

A New Species of the Genus *Raapia* Fleutiaux, 1899 (Coleoptera, Eucnemidae) from Continental Malaysia¹

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Abstract—*Raapia poggii* sp. n. is described from Malaysia (Perak), illustrated, and compared with the known congeners.

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The genus *Raapia* Fleutiaux, 1899 is poorly known and its species are rather rare in the collections. Till now it has included only four species known from the southeastern Palaearctic and from the Indo-Malayan Region. The type species, *Raapia galboides* Fleutiaux, 1899, is described from Nias Island and subsequently recorded from Vietnam (Fleutiaux, 1928, 1947) but the latter records for mainland South-East Asia need confirmation. *Raapia sauteri* Fleutiaux, 1929, is known only from Taiwan (Suzuki and Hsieh, 2014), and its recent record for Laos (Otto, 2016) is erroneous. *Raapia angularis* Fleutiaux, 1922 and *R. philippinensis* Cobos, 1986 are known only from their holotypes; the former is described from Borneo (Sandakan), and the latter from the Philippines, the Sulu Archipelago (Tawi-Tawi Island).

A new species of this genus described below was found among unsorted material on eucnemids from the collection of Museo Civico di Storia Naturale “G. Doria.”

MATERIALS AND METHODS

The type specimen is housed in the collection of Museo Civico di Storia Naturale “G. Doria,” Genova (MCSG). For examination the specimen was relaxed in warm water, the genitalia after dissection were macerated in cold 10% KOH solution overnight and rinsed with water, after examination the genitalia were transferred to microvials and pinned beneath the

specimen. The examination of the specimen was fulfilled with the use of the stereomicroscopes MBS-1 and MBS-10, and the photographs were taken with a Canon EOS 40D digital camera with a Canon MP-E 65 mm objective and were combined using Zerene Stacker 1.04 software.

SYSTEMATICS

Subfamily **MACRAULACINAE** Fleutiaux, 1922

Tribe **Macraulacini** Fleutiaux, 1922

Genus **RAAPIA** Fleutiaux, 1899

Type species: *Raapia galboides* Fleutiaux, 1899

The genus *Raapia* is characterized by the following combination of features. Antennal insertions widely separated; antennae unipectinate in both sexes, antennomere 3 much longer than pedicel, antennomeres 3–10 each with long lamelliform process formed by its dorsoapical surface. Maxillary and labial palpi short and thick; apical maxillary and labial palpomeres unmodified in both sexes, slightly compressed and somewhat broadened apically, obliquely truncate and hollowed at apex. Pronotal lateral carina varyingly distinctly emarginate at hind angles; prothoracic antennal impression well developed, running along lateral margin, very broad and moderately deep, unclearly outlined along its inner edge, open at base, distinctly broader than the base of not-impressed part of prohypomera (“prohypomeral triangle”). Prosternum unmodified in both sexes; prosternal process about as long as prosternum before procoxae, on ventral side strongly produced behind procoxae and forming flattened, subparallel-sided process widely emar-

¹ This article was originally submitted by the author in English and is first published here.

ginate at apex (as shown in Figs. 2, 3). Elytra with apices dehiscent and separately acute; epipleura externally delimited by varying distinct carina and impressed anteriorly; base of epipleura impressed, not covered by projection of mesepisternum. Metepimeron partly exposed or completely concealed by elytra; metacoxal plates distinctly expanding inwards to mesal third, with posterior margin forming rounded obtuse angle in mesal third and slightly sinuate externally to the prominent lateroposterior angle. Meso- and metatibiae covered with uniform setae or also with transverse combs of minute spines on laterocaudal surface; tarsi slightly compressed dorsoventrally; tarsomeres 2 and 3 slightly emarginate at apex, tarsomere 4 deeply excavated in apical two-thirds; tarsal claws with large sharp tooth; protarsomere 1 in males with small sex comb in basal fourth. Abdominal ventrite 5 with posterior margin more or less protruding medially in both sexes; free part of paramera with strong preapical hook, near apex distinctly hollowed along inner surface; accessory lobes absent.

Raapia poggii Kovalev, sp. n.
(Figs. 1–13)

Material. Holotype, male: “**Malaysia** – Perak / Cameron Highlands / Batu (= miles) 19 vill. Env. / 22–27-IV-2009 / M. Tryzna legit – 590 m”, “Museo Genova / Dono S. Riese” (MCSG).

Description. Body length 9.4 mm. Body elongate, about 3.4 times as long as wide, strongly convex dorsally and moderately convex ventrally.

Head brownish black; prothorax brownish black with lighter pronotal margins; elytra light reddish brown, humeri in anterior fifth of elytral length and transverse band between anterior two-fifths and four-fifths of elytral length black, sutural interval in this band somewhat lighter. Metathorax and metacoxae dark brown with lighter margins of sclerites, abdomen brownish red with darker apex. Antennal scape, pro- and mesofemora and corresponding tibiae dark brown to brownish black with lighter margins; metafemur, metatibia and all tarsi brownish red; pedicel, flagellomeres and palpi brownish yellow. Vestiture long and dense; head, pronotum and entire ventral side with golden-yellow setae; elytra mainly covered with light yellow setae becoming somewhat denser before and behind transverse band of elytra, setae on this band black; legs as well as antennal scape and pedicel covered with short yellowish setae. Head and pronotum matt, elytra moderately shining.

Head about 0.6 times as wide as pronotum and about as long as wide; integument with uniform fine, very dense round ocellate punctures; interspaces between punctures smaller than a puncture diameter, on frontoclypeal region nearly cariniform. Frons moderately convex, subflattened along the middle at level of antennal insertions. Eyes moderately large, suboval and rather convex. Distance between inner edges of antennal insertions about 0.4 times that between mandibular bases.

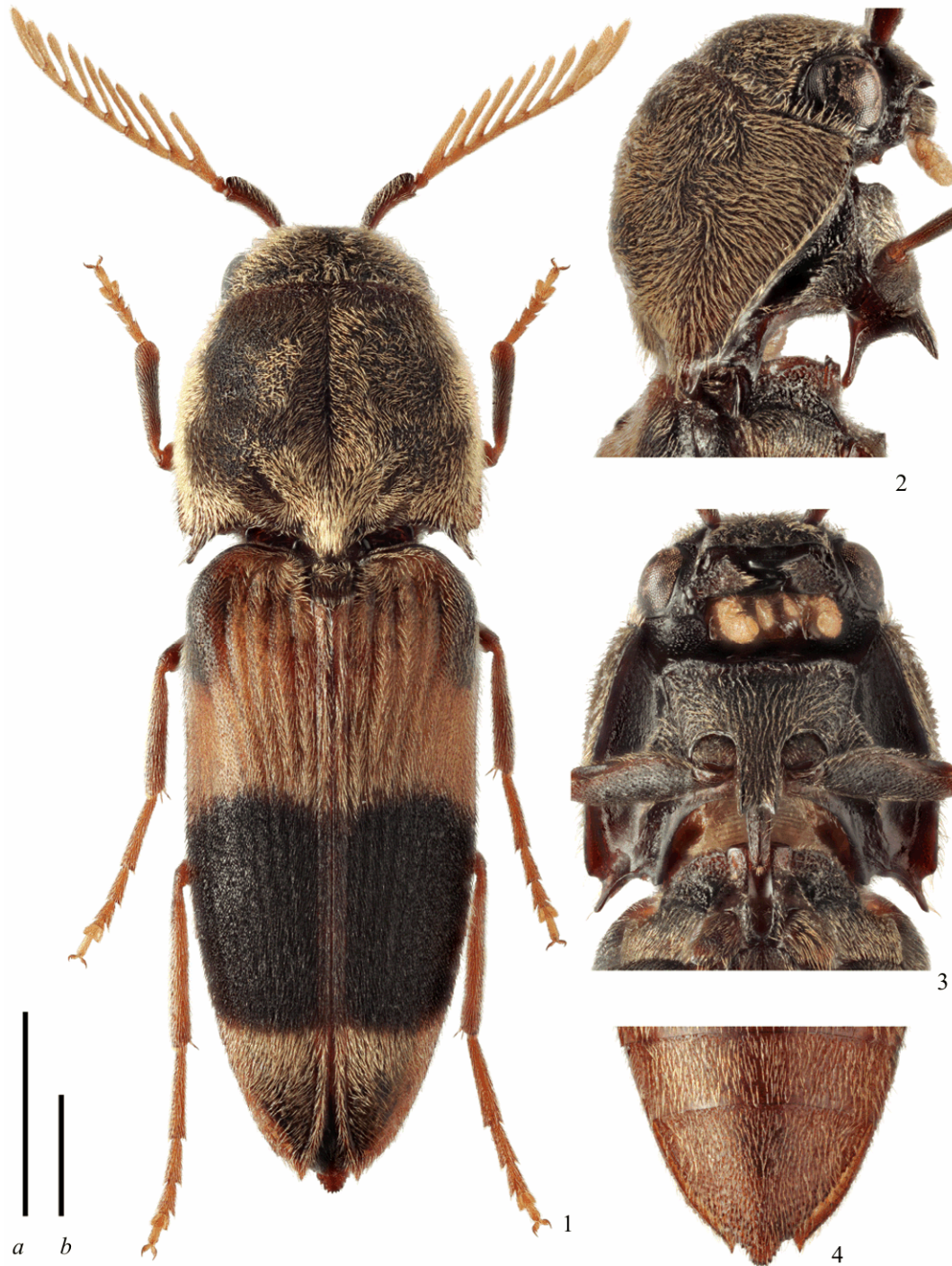
Antennae about one-third as long as body, not extending behind posterior angles of pronotum, as in Fig. 6.

Pronotum about as wide as long, broadest behind middle; sides subparallel-sided in posterior half and arcuately converging anteriorly. Disc strongly convex, at middle part of disc with narrow and shallow median impression, each side of disc with large shallow paramedian impression and slightly elevated behind this impression; base of pronotum longitudinally elevated before scutellum and impressed at each side of this elevation; lateral carina with deep excision at hind angles. Integument with fine, very dense, partly confluent, round ocellate punctures; interspaces between punctures mostly smaller than a puncture diameter. Prosternum and “prohypomeral triangle” sculptured about as on pronotum, antennal impression shallowly rugose and with strong longitudinal microsculpture.

Scutellum somewhat longer than broad, subrectangular, with posterior margin widely truncate and slightly convex; integument with fine, dense, simple punctures.

Elytra about 2.4 times as long as wide combined and about 2.4 times as long as pronotum, widest at humeri, subparallel-sided in basal half and gradually tapered to apices behind the middle. Discal elytral striae deeply impressed at base, except for sutural stria gradually becoming shallower posteriorly and obliterated at apices; interstriae on disc more or less convex. Integument with fine and dense simple punctures on anterior two-fifths of elytral length, interspaces between punctures on disc about 1.0–1.5 times a puncture diameter; punctures becoming coarser and nearly confluent on humeri, finer and denser in transverse band of elytra, and finer and sparser behind this band.

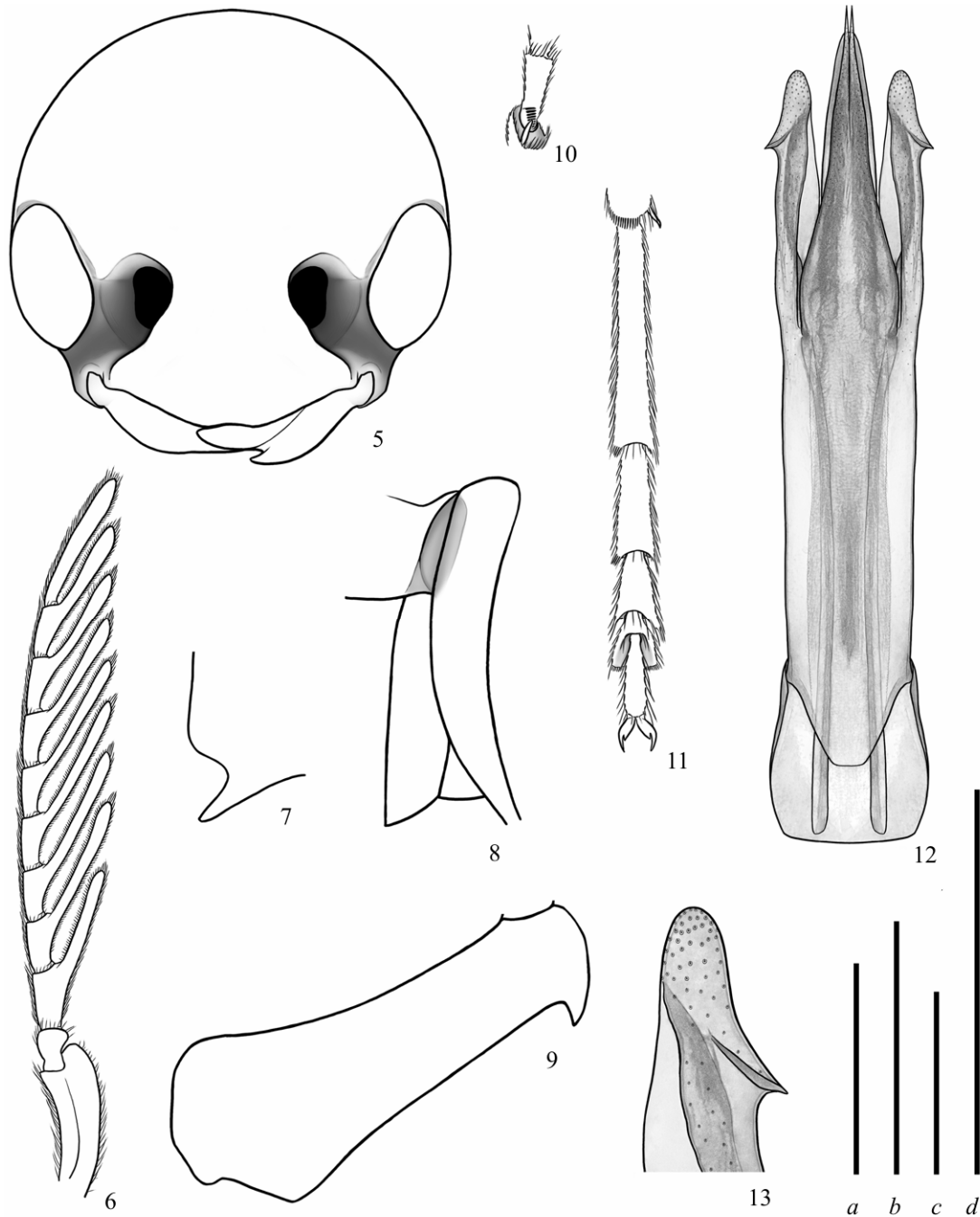
Metepisternum about 3.8 times as wide as long, subparallel-sided and partly concealed by epipleura;



Figs. 1–4. *Raapia poggii* sp. n., holotype: (1) general view, dorsal; (2) head and prothorax, lateral; (3) ditto, ventral; (4) abdominal ventrite 5. Scale (1.0 mm): *a*, for Fig. 1; *b*, for Figs. 2–4. Original.

metepimeron partly exposed, its visible part triangular. Base and sides of metaventrite, metepisternum and exposed part of metepimeron with very fine and dense simple punctures, interspaces between punctures mostly 0.5–1.0 times a puncture diameter; metaventrite with punctures becoming larger posteriad and

sparser along the middle; integument between punctures with fine transverse microsculpture. Metacoxal plate as in Fig. 9; integument with fine and moderately dense simple punctures; interspaces between punctures about 1.0–2.0 times a puncture diameter, with fine transverse microsculpture.



Figs. 5–13. *Raapia poggii* sp. n., holotype: (5) head, frontal; (6) antenna; (7) hind angle of pronotum; (8) side of meso- and metathorax; (9) metacoxal plate; (10) protarsomere 1, ventral; (11) metatarsus, dorsal; (12) aedeagus, dorsal; (13) apex of paramera. Scale: *a*—10 mm for Figs. 5–9; *b*—10 mm for Figs. 10, 11; *c*—0.5 mm for Fig. 12; *d*—0.5 mm for Fig. 13. Original.

Legs long and moderately slender. Fore leg with tibia somewhat shorter than femur, middle and hind legs with tibia subequal in length to corresponding femora. Pro- and mesocoxae as well as femora mostly with fine, dense punctures and strong transverse microsculpture between them. Meso- and metatibiae covered with uniform setae, without transverse combs

of minute spines (except for apical one). Protarsus about three-quarters as long as protibia, meso- and metatarsi about 1.2 times as long as corresponding tibiae. Male protarsal sex comb consisting of 8 spines.

Metatarsus as in Fig. 11, with tarsomere 1 distinctly shorter than tarsomeres 2–4 combined. Claws with large acute tooth in basal half.

Abdominal ventrite 5 distinctly elevated along midline in posterior half and with apex strongly produced; ventrites mostly covered with simple, moderately dense punctures finer than those on metacoxal plates; interspaces between punctures 1–3 times puncture diameter, with fine transverse microsculpture; ventrite 5 behind the middle covered with moderately dense, acute granules.

Aedeagus as in Figs. 12, 13.

Differential diagnosis. The new species is distinguished from all described species of *Raapia* by its characteristic coloration and vestiture of elytra. In other known species of the genus elytra are uniformly dark (*R. galboides* Fleutiaux, 1899 and *R. sauteri* Fleutiaux, 1929) or longitudinally darkened along suture and lateral margins (*R. angularis* Fleutiaux, 1922 and *R. philippinensis* Cobos, 1986); in *R. galboides* vestiture mainly dark with lighter setae forming common transverse band in the posterior third of elytra and patch behind the latter, in *R. sauteri* those with lighter setae at bases, along suture and at sides, in *R. angularis* and *R. philippinensis* mainly light with longitudinal stripes of darker setae along suture and lateral margins. *Raapia sauteri*, *R. angularis*, and *R. philippinensis* also differ from the new species in the shallowly incised at hind angles pronotal lateral margins, less convex pronotum not impressed along the middle, indistinct striae on elytral disc (only in *R. sauteri* impressed at elytral bases), and sparser punctuation of head and pronotum. In the pronotal lateral margins deeply excised at hind angles, distinct median impression of the pronotum, and elytral disc with distinct striae, *R. poggii* sp. n. is similar to the type species, *R. galboides*, but the latter differs from *R. poggii* sp. n., in addition to the elytral coloration and vesti-

ture, in the more widely separated antennal insertions, darker antennae, and coarser punctuation of the body integument.

Etymology. The new species is named after Dr. Roberto Poggi, Honorary Curator of Museo Civico di Storia Naturale “G. Doria”, who provided the material for the present paper.

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