



New species of *Chironomus* Meigen (Diptera: Chironomidae: Chironominae) from Brazil

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Abstract

Five new species of *Chironomus* Meigen, *C. detriticola*, *C. antonioi*, *C. phytophilus*, *C. oliveirai*, and *C. fittkai*, are described and figured as male, pupa, and larva. The species live in different water systems in São Paulo State, Southeastern Brazil.

Key words: Neotropical, Chironomidae, *Chironomus*, new species

Introduction

The genus *Chironomus* Meigen, 1803 is distributed in all zoogeographical regions except Antarctica, and comprises several hundred species, some of which are separable only on cytological characters. The larvae are found in the sediments of most standing water bodies, from pristine to severely polluted. A few species of *Chironomus* are halophilous or halobiontic, others have capacity to colonize extremely acid or hot habitats (e.g., Pinder 1995; Cranston *et al.* 1997; Johnson 1998; Rodrigues 2001; Özkan 2006). Some species are very abundant in heavily polluted standing or running waters, and are used as pollution indicators in water quality monitoring programs (e.g., Lindegaard 1995; Hardwick *et al.* 1998). They are also used for toxicity testing in laboratory studies designed to measure the potential hazard presented by a variety of biocides (e.g., Buhl & Faerber 1989; Oliver *et al.* 2003). Moreover some species tend to reach large numbers and in some areas swarms can cause severe nuisance, economic loss, and in some situations, human allergies (e.g., Cranston 1995; Spies 2000).

In the catalog of Neotropical and Mexican chironomids, seven *Chironomus* species are listed from Brazil, including only one from São Paulo State (Spies & Reiss 1996). A survey of the *Chironomus* species in São Paulo, carried out within the BIOTA-FAPESP research program, resulted in the identification of seven described species (Correia & Trivinho-Strixino 2005) and the recognition of eight new species. Correia *et al.* (2005, 2006) described adults, immatures, and karyotypes of two of these new species. In the present study an additional five new *Chironomus* species are described as male, pupa, and larva.

Materials and methods

The material examined was mounted on slides in Euparal® (male adults with their associated exuviae) or Hoyer's medium (larvae and pupae). The general terminology follows Sæther (1980). The term 'taeniae' is used for the flattened setae on the pupal abdomen in accordance with Langton (1994). When more than three