

Description of seven new taxa of Cetoniinae from Indonesia (Coleoptera: Scarabaeidae)

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Abstract. Four new species and three new subspecies of Cetoniinae from Indonesia are described: *Protaetia (Macroprotaetia) maxwelli* sp. nov. and *Thaumastopeus pugnator insulanus* subsp. nov. from Nias Island; *Meroloba siberutana* sp. nov., *Taeniodera monacha nigra* subsp. nov., *Protaetia (Pachyprotaetia) mentawaica* sp. nov. and *Thaumastopeus striatus siberutanus* subsp. nov. from Siberut Island; and *Protaetia (Pachyprotaetia) engganica* sp. nov. from Enggano Island. All the taxa are compared and illustrated.

Key words. Coleoptera, Scarabaeidae, Cetoniinae, *Meroloba*, *Taeniodera*, *Protaetia*, *Thaumastopeus*, taxonomy, new species, new subspecies, Indonesia, Oriental Region

Introduction

This study concerns four genera of Cetoniidae, *Protaetia* Burmeister, 1842 of the tribe Cetoniini, *Meroloba* J. Thomson, 1880 and *Taeniodera* Burmeister, 1842 of the tribe Taenioderini, and *Thaumastopeus* Kraatz, 1885 of the tribe Lomapterini:

Protaetia (Pachyprotaetia) Mikšić, 1965. MIKŠIĆ (1965) established the subgenus *Pachyprotaetia* with the type species *Cetonia mixta* Weber, 1801. MIKŠIĆ (1987) listed nine species included in this subgenus. Two additional species were added by ANTOINE (1991, 1992), one by KRAJČÍK (2007), and one by JÁKL (2008). Malay Peninsula and the island of Sumatra can be regarded as the evolutionary centre of the subgenus. Nine of the 13 hitherto known species occur in this region. This study concentrates on various populations of *Protaetia (Pachyprotaetia) mixta* Weber, 1801, which probably inhabit the entire chain of islands west of the Sumatra coast. I have examined specimens from Simeuleue, Nias, Siberut and Enggano Islands. Significant differences between these populations, each inhabiting a different island, can be found. In this study two populations, one from Siberut Island and the other from Enggano Island, are described as new species.

Protaetia (Macroprotaetia) Mikšić, 1965. The subgenus *Macroprotaetia* was established by MIKŠIĆ (1965) with the type species *Cetonia inanis* Wallace, 1868. After MIKŠIĆ's (1987) study, the taxonomy of the subgenus was further dealt with by ANTOINE & PAVIČEVIĆ (1994). Two of

the six hitherto known species are distributed from NE India (Assam, Sikkim, Meghalaya) across the northern parts of Myanmar, Thailand and Vietnam, whereas other species occur across the Malay Peninsula and Great Sunda Islands. The newly described species is from Nias Island and represents the seventh known species of the subgenus.

Taeniodera Burmeister, 1842. The genus was established by BURMEISTER (1842) with the type species *Macronota egregia* Gory & Percheron, 1833. Approximately 70 species are presently known. Their distribution encompasses the Indian subcontinent (including Sri Lanka), Myanmar, Thailand, Laos, Vietnam, central and southern parts of China (including Taiwan), Malay Peninsula, Indonesian Great Sundas and Sulawesi and the whole territory of the Philippines. Since the monograph of MIKŠIĆ (1976), several authors worked on the taxonomy of the genus. The following papers contributed to the descriptions of new taxa: KRIKKEN (1982), PAVIĆEVIĆ (1984), MA (1988), REICHENBACH (1996), ANTOINE (1998, 2000), LEGRAND (2000, 2004), JÁKL & KRAJČÍK (2004, 2006) and JÁKL (2008a,b).

Meroloba J. Thomson, 1880. This genus was established by THOMSON (1880) with the type species *Macronota antiqua* Gory & Percheron, 1833. This is a small genus with seven currently known species, whose distribution encompasses the Great Sunda Islands (Sumatra, Java, Kalimantan) and Palawan Island in the Philippines; one species was recently revalidated from continental southeast Asia (Thailand, Laos) by ANTOINE (2007). Surprisingly, specimens from Siberut Island are morphologically most similar to *M. quadrilineata* Nagai, 1984 from Palawan.

Thaumastopeus Kraatz, 1885. KRAATZ (1885) established this genus with the type species *Cetonia nigrita* Frohlich, 1792. Eighteen species and two subspecies are mentioned in the monograph by MIKŠIĆ (1977). Additional nine species and six subspecies have been described and some nomenclatural changes made since that time by RUTER (1980), ARNAUD (1985), PAVIĆEVIĆ (1986), MIYAKE & YAMAYA (1995), ALLARD (1995), RIGOUT & ALLARD (1997), ANTOINE (2000), ALEXIS & DELPONT (2001), ARNAUD & DELPONT (2001) and JÁKL (2008c). Twenty seven species and eight subspecies currently placed in this genus are widely distributed in Oriental Region from Pakistan, throughout Indian subcontinent and south-east Asia (including Taiwan), Sunda Islands, Philippines and Sulawesi to Moa Island east of Timor.

Material and methods

Body length was measured from the anterior margin of the clypeus to the apex of the elytra.

Holotypes of the newly described taxa are provided with red printed labels bearing the 'name of the taxon', 'HOLOTYPE', handwritten sex symbol, and 'St. Jákł det. 2010'. Each paratype is provided with a yellow label similar to that of the holotype, except 'PARATYPE' instead of 'HOLOTYPE', the respective sex symbol and a collection number. Genitalia of at least 10 males (if available) were dissected. The type material is deposited in the following institutional and private collections:

- BMNH The Natural History Museum, London, United Kingdom;
- NMPC Národní muzeum, Praha, Czech Republic;
- MNHN Muséum national d'Histoire naturelle, Paris, France;
- SJPC Stanislav Jákł private collection, Praha, Czech Republic.

Systematics

Protaetia (Macroprotaetia) maxwelli sp. nov.

(Figs. 1a–e)

Type locality. Indonesia, North Sumatra province, Nias Island.

Type material. HOLOTYPE: ♂ (NMPC): 'Indonesia, Nias island, 12. 1995, native collectors'. PARATYPES: ♂ (no. 1), ♂ (no. 2): 'INDONESIA, NIAS ISLAND, 8. – 9. 1995, native collectors lgt.' (SJPC); ♂ (no. 3): 'Sumatra, Nias, German Mission [handwritten], Fry Coll. 1905-100' (BMNH); ♂ (no. 4), ♀ (no. 5): 'Nias, 84. 2 [handwritten]' (BMNH).

Description. Holotype length 27.1 mm, maximum humeral width 14.0 mm. Dark grassy green, oval shaped, completely covered with dark green tomentum.

Head. Parallel-sided, completely covered with dark green tomentum. Frons simply punctured. Clypeus laterally wrinkled, middle part simply punctured. Anterior margin of clypeus with shallow, narrow impression along entire margin. Simple border of apical margin present, medially indistinctly emarginated. Antennae simple, blackish with yellow setation.

Pronotum. Completely covered with dark green tomentum. Lateral margins simply wrinkled, closer to midline simply punctured. Disc, anterior and posterior margins impunctate. Anterolateral margins with short, obtuse border, other parts of all margins unbordered. Setation not present. Parts with broken tomentum with golden-green lustre.

Scutellum. Triangular, apex obtusely rounded. Whole surface covered with dark green tomentum, impunctate.

Elytra. Similarly to other parts of dorsum covered with dark green tomentum. Semicircular punctures running in irregular lines. Concentration of punctures denser near lateral margins. Humeral calli simple and obtuse, impunctate. Apical calli better developed, densely wrinkled. Each elytron with obtuse costae in posterior half. Sutural ridge flat in basal half, elevated in posterior half, in last quarter of length sharp, protruding over elytral apex; its termination very sharp. Anterior and middle parts of epipleura impunctate, posterior part wrinkled, causing serration of margins.

Pygidium. Dark green, also covered with tomentum, intensely wrinkled. Apex with few reddish setae.

Ventral part. Green with metallic golden lustre. Each abdominal ventrite laterally wrinkled; transverse wrinkles short. Medial furrow wide, but very shallow. Metasternum dark green, shining. Its lateral parts longitudinally wrinkled, closer to midline with transverse wrinkles. Disc impunctate, with longitudinal furrow only medially; covered with reddish setae, except on disc. Mesometasternal process wider than long, apex broadly rounded. Punctures or setation absent. Prosternum and mentum dark green, intensely wrinkled, with abundant short yellowish to reddish setae.

Legs. Tarsi and tibiae dark green to black. Tarsi with golden-green reflection. Protibiae bidentate, posterior tooth very small, but discernible. Meso- and metatibiae carinate, with reddish setation, especially abundant at inner side. Femora wrinkled, with yellowish setae.

Male genitalia. Similar to other representatives of the subgenus, most similar to *Protaetia (Macroprotaetia) milani* Antoine & Pavićević, 1994, but inner parts of parameres more slender, and apical ends almost parallel, also shape of membranous flap different (Figs. 1d–e).

Variability. Body length 24.8–27.1 mm. Protibiae of paratypes Nos. 3–4 are unidentate. In other respects all specimens are very similar to each other.

Sexual dimorphism. Female body length 24.0 and 25.5 mm. Both females available for study have bidentate protibiae, bodies slightly wider and more robust, punctation and wrinkling on head, pronotum and elytra more better defined, abdomen more arched and lacking middle furrow.

Differential diagnosis. In habitus, the new species resembles *Protaetia* (*Macroprotaetia*) *inanis* from Java. However, the structure of the genitalia is rather different and much closer to *P. (M.) milani*, occurring in Sumatra and the Malay Peninsula. *Protaetia* (*Macroprotaetia*) *maxwelli* sp. nov. differs from *P. (M.) milani* as follows: 1) male protibia bidentate or with the proximal tooth at least indicated (always unidentate in *P. (M.) milani*); 2) lateral margins of the posterior half of the pronotum straight (shallowly emarginate in *P. (M.) milani*); 3) punctation of pronotum much coarser and denser; 4) sutural ridge of elytra protruding over apex and its termination very sharp (much less protruding over apex and its termination rounded in *P. (M.) milani*); 5) body colouration grassy green (purpureous brown in *P. (M.) milani*); 6) body length much less, only 24–27 mm; 7) inner parts of parameres apically slender and almost parallel (thicker, shorter, undulate and not parallel in *P. (M.) milani*).

Etymology. Patronymic, in honour of Maxwell V. L. Barclay, curator of beetles at BMNH, who kindly lend me part of the type material.

Distribution. Nias Island, Indonesia.

***Protaetia* (*Pachyprotaetia*) *mentawaica* sp. nov.**

(Figs. 2a–e)

Type locality. Indonesia, West Sumatra province, Mentawai Archipelago, north part of Siberut Island, environs of Bojakan village, 150 m a.s.l.

Type material. HOLOTYPE: ♂ (NMPC): ‘Indonesia, Mentawai Isls., N. SIBERUT ISL., 12. 2006, Bojakan vill. env., 150 m, St. Jakl lgt.’ PARATYPES: ♂ (no. 1): ‘Indonesia, Mentawai Isls., SIBERUT ISL., south, 20 – 100 m, SALAPPA VILL. ENV., 2. 2006’ (SJPC); ♂ (no. 2): ‘Indonesia, Mentawai Isls., SIBERUT ISL., north, 0 – 200 m, MT. MALANCAN, 1. 2004, St. Jakl lgt.’ (SJPC); ♂ (no. 3): ‘Indonesia, Mentawai Isls., SIBERUT ISL., north, 50 – 200 m, BOJAKAN VILL. ENV., 5. 2004, St. Jakl lgt.’ (SJPC); ♂ (no. 4): ‘Indonesia, Mentawai, Siberut island, 3. 1995, native collectors’ (SJPC); 3 ♀♀ (nos. 5–7): ‘Indonesia, Mentawai Isls., S. Siberut Isl., Salappa env., 0 – 150 m, 6. 2005, St. Jakl lgt.’ (NMPC, SJPC); ♂ (no. 8), ♀ (no. 9): ‘Indonesia, Mentawai Isls., N. SIBERUT ISL., 100 m, Bojakan v. env., 11. 2004, St. Jakl lgt.’ (SJPC); ♀ (no. 10): ‘Indonesia, Mentawai Isls., S. Siberut isl., 0 – 150 m, Salappa env., 2. 2007, St. Jakl lgt.’ (SJPC); ♀ (no. 11): ‘Indonesia, Mentawai Isls., SIBERUT ISL., north, 50 – 200 m, BOJAKAN VILL. ENV., 3. 2005, St. Jakl lgt.’ (SJPC).

Description. Holotype length 16.5 mm. Maximum humeral width 8.8 mm. Dark brown to olive with abundant reddish to beige ornamentation.

Head. Dark olive, almost parallel-sided; covered with abundant creamy tomentum. Punctation very dense, circular. Each puncture bears creamy tomentum. Interspaces between punctures much smaller than their diameter. Clypeal margin vertically elevated, narrowing to apical margin, which is indistinctly emarginated. Antennae reddish brown with yellowish setation.

Pronotum. Dark olive, matte, covered with dozens of micropatches of creamy tomentum; their concentration very dense around margins, sparser on disc. Bigger, irregular spots present in frontal part of pronotal disc (one pair of largest irregular spots), near lateral margins

approximately at midlength, and also between base and disc on both sides. Lateral margins bordered, which is hardly visible due to presence of tomentum patches. In front of postero-lateral margins indistinctly emarginated.

Scutellum. Dark olive, impunctate. Triangular with obtuse apex and several small irregularly placed tomentum patches.

Elytra. Dark brown along lateral parts, including humeral and part of apical calli, dark olive in middle parts and rest of surface. Covered with patches of yellowish brown to ochraceous tomentum, patches irregularly shaped, bigger than those on pronotum. Whole surface densely setose, setae short, mostly yellowish. Humeral and apical calli obtuse. Sutural ridge flat, in posterior third mildly elevated, not protruding over apex of elytra.

Pygidium. Dark olive, almost completely covered with brown to yellowish tomentum. Surface wrinkled and bearing abundant setae.

Venter. Abdomen brownish to dark plum along lateral sides, dark olive in central part. Each ventrite laterally wrinkled, middle parts punctate. Lateral parts with abundant creamy tomentum, discal parts only with tomentum micropatches. Yellow setation abundant. Metasternum dark olive at middle, brownish laterally. Sides completely covered with silky cream tomentum, middle part with few large punctures filled with tomentum. Mesometasternal process wider than long, widest at two-thirds of length, apex rather sharp, entirely covered with tomentum patches. Setation present mainly along sides, setae longer than on abdomen. Prosternum and mentum wrinkled, almost whole surface covered with silky cream tomentum. Setation yellow, long and abundant.

Legs. Dark violet with metallic reflection. Protibiae bidentate, meso- and metatibiae with carina in posterior third. Femora and tibiae densely covered with circular patches of tomentum and abundant setosity.

Male genitalia. Similar to *Protaetia (Pachyprotaetia) mixta*. Ventral side of paramere apex without tooth (Figs. 2d–e).

Variability. Body length 15.5–16.5 mm. Tomentation of pronotum and elytra varies among specimens, also proportion of brown and olive colour of elytra variable; some specimens have completely brownish elytra, some completely olive.

Sexual dimorphism. Female body length 15.5–17.5 mm. Generally wider and more robust. Anterior margin of clypeus not highly elevated, obtusely rounded. Colouration and ornamentation vary similarly to males.

Differential diagnosis. The habitus of the new species is similar to *Protaetia (Pachyprotaetia) medvedevi* Mikšić, 1965 from Sumatra, but in structure of the male genitalia, it appears to be allied to *Protaetia (Pachyprotaetia) mixta*. *Protaetia (Pachyprotaetia) mentawaica* sp. nov. differs from the latter species in following respects: 1) male protibia bidentate (tridentate or with the third, proximal-most tooth at least indicated in *P. (P.) mixta*); 2) brushes of setae at inner side of metatibia short and not so abundant; 3) colouration of elytra dark olive to brown (black to very dark brown in *P. (P.) mixta*); 4) ventral part of paramere apex without protuberance (with dent or protuberance at ventral side in *P. (P.) mixta*).

Etymology. Named after the Mentawai Archipelago, of which Siberut is the largest island.

Distribution. So far known only from several localities on Siberut Island, Mentawai Archipelago, Indonesia.

***Protaetia (Pachyprotaetia) engganica* sp. nov.**

(Figs. 3a–e)

Type locality. Indonesia, Bengkulu province, Enggano Island.

Type material. HOLOTYPE: ♂ (NMPC): 'Indonesia, Bengkulu prov., ENGGANO ISL., 0 – 100 m, cca 120 km of Sumatra, 4. 2005, local collectors lgt.'

Description. Holotype length 16.2 mm, maximum humeral width 9.2 mm. Uniformly reddish brown with abundant yellowish tomentum.

Head. Dark brown. Punctuation very dense, diameters of punctures circular, each puncture bears yellowish tomentum and setae. Interspaces between punctures very small. Antennae reddish. Whole surface and antennae with yellowish setosity.

Pronotum. Uniformly reddish brown, dull. Whole surface covered with abundant short, yellow setation and hundreds of small, equally sized circular patches; concentration of patches slightly lower on disc. Lateral margins of pronotum obtusely bordered. Posterolateral margins very broad, entirely bordered.

Scutellum. Reddish brown, apex dark olive. Elongated, apex obtusely rounded. Lateral and anterior margins decorated with tiny patches of tomentum.

Elytra. Reddish brown, decorated with hundreds of very small tomentum patches throughout length. Humeral and apical calli flat, indistinct, also covered with small tomentum patches. Sutural ridge with metallic reflection, slightly elevated in posterior half, not protruding over rounded elytral apex. Net-like striolation in posterior half, between sutural and elytral ridges; striolation simple and less abundant laterally. Setosity present throughout length, near apex and lateral margins very dense.

Pygidium. Reddish, entirely wrinkled, covered with numerous tiny tomentum spots and abundant yellowish setae.

Venter. Light brown with strong metallic-green reflection. All abdominal ventrites deeply punctured, diameters of punctures large, circular or semicircular. Punctures covered with yellow tomentum. Interspaces between punctures very narrow. Metasternum reddish, discal part with strong green lustre. Punctures large and dense, especially laterally. Each puncture covered with tomentum and long yellow setae. Mesometasternal process chestnut brown, wider than long, glabrous, not protruding. Prosternum and mentum reddish, with abundant tomentation and covered with long, yellow setae.

Legs. Violet-coloured, shining. Femora and tibiae covered with abundant patches of yellow tomentum. Setation yellow and abundant, inner part of metatibiae with brushes of ginger-coloured setae. Protibiae tridentate, meso- and metatibiae with carina in posterior third.

Male genitalia. Similar to *Protaetia (Pachyprotaetia) mixta*, paramere apex elongated (Figs. 3d–e).

Differential diagnosis. The new species is most similar to *Protaetia (Pachyprotaetia) mixta*. It differs from that species in the following respects: 1) dorsum completely reddish brown; 2) pronotal patches very small, covering densely and regularly whole surface of the pronotum; 3) tomentation of elytra abundant, also composed of hundreds of small yellow tomentum patches; 4) Striation of the posterior half of elytra between the sutural and lateral ridges very dense, bi-directional, forming reticulation (in *P. (P.) mixta* the striolation is only longitudinal and

much less dense); 5) shape of lateral margins of the pronotum, which is broadly rounded in front of the posterolateral margins (shallowly emarginate in *P. (P.) mixta*); 6) parame apex slightly more elongated, with the ventral protuberance farther away from the apex.

Etymology. Named after the type locality.

Distribution. So far known only from the type locality in Enggano Island, Indonesia.

***Taeniodera monacha nigra* subsp. nov.**

(Figs. 4a–c)

Type locality. Indonesia, West Sumatra province, Mentawai Archipelago, north part of Siberut Island, environs of Bojakan village, 50–200 m a. s.l.

Type material. HOLOTYPE: ♂ (NMPC): 'Indonesia, Mentawai isls., SIBERUT ISL., north, 50 – 200 m, BOJAKAN VILL. ENV., 5. 2004, St. Jakl lgt.' PARATYPES: 11 ♂♂ (nos. 13–23), 4 ♀♀ (nos. 24–27) and 93 unsexed specimens (nos. 28–120), same label data as holotype (SJPC, two paratypes each at BMNH, MNHN, NMPC); 10 unsexed specimens (nos. 1–10): 'Indonesia, Mentawai Isls., SIBERUT ISL., south, 0 – 50 m, SALIGUMA vill. env., 10. 1996, local collectors lgt.' (SJPC); 2 unsexed specimens (nos. 11–12): 'Indonesia, Mentawai Isls., SIBERUT ISL., south, SALAPPA VILL. ENV., 10. 2005, St. Jakl lgt.' (SJPC).

Description. Holotype length 15.5 mm, maximum humeral width 7.2 mm. Black, slightly shining, decorated with whitish tomentum.

Head. Frons black, shining, rugosely punctate, untomented. Midline glabrous. Clypeus widening from level of eye canthus, laterally decorated with two whitish stripes of tomentum. Punctuation slightly less dense than on frons. Whole surface of head covered with yellowish setation. Apex of clypeus rather deeply incised. Antennae dark brown, simple.

Pronotum. Black, decorated with whitish tomentum in pattern similar to other subspecies. Coarsely and regularly punctured throughout length. Lateral margins with narrow, obtuse border. Posterior and posterolateral margins not bordered, glabrous. Each puncture bears yellowish setae.

Scutellum. Black with striolate lines. Decorated with whitish tomentum, covering most of surface; sides untomented.

Elytra. Basal tomentum black, overlain with white tomentum, whose pattern is rather similar to other subspecies. Striolae lines run longitudinally along sutural ridge and forme five intervals. Sutural ridge flat, apex of elytron obtuse. Humeral calli flat and glabrous; apical calli also rather flat, wrinkled. Yellowish setation short, not very abundant.

Pygidium. Black, regularly wrinkled throughout length, decorated with one patch of white tomentum at centre.

Venter. Abdomen black, very arched, shining, without basal tomentum. Medial furrow not developed. Each ventrite decorated with silky tomentum placed laterally; tomentum of ventrites 1–3 broader. Metasternum black, sides with silky tomentum. Punctuation simple, yellowish setae short. Mesometasternal process semicircularly keel-shaped, sharp, covered with tomentum and setae. Prosternum and mentum with longer yellow setation, silky tomentum present at sides.

Legs. Femora, tibiae and tarsi black. Coxae and claws reddish brown. Protibiae tridentate. Mesotibiae carinate in posterior half. Femora with small patches of tomentum and dense yellow setosity at inner side. Metatibiae with brush of long setation at inner side.

Male genitalia. Close to nominotypical subspecies. Apex of parameres very flat and horizontally curved into forceps-like shape (Figs. 4d–e).

Variability. Body length 14.8–17.2 mm. Tomentation, punctation and also other aspects rather uniform. Some specimens with reddish margin of clypeus.

Sexual dimorphism. Female body length 14.5–16.7 mm. Generally wider and more robust than males. Protibia tridentate. Punctuation of head and pronotum coarser. Head with stripes of white tomentum. Pronotum and elytra wider.

Differential diagnosis. Black colour of the head, pronotum, elytra and legs, and decoration by white tomentum distinguish this subspecies. In addition, *Taeniodera monacha nigra* subsp. nov. differs from other populations in the shape of parameres, which are flattened at the apex and widely open.

Etymology. The name refers to the completely black colour of the dorsum and legs.

Distribution. This subspecies occurs on Siberut Island in the Mentawai Archipelago, Indonesia.

Meroloba siberutana sp. nov.

(Figs. 5a–c)

Type locality. Indonesia, West Sumatra province, Mentawai Archipelago, northern part of Siberut Island, environs of Bojakan village, 50–200 m a.s.l.

Type material. HOLOTYPE: ♂ (NMPC): ‘Indonesia, Mentawai Isls., SIBERUT ISL., north, 50 – 200 m, BOJAKAN VILL. ENV., 5. 2004, St. Jakl lgt’. PARATYPES: 10 ♂♂ (nos. 1–10), 10 ♀♀ (nos. 11–20) and 100 unsexed specimens (nos. 21–120), same label data as holotype (SJPC, two paratypes each at BMNH, MNHN, NMPC).

Description. Holotype length 17.9 mm, maximum humeral width 8.2 mm. Velvety black with golden-yellow tomentum.

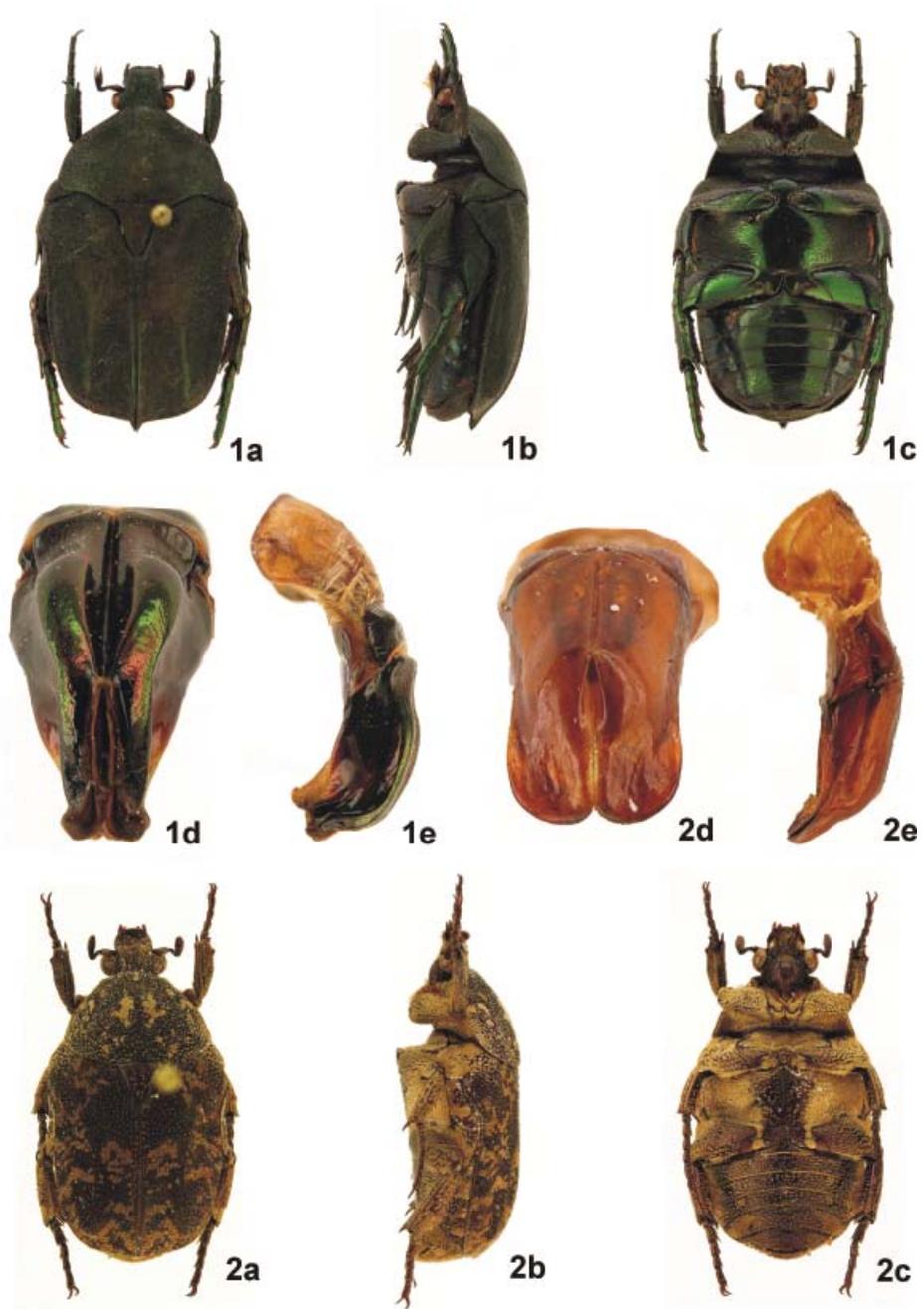
Head. Black, covered with basal tomentum. Laterally with two stripes of golden-yellow tomentum not reaching apex of clypeus. Punctuation simple, denser on clypeus. Widest at three-fourths of length. Apical margin of clypeus deeply incised. Antennae simple, dark brown, with yellowish setosity.

Pronotum. Velvety black, impunctate. From midlength sharply narrowing to apex. Decorated with three longitudinal stripes of golden-yellow tomentum running from anterior margin to base. Two stripes run laterally, but leaving narrow lateral margin black; one stripe runs medially to base of pronotal lobe. Anterolateral margins with very low, obtuse border, rest of margins unbordered. Lateral margins with shallow emargination in front of posterolateral margins. Yellowish setae very short, but present throughout length.

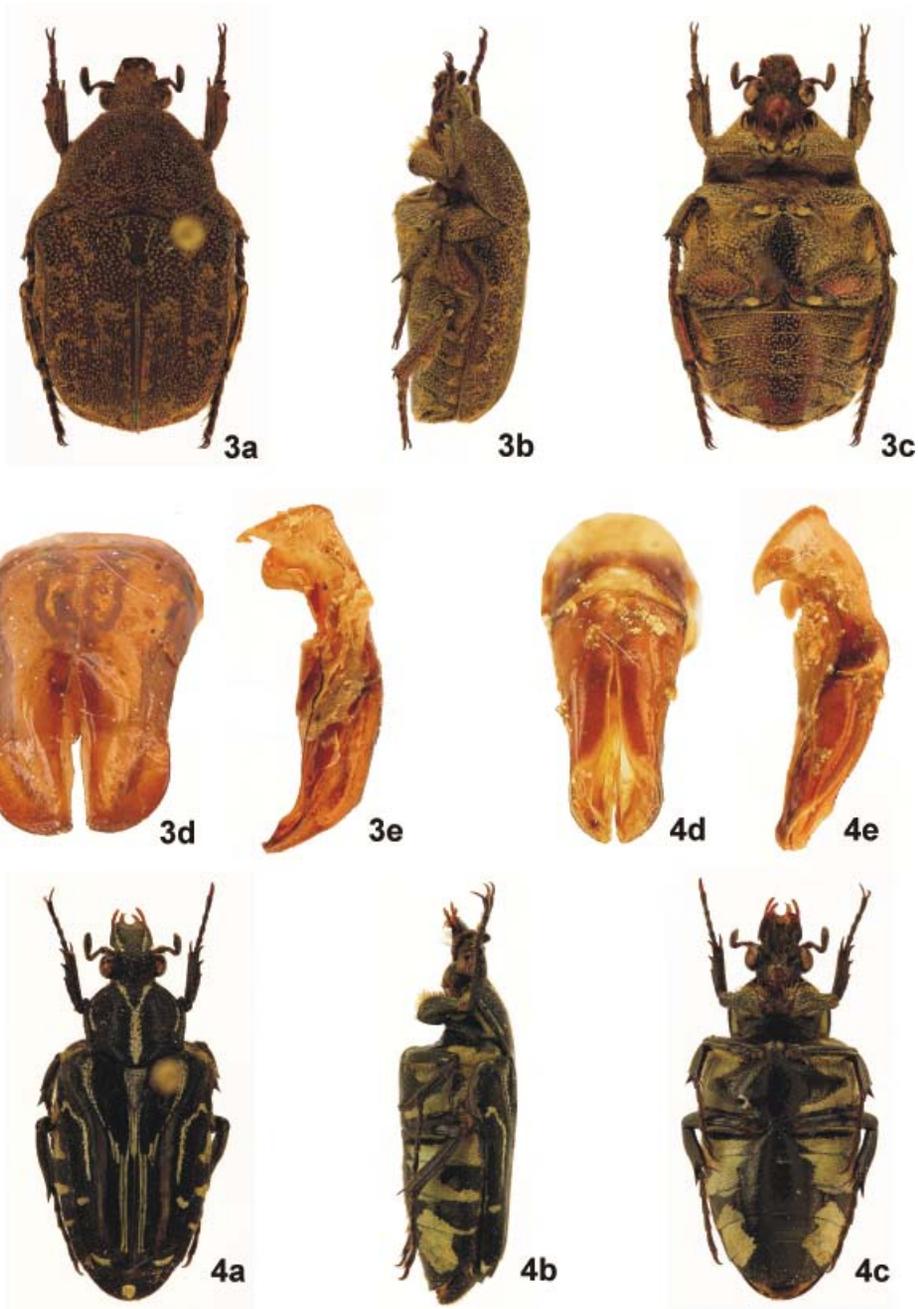
Scutellum. Triangular, entirely under pronotal lobe and completely covered with golden tomentum.

Elytra. Velvety black, sharply narrowing to apex. Impunctate, apex wrinkled. Each elytron decorated with three stripes of golden-yellow tomentum running from base to apex. Two of them adjoin pronotal stripes, third (lateral) runs along epipleura. Medial stripe runs along sutural ridge and reaches apex of elytron, lateral stripes stop at level of apical calli and join each other. Lateral ridge obtuse, except apically, where it bears short costae in front of apical calli. Humeral calli indistinct. Sutural ridge flat, slightly elevated in posterior quarter, its termination obtuse, not protruding over apex of elytra.

Pygidium. Small, semicircular, entirely covered by elytra. Completely covered with golden tomentum.



Figs. 1–2. 1 – *Protaetia (Macroprotaetia) maxwelli* sp. nov.; 2 – *P. (Pachyprotaetia) mentawaica* sp. nov. a – habitus dorsally; b – habitus laterally; c – habitus ventrally; d – aedeagus apically; e – aedeagus laterally. Not in scale.



Figs. 3–4. 3 – *Protaetia (Pachyprotaetia) engganica* sp. nov.; 4 – *Taeniodera monacha nigra* subsp. nov. a – habitus dorsally; b – habitus laterally; c – habitus ventrally; d – aedeagus apically; e – aedeagus laterally. Not in scale.

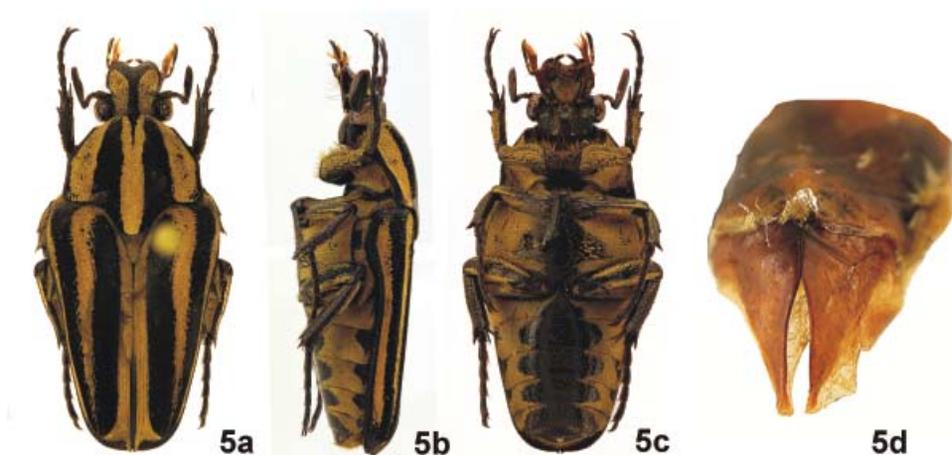


Fig. 5. – *Meroloba siberutana* sp. nov. a – habitus dorsally; b – habitus laterally; c – habitus ventrally; d – aedeagus apically. Not in scale.

Venter. Black, velvety tomentum absent, surface shining. Medial furrow not developed. Each ventrite finely punctured. Each puncture bears short yellow setae. Each ventrite laterally with golden tomentum, widest on first ventrite, narrowest on apical ventrite. Metasternum except for mesometasternal part completely covered with yellow tomentum. Meso-metasternal area striolated, midline furrow developed. Meso-metasternal process black, slightly protruding in front and downwards, terminating in keel-shaped declivity. Prosternum and mentum covered with tomentum and longer yellowish setation.

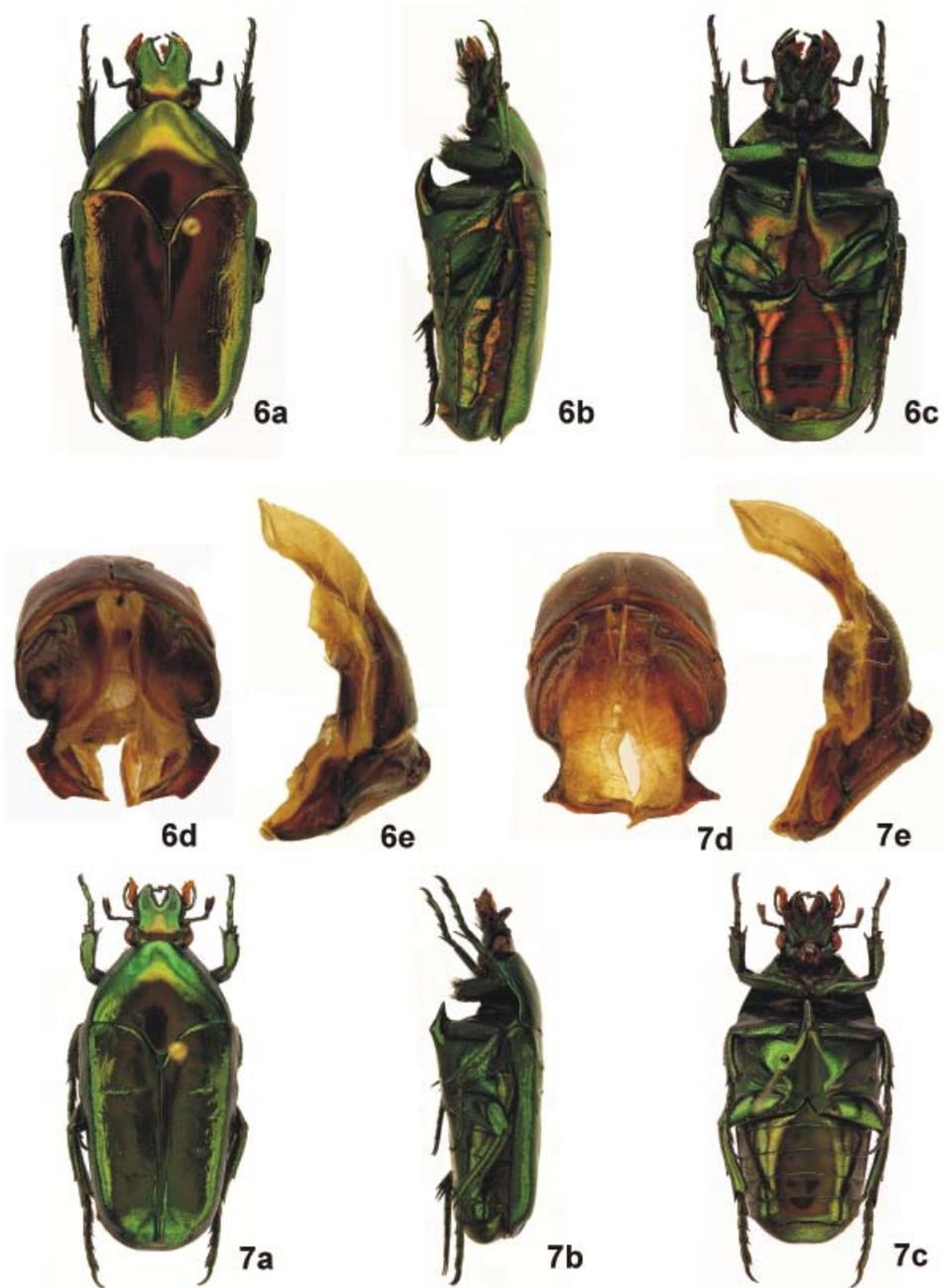
Legs. Black to dark brown, moderately long. Femora and tibiae with small patches of golden tomentum. Protibiae tridentate, mesotibiae with small carina at midlength. Knees and coxae reddish brown.

Male genitalia. Similar to other representatives of genus (Figs. 5d–e).

Variability. Body length 16.5–18.5 mm. All males available for study almost identical.

Sexual dimorphism. Female body length 16.2–18.4 mm. Both sexes very similar except for protibiae (slightly more robust) and abdomen (more arched).

Differential diagnosis. Regionally closely allied species is *Meroloba suturalis* Snellen van Vollenhoven, 1858, from which differs mainly by the pattern and colour of the elytral tomentum stripes. Each elytron of the newly described species is decorated with three longitudinal golden-yellow tomentum stripes. In *M. suturalis* the tomentum is silky beige and its two outer stripes are reduced and irregularly cover only the areas of striolate lines. The genitalia of the new species have the termination of the paramere tip sharply triangular, whereas in *M. suturalis* it is elongated. Similar is also *M. quadrilineata* Nagai, 1984 from Palawan Island, from which the newly described species differs in four respects: 1) elytral costae very short, running at apical third of elytra (costae run from subhumeral level to apex of elytra in *M. quadrilineata*); 2) lateral part of elytra (between lateral ridge and epipleura) steeply gradual, not vertical as in *M. quadrilineata*; 3) epipleura black (covered with golden tomentum and adjoining the sutural tomentum stripe in *M. quadrilineata*); 4) body length of newly described species 16.2–18.5 mm, of *M. quadrilineata* 19.1–22.2 mm.



Figs. 6–7. 6 – *Thaumastopeus striatus siberutanus* subsp. nov.; 7 – *T. pugnator insulanus* subsp. nov. a – habitus dorsally; b – habitus laterally; c – habitus ventrally; d – aedeagus apically; e – aedeagus laterally. Not in scale.

Etymology. Named after Siberut Island.

Distribution. So far known only from the type locality on Siberut Island, Mentawai Archipelago, Indonesia.

***Thaumastopeus striatus siberutanus* subsp. nov.**

(Figs. 6a–c)

Type locality. Indonesia, West Sumatra province, Mentawai Archipelago, northern part of Siberut Island, Bojakan village, 50–200 m a.s.l.

Type material. HOLOTYPE: ♂ (NMPC): 'Indonesia, Mentawai isls., SIBERUT ISL., north, 50 – 200 m, BOJAKAN VILL. ENV., 5. 2004, St. Jákł lgt.' PARATYPES: 3 ♂♂ (nos. 1–3), ♀ (no. 7), same label data as holotype (SJPC); ♂ (no. 4): 'Indonesia, Mentawai Isls., SIBERUT ISL., south, 20 – 100 m, SALAPPA VILL. ENV., 3. 2005, St. Jákł lgt.' (SJPC); ♂ (no. 5), ♀ (no. 12): 'Ind., W. Sumatra prov., Mentawai Islands, Siberut isl., 9. 1995' (SJPC); ♀ (no. 6): 'Indonesia, Mentawai Isls., SIBERUT ISL., north, 50-200 m, BOJAKAN VILL. ENV., 3. 2005, St. Jákł lgt.' (SJPC); 3 ♀♀ (nos. 8–10): 'Indonesia, Mentawai Isls., SIBERUT ISL., south, 0 – 50 m, SALIGUMA VILL. ENV., 10. 1993, local collectors lgt.' (NMPC, SJPC); ♀ (no. 11): 'Indonesia, Mentawai Isls., SIBERUT ISL., south, 0 – 50 m, SALIGUMA VILL. ENV., 10. 1996, local collectors lgt.' (SJPC); 4 ♂♂ (nos. 12–15), ♀ (no. 16): 'Indonesia, Mentawai Isls., N. SIBERUT Isl., 150 m, BOJAKAN vill. env., 122006, St. Jákł lgt.' (SJCP).

Description. Holotype length 29.7 mm, maximum humeral width 13.5 mm. Body coppery greenish-gold with purpureous lustre.

Head. Dark green with golden-green lustre, widest in apical third. Frons with several simple, large punctures and dense micropunctures. Punctuation of clypeus more rugose, some punctures confluent. Apex of clypeus deeply incised. Scape dark green, rest of antenna black. Setation of antenna blackish.

Pronotum. Dark green with strong golden-purpureous lustre. Lateral sides with large simple punctures, finer simple punctures present throughout length, very fine micropunctures densely and regularly placed throughout pronotal surface. Laterally bordered throughout length. Termination of pronotal lobe obtuse.

Scutellum. Small, sharply triangular, with micropunctuation. Glabrous midline present.

Elytra. Shape similar to nominotypical subspecies, but more parallel-sided. Dark green with strong golden-purpureous lustre. Apex and part of apical calli wrinkled. Apical two-thirds of sides also with similar wrinkles. Rest of surface with eight to nine longitudinal punctured lines. Apical calli obtuse, glabrous, shining. Humeral calli indistinct, with several irregularly shaped impressions. Epipleura developed in basal third. Sutural ridge flat in basal half, mildly and obtusely elevated in apical half, its termination sharply pointed, very shortly protruding over elytral apex.

Pygidium. Dark green, reflective, wrinkled throughout length.

Venter. Abdomen dark green with metallic reflection, which is more visible in anterior part of each ventrite. Sides of each ventrite with few wrinkles, middle parts with transverse line of fine punctures. Medial furrow developed, shallow but rather wide. Metasternum almost glabrous medially (dense micropunctuation present), finely wrinkled along sides. Mesometasternal process robust, protruding to level of procoxae, its end sharply pointed and bent downwards. Prosternum and mentum dark green to blackish, slightly reflective, both wrinkled.

Legs. Femora, tibiae and tarsi green, reflective, setation blackish. Coxae black. Protibia tridentate, anterior teeth small, obtuse, but distinctly developed. Meso- and metatibiae with fine carina approximately in posterior third of length.

Male genitalia. Similar to other subspecies (Figs. 6d–e).

Variability. Body length 27.2–31.2 mm. In other aspects all specimens similar to holotype.

Sexual dimorphism. Body length of females 27.2–32.1 mm. Body wider and more robust. Punctuation and wrinkling on head, pronotum and elytra generally more developed, deeper and denser. Protibia wider, tridentate, proximal tooth large and sharp.

Differential diagnosis. The new subspecies differs from the nominotypical subspecies by its smaller size, finer punctuation of the pronotum and elytra, less developed striolation of elytral lateral margins, and golden-purpureous lustre of the dorsum (bright golden-green in the nominotypical subspecies). From *Thaumastopeus striatus krikkeni* Allard, 1995, described from Nias Island, it differs by the presence of pronotal and elytral punctuation (subspecies from Nias has the dorsum almost glabrous) and general shape of the body, which is wider and not so parallel-sided.

Etymology. Named after Siberut Island.

Distribution. Siberut Island, Mentawai Archipelago, Indonesia.

Thaumastopeus pugnator insulanus subsp. nov.

(Figs. 7a–c)

Type locality. Indonesia, North Sumatra province, Nias Island.

Type material. HOLOTYPE: ♂ (NMPC): ‘Indonesia, Nias island, X. 1993 [handwritten], native collectors’. PARATYPES: ♀ (no. 1), same label data as holotype (SJPC); ♂ (no. 2), ♀ (no. 3): ‘Indonesia, Nias island, I. 1995 [handwritten], native collectors’ (SJPC).

Description. Holotype length 28.8 mm, maximum humeral width 11.4 mm. Narrow, rather parallel-sided; dark olive green with golden reflection.

Head. Dark green, shining, widest in apical third. Frons simply punctate. Clypeus with two densely wrinkled lateral furrows. Apex of clypeus deeply incised, its apical margin sharp but termination obtuse. Antenna moderately long, stalk black, club dark brown, setation brownish.

Pronotum. Olive to green with golden-metallic reflection. From base sharply narrowing to apex. Lateral margins with double emargination, first very mild in front of anterolateral margin, second deeper in front of posterolateral margin. Microreticulation densely developed throughout length. Apical half of lateral margins with fine wrinkles.

Scutellum. Small, dark green, shining. Moderately narrowing to apex, here obtusely rounded. Impunctate.

Elytra. Olive to green with golden lustre. Basal half almost parallel-sided, apical half moderately narrowing toward apex. Apical two-thirds laterally wrinkled, wrinkles denser along apical third. Apex and apical calli also with moderately developed wrinkling. Each elytron with three to four indistinctly punctured lines. Fine microreticulation present throughout length. Basal half also with three to four irregularly shaped transverse impressions. Humeral calli small, apical calli not developed. Epipleura present only in basal half. Sutural ridge elevated in apical third, its termination rather obtuse, indistinctly protruding over apex.

Pygidium. Brownish with green-metallic lustre. Densely wrinkled throughout length.

Venter. Abdomen brownish with green reflection. Each ventrite laterally wrinkled, middle part impunctate, but microreticulated. Metasternum green with mild lustre, laterally wrinkled, middle part only with microreticulation. Mesometasternal process long and robust, sharply

pointed at apex, not reaching level of procoxae. Prosternum and mentum dark green, wrinkled, with blackish setation.

Legs. Femora, tibiae and tarsi dark green, with mild lustre. Tibiae and tarsi elongated. Protibiae tridentate. Meso- and metatibiae with carina approximately between posterior third and fourth.

Male genitalia. Similar to other subspecies (Figs. 7d–e).

Sexual dimorphism. Both female paratypes are bigger, 29.0 and 32.5 mm. Punctuation of the pronotum is almost the same as in the holotype male, but punctuation of elytra is more developed. Both specimens have eight punctate lines on each elytron. The body is wider and much more robust. Also legs are more robust, especially the protibia. The abdomen is more arched, without a distinct abdominal furrow.

Differential diagnosis. *Thaumastopeus pugnator insulanus* subsp. nov. differs from the nominotypical subspecies by the much less developed punctuation of pronotum and elytra, shining appearance, body slender and more parallel-sided, and also by smaller size. From *Thaumastopeus pugnator arrowi* Allard, 1995, described from northern Thailand, new subspecies differs by the presence of elytral punctate lines (*T. pugnator arrowi* has elytra only indistinctly punctate) and by the punctuation of the pronotum, which is finer than in the nominotypical subspecies, but still present (almost glabrous in *T. pugnator arrowi*).

Etymology. The name emphasizes that this is the first population of *Thaumastopeus pugnator* discovered on a small island off the continental mainland or large islands of the Great Sundas (Sumatra, Java).

Distribution. Nias Island, Indonesia.

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