



Redescription of the genus *Coniceps* Loew, 1873 (Diptera, Richardiidae)

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Abstract

The genus *Coniceps* Loew is restricted to the central and southern part of the continental United States of America, and contains a single species, *C. niger* Loew, 1873. A redescription of the type species of the genus including illustrations of main external characters and the first illustrations of male and female terminalia are provided. The lectotype and paralectotypes are designated. A brief discussion on the superficial similarities between *Coniceps* and the Neotropical *Ozaenina* Enderlein is also provided.

Key words: Richardiinae, taxonomy, New World, Nearctic Region

Introduction

The family Richardiidae belongs to the superfamily Tephritoidea; however, the phylogenetic relationship of the family with other tephritoids is still quite controversial (Griffiths 1972; McAlpine 1989; Korneyev 1999; Han & Ro 2006), and the monophyly of the entire family has not been convincingly demonstrated (Korneyev 1999; Han & Ro 2006). Furthermore, the relationships among richardiid genera remain unknown.

Richardiidae is currently divided into two subfamilies (Steyskal 1987): Epiplateinae, with three genera (Steyskal 1987) and 11 valid species (Steyskal 1968; Steyskal 1973); and Richardiinae, with 28 genera and about 170 valid species (Aczél 1950; Steyskal 1968; Perez-Gelabert & Thompson 2006). The family is restricted to the New World, and predominantly to the Neotropics (Aczél 1950; Steyskal 1968). For the Nearctic Region, only 10 species in six genera are recorded: *Automola* Loew and *Omomyia* Coquillett, belonging to Epiplateinae (Steyskal 1987); and *Coniceps* Loew, *Odontomera* Macquart, *Richardia* Robineau-Desvoidy and *Sepsisoma* Johnson, belonging to Richardiinae (Steyskal 1968). For some of these species, Steyskal (1958, 1973) provided a partial revision with keys to the genera and species and illustrations of some male terminalia. Until that time, only Lopes (1936) had presented illustrations of terminalia of Richardiidae, and only for a few species.

The genus *Coniceps* was described by Loew in 1873, based on a single species, *Coniceps niger*, which is restricted to the central and southern continental United States of America. Loew (1873a) provided a succinct description for the genus, which did not include several important structures for identification and without description or illustration of the male and female terminalia. In the same year, Loew (1873b) described a second species assigned to the genus, *Coniceps carbonarius*, from Sarepta, Russia. However, Hendel (1911) transferred *C. carbonaris* to *Acrometopia* Schiner, which currently belongs to Chamaemyiidae (Chamaemyiinae, Chamaemyiini) (McAlpine 1989).

The present work is the first comprehensive taxonomic revision of a genus of Richardiidae and the first step to define and understand the generic delimitation among the richardiids. Thereby, with the aim of redefining the genus *Coniceps*, the type series of *C. niger* was examined. Here, we redescribed the genus and the species, including news characters, designed the lectotype and paralectotype and described and illustrated the male and female terminalia for the first time. In addition, a brief discussion on the superficial similarities between *Coniceps* and other genera with protruded frons was provided.