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BARRIELLA OPITZ: A NEW GENUS OF CLERIDAE FROM BRAZIL (COLEOPTERA: CLERIDAE: CLERINAE)

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Abstract

The monotypic **new genus** *Barriella* is described on the basis of *B. longicornoides* Opitz, **new species,** from Brazil. I postulate that *Barriella* represents a descendant of a Gondwanian stock that also yielded such Old World genera as *Stigmatium* Grey and *Clerus* Fabricius. The potential relationships of *B. longicornoides* Opitz to Chilean genera such as *Natalis* Laporte, *Notocymatodera* Schenkling, *Eurymetomorphon* Pic, and *Ctenoclerus* Solervicens, and to the New World genera *Placopterus* Wolcott and *Enoclerus* Gahan, is also discussed. A synonymy involving *Notocymatodera modesta* (Spinola) and *Notocymatodera dimidiata* (Germar) is suggested.

Nearly twenty years ago I came upon an unusual checkered beetle from Brazil in the coleopteran collection of the Paris Museum of Natural History. I resisted the temptation to publish a description of this very unusual species of Cleridae with the hope that more specimens, or perhaps congeners, could be found. Unfortunately, no other specimens have surfaced, thus this brief contribution to descriptive Cleridology.

Material and Methods

The specimen was dislodged from its mount card by soaking in soapy water, sonically cleaned, its abdomen eviscerated, then point mounted. The right metathoracic wing was floated in 70% ethanol, then unfolded between two glass slides. When dry the wing was mounted on a support card, studied, and illustrated (Fig. 8). Illustrations were made with a camera lucida mounted on a Wild M5 stereomicroscope. After examination, the aedeagus was preserved in glycerin and placed in a plastic genital vial. Body length and width measurements were made with a metric ruler set beneath a magnification of 180×. Measurements involving proportion of body parts were made through microscope lenses at magnifications as noted in the description. There has been some difficulty in the recognition of historical type material, mostly due to scanty label information or lack of label information in published descriptions. Herein, I provide the precise sequence of labels and other information associated with the holotype. The unique holotype specimen is deposited in the Museum National D'Histoire Naturelle (MNHN), Laboratoire d'Entomologie, 45 rue Buffon, F-75005, Paris, France. It is in the charge of Jean J. Menier (menier@mnhn.fr)

Discussion

The holotype specimen is particularly interesting because it represents a new genus and species that cannot be closely associated evolutionarily with any

other known genera of New World Cleridae; and it is clearly not an introduced species from elsewhere in the world. In my opinion *Barriella* Opitz is a descendant of some ancient stock, perhaps of Gondwanian ancestry that also yielded an assemblage of Old World genera such as *Stigmatium* Grey and *Clerus* Fabricius. Perhaps very distant relatives of the new taxon described below are members of the Chilean clerine species of *Natalis* Laporte, *Notocymatodera* Schenkling (Figs. 6–7), *Eurymetomorphon* Pic, and *Ctenoclerus* Solervicens. It is commonly recognized that the Chilean insect fauna has an ancient refugial nature with an abundance of Gondwanian elements. The association of these Chilean genera with *Barriella* is solely based on general similarity of antennal development (Figs. 2, 6, 7) which, when more is known, may be interpretable as a synapomorphic character state.

Alternatively, *B. longicornoides* shares with some New World genera, and with such Old World genera as *Clerus* and *Stigmatium*, compound eyes that are finely faceted. Also, the frons is particularly wide in *B. longicornoides*, as in the case in the New World genera *Placopterus* Wolcott and *Enoclerus* Gahan. In *Notocymatodera* and related genera the compound eyes are coarsely faceted. The linking of *Barriella* to a credible sister taxon is impossible at this time in view of the current extensive intergeneric taxonomic disarray among Clerinae genera, particularly those associated with the abovementioned Old World genera.

Descriptions

Barriella Opitz, **new genus**

Type-species. *Barriella longicornoides* Opitz, **new species.**

Description. *Form* (Fig. 1): Broadly rectangular, about three times longer than wide. *Vestiture*: Integument densely vested with vertical and decumbent setae. *Head:* About as wide as width of pronotum; frons about three times as wide as width of eyes; antenna comprised of 11 antennomeres, mostly filiform, very long, much longer than lenght of pronotum; labrum deeply incised; terminal paplopmere of maxillary palpus digitiform, of labial palpus securiform; gular process narrowly trigonal; eyes small, moderately convex, ommatidia very small. *Thorax:* Pronotum campaniform, broadest along anterior margin; procoxal cavities open from behind; femoral robustness decreasing from pro- to metafemur; tibiae with well-developed carina on anterior and posterior surface; tibial apical spur formula 1–2–2; tarsi with four pulvilli; tarsal claws with well-developed basal denticle. *Abdomen:* Six visible sterna. *Male genitalia:* Tegmen well sclerotised

Etymology. The genus name is a surname patronym to honor my good friend and mentor Dr. William F. Barr. He has provided many years of assistance and guidance in our efforts in Cleridae systematics.

Barriella longicornoides Opitz, **new species**
Figs. 1–4

Holotype. Male. Brazil: Bahia: Villa Victoria, 1890, Ch. Pujo (MNHN) (Specimen point mounted, sex label affixed to paper point, white, machine printed; metathoracic wing mounted on support card, white; specimen support card, white; locality label, white, machine printed; MNHN repository label, white machine printed; holotype label, red machine printed; plastic genitalia vial with aedeagus).

Paratypes. None.

Diagnosis. The specimen differs from all other New World clerines by the

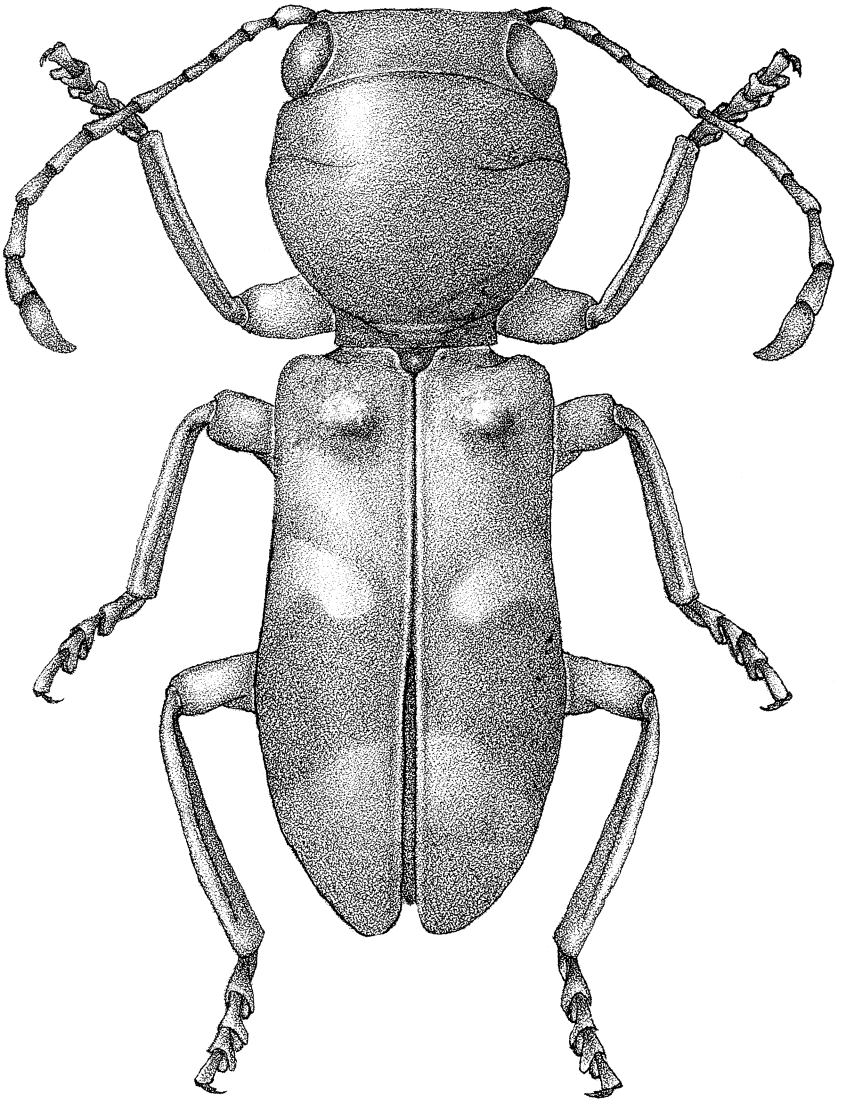
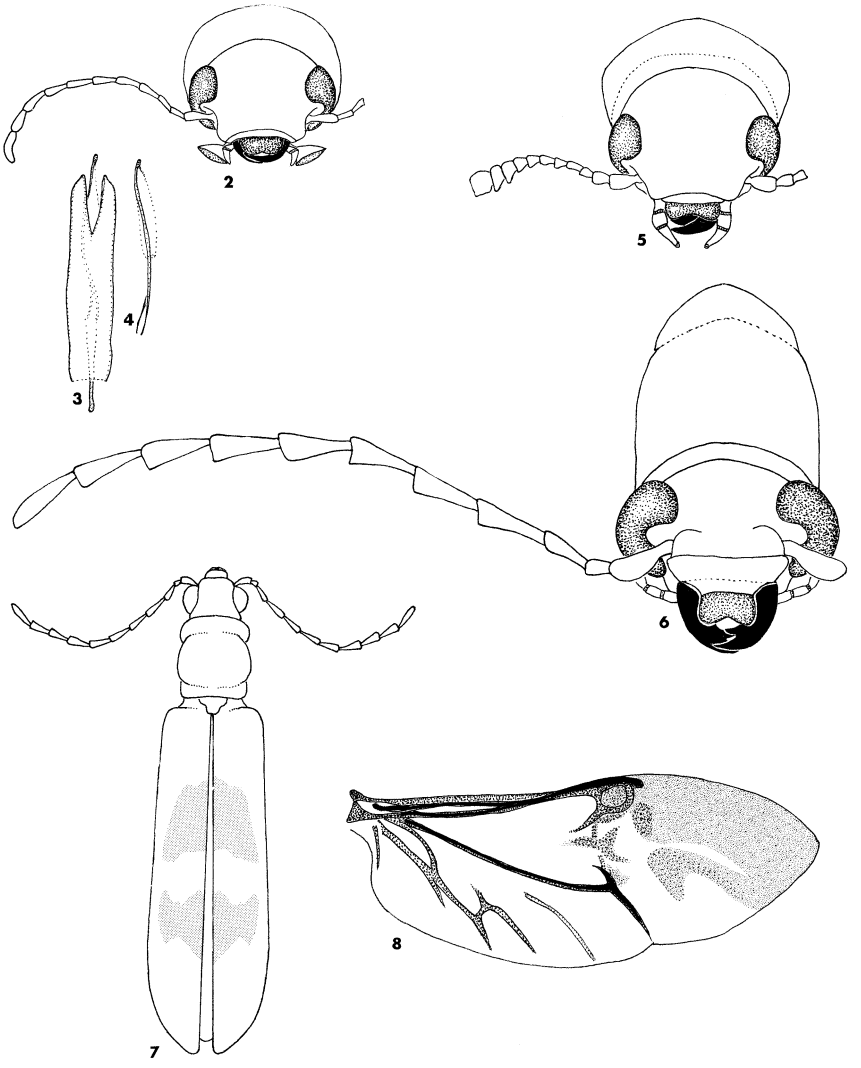


Fig. 1. Habitus of *Barriella longicornoides* Opitz.

unusually lengthy antenna in combination with a robust-squat body form. Other New World specimens of Clerinae with a squat body have clubbed (Fig. 5), or relatively short antennae. Specimens of *Notocymatodera* and allies are elongated in body form (Fig. 7) and the compound eyes are coarsely faceted.

Description. *Size:* Length 8.0 mm; width 2.8 mm. *Integument: Color*: Head piceous; mouthparts and antenna flavotestaceous; pronotum broadly piceous to lateral margins, anterior margin narrowly testaceous at middle, posterior angles and collar flavotesta-



Figs. 2–8. Neotropical Clerinae. **Figs. 2–4, 8.** *Barriella longicornoides.* **2)** Forebody; **3)** aedeagus; **4)** phallus; **8)** metathoracic wing. **Fig. 5.** Forebody of *Placopterus subcostatus* (Schaeffer). **Figs. 6–7.** *Notocymatodera modesta* Spinola. **6)** Forebody; **7)** habitus.

ceous; prosternum infuscated; meso—metasternum flavotestaceous; elytra with lunulate transverse flavous fascia at middle, fascia broader at epipleural margin then narrowly curvate to sutural margin, fascia does not reach sutural margin; elytral disc faintly infuscate in front of flavous fascia, testaceous in remainder of basal half, with subovoid piceous macula that thins around flavous transverse fascia and connects with faintly infuscate region in front of flavous fascia, elytral apical third testaceous; legs testaceous; abdomen bicolorous, first five visible sterna piceous, pygidium and sixth visible sternum testaceous: *Vestiture:* Clypeus, frons, and gena copiously vested with decumbent, flavous

setae; pronotal vestiture piceous or flavotestaceous corresponding with integumental color; elytral setae dark or light corresponding with integumental color, except dark on prominent testaceous elytral umbones. *Head:* Feebly narrower than width of pronotum (72:75; at 250×); antenna (Fig. 2) very long, scape about as long as flagellar antennomeres, pedicel shorter than scape, flagellar antennomeres mostly filiform, antennomeres nine and ten feebly triangular, antennomere eleven digitiform and slightly curvate distally; labrum deeply incised; terminal palpomere of maxillary palpus digitiform, of labial palpus securiform; eyes small, moderately convex; ommatidia very small (at 500× one mm); frons very wide, about three times wider than width across eye (47:15). *Thorax:* Transverse (75:70; at 250×); pronotal proper subglobose, outer lateral margins boldly arcuate, pronotum campaniform, pronotal proper feebly convex, posterior slope deep when viewed from the side; pronotal collar well defined; pronotal transverse subapical depression prominent along sides, faintly indicated at middle; profemora robust, femoral robustness decreasing from pro- to metafemur; tibiae with well-developed carinae on anterior and posterior surface, carinae extended entire length of tibiae, tibial apical spur formula 1-2-2; tarsi with basitarsal pulvillus progressively diminuative from pro-to-metatarsus; basal denticle of tarsal claws about equal in size in all tarsi; elytra plane when viewed from the sides, posterior slope steep, deep (1.1 mm at 250×), about twice as long as wide (148:75; at 250×); humeral angles prominent; midbasal umbones well developed; surface with deeply impressed coarse punctations diminished at about elytral middle; elytral apical slope acute; metathoracic wing as in Figure 8. *Abdomen:* Pygidium scutiform, gradually narrowing in posterior border; sixth visible sternum emarginated posteriorly. *Male genitalia:* Tegmen well sclerotized; parameres well developed; phallobasic apodeme and phallus particularly short (Figs. 3–4).

Etymology. The specific epithet is a Latin compound name that stems from the Latin adjectival *longus* (= long), the Latin noun *cornu* (= horn), and the suffix—*oides* (= likeness). I refer to the comparatively long antennae of this beetle.

Remarks. As only one specimen of this species has been examined I cannot discuss variation, distribution, or comment on the natural history of this fascinating checkered beetle.

Taxonomic Notes. In 1975 [Ekis (now Opitz), 1975:15] established that the type-specimen of *Cymatodera modesta* Spinola (1949:391) was in the Paris Museum, that it was collected from Chile, and that the species more appropriately belongs to the genus *Notocymatodera* as noted by Corporaal (1950: 54). In a revision of that genus, Solervicens (1996:99) expressed doubts about the validity of Spinolas' name, questioned the identity of the specimen the name represents, correctly transfered *Cymatodera dimidiata* Germain (1856: 393) to *Notocymatodera*, and established that the latter genus is more correctly classified under Clerinae. Solervicens's habitus illustration (Solervicens 1996: 100) strongly suggests that *Notocymatodera dimidiata*(Germain 1856:393) is conspecific with, and a junior synonym of, *Notocymatodera modesta* (Fig. 7). The type-specimen of *Cymatodera dimidiata* Germain must be examined to resolve the question of this synonymy and correctly identify the nominal type-species of the genus *Notocymatodera*.

Acknowledgments

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