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Review of the genus *Microacmaeodera* (Coleoptera: Buprestidae) with descriptions of four new species

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Abstract. The genus *Microacmaeodera* Cobos, 1966 is revised and four new species are described and illustrated: *M.* (*Microacmaeodera*) *cuneiformis* **sp. nov.** (Thailand), *M.* (*M.*) *ohmomoi* **sp. nov.** (Thailand), *M.* (*M.*) *kucerai* **sp. nov.** (China), and *M.* (*Squamicroacmaeodera*) *rolciki* **sp. nov.** (Thailand). *M.* (*S.*) *labuanica* (Hołyński, 1995) (Labuan Island, Northern Borneo) and *M.* (*S.*) *grootaerti* (Hołyński, 1995) (Mindanao, Philippines) are transferred from genus *Acmaeodera* Eschscholtz, 1829, and *M.* (*S.*) *labuanica* is downgraded to subspecies of *M.* (*S.*) *aruensis* (Théry, 1922). All of the subgenera and species of *Microacmaeodera* Cobos, 1966 are keyed with complete bibliography, distributions, type specimen data and deposition for each species are provided.

Taxonomy, review, new species, new combinations, new status, key, Coleoptera, Buprestidae, *Microacmaeodera*, *Squamicroacmaeodera*, Palaearctic and Oriental regions

Introduction

Since the revision of *Microacmaeodera* Cobos, 1966 by Volkovitsh (1986a) a number of new species have been described (Bellamy & Volkovitsh, 1992; Volkovitsh & Bellamy, 1995; Hołyński, 1995). In addition, through the examination of extensive material recently collected in Thailand and China, four new species of *Microacmaeodera* await description and will increase the number of known *Microacmaeodera* species to twelve. These changes require a modification of the species keys (Volkovitsh & Bellamy, 1995 for genus *Microacmaeodera*; Hołyński (1995) for subgenus *Squamicroacmaeodera* Volkovitsh, 1986) and generalization of all the data available on taxonomy and distribution of *Microacmaeodera*. Because this genus is poorly represented in collections and many species are still known as holotypes only, further changes and additions are predicted.

Locality data of the type specimens are cited "verbatim" with additional notes in [square brackets].

Collection codens used throughout the text:

ALCR coll. A. Liberto, Rome, Italy;
BMNH The Natural History Museum, London, Great Britain;
CHCV coll. C. Holzschuh, Villach, Austria;
COTJ coll. S. Ohmomo, Tsukuba, Japan;
EJCB coll. E. Jendek, Bratislava, Slovakia;
EKCS coll. E. Kučera, Soběslav, Czech Republic;
GNCW coll. G. Novak, Wien, Austria;
HMCM coll. H. Mühle, München, Germany;
ISNB Institut Royal des Sciences Naturelles de Belgique, Brussels, Belgique;
MNHN Muséum national d'Histoire naturelle, Paris, France;
NMNH National Museum of Natural History, Washington, U.S.A.;
NMPC National Museum, Prague, Czech Republic;
TICB TAMMIN Insecta collection, Brno, Czech Republic (http://home.tiscali.cz/tammin/);
ZIN Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia;

ZMHB Museum für Naturkunde der Humboldt-Universität, Berlin, Germany;
ZSMC Zoologische Staatssammlung, München, Germany.

In citation of labels: [h] – handwritten, [p] – printed, and "/" is used when separating data from different labels.

Comments on taxonomy of *Microacmaeodera*

The subgenus *Microacmaeodera* of *Acmaeodera* Eschscholtz, 1829 was established by Cobos (1966) for a single species, *A.* (*M.*) *longicornis* Cobos, 1966 from Eastern Afghanistan. This species is easily distinguished from all other *Acmaeodera* species in having very long antennae (half of body length) and extremely small size combined with strongly elongated body (Fig. 1). Based on these characters along with the male genital structure of *A.* (*M.*) *longicornis*, Volkovitsh (1979) elevated *Microacmaeodera* to generic rank. Later Volkovitsh (1986a) revised *Microacmaeodera* and established two subgenera: *Microacmaeodera* (two species) and *Squamicroacmaeodera* (two species transferred from *Acmaeodera*); these subgenera differ in body shape, vestiture, length of antennae, sculpture of head and pronotum, and width of elytral intervals. Since then five more species have been described from Oriental region (Bellamy & Volkovitsh, 1992; Volkovitsh & Bellamy, 1995; Hołyński, 1995). Hołyński (1995) argued against generic rank of *Microacmaeodera* and treated *Squamicroacmaeodera* as subgenus of *Acmaeodera*.

The discovery of the new species described herein partly confirms the opinion of Hołyński regarding the variability of some diagnostic characters of *Microacmaeodera* and its subgenera (Volkovitsh, 1986a) such as body size and shape, length of antennae, width of elytral intervals and lack of basal fossae (these are present though poorly defined at least in *M.* (*S.*) *rolciki* sp. nov.).

However, the male genital structures of *Microacmaeodera* (Figs 23-32) differ from all known *Acmaeodera* species and combined with other morphological characters and a distribution primarily in the Oriental Region (with only three species occuring in the adjacent regions of the southeastern Palaearctic Region), suggest that this group is rather isolated and should retain its generic status.

In having a cuneiform body, *M.* (*M.*) *cuneiformis* sp. nov. and *M.* (*M.*) *ohmomoi* sp. nov. (Figs 6-7) look similar to species of the subgenus *Squamicroacmaeodera* (Figs 8-15) thus proving the close relationship of these subgenera, but other characters (punctate sculpture of head and pronotum, long mesosternum, relatively narrow elytral intervals, and setiform vestiture; see also Table 1) suggest that these species belong to the subgenus *Microacmaeodera*.

To distinguish subgenera and species-groups of *Microacmaeodera* the shape of mesosternum (width/length ratio) can additionally be used (Figs 16-18). All examined species of the subgenus *Microacmaeodera* have this ratio equal to 1.5-1.9 (mesosternum weakly transverse, Fig. 18); in the subgenus *Squamicroacmaeodera* it varies from 2.7-3.7 in *M.* (*S.*) *aruensis* (Théry, 1922), *M.* (*S.*) *grootaerti* (Hołyński, 1995), and *M.* (*S.*) *kubani* Volkovitsh & Bellamy, 1995 (mesosternum moderately transverse, Fig. 17) to 4.5-4.8 in *M.* (*S.*) *macgregori* Bellamy & Volkovitsh, 1992 and *M.* (*S.*) *rolciki* sp. nov. (mesosternum strongly transverse, Fig. 16); no data are available for *M.* (*S.*) *belli* (Kerremans, 1893). The configuration of the prosternal process can be also used (compare Figs 16-18) but its taxonomical value should be verified more carefully.

To clarify the taxonomic rank and find more reliable diagnostic characters for *Microacmaeodera* additional specimens are of great necessity.

Microacmaeodera Cobos, 1966

Acmaeodera subgenus *Microacmaeodera* Cobos, 1966: 310.
Type species: *Acmaeodera* (*Microacmaeodera*) *longicornis* Cobos, 1966; by monotypy.

Microacmaeodera: Volkovitsh, 1979: 345 (as genus); Bellamy, 1985: 412; Volkovitsh, 1986a: 126 (revision), 1986b: 22; Bellamy & Volkovitsh, 1992: 59 (key); Volkovitsh & Bellamy, 1995: 69 (key); Bellamy, 2003: 18 (catalogue).

Subgenus *Microacmaeodera* Cobos, 1966

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Microacmaeodera subgenus *Microacmaeodera*: Volkovitsh, 1986a: 130; Bellamy & Volkovitsh, 1992: 59 (key); Volkovitsh & Bellamy, 1995: 69 (key); Bellamy, 2003: 18 (catalogue).

Microacmaeodera (*Microacmaeodera*) *longicornis* (Cobos, 1966)

(Fig. 1)

Acmaeodera (*Microacmaeodera*) *longicornis* Cobos, 1966: 310.
Type locality: East Afghanistan, Nuristan prov., Bashgultal, Kamdesch, 2000 m.

Microacmaeodera longicornis: Volkovitsh, 1979: 345; 1986b: 22.
Microacmaeodera (*Microacmaeodera*) *longicornis*: Volkovitsh, 1986a: 128; Alexeev et al., 1990: 78; Bellamy & Volkovitsh, 1992: 60 (key); Volkovitsh & Bellamy, 1995: 72 (key); Bellamy, 2003: 18 (catalogue).

Type specimens. Holotype ♂ (HMCM-ZSMC): "J. Klapperich, Kamdesch, 2000 m, Bashgultal, Nuristan, O-Afghan., 16 VII 52[p] / Holotypus, A. Cobos [p, red] / Acmaeodera (Klapperichia) longicornis sp. nov., Holotypus [h], A. Cobos det. [p], l. 965 [h]".

Host plant. *Quercus* sp. (C. Holzschuh, Villach, Austria, pers. comm.).

Distribution. Afghanistan (Kunar), Pakistan (North West Province), India (Jammu & Kashmir).

Microacmaeodera (*Microacmaeodera*) *wittmeri* Volkovitsh, 1986

(Fig. 2)

Microacmaeodera (*Microacmaeodera*) *wittmeri* Volkovitsh, 1986a: 133. – Bellamy & Volkovitsh, 1992: 60 (key); Volkovitsh & Bellamy, 1995: 72 (key).
Type locality: India, Jammu & Kashmir, Jammu, Kishtwar distr., Kishtwar env., 1500 m.

Type specimens. Holotype ♂ (CHCV): "India, Jammu u. Kashmir, Jammu, District Kishtwar, Kishtwar Umg., 4-6 VII 1980, 1500 m, leg. C. Holzschuh [p]". Paratype ♀ (NMPC): "♀ [p] / Jammu 1980, W. Wittmer [p] / Ekala-Sonder, 1700-2100 m, Jammu, 8.7. [p]".

Distribution. India (Jammu & Kashmir).

Microacmaeodera (*Microacmaeodera*) *cuneiformis* sp. nov.

(Fig. 6)

Type locality: Thailand, Chiang Mai prov., 20 km northeast from Fang, 1000-1600 m.

Type specimens. Holotype ♀ (TICB): "Thailand, 1000-1600 m Chiang Mai prov. 20 km NW from Fang, 2.-5. v. 1996, lgt. S. & E. Becvar [p]".

Description. Body very small, length 3.05 mm, width 1.1 mm, slightly elongate, broad, moderately cuneiform, convex, with well defined dorsal curvature; black with coal sheen; covered with short, fine, whitish setae (Fig. 6).

Head convex, narrow, slightly depressed medially when seen from above; front with very shallow fovea in the middle, with sides markedly curved and converging feebly to vertex. Vertex convex, without longitudinal keel, 2.25 times as wide as transverse diameter of eye and 0.95 times as wide as front above antennal depressions. Clypeus narrow, with wide, shallow median emargination anteriorly. Front with sculpture punctate, formed by large, deep, simple dense punctures; intervals smooth, shining, similar or slightly wider than diameter of punctures; covered with fine decumbent white setae. Antennae (♀) relatively long, 1.81 times as long as height of eye; serrate from antennomere 4; antennomere 2 oval, robust; 3 thin, peg-like, slightly enlarged apically, as long as antennomere 4; antennomere 4 triangular, weakly narrower than antennomere 5, slightly longer than wide; 5 triangular, nearly as long as wide, with slightly arcuate inner margin; 6-10 triangular, weakly longer than wide or as long as wide, with weakly arcuate inner margins; 11 widely oval, regularly rounded apically.

Pronotum campaniform, evenly convex, without basal fossae and median depression; weakly transverse, basal width 1.29 times as wide as long, widest at base; sides feebly arcuately converging anteriorly; anterior margin weakly projecting angularly; basal margin straight (Fig. 6). Lateral carina very fine, distinct, entire, straight, reaching anterior corners. Sides with pseudoalveolate sculpture of large, deep, simple punctures forming concentric series but without distinct rugosity; disc with simple punctate sculpture of smaller, slightly asperate punctures in the middle; intervals slightly wider than diameter of punctures, shining. Vestiture consisting of very fine decumbent whitish setae mixed with brownish setae at the middle of disc. Anterior prosternal margin slightly bisinuate, bordered by a fine sulcus; prosternum evenly convex, with simple punctate sculpture of small, dense, coarse, deep punctures; mesosternum relatively long and narrow, 1.7 times as wide as long; sculpture of meso-, metasternum and metacoxal plates consisting of similar but bigger punctures. Hypomera with simple punctate sculpture of large, deep punctures on strongly shagreened background.

Elytra broad, convex, cuneiform, relatively short, 2.09 times as long as wide at base; base with very deep transverse depression along entire width, anterior margin swollen; sides subparallel from humeri toward metacoxae, then evenly, almost straightly converging to separately rounded apices (Fig. 6). Subhumeral incisure shallow but defined; epipleural serration relatively big, sparse, visible at apices only. Strial punctures large, oval; striae sulciform, deeper posteriorly, and distinct along entire elytral length. Intervals flat at anterior ⅓ then slightly convex, nearly equal or 1.5-3 times as wide as striae; 9th not elevated, without serration; covered with very fine, inconspicuous punctures on finely rugulose background; with short, delicate, inclined, uniseriate, hyaline setae slightly shorter or as long as interval width; surface black with coal sheen.

Legs black; metacoxal plates with posterior margin slightly emarginate along entire length, without lateral tooth. Tibiae slender, not enlarged apically, slightly curved. Legs with white and brown setae; metatibiae bearing one row of brownish thick setae along external margin. Tarsomere 1 slightly longer than 2 and 3; 5th thin, not expanded apically, as long as three basal tarsomeres jointly; tarsal pulvilli small, poorly developed on 1-4, each larger toward distal end. Claws short, curved, and with large tooth at the middle of inner margin.

Abdomen black with dull bronze sheen; sides with punctate sculpture of simple, large, dense punctures, disc with smaller, sparser and asperate punctures at the middle; covered with fine decumbent, whitish and brownish setae. Anal sternite of female short, broadly rounded apically, bordered with narrow sulcus.

Male unknown.

Female. Ovipositor: tubular, rather short, approximately 3 times as long as enlarged part; deeply angularly emarginated apically; with short styli as long as wide; hemisternites thin, slightly curved; apical sclerotization of dorsal ones poorly defined, with inconspicuous recurrent branches.

Etymology. The name is derived from the cuneiform body.

Distribution. Thailand (Chiang Mai).

Differential diagnosis. *Microacmaeodera* (*Microacmaeodera*) *cuneiformis* sp. nov. and another very similar species, *M.* (*M.*) *ohmomoi* sp. nov. which is described below, share a curious character set which is inherent to both subgenera of *Microacmaeodera*. By the cuneiform body (Figs 6-7), these species should be attributed to the subgenus *Squamicroacmaeodera* but due to the simple punctate sculpture of the entire body, setose vestiture, shape of the clypeus, long antennae serrate from antennomere 4 even in the female, long mesosternum and narrow elytral intervals, they obviously belong to subgenus *Microacmaeodera*. Superficially, both *M.* (*M.*) *cuneiformis* sp. nov. and *M.* (*M.*) *ohmomoi* sp. nov. resemble *M.* (*S.*) *kubani* (Fig. 8), also from Thailand; these three species are contrasted in Table 1. Distinguishing characters between *M.* (*M.*) *cuneiformis* sp. nov. and *M.* (*M.*) *ohmomoi* sp. nov. are shown in Table 2.

Table 1. Diagnostic differences between *Microacmaeodera* (*Microacmaeodera*) *cuneiformis* **sp. nov.**, *M.* (*M.*) *ohmomoi* **sp. nov.** and *M.* (*Squamicroacmaeodera*) *kubani*.

	***M.* (*M.*) *cuneiformis* sp. nov.** (Fig. 6) ***M.* (*M.*) *ohmomoi* sp. nov.** (Fig. 7)	***M.* (*S.*) *kubani*** (Fig. 8)
Character	Character state	
front, sides	subparallel or slightly converging to vertex	slightly diverging to vertex
front, sculpture	punctate, formed by simple punctures	reticulate, formed by umbilicate punctures with well defined granules and micropuncture
clypeus, anterior emargination	wide	narrow
antennae, length/ height of eye, shape	2.71 (♂), 1.81 (♀) serrate from antennomere 4	1.32* (♀) serrate from antennomere 5
pronotum, width/ length	1.29-1.30	1.41
pronotum, sculpture of sides	alveolate or pseudoalveolate, of simple punctures forming concentric or longitudinal series, without rugosity	reticulate-rugose, with distinct concentric rugosity, fragments of umbilicate punctures and micropunctures
mesosternum, meso-metasternal suture	well defined medially	obliterated medially, poorly visible on sides only
mesosternum, width/length	1.7-1.8 times as wide as long	3.1 times as wide as long
elytra, sides	subparallel from humeri to metacoxa, or converging from behind humeri to apices	slightly diverging from humeri to posterior to midpoint, then sharply converging to apices
elytra, interval width	equal or 1.5-3 times as wide as striae; covered with setae	3-4 times as wide as striae; covered with finely lanceolate scales
abdomen, sculpture	sides with alveolate, pseudoalveolate or punctate sculpture of simple punctures, disc with smaller, sparser and asperate punctures at the middle	1st and anal sternites with reticulate-rugose sculpture and with defined longitudinal rugae; disc with partly obliterated reticulate sculpture of umbilicate punctures

* In Volkovitsh & Bellamy (1995) this ratio is erroneously indicated as 1.41.

Microacmaeodera (*Microacmaeodera*) *ohmomoi* sp. nov.

(Figs 7, 18)

Type locality: Northeastern Thailand, Khon Kaen prov., Ubol Ratana lake.

Type specimens. Holotype ♂ (COTJ): "Ubol Ratana, Khon Kaen, NE Thai[land], 20.4.[200]2, S. Ohmomo leg. [p]".

Description. Body very small, length 3.3 mm, width 1.1 mm, elongate, relatively broad, strongly cuneiform, slightly convex, with poorly defined dorsal curvature; black with coal sheen; covered with short, fine, decumbent whitish setae (Fig. 7).

Head convex, broad when seen from above; front evenly convex, without median depression or fossa; with sides subparallel, feebly converging to vertex. Vertex convex, without median keel, 1.82 times as wide as transverse diameter of eye and as wide as front above antennal depressions. Clypeus narrow, separated from front by transverse depression, with wide, shallow median emargination anteriorly. Front with sculpture punctate, formed by small, shallow, dense, simple punctures; intervals smooth, shining, two times as wide as diameter of punctures; covered with very fine, decumbent, white setae. Antennae (♂) long, 2.71 times as long as height of eye; serrate from antennomere 4; antennomere 2 rounded, robust; 3rd elongate, peg-like, not enlarged apically; antennomere 4 triangular, distinctly narrower than 5th; antennomeres 5-10 triangular, strongly enlarged, longer than wide; antennomere 11 strongly elongate, regularly rounded apically.

Pronotum campaniform, evenly convex, without basal fossae and median depression; weakly transverse, basal width 1.30 times as wide as long, widest in anterior to base; sides nearly parallel at basal ½ then arcuately converging anteriorly; anterior margin feebly arcuately projecting, nearly straight; basal margin slightly emarginated (Fig. 7). Lateral carina very fine, entire, slightly curved, reaching anterior corners, not seen from above. Sides with fine alveolate sculpture of small, deep alveolae with smooth bottom, forming longitudinal series but without distinct rugosity; disc basally with fine alveolate sculpture changing medially to punctate sculpture of partly asperate simple punctures; intervals slightly wider than diameter of punctures, shining. Vestiture consisting of very fine, decumbent, whitish setae. Anterior prosternal margin weakly bisinuate, bordered by a fine sulcus; prosternum evenly convex, medially with nearly alveolate sculpture, laterally with punctate sculpture of dense, deep simple punctures; hypomera with ocellate sculpture of oval umbilicate punctures with distinct granules and micropunctures on finely shagreened background; mesosternum relatively long and narrow (Fig. 18), 1.7 times as wide as long, with coarse alveolate sculpture; metasternum and metacoxal plates with large, partly obliterated umbilicate punctures with distinct micropunctures; intervals equal or less than diameter of punctures.

Elytra weakly convex, sharply cuneiform, relatively short, 2.09 times as long as wide at base; base with very deep transverse depression along entire width, anterior margin swollen; sides slightly diverging at humeri, then evenly, behind the metacoxae more sharply, almost straightly converging to separately rounded apices (Fig. 7). Subhumeral incisure deep, distinct; epipleural serration relatively big, well visible at apices only. Strial punctures almost inconspicuous in anterior ⅓ being confused with coarse interval punctuation; striae more distinct and sulcate in posterior half of elytral length. Intervals flat or slightly convex in posterior ⅔, subequal, 2-3 times as wide as striae; 9th not elevated, without serration; with reticulate sculpture of large, slightly asperate punctures (similar to *M.* (*S.*) *belli*) in anterior ⅓ and with coarse, multiseriate punctures nearly as large as these in striae posteriorly; with short, delicate, decumbent, multiseriate whitish setae which are slightly shorter or as long as interval width; surface black with coal sheen.

Legs black; posterior margin of metacoxal plates with deep lateral emargination and broad rectangular tooth which not seen from above. Tibiae slender, almost not enlarged apically, slightly curved. Legs with white and brown setae; metatibiae bearing one row of short, thick yellowish setae along external margin. Tarsomere 1 slightly longer than 2 and 3 altogether; 5th thin, not expanded apically, as long as three basal tarsomeres jointly; tarsal pulvilli small, poorly developed on 1st, each larger toward distal end. Claws (♂) short, curved, and with large rectangular tooth at the middle of inner margin.

Abdomen black; sides of 1st abdominal sternite with alveolate, other sternites with pseudo-alveolate sculpture; disc with punctate sculpture of slightly asperate simple punctures; covered with rather long, fine, decumbent whitish setae. Anal sternite (♂) short, widely rounded apically, entirely bordered with fine sulcus.

Male. The aedeagus was not extracted to avoid the risk of damaging the single specimen. Antennae are presumably dimorphic like those in other *Microacmaeodera* (*Microacmaeodera*) species.

Female unknown.

Etymology. This species is named in honor of its collector, Mr. Sadahiro Ohmomo (Tsukuba, Japan).

Distribution. Thailand (Khon Kaen).

Differential diagnosis. *Microacmaeodera* (*Microacmaeodera*) *ohmomoi* sp. nov. is very similar to *M.* (*M.*) *cuneiformis* sp. nov. (Fig. 6); both species are contrasted in Table 2. For differences between *M.* (*M.*) *ohmomoi* sp. nov. and *M.* (*S.*) *kubani* (Fig. 8) see Table 1.

Table 2. Diagnostic differences between *Microacmaeodera* (*Microacmaeodera*) *cuneiformis* **sp. nov.** and *M.* (*M.*) *ohmomoi* **sp. nov.**

	***M.* (*M.*) *cuneiformis* sp. nov.** (Fig. 6)	***M.* (*M.*) *ohmomoi* sp. nov.** (Fig. 7)
Character	Character state	
body, shape	moderately cuneiform	strongly cuneiform
hypomera, sculpture	with punctate sculpture of large, deep simple punctures on strongly shagreened background	with ocellate sculpture of umbilicate punctures with distinct granules and micropunctures on finely shagreened background
elytra, sides	subparallel from humeri toward metacoxae, then converging to apices	converging from humeri to apices
elytra, striae	distinct along entire length of elytron	almost inconspicuous at anterior ⅓ being confused with coarse interval punctures
elytra, intervals	with very fine, inconspicuous punctures on finely rugulose background along entire length of elytron	with reticulate sculpture at anterior ⅓, and coarse, multiseriate punctures nearly as large as strial ones in posterior ⅔
metacoxal plates, posterior margin	slightly emarginated along entire length, nearly straight; without lateral tooth	with deep lateral emargination and broad rectangular tooth not visible from above

Microacmaeodera (*Microacmaeodera*) *kucerai* sp. nov.

(Figs 4-5, 23-24)

Type locality: China, Northwestern Yunnan, Daju, 27°18'N 100°14'E, ~2000 m.

Type specimens. Holotype ♂ (ZIN): "China, Yunnan, Daju, 24-29.06.1994, lgt. E. Kučera [p]". Paratypes (15 specimens ALCR, EJCB, EKCS, GNCW, NMPC, COTJ): same location (1 ♂, 3 ♀♀); same location but 7.-10.vi. and 3.-8.vii.1995, E. Kučera leg. (3 specimens); same location but 17.vi.1995, B. Šiška, T. Spevár & P. Pekarovič leg. (1 ♂, 7 ♀♀).

Description. Body small, length 3.9 (3.1-4.6) mm, width 1.2 (0.9-1.4) mm, slightly elongate, relatively broad, convex, with well defined dorsal curvature; bronze black, shining; covered with short, decumbent white setae (Figs 4-5).

Head broad, convex, without median depression when seen from above; front evenly convex, sometimes flattened at the middle; with sides nearly straight and converging slightly to vertex or subparallel. Vertex without longitudinal keel, 2.33 (2.09-2.50) times as wide as transverse diameter of eye and 0.97 (0.96-1.00) times as wide as front above antennal depressions. Clypeus very narrow, with inconspicuous median emargination, nearly straight anteriorly. Front with sculpture punctate, formed by large, deep, dense simple punctures; intervals smooth, shining, as wide as diameter of punctures; covered with relatively long, decumbent setae. Antennae long (Figs 4-5), 2.58 (2.42-2.68) (♂) or 2.20 (2.04-2.33) (♀) times as long as height of eye; serrate from antennomere 4; antennomere 2 elongate, enlarged apically; 3 peg-like, much narrower than antennomere 2; 4 markedly enlarged apically but narrower than antennomere 5; 5-10 triangular, slightly longer than wide, with feebly arcuate or nearly straight inner margins; 11 elongate with obliquely truncate (♂) or rounded (♀) apex.

Pronotum evenly convex, without basal fossae and median depression; weakly transverse, basal width 1.25 (1.17-1.32) times as wide as long, widest in posterior ⅓ or slightly closer to middle; sides arcuately, more strongly converging anteriorly than posteriorly; anterior margin very feebly projecting anteriorly, nearly straight; basal margin straight (Figs 4-5). Lateral carina delicate, distinct, entire, straight, reaching anterior corners. Pronotum entirely with nearly regular, coarse pseudoalveolate sculpture of large, deep simple punctures; intervals similar or narrower than diameter of punctures, shining. Vestiture consisting of short, decumbent, white setae. Anterior prosternal margin slightly bisinuate, bordered by a fine sulcus; prosternum evenly convex with small, very dense, deep, simple punctures in the middle; mesosternum relatively long and narrow, approx. 1.8 times as wide as long; sculpture of prosternal sides, meso-, metasternum and metacoxal plates consisting of similar but larger punctures. Hypomera with large, deep, simple punctures on finely shagreened background.

Elytra relatively broad, strongly convex; 2.39 (2.30-2.46) times as long as wide at base; base with very deep transverse depression along entire width, anterior margin swollen; sides feebly converging posterior to humeri, then subparallel or very feebly diverging to midway between middle and posterior ⅓, and evenly, weakly arcuately or straightly converging to widely jointly rounded apices (Figs 4-5). Subhumeral incisure shallow but defined; epipleural serration small, visible only in apical ¼. Strial punctures shallow, rounded or slightly elongate, partly confused with punctures of intervals in anterior ⅓; striae distinct and sulcate in posterior ⅔. Intervals flat, subequal, broad, 2-4 times as wide as striae; 9th not elevated, without serration; covered with coarse, irregular, mostly multiseriate, on sides asperate, punctures on finely rugulose, shining background; these punctures as big as strial ones in anterior ⅓. Vestiture consisting of relatively long, mostly multiseriate, posteriorly pointing setae, hardly shorter than interval width; surface dark bronze.

Legs blackish-bronze; metacoxal plates with posterior margin slightly emarginate laterally, without lateral tooth. Tibiae thin, very feebly enlarged apically, weakly curved. Legs covered with light setae; metatibiae bearing one row of thick yellowish setae on external margin. First tarsomere slightly longer than 2 and 3 together; 5th thin, not expanded apically, as long as three proximal tarsomeres jointly; tarsal pulvilli small, poorly developed, each larger toward distal end. Claws short, curved, with acute tooth in the middle of inner margin closer to apices.

Abdomen dark bronze; completely with punctate sculpture of very dense, simple punctures; sides of 1st visible sternite with larger and coarser punctures; covered with fine decumbent setae. Anal sternite short, evenly (♂) or broadly rounded (♀) apically, bordered with fine sulcus.

Male. Aedeagus (Figs 23-24): parameres with narrow, curved, pointed apices; basal piece narrow, nearly parallel sided; penis short, wide, blunt apically, with centrally placed undivided lamina and short, curved apophyses.

Female. Ovipositor tubular, relatively short, approximately 3 times as long as enlarged part; deeply angularly emarginate apically; styli separated from each other at their 1.5 length and bearing apical setae 1.5 times as long as length of stylus; hemisternites thin, distinctly curved in anterior ⅓; apical sclerotization of dorsal ones well defined, with long, curved recurrent branches.

Etymology. This species is named after its first collector, Mr. E. Kučera (Soběslav, Czech Republic).

Distribution. China (Yunnan).

Differential diagnosis. *Microacmaeodera* (*Microacmaeodera*) *kucerai* sp. nov. comes closest to *M.* (*M.*) *thailandica* Volkovitsh & Bellamy, 1995 (Fig. 3) from Thailand; both species are contrasted in Table 3.

Table 3. Diagnostic differences between *Microacmaeodera* (*Microacmaeodera*) *kucerai* **sp. nov.** and *M.* (*M.*) *thailandica*

	***M.* (*M.*) *kucerai* sp. nov.** (Figs 4-5)	***M.* (*M.*) *thailandica*** (Fig. 3)
Character	Character state	
body, coloration	dark bronze	black with coal sheen
front, surface	evenly convex or flattened in the middle, without distinct fovea	with shallow fovea in the middle
head, sculpture	large, deep, dense punctures; intervals as wide as diameter of punctures	fine, sparse punctures; intervals wider than diameter of punctures
pronotum, sculpture	entirely with pseudoalveolate sculpture of large, deep simple punctures; intervals similar or narrower than diameter of punctures	sides with pseudoalveolate sculpture; disc with simple punctate sculpture of sparse punctures; intervals wider than diameter of punctures
elytra, strial punctures	shallow, partly confused with punctures of intervals anteriorly; striae poorly visible in anterior ⅓	deep, isolated; striae distinct along entire length
elytra, intervals	flat, broad, 2-4 times as wide as striae	subconvex, narrow, 1.5-2.5, at most 3 times as wide as striae

Microacmaeodera (*Microacmaeodera*) *thailandica* Volkovitsh & Bellamy, 1995

(Fig. 3)

Microacmaeodera (*Microacmaeodera*) *thailandica* Volkovitsh & Bellamy, 1995: 66, 72 (key).

Type locality: Northwestern Thailand, Mae Hong Son prov., Mae Hong Son, airport env., 19°18'N 97°59'E, ca. 300 m.

Type specimens. Holotype ♀ (TICB): "Thailand NW, Mae Hong Son prov., Mae Hong Son, airport env., 19°18'N 97°59'E, ~300 m, 7.-14.v.1992, P. Pacholátko leg. [h]".

Distribution. Thailand (Mae Hong Son).

Subgenus *Squamicroacmaeodera* Volkovitsh, 1986

Microacmaeodera (*Squamicroacmaeodera*) Volkovitsh, 1986a: 127. – Bellamy & Volkovitsh, 1992: 59 (key); Volkovitsh & Bellamy, 1995: 69 (key); Bellamy, 2003: 18 (catalogue).
Type species: *Acmaeodera belli* Kerremans, 1893; by original designtion.

Acmaeodera (*Squamicroacmaeodera*): Hołyński, 1995: 5 (key).

Microacmaeodera (*Squamicroacmaeodera*) *belli* (Kerremans, 1893)

(Fig. 9)

Acmaeodera belli Kerremans, 1893: 338. – Kerremans, 1907: 260; Obenberger, 1926: 84.
Microacmaeodera (*Squamicroacmaeodera*) *belli*: Volkovitsh, 1986a: 128; Bellamy & Volkovitsh, 1992: 59 (key); Volkovitsh & Bellamy, 1995: 69 (key); Bellamy, 2003: 18 (catalogue).
Acmaeodera (*Squamicroacmaeodera*) *belli*: Hołyński, 1995: 5 (key).

Type locality: Southwestern India, Karnataka prov. ("Kanara").

Type specimens. Holotype ♀ (BMNH): "Type [p, round] / Kanara, Andrews [h] / Belli Kerrem., Type [h] / Kerremans 1903-59 [p]".

Distribution. India (Karnataka).

Microacmaeodera (*Squamicroacmaeodera*) *aruensis aruensis* (Théry, 1922) comb. rest.

(Figs 10, 17)

Acmaeodera aruensis Théry, 1922: 194. – Obenberger, 1926: 83.
Microacmaeodera (*Squamicroacmaeodera*) *aruensis*: Volkovitsh, 1986a: 128; Bellamy & Volkovitsh, 1992: 59 (key); Volkovitsh & Bellamy, 1995: 69 (key).
Acmaeodera (*Squamicroacmaeodera*) *aruensis*: Hołyński, 1995: 5 (key).

Type locality: Malaysia, Sabah prov. - ?Aru Baru – Merapok; Brunei. ??Aru Islands.

Type specimens. Lectotype ♂ (MNHN): "Ile Aru, Schneider [h] / Type [p, red] / Muséum Paris, 1935, coll. A. Théry [p] / Acmaeodera aruensis Théry, Type unique [h]". Designated by Volkovitsh (1986a).
Additional specimens. "Cotype [p] / Ile Aru [h] / Acmaeodera aruensis Théry, Type, Théry det. [h] / ex coll. A. Théry, BM 1923-364 [p]" (1 ♂, BMNH); "Arou Isl., ex Théry [h] / Acmaeodera aruensis Théry, comp. au type, Théry det. [h]" (1 ♂, NMPC); "Aru-Ins." (p.), "Acmaeodera aruensis Théry [h], det. Hoscheck 19 [p] 31 [h]" (5 specimens ZMHB, V. Kubáň, pers. comm.).

Remarks. Volkovitsh (1986a) discussed the inconsistency in type locality indication for *Microacmaeodera* (*Squamicroacmaeodera*) *aruensis* in the original description (Théry, 1922: 195): "Ile Aru, M. Marapok, Borneo, Brunei, Borneo" while the type specimen (MNHN) is labelled "Type unique". This controversial data raised suspicions as to whether Théry described this species from a single specimen or from more than one specimen labelled from the different localities used in description. For this reason I have designated the specimen from MNHN as the lectotype. However, there are no additional specimens in the Théry collection (MNHN, S. Bílý, pers. comm.) while all other known specimens of *M.* (*S.*) *aruensis* are labelled "Aru Isl." without any information about the collecting dates or collectors. This inconsistency casts some doubt as to whether these specimens actually originated from Aru Islands or from Borneo. Hołyński (1995) postulated that specimens from "Borneo", "Brunei", and "M. Marapok" probably belonged to *M.* (*S.*) *labuanica* (Hołyński, 1995) though it is obvious from his paper that he has never seen any specimen with such labels. The taxonomical status of *M.* (*S.*) *labuanica* is discussed below.

Distribution. Mt. Marapok is a part of the Crocker Range in northern Borneo (Malaysia, Sabah). Recently, V. Kubáň kindly informed me that there are locations Aru Baru (4°57'N 115°30'E) which possibly match name Aru in Théry's description, and Merapok (4°56'N 115°30'E) on Sabah – Sarawak boundary. All mentioned locations are very close to Brunei and Labuan Island (type locality of *M.* (*S.*) *labuanica*). If "Ile Aru" really corresponds to Aru Baru, the type locality of *M.* (*S.*) *aruensis* is restricted to a rather limited territory in northern Borneo and indication of Aru Islands is a misunderstanding of the original name. Unfortunately, there is still no solid proof of such a mistake.

Microacmaeodera (*Squamicroacmaeodera*) *aruensis labuanica* (Hołyński, 1995) comb. & stat. nov.

(Figs 11, 31-32)

Acmaeodera (*Squamicroacmaeodera*) *labuanica* Hołyński, 1995: 2.
Type locality: Malaysia, Sabah prov., Labuan Island.

Type specimens. Holotype ♂ (ISNB): "I. Labuan [p] [glued to following label] / Coll. Dr. A. Frn. V. Hoscheck [p] / Typus [p, black] / Acm. Labuani m. n. sp., Typ. [h], Det. Hoscheck 19 [p] 40 [h] / Coll. R. I. Sc. N. B., Java [p] / Acmaeodera hoschecki Hol., 1995 [h], det. R. Hołyński [p] / Acmaeodera hoschecki Hołyński, Holotype [h, red]".

Remarks. Characters of *Microacmaeodera* (*Squamicroacmaeodera*) *labuanica*, except for smaller size and some minor differences indicated by Hołyński (1995) and in the key below, almost completely match those of *M.* (*S.*) *aruensis*, including the aedeagus structures (Figs 31-32; compare with Volkovitsh 1986, Figs 18-19), particularly the shape of the tegmen and double lamina of penis. Despite the obvious similarity, I hesitate to synonymize *M.* (*S.*) *labuanica* under *M.* (*S.*) *aruensis* until the type locality of the latter will be cleared up and additional specimens become available. But taken into account the fact that *M.* (*S.*) *labuanica* originates from small isolated island Labuan near Borneo, it can be downgraded to subspecies of *M.* (*S.*) *aruensis*.

Distribution. Malaysia (Sabah: Labuan Isl.).

Microacmaeodera (*Squamicroacmaeodera*) *grootaerti* (Hołyński, 1995) comb. nov.

(Figs 12, 29-30)

Acmaeodera (*Squamicroacmaeodera*) *grootaerti* Hołyński, 1995: 3.
Type locality: Philippinen, Mindanao, Kolambangan.

Type specimens. Holotype ♂ (ISNB): "Philippinen [p], Mindanao, Kolambangan [h] [glued to following label] / Coll. Dr. A. Frn. V. Hoscheck [p], 24.VI. 1915 [h] / Acmaeodera aruensis Théry [h], Det. Hoscheck 194. [p] / Acmaeodera grootaerti Hol., 1995 [h], det. R. Hołyński [p] / Acmaeodera grootaerti Hołyński, Holotype [h, red]".

Remarks. *Microacmaeodera* (*Squamicroacmaeodera*) *grootaerti* is a distinct species from Mindanao Isl. (Philippines) which comes closest to *M.* (*S.*) *aruensis*. Apart from characters indicated in the description (Hołyński, 1995) and key below, it differs from *M.* (*S.*) *aruensis* in aedeagus structures (Figs 29-30), particularly, in penis having no lamina (Fig. 30).

Distribution. Philippines (Mindanao Isl.).

Microacmaeodera (*Squamicroacmaeodera*) *kubani* Volkovitsh & Bellamy, 1995

(Fig. 8)

Microacmaeodera (*Squamicroacmaeodera*) *kubani* Volkovitsh & Bellamy, 1995: 64, 69 (key).

Type locality: Thailand, Kanchanaburi prov., 155 km northwestern of Kanchanaburi, Thimongtha, 15°02'N 98°35'E, 350 m.

Type specimens. Holotype ♀ (TICB): "Thai, 9.-13.IV.1991, Thimonghta [Ban Thimongtha] 350 m 15°02'N 98°35'E Vít Kubáň leg. [p]" / Thailand '91 "Thanon Thong Chai" D. Král & V. Kubáň [p]".

Distribution. Thailand (Kanchanaburi).

Microacmaeodera (*Squamicroacmaeodera*) *macgregori* Bellamy & Volkovitsh, 1992

(Figs 13, 21-22, 27-28)

Microacmaeodera (*Squamicroacmaeodera*) *macgregori* Bellamy & Volkovitsh, 1992: 56, 59 (key). – Volkovitsh & Bellamy, 1995: 69 (key).

Acmaeodera (*Squamicroacmaeodera*) *macgregori*: Hołyński, 1995: 5 (key).

Type locality: Philippines, Luzon, Llocos Sur.

Type specimens. Holotype ♂ (NMNH): "Philippines, Llocos Sur. Luzon, McGregor [p]". Paratypes (1 ♂, 2 ♀♀, NMNH, ZIN): same data as holotype.

Distribution. Philippines (Luzon Isl.).

Microacmaeodera (*Squamicroacmaeodera*) *rolciki* sp. nov.

(Figs 14-16, 19-20, 25-26)

Type locality: Eastern Thailand, Chanthaburi prov., Khao Soi Dao.

Type specimens. Holotype ♀ (NMPC): "E Thailand, Chanthaburi Dist., Khao Soi Dao, 5-13.V.1998, J. Rolčík lgt. [p]". Paratypes (2 ♂♂, COTJ): "C Thailand, Mt. Hin Lec Phai, Hua Hin [city] PKK [Prachuap Khiri Khan prov.], 29.3.2003, S. Ohmomo leg. [p]".

Description of holotype. Body relatively large, length 5.8 mm, width 2.1 mm, weakly elongate, broad, cuneiform, convex, with well defined dorsal curvature; black, elytra with bluish sheen; covered with very finely lanceolate and setiform whitish scales (Figs 14-15).

Head weakly convex, without median depression when seen from above; front slightly flattened sideward from the middle anteriorly, with poorly marked, shallow fovea above clypeus; sides feebly diverging to vertex, nearly straight. Vertex with sharp, distinct longitudinal keel, 2.00 times as wide as transverse diameter of eye and 1.10 times as wide as front above antennal depressions. Clypeus narrow, with shallow median emargination anteriorly. Front with coarse reticulate, nearly alveolate sculpture, formed by large, deep, adjacent umbilicate punctures with inconspicuous granules and distinct micropunctures; intervals much narrower than diameter of punctures, shining; covered with short, poorly visible, directed anteriorly, setiform scales. Antennae (Fig. 14) short, 1.42 times as long as height of eye; serrate from antennomere 5; antennomere 2 shortly oval, robust; 3-4 nearly similar, slightly elongate, weakly, 4th stronger, enlarged apically; 5 triangular, sharpened, slightly wider than long; 6-10 transverse, 1.5 times as wide as long, with inner margins broadly arcuate; 11 short, irregularly rounded apically.

Pronotum campaniform, strongly convex, with poorly defined basal fossae and without median depression; moderately transverse, basal width 1.50 times as wide as long, widest in posterior ¼; sides broadly arcuately, more strongly converging anteriorly than posteriorly; anterior margin projecting angularly, distinctly bisinuate; basal margin straight (Fig. 14). Lateral carina well developed, sharp, straight, slightly obliterated anteriorly, reaching anterior corners. Sides with alveolate sculpture of polygonal alveolae with inconspicuous granules and big micropunctures, sometimes forming concentric series but without distinct rugosity; disc with pseudoalveolate sculpture of large, very dense punctures; intervals narrow, similar or slightly wider than diameter of punctures, shining. Vestiture consisting of very fine, decumbent, finely lanceolate and setiform whitish scales. Anterior prosternal margin slightly emarginated, bordered by a deep sulcus; prosternum evenly convex, with distinct longitudinal series of simple punctures and with nearly alveolate sculpture of coarse umbilicate punctures anteriorly; prosternal process broad, with subparallel, slightly emarginated sides and widely arcuated apex; mesosternum strongly transverse, about 4.8 times as wide as long (Fig. 16); sculpture of meso-, metasternum and metacoxal plates consisting of similar umbilicate punctures. Hypomera with ocellate or reticulate sculpture of large, round, deep umbilicate punctures.

Elytra broad, convex, cuneiform; 2.10 times as long as wide at base; base with weak, triangular depression opposite a few presutural intervals, anterior margin flat; sides slightly diverging at humeri, subparallel toward midpoint and evenly, almost straightly converging to narrowly jointly rounded apices (Fig. 14). Subhumeral incisure very shallow, indistinct, epipleura straight, without curvature at the level of hind coxae; epipleural serration small, poorly visible in posterior ½. Strial punctures deep, fusing together; striae sulciform along the entire length of elytron, deeper in posterior ½. Intervals slightly convex, nearly similar, narrow, 1.5-3 times as wide as striae; 9th not elevated, without serration; covered with large, superficial, uniseriate, at the base biseriate, sometimes fusing transversally punctures on finely rugulose, weakly shining background, and with uniseriate, at the base biseriate, finely lanceolate, short white scales; surface black with bluish sheen.

Legs blackish-brown with bronze sheen; metacoxal plates with posterior margin straight, slightly emarginated laterally, without lateral tooth. Protibiae in male markedly enlarged toward apices, with widely arcuate outer margin and with straight longitudinal keel externally, separating outer part which forms a deep groove receiving tarsi in repose, this groove extending to basal end of protibia (Fig. 19); mesotibiae strongly enlarged toward apices with outer margin straight, groove deep, extending to about basal ⅓ (Fig. 20); metatibiae evenly slightly enlarged towards apices; in female pro- and mesotibiae much less expanded with outer margins of protibiae nearly straight. Legs with white and brown setae; metatibiae bearing one row of brownish thick setae on external margin. Tarsomere 1 slightly longer than 2 and 3; 5th markedly expanded apically, as long as three basal tarsomeres jointly; tarsal pulvilli small, well developed on 1-4, each larger toward distal end. Claws short, strongly curved, and with large, rounded, subapical tooth on inner margin.

Abdomen black with weak bronze sheen; sides with reticulate sculpture of half obliterated, adjacent umbilicate punctures, disc with smaller and stronger obliterated umbilicate punctures; covered with decumbent, finely lanceolate white scales. Anal sternite short, wider than long, evenly rounded apically, broadly and shallowly depressed transversally, not bordered with sulcus.

Ovipositor of tubular type, in holotype heavily destroyed.

Male. Pregenital abdominal segments are typical for subgenus *Squamicroacmaeodera*. Aedeagus (Figs 25-26): tegmen (Fig. 25) narrow, parallel-sided, basal piece with long and

narrow ventral lobe; penis (Fig. 26) slender, elongate, without lamina, with elongate apical apodema and slightly curved terminal processes.

Variability. Two paratypes (♂♂) (Fig. 15) differ slightly from the holotype (♀) as follows: body distinctly bicoloured, longer (length 6.0-7.1 mm, width 2.1-2.5 mm) and stronger cuneiform; elytra slender, 2.14-2.16 times as long as wide at base with sides more sharply converging to apices, bluish-black; sides of front more distinctly diverging to vertex, which is narrower, 1.38-1.68 times as wide as transverse diameter of eye and 1.12-1.13 times as wide as front above antennal depressions; antennae (♂!) 1.47-1.57 times as long as height of eye, distal antennomeres distinctly transverse (5 triangular, about 1.5 times as wide as long, 6-10 trapezoid, nearly two times as wide as long); pronotum slightly more transverse, 1.56-1.65 times as wide as long, disc with sparser punctuate sculpture of asperate punctures, covered entirely with setiform scales; strial punctures separated in anterior half of elytral length; intervals more flat and wider, 3-5 times as wide as striae, with surface more smooth and nitidous; pro- and mesotibiae stronger enlarged toward apicies with dipper and better defined grooves, tarsal claws (♂!) with bigger inner tooth.

Etymology. The species is named after the first collector of this species J. Rolčík (Prague, Czech Republic).

Distribution. Thailand (Chanthaburi, Prachuap Khiri Khan).

Differential diagnosis. In having very shallow, indistinct subhumeral incisure, strongly transverse mesosternum, distinctly expanded pro- and mesotibiae with grooves receiving tarsi in repose, and penis without lamina, *Microacmaeodera* (*S.*) *rolciki* sp. nov. comes closest to *M.* (*S.*) *macgregori* from Philippines; both species are contrasted in Table 4.

Table 4. Diagnostic differences between *Microacmaeodera* (*Squamicroacmaeodera*) *rolciki* **sp. nov.** and *M.* (*S.*) *macgregori*.

	***M.* (*S.*) *rolciki* sp. nov.** (Figs 14-15)	***M.* (*S.*) *macgregori*** (Fig. 13)
Character	Character state	
pronotum, sculpture of disc	pseudoalveolate formed by large, very dense punctures; intervals similar or about two times wider than diameter of punctures	asperate changing to punctate in the middle, formed by sparse punctures; intervals 2.5-3 times wider than diameter of punctures
protibiae, shape (♂)	strongly enlarged toward apices with outer margin slightly arcuate (Fig. 19)	moderately enlarged toward apices with outer margin straight (Fig. 21)
protibiae, groove receiving tarsi in repose (♂)	deep, sulciform, extending to proximal end (Fig. 19)	poorly depressed, extending to approx. ⅔ of length (Fig. 21)
mesotibiae, shape (♂)	strongly enlarged toward apices (Fig. 20)	slightly enlarged toward apices (Fig. 22)
mesotibiae, groove receiving tarsi in repose (♂)	deep, sulciform, extending to proximal ⅔ (Fig. 20)	poorly defined, nearly inconspicuous (Fig. 22)
aedeagus, shape of tegmen	narrow, parallel-sided (Fig. 25)	strongly enlarged toward apices (Fig. 27)
aedeagus, ventral lobe of basal piece	narrow, parallel-sided distally, with narrowly rounded apex (Fig. 25)	broad, short, gradually narrowed toward widely rounded apex (Fig. 27)
penis, shape	elongate, slender; lateral folds parallel-sided, apical apodema elongate, terminal processes slightly curved (Fig. 26)	relatively short and robust; lateral folds expanded toward apex, apical apodema short, terminal processes distinctly curved (Fig. 28)

Comments. Despite the numerous minor differences demonstrated by specimens designated here as paratypes, there are good reasons to attribute them to the same species. Some character states, particularly, body shape, width of vertex, length of antennae, shape of distal antennomeres, and structure of pro- and mesotibiae are most likely dimorphic. Moreover,

these specimens are originated from Hua Hin environs (Prachuap Khiri Khan prov.) on the opposite shore of Golf of Thailand, rather far from the holotype locality (Khao Soi Dao, Chanthaburi prov.), so variability to some extent can be explained by geographical and ecological reasons. Additional specimens including opposite sexes from both collection areas are needed to support or refute this assumption.

Key to the subgenera and species of *Microacmaeodera*

1 Body broad and robust, cuneiform (Figs 8-15), elytra not longer than 2.3 times basal width (generally less than 2.2); covered with thin transparent finely lanceolate or setiform scales. Mesosternum moderately to strongly transverse, 2.7-4.8 times as wide as long (Figs 16-17). Antennae normal, no more than 1.7 times as long as height of eye in both sexes. Sides of pronotum with alveolate, reticulate or reticulate-rugose sculpture of umbilicate punctures; disc with asperate, pseudoalveolate or simple punctate sculpture (subgenus ***Squamicroacmaeodera*** Volkovitsh) 2

– Body elongate and narrow (elytra no less than 2.3 times basal width) (Figs 1-5), rarely cuneiform and robust (Figs 6-7); mesosternum weakly transverse, less than 2 (1.5-1.9) times as wide as long (Fig. 18); covered with setae. Antennae longer, in male 2.4-5.3, in female 1.8-3.3 times as long as height of eye. Pronotum entirely covered with simple punctation, occasionally forming pseudoalveolate to alveolate sculpture on sides and at base (subgenus ***Microacmaeodera*** Cobos) 8

2 Punctate striae distinct on entire length of elytra. Metacoxal plates without lateral tooth 3

– Punctate striae visible only on posterior ½ of elytra, anteriorly mixed with punctations of intervals. Metacoxal plates with large rectangular lateral tooth. Front parallel-sided, not widening to vertex. Blackish-bronze. 4.2 mm. India (Karnataka). Fig. 9 ..... ***M. (S.) belli*** (Kerremans) → p. 76

3 Pro- and sometimes mesotibiae markedly enlarged toward apices forming a groove receiving tarsi in repose (Figs 19-22). Mesosternum strongly transverse, 4.5-4.8 times as wide as long (Fig. 16). Subhumeral incisure of elytra very shallow, indistinct. Pronotal sides with sculpture alveolate 4

– All tibiae slender or poorly enlarged toward apices, not forming a groove receiving tarsi in repose. Mesosternum moderately transverse, 2.7-3.7 times as wide as long (Fig. 17). Subhumeral incisure distinct. Pronotal sides with sculpture reticulate-rugose 5

4 Pronotal disc with sculpture pseudoalveolate of large, very dense punctures, with intervals similar or about two times wider than diameter of punctures. Pro- and mesotibiae strongly enlarged toward apices with groove receiving tarsi in repose deep, sulciform (Figs 19-20). Aedeagus: tegmen (Fig. 25) elongate, parallel-sided, ventral lobe of basal piece narrow, elongate; penis (Fig. 26) slender, elongate, with parallel-sided lateral folds, elongate apical apodema, and slightly curved terminal processes. 5.8-7.1 mm. Thailand (Chanthaburi, Prachuap Khiri Khan). Figs 14-15 ..... ***M. (S.) rolciki*** **sp. nov.** → p. 78

– Pronotal disc with sculpture asperate changing to punctate in the middle, formed by sparse punctures, with intervals 2.5-3 times wider than diameter of punctures. Pro- and mesotibiae moderately enlarged toward apices, with groove receiving tarsi in repose poorly defined, better marked on protibiae (Figs 21-22). Aedeagus: tegmen (Fig. 27) with parameres strongly diverging toward apices, ventral lobe of basal piece broad and short; penis (Fig. 28) short and robust, with lateral folds expanded toward apex, short apical apodema, and distinctly curved terminal processes. 5.4-5.9 mm. Philippines (Luzon Isl.). Fig. 13 ..... ***M. (S.) macgregori*** Bellamy & Volkovitsh → p. 78

5 Body length 4.5-5.7 mm. Hypomera and abdominal sides with reticulate sculpture of umbilicate punctures, without distinct longitudinal rugosity. Meso-metasternal suture well defined medially 6

– Body length 3.4 mm. Hypomera and abdominal sides with markedly reticulate-rugose sculpture and with distinct longitudinal rugosity. Meso-metasternal suture indistinct medially, visible on sides only. Thailand (Kanchanaburi). Fig. 8 ..... ***M. (S.) kubani*** Vokovitsh & Bellamy → p. 78

6 Body bronze. Pronotal sides evenly arcuate. Penis without lamina (Fig. 30). 4.5 mm. Philippines (Mindanao Isl.). Fig. 12 ..... ***M. (S.) grootaerti*** (Hołyński) → p. 77

– Body black. Pronotal sides subparallel at basal ⅓. Penis with lamina consisting of 2 sclerites (Fig. 32) 7

7 Body length 5.5-5.7 mm. Lateral carina of pronotum indistinct, defined only at base. Elytral apices rounded separately. Malaysia (Sabah), ??Aru Isl.. Fig. 10 ..... ***M. (S.) aruensis aruensis*** (Théry) → p. 76

– Body length 4.5 mm. Lateral carina of pronotum distinct, entire. Elytral apices rounded jointly. Malaysia (Labuan Isl.). Fig. 11 ..... ***M. (S.) aruensis labuanica*** (Hołyński) → p. 77

8 Body robust, cuneiform (Figs 6-7); elytra 2.1 times as long as width at base 9

– Body slender, subparallell (Figs 1-5); elytra 2.3-2.9 times as long as width at base 10

9 Moderately cuneiform; elytral sides subparallel from humeri toward metacoxae, then converging to apices. Punctate striae distinct along entire length of elytra; intervals with very delicate punctures on finely rugulose background. Posterior margin of metacoxal plates slightly emarginated, nearly straight, without lateral tooth. Black with coal sheen. 3.05 mm. Thailand (Chiang Mai). Fig. 6 ..... ***M. (M.) cuneiformis* sp. nov.** → p. 69

– Strongly cuneiform; elytral sides converging from humeri toward apices. Punctate striae almost inconspicuous in anterior ⅓ being confused with coarse interval punctures; intervals with reticulate sculpture in anterior ⅓ and coarse multiseriate punctures nearly as large as strial ones in posterior ⅔. Posterior margin of metacoxal plates with deep lateral emargination and broad rectangular tooth. Black with coal sheen. 3.3 mm. Thailand (Khon Kaen). Fig. 7 ..... ***M. (M.) ohmomoi* sp. nov.** → p. 72

10 Body narrow, strongly elongated (Figs 1-2), elytra 2.4-2.9 (average 2.7) times as long as basal width; antennae in male 3.5-5.3, in female 2.3-3.3 times eye height. Western Himalayas 11

– Body relatively robust (Figs 3-5), elytra 2.3-2.5 (average 2.4) times as long as basal width; antennae in male 2.4-2.6, in female 2.0-2.3 times eye height. China (Yunnan), Thailand 12

11 Front parallel-sided or slightly widened to vertex. Antennae in male half body length, not less than 5 times eye height, in female 2.9-3.3 times eye height. Sides of pronotum without small elevations. Penis with entire lamina displaced to base of apophyses. Ovipositor long, total length 5 times length of widest part. Body black with bluish sheen. 2.9-4.2 mm. Afghanistan, Pakistan, Northwestern India. Fig. 1 ..... ***M. (M.) longicornis*** (Cobos) → p. 69

– Front slightly narrowed to vertex. Antennae in male 3.54, in female 2.25 times eye height. Sides of pronotum with small lateral elevations in middle. Penis with lamina displaced to anterior part and consisting of two sclerites. Ovipositor shorter, not longer than 3 times length of widened part. Body bronze black. 4.4-5.3 mm. Northwestern India (Jammu & Kashmir). Fig. 2 ..... ***M. (M.) wittmeri*** Volkovitsh → p. 69

12 Front evenly convex or flattened in the middle, without distinct fovea. Pronotum entirely with coarse pseudo-alveolate sculpture of large, deep simple punctures. Strial punctures of elytra shallow, fused with punctures of intervals anteriorly; striae poorly visible on anterior ⅓; intervals flat, broad, 2-4 times as wide as striae. Body bronze black. 3.1-4.6 mm. China (Yunnan). Figs 4-5 ..... ***M. (M.) kucerai* sp. nov.** → p. 73

– Front with shallow fovea in the middle. Pronotal sides with pseudoalveolate sculpture; disc with simple punctate sculpture of sparse punctures. Strial punctures of elytra deep, isolated; striae distinct along entire length; intervals subconvex, narrow, 1.5-2.5, at most 3 times as wide as striae. Body black with coal sheen. 3.2 mm. Thailand (Mae Hong Son). Fig. 3 ..... ***M. (M.) thailandica*** Vokovitsh & Bellamy → p. 75

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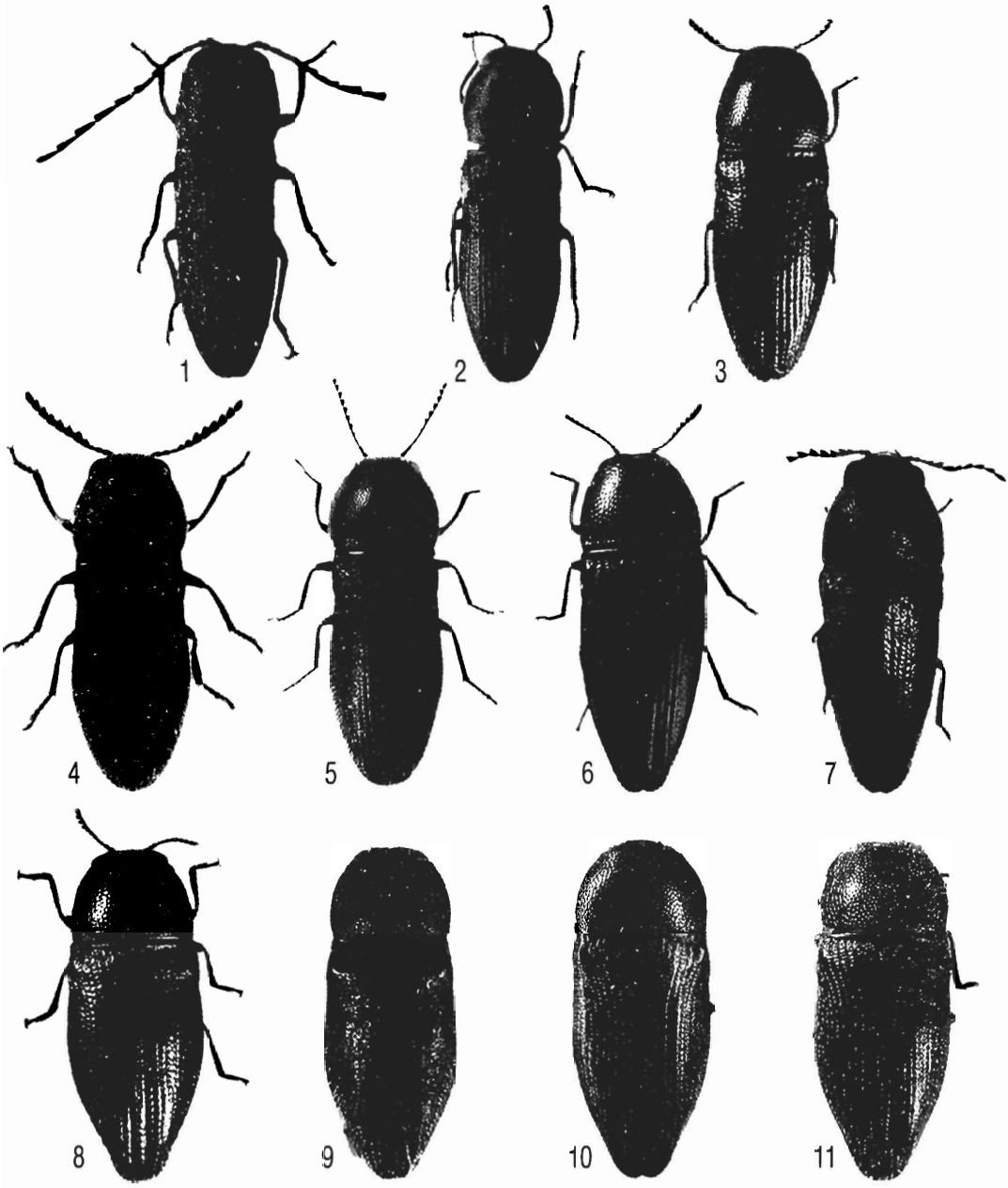
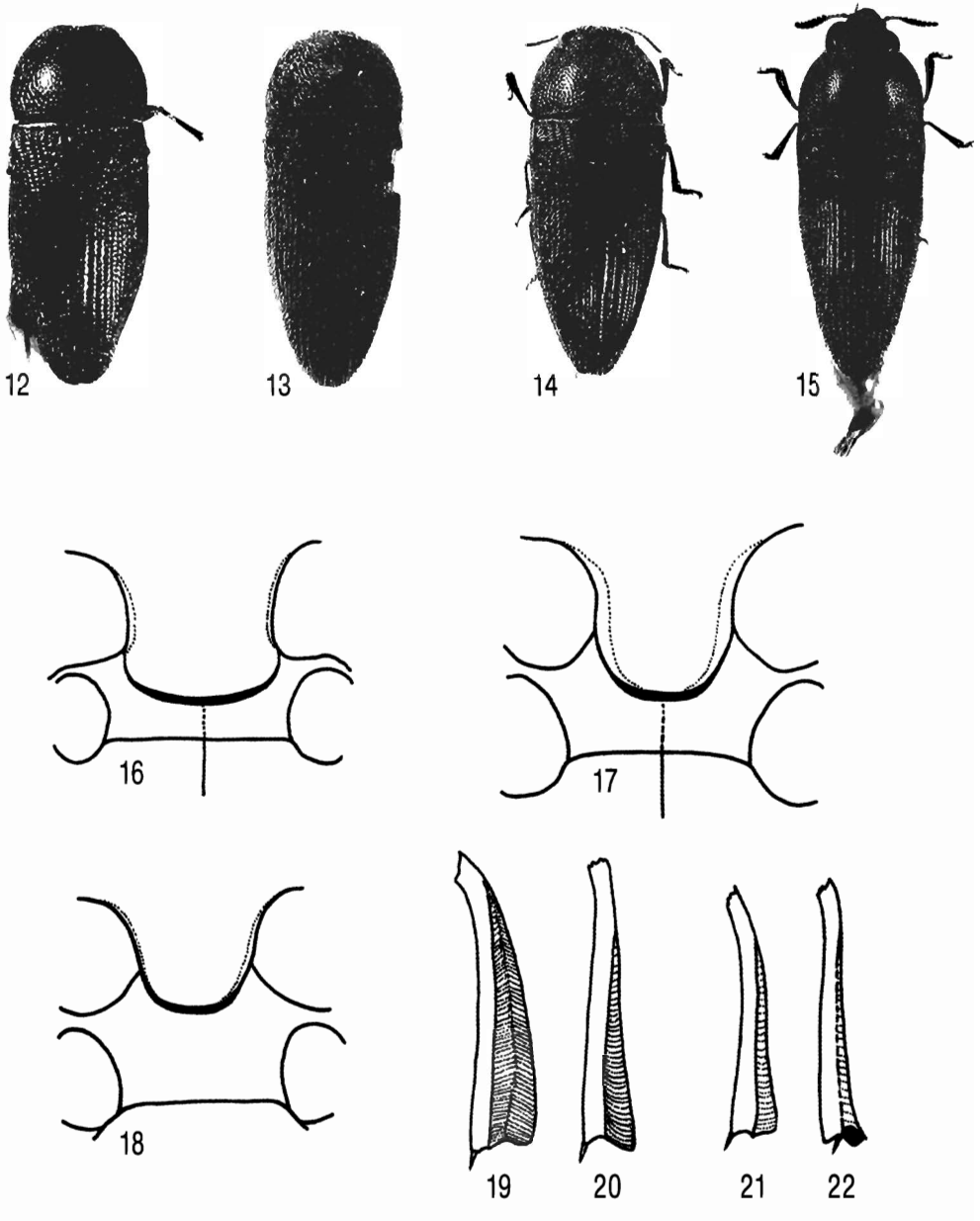
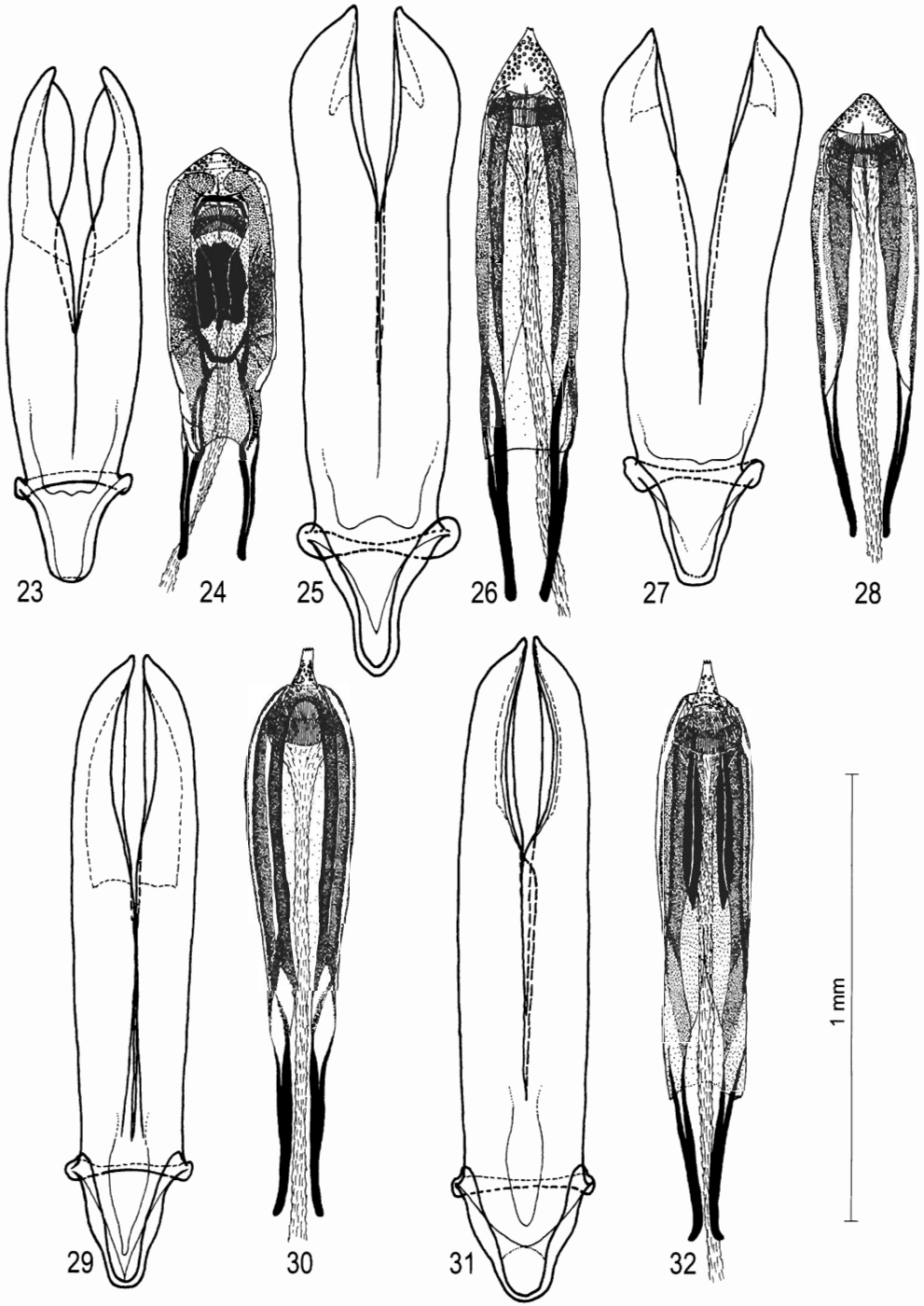


Figs 1-11. 1 – *Microacmaeodera* (*Microacmaeodera*) *longicornis* (Cobos), holotype ♂, 3.0 mm; 2 – *M.* (*M.*) *wittmeri* Volkovitsh, paratype ♀, 4.4 mm; 3 – *M.* (*M.*) *thailandica* Volkovitsh & Bellamy, holotype ♀, 3.2 mm; 4 – *M.* (*M.*) *kucerai* **sp. nov.**, paratype ♂, 4.1 mm; 5 – *M.* (*M.*) *kucerai* **sp. nov.**, paratype ♀, 4.0 mm; 6 – *M.* (*M.*) *cuneiformis* **sp. nov.**, holotype ♀, 3.05 mm; 7 – *M.* (*M.*) *ohmomoi* **sp. nov.**, holotype ♂, 3.3 mm; 8 – *M.* (*Squamicroacmaeodera*) *kubani* Volkovitsh & Bellamy, holotype ♀, 3.4 mm. 9 – *M.* (*S.*) *belli* (Kerremans), holotype ♀, 4.2 mm (Photo: The Natural History Museum, London), 10 – *M.* (*S.*) *aruensis aruensis* (Théry), ♂ from NMPC, 5.6 mm; 11 – *M.* (*S.*) *a. labuanica* (Hołyński), holotype ♂, 4.5 mm. Photo: 1 – courtesy H. Mühle; 3, 6 and 8 – courtesy L. Dembický and V. Kubáň.



Figs 12-15. 12 – *Microacmaeodera* (*Squamicroacmaeodera*) *grootaerti* (Hołyński), holotype ♂, 4.5 mm; 13 – *M.* (*S.*) *macgregori* Bellamy & Volkovitsh, paratype ♂, 5.4 mm; 14 – *M.* (*S.*) *rolciki* **sp. nov.**, holotype ♀, 5.8 mm; 15 – *M.* (*S.*) *rolciki* **sp. nov.**, paratype ♂, 6.0 mm. Figs 16-22. 16 – Prosternal process and mesosternum of *M.* (*S.*) *rolciki* **sp. nov.**; 17 – the same of *M.* (*S.*) *aruensis aruensis* (Théry); 18 – the same of *M.* (*Microacmaeodera*) *ohmomoi* **sp. nov.** 19-22: Pro- and mesotibiae. 19-20: *M.* (*Squamicroacmaeodera*) *rolciki* **sp. nov.**, paratype ♂. 21-22: *M.* (*S.*) *macgregori* Bellamy & Volkovitsh, paratype ♂.



Figs 23-32. Male genitalia (tegmen – left, penis – right). 23-24: *Microacmaeodera* (*Microacmaeodera*) *kucerai* **sp. nov.**, PT. 25-26: *M.* (*Squamicroacmaeodera*) *rolciki* **sp. nov.**, PT. 27-28: *M.* (*S.*) *macgregori* Bellamy & Volkovitsh, PT. 29-30: *M.* (*S.*) *grootaerti* (Hołyński), HT. 31-32: *M.* (*S.*) *aruensis labuanica* (Hołyński), HT.

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