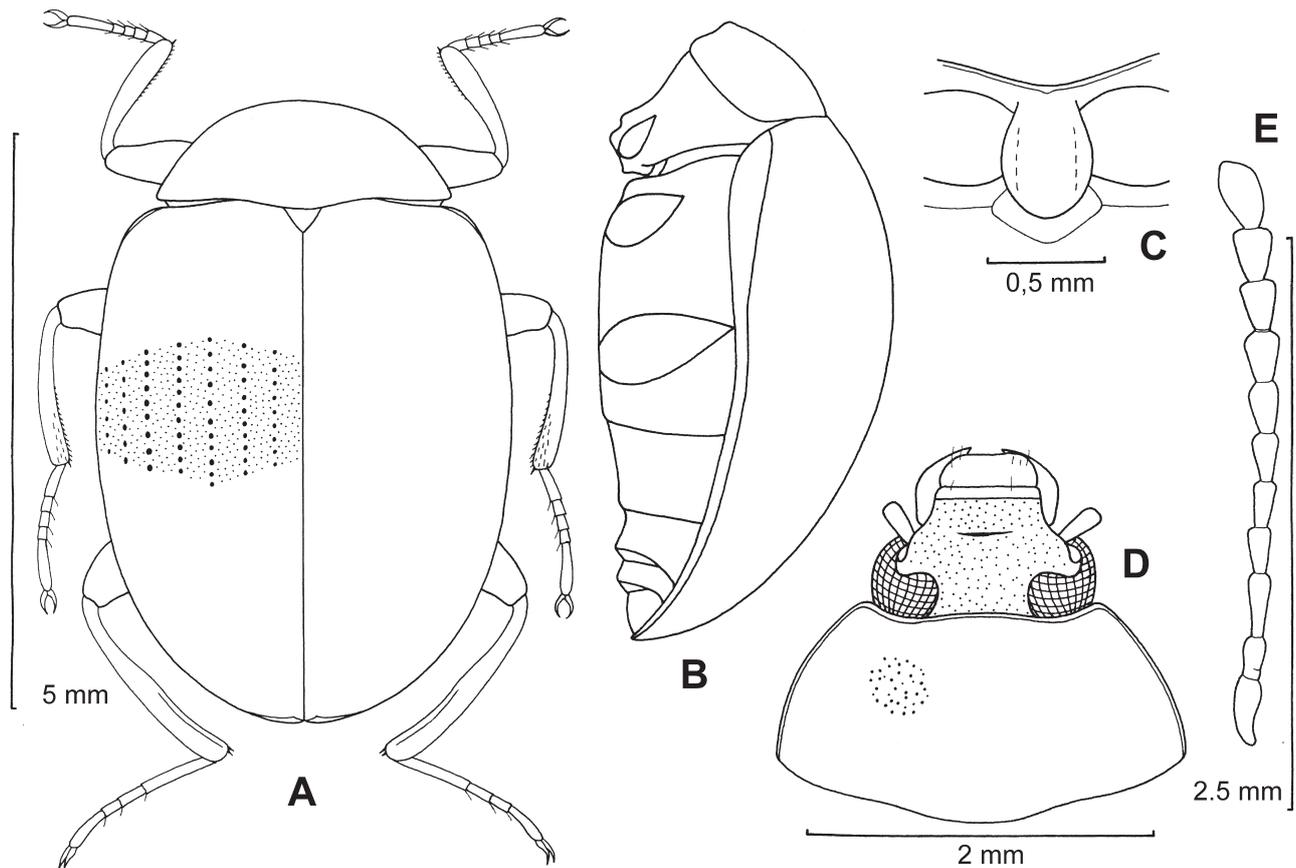


Fig. 5. *Amarygmus pyritidis* n. sp. – A Habitus, female. B Body, lateral view. C Prosternal apophysis. D Head and pronotum. E Antenna.

distinctly excavated. Lateral and anterior margins bordered. Lateral borders in dorsal view barely visible in the anterior fourth. Front corners in lateral view obtuse and rounded; hind corners more angular. Surface with minute, relatively closely set punctures.

Scutellum: Triangular, with a few tiny punctures.

Elytra: Oval, convex transversely and longitudinally. Maximum width and height slightly anterior to the middle. Shoulders rounded and somewhat prominent. Apices of elytra mutually rounded. Lateral edges in dorsal view visible only on shoulders and on apex. Surface with rows of medium-sized punctures, their distance on disc in row 4 about 1–1½ diameters of a puncture; about 38 punctures in row 4. Intervals flat, with minute, distinct, relatively closely set punctures.

Prosternum: Anterior margin continuously and narrowly bent upwards. Apophysis wide, flat, lateral margins along procoxae slightly raised; lateral margins and apex rounded.

Mesosternum: Hind part somewhat raised, its lateral margins rough and with minute tubercles, its centre smooth; anterior margin excavated in the middle.

Metasternum: Anterior margin between mesocoxae rounded, bordered. Anterior apophysis smooth anteriorly, separated from disc by large punctures posteriorly. Disc with tiny, distinct, widely separated punctures. Median line neither incised nor impressed.

Sternites: Anterior margin between metacoxae ogival, indistinctly bordered. Anterior part of sternites 1 and 2 with some small punctures, posterior part and sternites 3–5 nearly impunctate.

Antennae: Reaching to anterior third of elytra. Length/width ratio of antennomeres 1–11 equals to 12:7/6:5/13:4/9:4/9:4/9:5/10½:6½/11:7/11:7½/10½:7½/15:8.

Legs: Short. Femora thickened towards the second third. Tibiae somewhat tender; protibia slightly bent; mesotibia more bent than protibia; metatibia moderately bent, on inner side with a small swelling in the middle (Fig. 5A). Lengths of protarsomeres 1–5 as 6:5:5:4½:17; lengths of mesotarsomeres 1–5 as 16:9:5½:5:18; lengths of metatarsomeres 1–4 as 25:11:7:19.

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