THE GENUS *CAIRNSIMYIA* MALLOCH (Diptera, Heleomyzidae, Rhinotorini)

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Synopsis

The known species of the genus *Cairnsimyia*, all of which occur in Australia and New Guinea (including Papua and West Irian), are described and a key is given for their identification. Six of the nine species are described as new. The larva of one species is also described. The family Rhinotoridae is reduced to a tribe of the family Heleomyzidae.

Introduction

The subfamily Rhinotorinae was proposed by Williston (1896) within the family Ropalomeridae (often incorrectly spelled Rhopalomeridae) and was elevated to family rank by Hendel (1916). Most authors, however, continued to regard it as a subfamily of the Ropalomeridae until recently, when Brues, Melander, and Carpenter (1954), Wheeler (1954), and Steyskal (1957) have advocated family status for the Rhinotoridae. Hennig (1948) placed this group in the Lauxaniidae but later (1958) regarded it as a distinct family related to the Heleomyzidae, pointing out the numerous differences separating it from the Ropalomeridae.

The author (McAlpine, 1958) referred the Australian genus *Cairnsimyia* Malloch, originally described as a heleomyzid, to the Rhinotoridae, and almost simultaneously Hennig (1958) commented on its similarity to that family.

Faunal treatises and texts including keys to families of Diptera almost invariably exclude the Rhinotoridae as a distinct family, though its members cannot be run to Ropalomeridae in keys. Brues, Melander, and Carpenter (1954) include Rhinotoridae at two points in their key to the families of Diptera. None of the species will run to the first point in their key, though most of the neotropical ones may be run to the second. The separation of the Trixoscelidae from them is very imperfect, as in many of these the subcosta is less developed than in the Rhinotoridae.

This group is here reduced to a tribe, the Rhinotorini, within the family Heleomyzidae, for reasons which are explained below.

Some notable characters of the Rhinotorini, which illustrate its close relationship to other Heleomyzidae, are as follows: vibrissae are present, though the elongation of the face may make the position of the vibrissal angle obscure; convergent postvertical bristles occur in *Rhinotoroides* and in some species of *Cairnsimyia;* preapical tibial bristles are often present, though short, in *Cairnsimyia;* the costa is broken near the termination of the subcosta.

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