



<http://dx.doi.org/10.11646/zootaxa.3670.3.2>

<http://zoobank.org/urn:lsid:zoobank.org:pub:3F2904A2-A999-484A-850B-4E2E13A9DBD7>

A new species of the putatively myrmecophilous genus *Plaumanniola* Costa Lima, with notes on the systematic position of Plaumanniolini (Coleoptera: Staphylinidae: Scydmaeninae)

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Abstract

The enigmatic Neotropical genus *Plaumanniola* Costa Lima is revised. *Plaumanniola sanctaecatharinae* is redescribed and *P. regina* sp. n. is described (both from Brazil). Morphological structures of *Plaumanniola* are illustrated and the systematic position of the tribe Plaumanniolini is discussed. A previously postulated myrmecophily of this morphologically highly unusual genus is found to be weakly supported by biological observations and should be treated as a supposition that needs further study.

Key words: Coleoptera, Staphylinidae, Scydmaeninae, Plaumanniolini, *Plaumanniola*, new species, Neotropical, Brazil

Introduction

The genus *Plaumanniola* Costa Lima, 1962 is one of the most enigmatic taxa of Scydmaeninae. First known specimens were collected by Fritz Plaumann from a dry leaf litter on the forest floor in southern part of Brazil. Costa Lima (1962) placed *Plaumanniola* in Ptinidae, in a new subfamily Plaumanniolinae. He believed that Plaumanniolinae is allied to myrmecophilous Pausoptininae, Polyproctotinae and Ectrephinae (currently all are included in the ptnid subfamily Ectrephinae). His illustrations of *P. sanctaecatharinae*, the only species included in Plaumanniolinae, indeed show a beetle with highly unusual body shape and structures. It has an extremely broad and strongly flattened head, mouthparts located on its ventral side and not visible in dorsal view, except for distal parts of enlarged maxillary palps, short and clubbed antennae, oval and strongly transverse prothorax, oval and entire elytra, six externally recognizable abdominal sternites and large, oval aedeagus with large and darkly sclerotized internal armature (Costa Lima 1962; Figs. 1–4). Lawrence & Reichardt (1966) re-examined a paratype of *P. sanctaecatharinae* and found out that its wing venation was "undoubtedly staphylinoid", and a number of characters suggested the placement of *Plaumanniola* among Scydmaenidae. They accordingly transferred *P. sanctaecatharinae* to Scydmaenidae (now Scydmaeninae), where it still belongs, being currently the only species of a separate tribe Plaumanniolini (Newton & Franz 1998). Lawrence & Reichardt provided a partial redescription, with illustrations of the maxillary palp and antenna (Lawrence & Reichardt 1966; Figs. 1–2), and a brief discussion on the placement of Plaumanniolini within the system of ant-like stone beetles.

Since Lawrence & Reichardt (1966) some new details related to *Plaumanniola* became available. The assumption that *P. sanctaecatharinae* was a myrmecophile, based solely on a bizarre appearance somewhat similar to that of myrmecophilous ptnids, was supported by Lenko (1972), who found a single individual of *Plaumanniola* (confirmed to be *P. sanctaecatharinae* by Reichardt) in a small colony of a myrmicine ant *Octostruma stenognatha* Brown & Kempf between two decayed leaves deposited in a humus layer in a high *capoeira* (*capoeira* is a secondary vegetation composed of grass and sparse bushes that grow in places where primary vegetation was cut). The beetle, when disturbed by ants, curled up and remained motionless for several minutes. This finding extended the known distribution of *P. sanctaecatharinae* northward, to the state São Paulo, and additionally Lenko provided a total habitus illustration of the beetle (Lenko 1972; Fig. 1). Later Franz (1990) examined six new specimens collected in northern Brazil (state Amazonas), concluded that they belong to the same species and provided a