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NEW GENERA OF NEW WORLD CREMASTOCHEILINI, WITH REVISIONAL NOTES (COLEOPTERA: CETONIIDAE)

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With 16 text-figures and one plate

ABSTRACT

Centrochilus howdeni gen. nov., sp. nov. (Mexico) is described and illustrated. *Cyclidinus velutinus* Westwood, the distribution of which appears to be Neotropical, is accommodated in *Cyclidiellus* gen. nov. A brief revised key to the New World genera of Cremastocheilini is given; *Uloptera* Burmeister is excluded, being Ethiopian, the new genera and the neglected *Cyclidinus* Westwood are included.

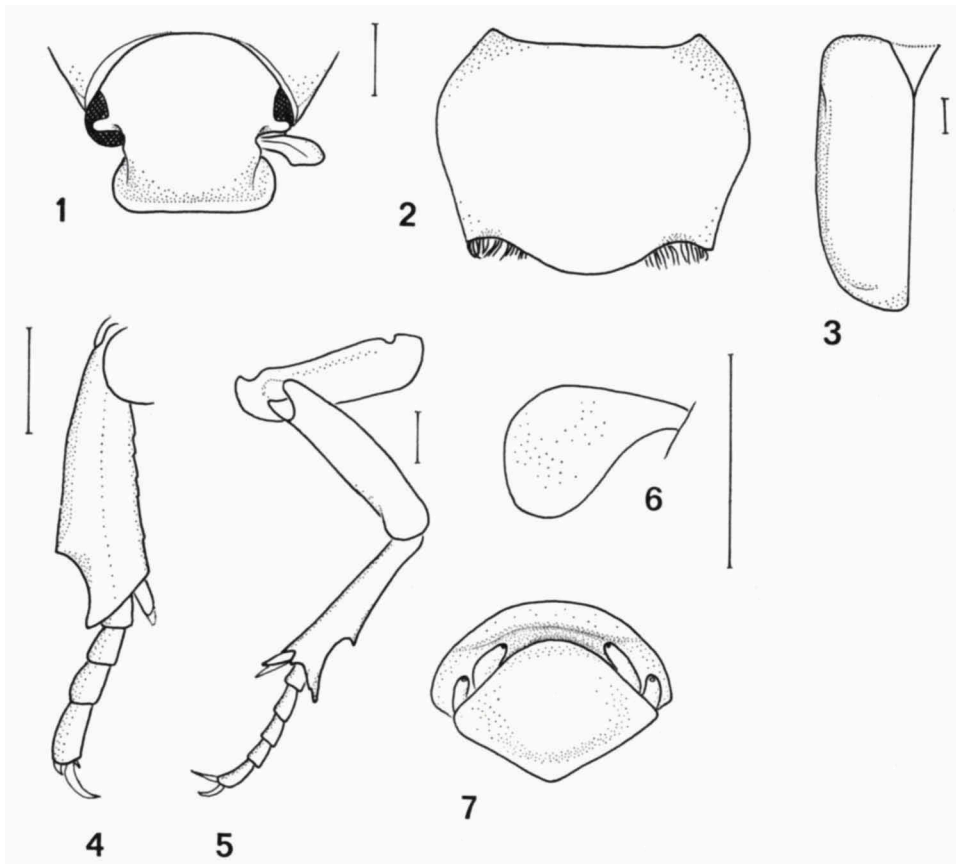
Together with the description of a new genus and species Howden (1971) published a survey of the New World genera and subgenera of Cremastocheilini. Being engaged in a reclassification of the forms currently placed in and near this tribe, I can now add three genera to his survey, and delete one. These precursory notes are given in order not to encumber the final work with too many pages of indirectly-relevant detail.

Two new genera are proposed; one is based on a specimen collected by Howden in Mexico, the other on Brazilian specimens referable to *Cyclidinus velutinus* Westwood, a species persistently misunderstood so far. *Cyclidinus lugubris* Westwood, the only species left in the genus, has disappeared from the New World lists, which is rectified herein (see notes under *Cyclidiellus velutinus*). *Uloptera* Burmeister, mentioned by Howden (1971: 225, 229), was incorrectly recorded from the Guyanas, being strictly Ethiopian (see Ruter, 1964: 881-883).

The new situation on the generic level is summarized by means of a brief key; detailed information on the New World supra-specific taxa, including an extensive, undoubtedly improved key, will be presented in my proposed treatment of the world fauna.

Genus **Centrochilus** nov.

Generic diagnosis. — Lateral border of pronotum immarginate, in dorsal outline evenly rounded (fig. 2), with projecting angle behind; lateral emargination of base (adjacent to angle) with simple trichome, anterolateral



Figs. 1-7. *Centrochilus howdeni*, holotype. Countours of: 1, head, full-face view; 2, pronotum, dorsal view; 3, elytron, dorsal view; 4, right fore tibia and tarsus; 5, left hind leg; 6, left antennal scape; 7, mentum and clypeopleuron. Scale-lines = 1 mm; 1, 2: same scale; 4, 7: same scale.

region of pronotum unmodified. Clypeopleuron (= deflexed anterior margin of clypeus; fig. 7) narrow. Legs (figs. 4, 5) robust; tarsi 5-segmented, slender, shape of segments normal (subcylindrical to club-shaped); tarsal claws sickle-shaped. Propygidial spiracles scarcely produced.

General surface of clypeofrons (fig. 1) evenly convex, unmodified. Anterior border of clypeus in full-face outline straight; lateral ridge limiting

clypeal disc obsolete. General surface of pronotum (fig. 2) evenly convex, unmodified; anterolateral notal-pectoral transition abrupt. Scutellum (fig. 3) triangular, apex acute. Elytra (fig. 3) moderately elongate, maximum length/width (single) less than 3; disc remarkably deplanate, unmodified, lacking any trace of striae; juxtasutural margin of elytra level with general surface; apicosutural angle of elytron rounded. Mentum (fig. 7) dilated, strongly extended from anterior part, covering palpi almost completely; exposed general surface flat or nearly so. Antennal scape (fig. 6) inflated-dilated, rounded distally. Anteromedian apophysis of prosternum well developed (though much shorter than antennal lamellae), tapering. Posteromedian part of prosternum unmodified. Anterolateral flange of propectus scarcely extended. Middle coxae subcontiguous. Mesosternal collum broad. Mesepimeron in dorsal outline narrow, non-protuberant. Six abdominal sternites visible; abdominal spiracles, except for propygidial ones, concealed under elytra; only propygidium and pygidium visible from above. Pygidium simply convex, lacking special features, slightly transverse; pygidial apex not visible in dorsal view; anal border marginate. Fore tibia (female; fig. 4) with two well-developed external denticles; inferior surface with longitudinal costa, terminating in distal denticle. Hind tibia (female; fig. 5) with spiniform non-apical elevation, general shape normal (width not greatly exceeding height, ratio w/h 1-2); hind coxa visible from above. Derm black, shagreened, opaque, mostly sparsely setiferous; setae mostly black. Predominant microsculpture consisting of normal punctures, hemipunctures, and isolated annulate to horseshoe-shaped striolae. — Male sex unknown.

Type-species. — *Centrochilus howdeni* sp. nov.

Affinities. — At first sight *Centrochilus* seems intermediate between *Cremastocheilus* and *Psilocnemis*, the former having a sophisticated set of prothoracic trichomes, the latter having a simple prothorax with obsolete hind angles, lacking trichomes (see key given below). For the time being I consider *Psilocnemis* the closest known relative of *Centrochilus*.

Distribution. — Nearctic: Mexico; one species known.

Bionomics. — Unknown, but association with social insects suspected.

***Centrochilus howdeni* sp. nov.** (figs. 1-8, pl. 1 fig. 17)

Description (holotype, female). — Approximate length 14.5, width 6, height 4 mm. Colour black, opaque, derm shagreened. Pilosity black. Habitus, plate 1 fig. 17.

Cephalic contours, fig. 1. Clypeopleuron (fig. 7) narrow, shiny, with reflexed superior border; clypeofrontal disc distinctly hemipunctate in front, with long erect pilosity, diameters of punctures and length of setae

decreasing caudad; diameters of clypeal punctures ca. 0.075 mm, their densities 7-10/0.1 sq. mm. Maximum width of head 3.85 mm.

Pronotal contours, fig. 2; notal-pectoral transition abrupt, even near anterolateral angle; posterolateral angle distinct, acute; basal-lateral trichome a fringe of closely set, coarse black setae. General surface of pronotum evenly convex, with numerous fine punctures, several with fine recurved seta; anterolateral surface hemipunctate, with coarser setae; diameters of central punctures ca. 0.025 mm, their densities 7-10/0.1 sq. mm. Maximum length of pronotum 4.70, maximum width 3.20 mm; ratio l/w 1.47. Scutellum, fig. 3.

Elytral contours, fig. 3; posthumeral emargination shallow; disc remarkably deplanate, with numerous evenly distributed horseshoe-shaped striolae, their size rapidly decreasing towards elytral base and apical declivity; shortest (transverse) diameters of striolae ca. 0.125 mm, their densities 10-15/sq. mm; lateral declivity and paradiscal costa with numerous fine punctures, some of them with extremely fine seta, their diameters 0.05 mm or slightly less, separated by many times this diameter. Maximum length of elytron 8.4, sutural length 6.3, maximum width of elytra combined 6.0 mm; ratio maximum l/w 1.40.

Mentum, fig. 7; surface of backward extension with arcuate-striolate sculpture, densely covered with short setae, posterior border with long setae. Antennal scape, fig. 6. Prosternal apophysis relatively short; anterior border of prosternum with brown setae. Lateral surface of propectus longitudinally striolate, sparsely setiferous, posterolateral region slightly scabrous, weakly shiny. Lateral parts of mesopectus and metapectus (except for metepimeron), and hind coxae with numerous horseshoe-shaped striolae, many of them with a seta; diameters of these striolae ca. 0.2 mm. Proximal abdominal sternites with similar sculpture, striolae rather unevenly distributed; distal sternites with small hemipunctures; abdominal pilosity sparse; anteapical sternite with shallow basal-lateral impression. Propygidial spiracles very weakly elevated; propygidial surface with dense cover of arcuate striolae. Pygidium sparsely set with annulate striolae, their diameters centrally ca. 0.1 mm, densities ca. 6/0.25 sq. mm.

Fore tibia (fig. 4) with vague setiferous longitudinal ridge on superior side; both sides with erect to semierect short setae in poorly pronounced hemipunctures or short striolae, only internal border of tibia with longer setae; terminal denticle of inferior ridge very distinct; terminal spur of fore tibia acuminate, just reaching tarsal segment 3. Fore tarsi (fig. 4) distinctly setiferous. Middle and hind tibia (fig. 5) with spiniform external elevation at about one-third from apex; terminal spurs long and slender,

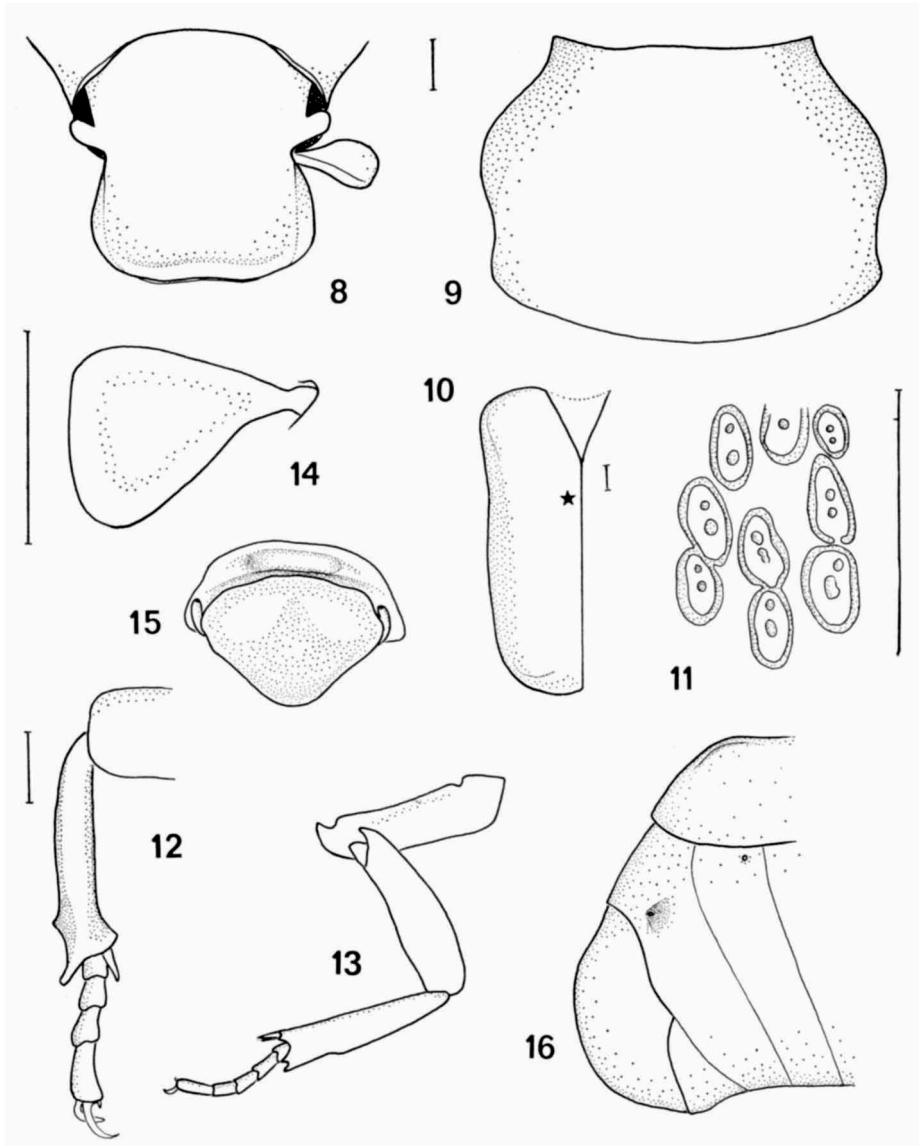
weakly acuminate, both reaching tarsal segment 2; visible femoral and tibial surfaces of middle and hind leg with numerous seta-bearing hemipunctures and striolae. Middle and hind tarsi also distinctly setiferous.

Material examined. — Holotype, female, from Mexico: Durango State: 9 mi E. of El Palmito, 7500 ft, 15-17.vi.1971, H. F. Howden (Howden collection, Ottawa).

Genus *Cyclidiellus* nov.

Generic diagnosis. — Lateral border of pronotum immarginate, in dorsal outline bisinuate (fig. 8), with posterolateral angle rounded off but distinct. Clypeopleuron (= deflexed anterior margin of clypeus; fig. 15) broad, with transverse impression. Legs remarkably long and slender; fore tibia (male, female; fig. 12) with two external denticles; hind tibia (male, female; fig. 13) more or less complanate (ratio width/corresponding height 2-3), lacking acute non-apical external protrusion. Body entirely dull black, with predominant microsculpture consisting of crowded, superficial, variably annulate, punctiferous striolae (fig. 11). Propygidial spiracles (fig. 16) produced, more or less coniciform.

General surface of clypeofrons (fig. 8) evenly convex, unmodified. Anterior border of clypeus in full-face outline straight or nearly so; lateral ridge limiting clypeal disc weak but distinct. General surface of pronotum (fig. 9) evenly convex, unmodified; notal-pectoral transition gradual in front. Scutellum (fig. 10) triangular, apex acute. Elytra (fig. 10) elongate, ratio maximum length/width (single) exceeding 3, disc remarkably deplanate, unmodified, without any trace of striae; juxtasutural margin level with general surface; apico-sutural angle of elytron rounded off. Mentum (fig. 15) dilated, strongly extended from its anterior part, concealing palpi almost completely. Antennal scape (fig. 14) inflated-dilated, rounded distally. Anteromedian apophysis of prosternum long, tapering. Anterolateral flange of propectus distinct. Middle coxae strongly approximated, narrow interspace non-protuberant. Mesosternal collum broad. Mesepimeron in dorsal outline narrow, non-protuberant. Metepimeron large, distinctly covering extremity of coxa, which is visible from above. Abdominal sternites just visible from above, but none of them particularly protuberant; in total 7 sternites visible; structure of distal sternites, fig. 16. Pygidium (fig. 16) simply convex, slightly transverse; apex in dorsal view not visible. Inferior surface of fore tibia with longitudinal costa terminating in distal denticle. All legs with slender tarsi (figs. 12, 13) consisting of 5 normally subcylindrical segments, derm not carinulose; claws sickle-shaped. Parameres simple. Derm largely



Figs. 8-16. *Cyclidiellus velutinus*, male, Brazil. Countours of: 8, head, full-face view; 9, pronotum, dorsal view; 10, elytron, dorsal view, with 11, enlarged sculpture from spot marked with asterisk; 12, right fore tibia and tarsus; 13, left hind leg; 14, left antennal scape; 15, mentum and clypeopleuron; 16, distal part abdomen and elytra. Scale-lines = 1 mm; 8, 9, 16: same scale; 10, 13: same scale; 12, 15: same scale.

glabrous, dorsum lacking tomentum. Body size moderate to large, length exceeding 15 mm.

Type-species. — *Cyclidinus velutinus* Westwood.

Affinities. — The nearest relatives of *Cyclidiellus* are *Genuchinus* and *Cyclidinus*. The characters described in the first paragraph of the generic diagnosis, however, particularly the shape of the pronotum and the type of microsculpture, warrant a more or less isolated position (see key given below). In my proposed reclassification I will select a probable twin taxon from the available genera.

Distribution. — Neotropical: Brazil, one species known.

Bionomics. — Unknown, but association with social insects suspected.

***Cyclidiellus velutinus* (Westwood) comb. nov.**

(figs. 8-16, pl. I fig. 18)

Cyclidinus velutinus Westwood, 1874, Thesaur. ent. oxon.: 204 (type-locality unknown; type in Paris Museum); 1878: viii (sub *Cyclidius*), 30, pl. I fig. 5. Schenkling, 1921: 375 (in catalogue).

Notes. — Five circumstances, partly interrelated, may have contributed to the confusion over this species: (1) the unknown geographic origin of Westwood's material; (2) the omission in Schenkling's catalogue of a reference to Westwood's 1878 illustrated redescription; (3) the mix-up of the Neotropical *Cyclidinus* Westwood (1873: 55) and the Ethiopian *Nyassinus* Westwood (1879: 199) in Schenkling's catalogue; (4) the types of both genera bearing the name *lugubris* Westwood; (5) the existence of a *Genuchinus velutinus* Westwood.

Point (3) has apparently also led to the complete omission of the genus *Cyclidinus* Westwood (1873: 55) from recent synoptic work (including Howden's survey, 1971). Westwood (1873: 56) clearly stated his *C. lugubris* to be Amazonian, and this New World origin is corroborated by its taxonomic characters. I have seen the holotype (Hope Department of Entomology, Oxford), and, despite the implications in Westwood's key (1873: 6), consider it very close to the species currently combined with *Genuchinus* Westwood (see below, key couplet 7). I will return to this matter later.

It should be emphasized that *Cyclidinus* has nothing to do with *Nyassinus*, the latter taking an isolated position among the cremastochiliform beetles.

Material examined. — 1 male, 2 females.

Brazil: Espirito Santo, female; male from Brazil, without further details; both specimens in the Leiden museum, from the Janson-Valck Lucassen collection. The holotype, apparently a female, was unexpectedly recovered in the Muséum National d'Histoire naturelle, Paris; its origin is consistent with Westwood's notes (Parry collection, from unknown locality).

BRIEF KEY TO THE GENERA OF NEW WORLD CREMASTOCHEILINI

1. Posterolateral angles of pronotum produced, with knob-like protrusion or acute; basal and/or apical margin with trichomes 2
- Posterolateral angles of pronotum not produced, usually rounded off, occasionally obtusely angulate, but never with sublateral basal trichomes 3
2. Apex of pronotum laterally with deep groove containing a trichome. Four subgenera recognized (see Howden, 1971). — Nearctic, ca. 50 spp.
. *Cremastocheilus* Knoch
- Pronotal apex entire (fig. 2). — Mexico, one sp. *Centrochilus* nov.
3. Tarsal segments longitudinally carinulose. Pronotum approximately cordiform. — Mexico, Arizona, one sp. *Lissomelas* Bates
- Derm of tarsi not longitudinally carinulose. Pronotum not cordiform 4
4. Shape of pronotum as in fig. 9. Derm with characteristic sculpture (fig. 11). — South America, one sp. *Cyclidiellus* nov.
- Shape of pronotum different. Predominant microsculpture different 5
5. Clypeopleuron very broad, anterior margin of clypeus non-tuberculate. Entire body polished, very shiny, lacking tomentum. Fore tarsi short, thickened. — SE United States, one sp. *Psilocnemis* Burmeister
- Clypeopleuron not very broad (proportions more like figs. 7 and 15). Derm not polished, usually more or less opaque, frequently with tomentum 6
6. Small, slender forms (length 9-15 mm), usually with light tomentum. Pronotal width and length not greatly different, pronotal surface distinctly punctate 7
- Large, robust forms (length 20-30 mm), lacking light tomentum. Pronotum transverse, surface smooth or finely punctate 8
7. Posterolateral angles of pronotum rounded off. Lateral parts of proximal abdominal sternites not visible from above. — Neotropical and Nearctic, North to Arizona, 9 spp. *Genuchinus* Westwood
- Posterolateral angles of pronotum obtuse. Lateral parts of proximal abdominal sternites visible from above. Tomentum abundant and not forming well-defined patterns. — Amazonia, one sp.
. *Cyclidinus* Westwood
8. Anterior margin of clypeus bituberculate or with horn. Pronotum with marginal bead. — South America, five spp. *Cyclidius* MacLeay
- Anterior margin of clypeus evenly arcuate. Pronotum lacking marginal bead. — South America, at least one sp. *Paracyclidius* Howden

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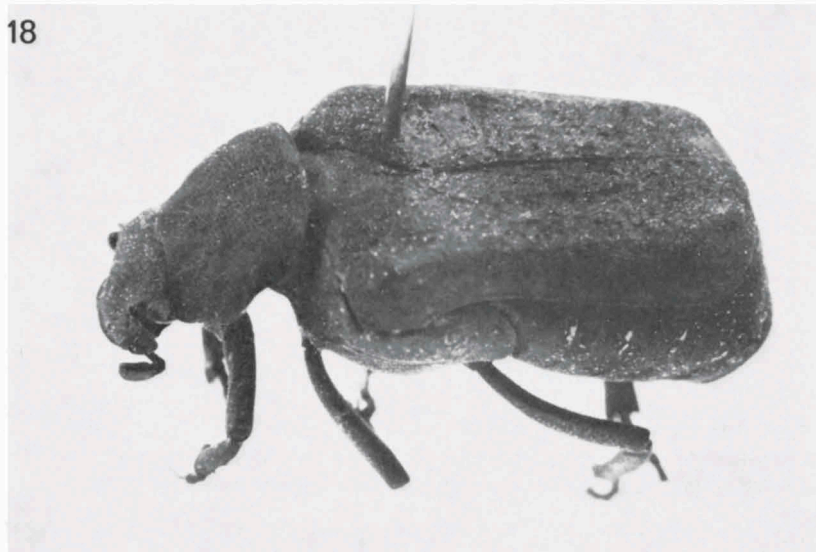
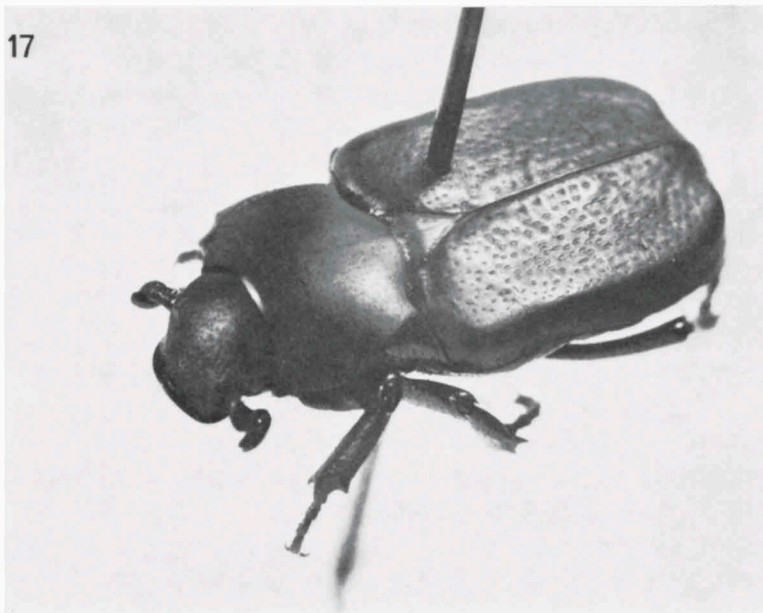


Fig. 17. *Centrochilus howdeni*, holotype, length 14.5 mm. Fig. 18. *Cyclidiellus velutinus*, male from Brazil, length 10.5 mm.