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Systematics of the Neotropical species of *Styringomyia* Loew (Diptera: Tipulomorpha: Limoniidae)

GUILHERME CUNHA RIBEIRO

Pós-Graduação em Entomologia. Departamento de Biologia, FFCLRP-Universidade de São Paulo. Avenida Bandeirantes 3900, 14040-901. Ribeirão Preto, SP, Brazil (gribeiro@usp.br)

Contents

Abstract

The Neotropical species of *Styringomyia* (Diptera: Limoniidae) are revised. *S. americana* Alexander, 1914 and *S. dorsolineata* Alexander, 1945 are considered *nomina dubia*. *S. mystica* Alexander, 1945, *S. simplex* Alexander, 1945 and *S. paulista* Alexander, 1946 are redescribed and illustrated in detail. Five new species, *S. amazonica* sp. n., *S. atlantica* sp. n., *S. maya* sp. n., *S. manauara* sp. n. and *S. youngi* sp. n. are described and illustrated. A cladistic analysis of the recog-

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nizable species (*S. americana* and *S. dorsolineata* excluded) is performed. A cladogram is produced with the topology ((*S. maya* sp. n. (*S. simplex* + *S. amazonica* sp. n.)) (*S. manauara* sp. n. ((*S. mystica* + *S. youngi* sp. n.) (*S. paulista* + *S. atlantica* sp. n.)))).

Key words: *Styringomyia*, Limoniidae, Diptera, taxonomy, systematics

Introduction

The limoniid genus *Styringomyia* was erected by Loew (1845) for *S. venusta* Loew, based on a single female specimen preserved in copal from an unknown locality of Africa. Soon after, Loew (1850) described *S. gracilis* from Baltic amber. It was only in the beginning of the twentieth century that the first recent *Styringomyia*, *S. didyma* Grimshaw, 1901 was described, from Hawaii. Since then, the knowledge about the world diversity of the genus has increased with the description of four additional fossil species (Cockerell, 1917; Cockerell & Haines, 1921; Podenas & Poinar, 1999, 2001) and about 150 extant species from Neotropical, Afrotropical, Oriental and Australasian-Oceanian regions. Nevertheless, it is still Edwardss (1914) paper, dealing with no more than 23 species known in that time, the most comprehensive taxonomic revision made with the group to date.

Nothing is known about the phylogenetic relationships among the species of the genus, and its affinities to other Limoniidae genera has not been well established. Edwards (1914: 206) called attention for the several peculiarities of structures that give to this genus a most isolated position among the Tipulidae (Tipulidae *sensu lato*, equaling Tipulomorpha of the system used herein). Edwards (1924) remarked on a close proximity of *Styringomyia* to the genus *Teucholabis* based on the morphology of the pupae without, however, giving further details. Alexander (1920) erected for *Styringomyia* the tribe Styringomyini, but later (Alexander, 1947), transferred it to the Styringomyaria, a subtribe of Eriopterini within the Tipulidae *sensu lato*. Hynes (1987, 1990), refused the necessity of placing the genus in any special tribe or subtribe, placing it in the already erected subtribe Eriopteraria Alexander in the Eriopterini. The only effort to elucidate the systematic position of *Styringomyia* using phylogenetic methods was made by Oosterbroek & Theowald (1991), who placed the genus at the base of the so-called higher Eriopterinae clade, based on the presence, in the larvae, of reduced head capsule compared with the more massive head capsule of the lower Eriopterinae.

Prior to the present paper, five species of *Styringomyia* have been described for the Neotropical region: *S. americana* Alexander, 1914 has been nominally recorded for Costa Rica, Colombia, Venezuela, Guyana, Suriname, Ecuador and Bolivia; *S. dorsolineata* Alexander, 1945 has been recorded for Ecuador; *S. mystica* Alexander, 1945, was recorded for Peru, and *S. simplex* Alexander, 1945, for Peru, Guyana and Bolivia. Finally, a single species, *S. paulista* Alexander, 1946, was recorded for Brazil, known only from its type locality in the southeastern region of the country (Alexander, 1947; Alexander & Alexander 1970).

