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NEW SPECIES OF *TAENIODERA* BURMEISTER FROM THE SUNDA ISLANDS (COLEOPTERA, CETONIIDAE)

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With 23 text-figures

ABSTRACT

Three new species of the Asian genus *Taeniodera* Burmeister are described and illustrated: *T. celebensis* (North Sulawesi), *T. inermis* (Sabah) and *T. bandahara* (North Sumatra).

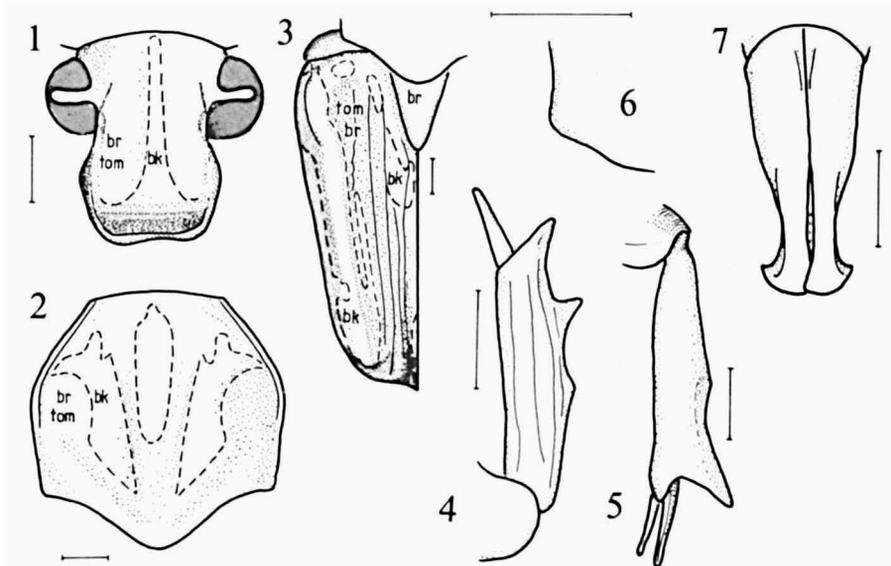
INTRODUCTION

The following descriptions of three new cetonine beetles have resulted from a partial revision of the material of this group kept in the Leiden museum. The three new species belong to the genus *Taeniodera* Burmeister. The majority of its species are flower-frequenting inhabitants of Oriental rainforest regions. The first new species described below constitutes the second record of the genus for Sulawesi. The second novelty, from Borneo, may have been overlooked by other workers, because it nearly perfectly duplicates a known species. The third novelty was collected during my 1972 expedition to Mt Bandahara in North Sumatra. *Taeniodera* has recently been treated by Mikšić (1976), who mentioned ca. 50 species. His keys are artificial, and pending a phylogenetically oriented reclassification of the Taenioderini my statements on the affinities of the new species can only be provisional.

DESCRIPTIONS

***Taeniodera celebensis* sp. nov.** (figs. 1-7)

Holotype (male). — Approximate length 18, width 7.5, height 5 mm. Derm black, partly velutinous, largely covered with dense, symmetrically patterned ochreous to light-brown tomentum. Pilosity yellowish, very abundant, but inconspicuous. Habitus like other *Taeniodera* species.



Figs. 1-7. *Taeniodera celebensis*, holotype. 1, head; 2, pronotum; 3, elytron and scutellum; 4, right fore tibia; 5, left hind tibia; 6, mesometasternal transition (lateral view); 7, parameres. — Scale lines are 1 mm; dashes represent limits of tomentum (cf. description); tom = tomentum, bk = black, br = brown.

Cephalic contours and disposition of tomentum, fig. 1. Anterior margin of clypeus strongly reflexed, crest feebly bisinuate. Clypeofrontal disc feebly convex; derm abundantly annulate-punctate-setose, punctures in tomentum exposed, black. Maximum width of head (including eyes) 3.3, of clypeus 2.1 mm.

Pronotal contours and disposition of tomentum and velutinous black areas, fig. 2. Lateral black bars of pronotal disc callous; pronotal derm abundantly annulate-punctate to arcuate-punctate, most punctures black, with short erect seta. Median length of pronotum 5.2, maximum width 5.5 mm. Scutellum (fig. 3) entirely tomentous, with many isolated striolae coming through.

Elytral contours and disposition of tomentum and velutinous black areas, fig. 3. Elytron with paradiscal costa extending from humerus to distinct apical umbone; lateral declivity steep; no distinct intrahumeral depression present; juxtasutural zone raised posteriorly; apicosutural angle acute; discal depression shallow from base to apical declivity, with several (4 continuous) longitudinal parallel striolae; remaining elytral punctation and striolation poorly developed, setae minute. Sutural length of elytra 7.5, maximum (humeral) width combined 7.3, maximum (longitudinal) length 11.2 mm.

Antennal club long, almost as long as rest of antenna. Pectus and abdominal venter largely tomentous; black derm exposed on: central area of metasternal disc; well-defined spot on metasternal wings; ventrodorsal transition of abdominal sternites 3-5; paramedian spots on sternites 3-4 and transverse mark on

sternite 5; most of anteanal (6) and anal sternites (7); propygidium tomentous; pygidium largely tomentous, with pair of black lateral spots; setae short, very abundant. Mesometasternal protrusion shortly conical in front (fig. 6). Ventrodorsal transition of abdomen very abrupt; abdominal venter concave, not impressed. Pygidium transverse, moderately double-topped.

Fore tibia (fig. 4) with (1) + 2 external denticles; terminal spur long, acuminate, tip curved, reaching tarsal segment 3. Middle and hind tibiae (fig. 5) with poorly pronounced external elevation ca. halfway their length; tibial apices inferiorly bidentate; terminal spurs simply tapering; internal side of hind tibia with dense fringe of setae longer than tibial width; tibial derm sparsely tomentous. Tarsi all slender, with large sickle-shaped claws. Posterolateral angle of hind coxa ca. 100°; hind coxal surface completely tomentous.

Parameres, fig. 7.

Female sex unknown.

Identification. — *Taeniodera celebensis* stands isolated within the genus. It is immediately recognizable by the combination of a reflexed clypeal margin, steep elytral lateral declivities, the overall colour pattern, the long hind tibial setae, and the shape of the parameres. Hitherto only one *Taeniodera* species has been recorded from Sulawesi, *T. nigrithorax* Mikšić, which has, inter alia, very different colours; the thorax and the pygidium of that species are entirely black.

Material examined. — Holotype male from North Sulawesi: Goeroepahi, 13.v.1917, W. Kaudern. Walter Kaudern (1881-1942), Swedish ethnologist-zoologist, travelled extensively in Sulawesi; details in Van Steenis-Kruseman (1950).

***Taeniodera inermis* sp. nov.**

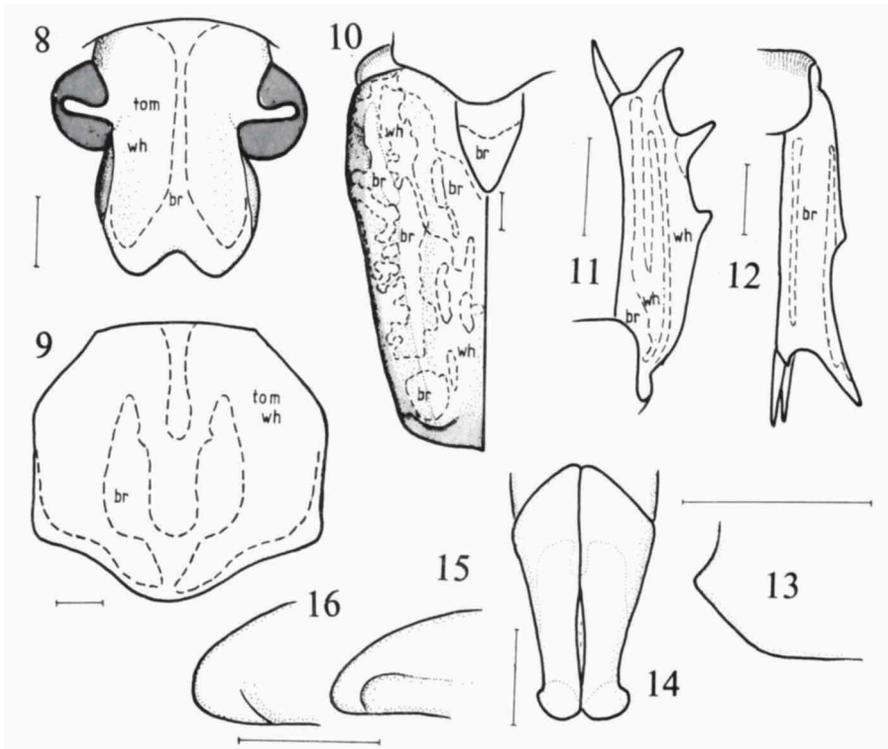
(figs. 8-15)

Holotype (male). — Approximate length 20.5, width 9.5, height 6.5 mm. Derm brown, largely velutinous, largely covered with dense, symmetrically patterned dirty whitish to pale-ochreous tomentum. Pilosity yellowish, mainly on pectus. Habitus very similar to that of *Taeniodera marmorata* (Wallace).

Cephalic contours and disposition of tomentum, fig. 8. Anterior border of clypeus bisinuate, immarginate; median clypeofrontal costa very slight; exposed area of clypeus densely, distinctly punctate-setose; most of cephalic punctation covered by tomentum. Maximum width of head (including eyes) 3.7, of clypeus 2.5 mm.

Pronotal contours and disposition of tomentum and dark-brown exposed areas, fig. 9. General surface of pronotal disc flat; derm abundantly, distinctly punctate-setose; punctures isodiametric, laterally changing to more or less arcuate striolation. Median length of pronotum 5.6, maximum width 6.0 mm. Scutellum (fig. 10) with some tomentum and scattered punctures.

Elytral contours and disposition of tomentum and exposed brown areas, fig. 10. Elytron with brown paradiscal costa extending from humerus to distinct



Figs. 8-16. *Taeniodera inermis*, holotype. 8, head; 9, pronotum; 10, elytron and scutellum; 11, right fore tibia; 12, left hind tibia; 13, mesometasternal transition (lateral view); 14, parameres; 15, parameral tip (lateral view), enlarged; 16, ditto of *T. marmorata* from Kuching. — Scale lines are 1 mm; dashes represent limits of tomentum (cf. description); tom = tomentum; br = brown; wh = whitish.

apical umbone; lateral surface of elytron very slightly declivous; intrahumeral depression very distinct; juxtasutural zone slightly raised posteriorly; apicosutural angle distinct, ca. 90° ; discal depression shallow, with 5 more or less continuous, undulate, sublongitudinal striolae; distomarginal zone striolate; remainder of elytron with scattered punctures and striolae, except on costae. Sutural length of elytra 8.3, maximum (humeral) width combined 9.5, maximum (longitudinal) length 12.1 mm.

Antennal club slightly longer than segments 2-7 combined, brown. Pectus, abdominal venter, pygidium, coxae, femora almost entirely tomentous; tibiae also with much tomentum; exposed areas include: preprosternum; most of mesometasternal protrusion and metasternal disc; median and ventrodorsal spots on visible sternites 3-5; setae abundant, long, particularly on pectus and femora. Mesometasternal protrusion shortly conical in front (fig. 13). Ventrodorsal transition of abdomen gradually rounded; abdominal venter not impressed. Pygidium transverse, slightly double-topped.

Fore tibia (fig. 11) with 3 external denticles; terminal spur long, acuminate, reaching tarsal segment 3. Middle and hind tibiae (fig. 12) with well-pronounced external elevation ca. halfway their length, that on middle tibia spiniform; tibial apices inferiorly simply bidentate; terminal spurs simply tapering. Tarsi all slender, with large sickle-shaped claws. Posterolateral angle of hind coxa ca. 90°.

Parameres, fig. 14, 15.

Female sex unknown.

Identification. — This species is extremely similar to *Taeniodera marmorata* (Wallace), but differs distinctly by lacking both the peculiarly elongated inferior-internal apical denticle of the hind tibiae and the strongly curved, enlarged hind tibial spurs; in *T. inermis* all this is unmodified. The parameres are also different, which is particularly evident in lateral view (fig. 15, 16). *T. inermis* may easily be overlooked in series of *marmorata*.

Material examined. — Holotype male from Sabah: Kinabalu, J. Waterstradt, ex Valck Lucassen - O. E. Janson - Van de Poll. Johannes Waterstradt has been on Mt Kinabalu several times between 1890 and 1912 (Van Steenis-Kruseman, 1950, and other sources).

***Taeniodera bandahara* sp. nov.**

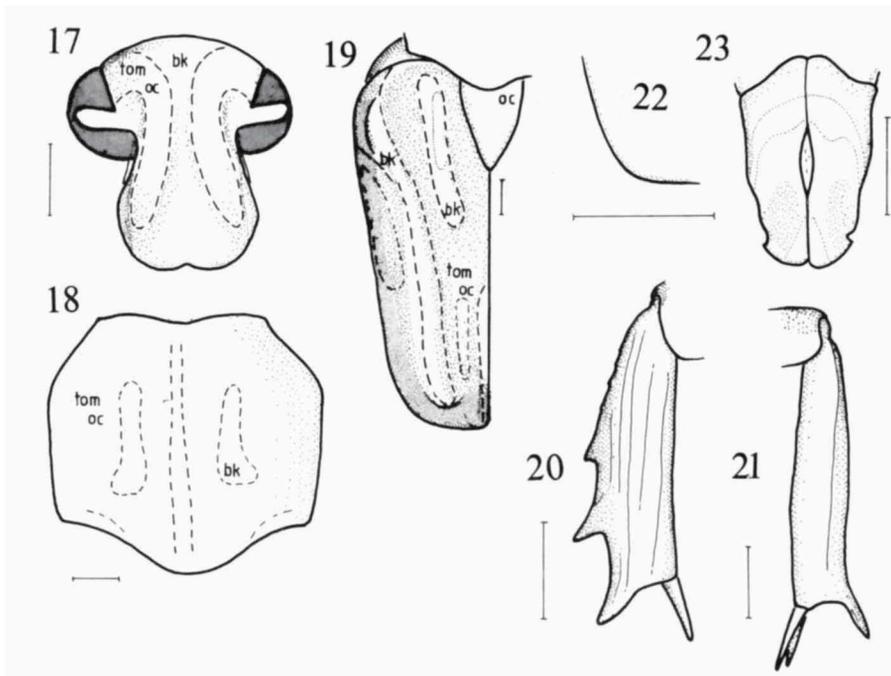
(figs. 17-23)

Holotype (male). — Approximate length 19, width 9, height 6 mm. Derm largely black, partly velutinous, with symmetrically patterned, more or less marmorate, ochreous to light greyish-brown tomentum; its density strongly variant. Pilosity yellowish, very abundant, mostly short, long on pectus. Habitus like other *Taeniodera* species.

Cephalic contours and disposition of tomentum, fig. 17. Anterior border of clypeus bisinuate, immarginate; exposed slightly convex clypeal disc extending to median frontal costa; punctuation of head very dense, but fine, superficial. Maximum width of head (including eyes) 3.4, of clypeus 2.2 mm.

Pronotal contours and disposition of tomentum and exposed velutinous areas, fig. 18. Basomedian surface of pronotum flat, remainder evenly convex; tomentous areas densely transversely undulate-striolate. Median length of pronotum 5.1, maximum width 5.7 mm. Scutellum (fig. 19) largely tomentous, densely undulate-striolate.

Elytral contours and disposition of tomentum and exposed velutinous areas, fig. 19. Elytron with black paradiscal costa extending from humerus to moderately convex apical umbone; lateral surface of elytron very slightly declivous; prediscal costa black with narrow brown streak; intrahumeral depression shallow, juxtasutural zone slightly raised posteriorly; apicosutural angle rounded off; shallow discal depressions all undulate-striolate, mainly longitudinally; lateral and distal declivities densely undulate-striolate. Sutural length of elytra 8.1, maximum (humeral) width combined 8.9, maximum (longitudinal) length 11.7 mm.



Figs. 17-23. *Taeniodera bandahara*, holotype. 17, head; 18, pronotum; 19, elytra; 20, right fore tibia; 21, left hind tibia; 22, mesometasternal transition (lateral view); 23, parameres. — Scale lines are 1 mm; dashes represent limits of tomentum (cf. description); tom = tomentum; bk = black; oc = ochreous.

Antennal club long, almost as long as rest of antenna. Most of pectus and abdominal venter with ochreous tomentum; black derm exposed on: prosternum; metasternal disc and mesometasternal protrusion; median zone and ventrodorsal transition of abdominal sternites. Tomentous portions of pectus mostly with long, dense pilosity; all tomentous portions of pectus and abdomen, as well as tomentous pygidium, more or less densely undulate-striolate. Mesometasternal transition only slightly convex (fig. 22). Abdominal venter superficially impressed; ventrodorsal transition very distinct from above. Pygidium simply convex.

Fore tibia (fig. 20) with 3 external denticles; terminal spur long, acuminate, reaching to apex of tarsal segment 2. Middle and hind tibiae (fig. 21) with distinct external elevation ca. halfway their length, that on middle tibia spiniform; tibial apices inferiorly bidentate; terminal spurs simply tapering; tibial derm sparsely tomentous. Femora slender, sparsely tomentous. Tarsi all slender, with large sickle-shaped claws. Posterolateral angle of hind coxa ca. 90°; hind coxal surface tomentous, densely undulate-striolate.

Parameres, fig. 23.

Female sex unknown.

Identification. — This species is characterized, inter alia, by its light-coloured, loosely marmorate dorsal tomentous pattern on an opaque black substrate; by the distinctly 3-dentate fore tibiae; by the distinct external protrusions on the middle and hind tibiae; by the slight mesometasternal protrusion; by the abdomen being distinctly visible from above; by its parameres; and by its size. In these characters *T. bandahara* differs from the superficially similar *T. cervina* (Wallace). The colour pattern is somewhat similar to *T. inermis* (described above) and *T. marmorata* (Wallace), but these species are very different in other characters, including the parameral shape.

Material examined. — Holotype male from North Sumatra: Mt Bandahara: Bivouac Three, 3°45' N-97°45' E, ca. 1810 m, 25.vii.1972, J. Krikken, no. 25, in undisturbed montane multistratal evergreen forest.

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