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Taxonomic review of *Neorhinotora* Lopes 1934 (Diptera, Heleomyzidae)

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Abstract

Neorhinotora Lopes 1934 (Heleomyzidae, Rhinotorini) constitutes a group of rare flies distributed mainly in the Neotropical Region. The taxonomy of this genus is herein reviewed and five species are recognized: *N. amapaensis* Guimarães and Papavero 1966, *N. aristalis* (Fischer 1932), *N. diversa* (Giglio-Tos 1893), *N. fonsecai* (Lopes 1934), and *N. mutica* (Schiner 1868). An identification key based on morphological characters is provided for the species.

Key words: taxonomy, Acalyptratae, Neotropical Region, McPhail trap, genitalia, egg

Introduction

Heleomyzidae (*sensu* D. McAlpine 1985) is a family of Sphaeroceroidea widely distributed in the world. D. McAlpine recently proposed that Heleomyzidae and Sphaeroceridae should be combined into a single family, Heteromyzidae (D. McAlpine 2007). That author argued that Sphaeroceridae are probably nested among certain tribes of Heleomyzidae. Because a phylogenetic analysis of Sphaeroceroidea has not yet been conducted to evaluate D. McAlpine's (2007) most recent classification, an earlier version of the classification proposed by the same author (D. McAlpine 1985) will be adopted in this paper, in which Heleomyzidae and Sphaeroceridae are considered as separate families.

Most heleomyzid flies are brownish to yellow, variable in size, and most commonly found in temperate forests and in high-elevation cooler tropical habitats (Sinclair & D. McAlpine 1995). Heleomyzidae comprise over 500 described species, distributed in about 65 genera (Pitkin 2007). D. McAlpine (1985) recognized 22 tribes within Heleomyzidae, some of them being considered distinct families by some authors (*e.g.* Trixoscelidini and Rhinotorini).

D. McAlpine (1985) defined Rhinotorini based on a combination of characters, some of them variable among the taxa comprised by this tribe. Among these characters, four are particularly important for the definition of Rhinotorini: (1) vertex of head more or less excavated (scarcely so in *Zentula* D. McAlpine, some *Anastomyza* Malloch and some *Apophoneura* Malloch), (2) the clypeus usually large and prominent, (3) the enlarged gena, and (4) the forward directed antenna, with arista mid-dorsal on flagellum. The tribe comprises 41 species distributed in the following genera: *Apophoneura* Malloch, *Anastomyza* Malloch, *Neorhinotora* Lopes, *Rhinotora* Schiner, *Rhinotoroides* Lopes, *Cairnsimyia* Malloch, *Zentula* D. McAlpine, and *Zinza* Sinclair & D. McAlpine. *Cairnsimyia*, *Zentula*, and *Zinza* are found in the Australian Region, the remainig genera are distributed in the Neotropics.

Adults of Rhinotorini occur in forests and are often spotted landing on tree trunks or licking sap extruded from damaged parts of plants. These flies are attracted by fruits in decomposition, such as banana, pineapple, and mango (Guimarães & Papavero 1966, J. McAlpine 1987). Larvae of the Australian species *Cairnsimyia*

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