



Synopsis of *Prosierola* (Hymenoptera: Bethylidae)

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Abstract

The identity of many species of *Prosierola* is currently unknown, mostly because the available taxonomic information is not sufficiently accurate to allow for precise identifications. To solve this problem, nine valid species were investigated. Neotropical species of Bethylinae were also examined in order to find possible misclassified species of *Prosierola*. In this paper six nomenclatural changes are made, and six valid species recognized. The lectotype of *Parasierola flavicoxis* Kieffer is designated. The following new species-group synonyms are established: *Prosierola lata* (Cameron) **syn. nov.** for *Prosierola nasalis* (Westwood); *Prosierola insularis* Evans **syn. nov.** for *Prosierola cubana* Evans, and *Prosierola bicarinata* (Brues) **syn. nov.** for *Prosierola flavicoxis* (Kieffer), and *Prosierola variegata* Evans **syn. nov.** for *Prosierola obliqua* Evans. The following new combination is established: *Prosierola flavicoxis* (Kieffer) from *Goniozus*.

Key words: Hymenoptera, Bethylidae, *Prosierola*, Taxonomy, Neotropical

Introduction

Prosierola Kieffer (Hymenoptera: Bethylidae) is restricted to the New World. Currently it is represented by nine valid species, with all of them being recorded from the Neotropical region. The genus is easily recognized as belonging to Bethylinae by the presence of a pair of conspicuous anterior pits on the propodeal disc. This character is autapomorphic for the genus according to Polaszek & Krombein (1994).

As far as known, *Prosierola* attacks the larvae of certain families of Lepidoptera, namely Olethreutidae (Muesebeck & Walker, 1951) and Pyralidae (Doutt, 1973, Evans, 1964). This is an infrequently captured bethylid genus, regardless of trap type or vegetation type. As an example, out of the 14,570 Bethylidae collected by Azevedo (1991, 1996), Azevedo & Helmer (1999), Azevedo et al. (2002a, 2002b, 2003, 2006) and Mugrabi et al. (2008) only four are *Prosierola*. This represents less than 0.03% of the bethylids collected.

Prosierola was proposed by Kieffer (1905b) based on *Epyris* ? *nasalis* Westwood, 1874, from Brazil. Cameron (1888) and Brues (1907) added two more species to *Prosierola*. Their descriptions, however, are all very superficial, and are insufficient to allow precise identifications. Evans (1964) revised the genus, proposed that it contained five species and provided a key of the species. However, Evans did not provide illustrations or external male genitalia descriptions, making it difficult to determine the species. Although the external male genitalia in *Prosierola* are not as diverse as in most other genera of Bethylidae, they are useful in differentiating closed related species. More recently, Schiffler & Azevedo (2002) described another species of *Prosierola* from the Amazon basin.

The main goal of this study is to organize the taxonomic knowledge of the species of *Prosierola*, based mostly on the review of primary type material of all available names.