



Revision of the Neotropical genus *Cheiromyia* Dyte (Diptera: Dolichopodidae)

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Abstract

The Neotropical dolichopodine genus *Cheiromyia* is revised. The limits of the genus are redefined to include only those species with one or more elongate projections on the male postpedicel. *Cheiromyia maculipennis* (Van Duzee) is transferred to *Paraclius* Loew **comb. nov.** *Cheiromyia* is now known from Costa Rica south to Bolivia and the Brazilian Atlantic Forest, and includes the following five species: *Cheiromyia bicornis* Brooks **sp. nov.**, *C. brevitarsis* Brooks **sp. nov.**, *C. laselva* Brooks **sp. nov.**, *C. palmaticornis* (Parent) and *C. pennaticornis* (Parent). A key to males is provided, as well as some remarks on related species of *Paraclius*.

Key words: Dolichopodidae, Dolichopodinae, *Cheiromyia*, *Paraclius*, Neotropical, new species, new combination, key

Introduction

The Neotropical genus *Cheiromyia* Dyte, 1980 (= *Cheirocerus* Parent, 1930) was established by Parent on the basis of the striking antenna of the type species, *C. palmaticornis* (Parent), with its slender pubescent projections on the outer surface of the male postpedicel. Parent (1931) described a second species, *C. pennaticornis* (Parent) from La Paz, Bolivia with similar projections on the male postpedicel. The generic name *Cheirocerus* Parent, 1930 was subsequently discovered to be preoccupied by *Cheirocerus* Eigenmann, 1917 (Pisces) and the replacement name *Cheiromyia* Dyte, 1980 was proposed.

Brooks (2005) expanded the generic limits of *Cheiromyia* to include a Neotropical species without the distinctive male antennae, i.e., *C. maculipennis* (Van Duzee, 1934). This expanded generic concept was based on the possession of a homologous enlarged sperm pump that is folded back on itself (character state 51:1, figure 8C in Brooks 2005). Several additional undescribed species related to *C. maculipennis* with a similarly enlarged folded sperm pump have now been discovered from the Neotropical Region (unpublished data). However, four recently described species of *Paraclius* Loew from the Brazilian Atlantic Forest (Capellari & Amorim 2009) have been found to possess intermediate degrees of folding in the sperm pump, currently making this character state problematic for discerning the generic limits of *Cheiromyia* sensu Brooks (2005) in relation to *Paraclius*. Given these new data, and also to ease future generic identifications of Neotropical *Paraclius* and *Cheiromyia*, the limits of *Cheiromyia* are herein restricted to include only those species with postpedicel projections on the male antenna. This definition is equivalent to Parent's original concept of *Cheiromyia*, and as a result *C. maculipennis* (Van Duzee) is transferred to *Paraclius* (see below).

Cheiromyia is now known from Central America south to La Paz, Bolivia in the west, and to the northern parts of the Brazilian Atlantic Forest (Pernambuco and Sergipe) in the east. The genus includes five species, three of which are newly described here. The purpose of this article is to redefine and revise *Cheiromyia* in