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