



## Eleven new species of the genus *Cluzobra* Edwards (Diptera, Mycetophilidae, Sciophilinae) from the Atlantic Forest of Brazil

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### Abstract

Eleven new species of the sciophiline genus *Cluzobra* Edwards are described and illustrated – *Cluzobra triocellata*, **sp.n.**, *Cluzobra accola*, **sp.n.**, *Cluzobra claripennis*, **sp.n.**, *Cluzobra papaveroi*, **sp.n.**, *Cluzobra coptolithus*, **sp.n.**, *Cluzobra vockerothi*, **sp.n.**, *Cluzobra sapiranga*, **sp.n.**, *Cluzobra fluminense*, **sp.n.**, *Cluzobra fritzmuelleri*, **sp.n.**, *Cluzobra spinata*, **sp.n.**, *Cluzobra elpidia*, **sp.n.** Additional specimens of *C. fuscipennis* Edwards, *C. plaumanni* Edwards, and *C. binocellaris* (Edwards) have been identified, extending the distribution range of these species. The species were identified and described based on 173 specimens at different latitudes along the Atlantic Forest in eastern Brazil and northern Argentina. The position of the new species in the groups of species proposed for the genus in the literature is considered. Three areas of endemism are identified for the group, one from southern Brazil, northern Argentina and Paraguay northwards to areas at higher altitudes in the States of Minas Gerais and Rio de Janeiro, one from southern Bahia to the extreme north of the Atlantic Forest, in the State of Rio Grande do Norte, and one in west State of São Paulo, extending west and northwards into the states of Mato Grosso do Sul and Goiás. This paper raises the number of known *Cluzobra* to 41 species.

**Key words:** *Cluzobra*, Diptera, Brazil

### Introduction

The family Mycetophilidae in the Neotropical region includes about 50 genera and close to 1000 species (Papavero, 1978, Amorim & Oliveira in prep). In the phylogeny proposed by Amorim & Rindal (2007) the family composes with Lygistorrhinidae the sister group of the Keroplatoidea (including Bolitophilidae, Dito-myiidae, Diadocidiidae and Keroplatidae), the Sciaridae being close to the base of the Mycetophiliformia, differently from other reconstructions (e.g., Hennig 1973, Matile, 1990, Chandler 2002, Hippa & Vilkamaa 2005, 2006). Most recent classifications accept Sciophilinae, Gnoristinae, Mycomyiinae, Leiinae, Manotinae, Allactoneurinae and Mycetophilinae as subfamilies of Mycetophilidae.

The Sciophilinae *sensu* Vockeroth (1981) have been demonstrated to be paraphyletic in relation to the Mycetophilinae (Söli, 1997, Tozoni, 1998). The Sciophilinae *s.s.* include 36 genera, most with macrotrichia on the wing membrane. Within the subfamily, there is a clade showing a gradual loss of  $M_4$ . *Megalopelma* Enderlein, *Morganiella* Tonnoir & Edwards, and *Sciophila* Meigen have  $M_4$  interrupted basally, while *Acnemia* Winnertz, *Afrocnemia* Matile, *Cluzobra* Edwards, *Monoclona* Mik, and *Parvicellula* Marshall have  $M_4$  entirely absent, and *Azana* Walker, *Neoaphelomera* Miller, *Neotrizygia* Tonnoir & Edwards, *Paratryzygia* Tonnoir and *Trizygia* Skuse have both the medial and cubital forks incomplete and an isolated vein in between