



Azana atlantica, n.sp., with reduced mouthparts and two ocelli: first record of *Azana* for the Neotropical region (Diptera: Mycetophilidae: Sciophilinae)

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Abstract

A new Sciophilinae—*Azana atlantica*, **sp.n.**—is described from the Atlantic Forest in southeastern Brazil. The species has a number of distinctive apomorphic features, including loss of the mid ocellus, reduced mouthparts, Sc short and incomplete, first section of Rs missing, r-m elongated, longitudinal in position, aligned with the second section of Rs (R_5), unforked medial and cubital veins, R_4 missing, M_4 entirely absent, gonostyle triangular, with an inner row of elongated spines and a basal, digitiform inner projection. Some of these features are shared with other genera of the *Azana*-group of Sciophilinae. The shape of the scutum and the strong spines on the gonostyle make it clear that the species belongs in *Azana*, despite the features that are distinctive from the remaining species in the genus. There are ten species described in *Azana* to date, from United States, Europe, Sri Lanka, Canary Islands, tropical Africa and Baltic amber. This is the first Neotropical species belonging to the genus. The complete loss of M_4 and the separated gonocoxites suggest that *Azana atlantica*, **sp.n.** forms a monophyletic group with the Afrotropical species of the genus. *Azana*, *Morganiella*, *Neoaphelomera*, *Neotrizygia*, and *Trizygia* are shown to compose a small clade within the *Azana*-group of genera. The division of the genus into two subgenera—*A. (Azana)* and *A. (Jugazana)*—most probably renders *A. (Azana)* paraphyletic and it is suggested that this should be for the time being abandoned.

Key words: Diptera, Mycetophilidae, Sciophilinae, *Azana*, biodiversity, taxonomy, Neotropical region, Atlantic forest

Introduction

The family Mycetophilidae (s.s.) has 135 genera and about 4,000 species described worldwide, of which about 50 genera and more than 900 species are known from the Neotropical region. Until recently the Dito-myiidae, Bolitophilidae, Diadocidiidae, Keroplatidae, and Lygistorrhinidae were included in this family as subfamilies. Amorim & Rindal (2007) proposed a phylogeny for the higher Bibionomorpha in which the Cecidomyiidae is the sister of the rest of the clade, and within this group the Sciaridae is the sister of the remaining Mycetophiliformia. The Mycetophilidae, in accordance with Hennig (1973) and Matile (1990), appears as the sister group of the Lygistorrhinidae.

The study of the phylogenetic relationships within the Mycetophilidae is still wanting. Söli's (1997) excellent study is a major contribution towards the understanding of the phylogeny of the family, but the sampling of genera was limited, in such a way that the incongruences in relation to the phylogenetic study of Tozoni (1998), for example, show the need for additional studies on specific parts of the family. Some important conclusions, however, are fairly well supported in view of the phylogeny of the family generated by the studies of Söli (1997) and Tozoni (1998): (1) the Sciophilinae *sensu* Vockeroth (1981) is paraphyletic in rela-