Zootaxa 1236: 37–52 (2006)
www.mapress.com/zootaxa/

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

1236

A cladistic analysis of the Neotropical genus *Sepedonea* Steyskal (Diptera: Sciomyzidae)

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Abstract

A cladistic analysis of the 13 known species of *Sepedonea* Steyskal, 1973, is presented and a new species, *Sepedonea giovana* **sp. n.,** is described. The monophyly of the genus is confirmed, as is the genus' sister-group relationship to *Sepedomerus* Steyskal, 1973. The cladistic analysis was done using NONA and a matrix of 27 adult morphological characters, including structures of the male and female terminalia. The relationships in parenthetic notation are: (*S. guatemalana* (*S. veredae* (*S. lindneri* (*S. isthmi* (*S. lagoa* ((*S. barbosai*+ *S. canabravana*) ((*S. neffi* (*S. giovana*+*S. guianica*))(*S. telson* (*S. incipiens*+*S. trichotypa*))))))))).

Key words: Sciomyzidae, *Sepedonea*, Neotropical, cladistic analysis

Introduction

The dipterous family Sciomyzidae, more commonly known as marsh or snail-killing flies, occurs essentially worldwide but is most diverse in temperate regions. As alluded by the family's "snail-killing" common name, most larvae are parasitoids or predators of aquatic, semi-aquatic, or terrestrial mollusks (Berg & Knutson 1978, Barker *et al.* 2004). Some species have been considered as biological control agents for pest species of Mollusca, especially snails that are hosts of schistosomes (bilharzia) and liver flukes (Chock *et al.* 1961, Berg 1973, Gormally 1988, Maharaj, Appleton & Miller 1992).

Although the breeding habits of many species have been reported (Berg & Knutson 1978, Barker *et al.* 2004) and the basic taxonomy at the species level is comparatively well documented (Knutson & Vala 2002), there is a paucity of studies on phylogenetic relationships at all levels. Marinoni & Mathis (2000) and Knutson & Vala (2002) presented preliminary cladistic analyses of the genera of the family, the former primarily using

Accepted by D. Bickel: 20 Apr. 2006; published: 19 Jun. 2006