



New species and records of *Goeldichironomus* Fittkau, 1965 from Brazil (Diptera: Chironomidae)

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Abstract

One new species named *Goeldichironomus adhaerens* sp. n. is described from urban area in Manaus, Brazilian Amazon, based on male adult, pupa and larva. New records of *G. neopictus* Trivinho-Strixino & Strixino, *G. maculatus* Trivinho-Strixino & Strixino, *G. pictus* Reiss and *G. fluctuans* Reiss are also provided.

Key words: Aquatic insects, Amazon, Urban area, Taxonomy

Introduction

Goeldichironomus Fittkau is a Pan-American genus with 14 valid species, all of them found in Neotropical region (Fittkau 1965; Reiss 1974; Trivinho-Strixino & Strixino 2005). Only *G. devineyae* (Beck, 1961), *G. holoprasinus* (Goeldi, 1905), *G. amazonicus* Fittkau, 1968, *G. carus* (Townes, 1945), *G. fluctuans* Reiss, 1974, *G. pictus* Reiss 1974 and *G. cf. natans* Reiss, 1974 (Epler 2001; Mackenzie 2003; Martinez 2009) are distributed in both Nearctic and Neotropical regions. The type species is *G. holoprasinus*, by subsequent designation (Fittkau 1965).

Immatures of this genus are found in lentic environments and eutrophic, shallow sediments, forming small tunnels in the petioles the macrophytes and wood in decomposition (Reiss 1974; Pinder & Reiss 1986; Trivinho-Strixino 2011). The adults live in marginal vegetation or macrophytes in freshwater habitats (Cranston *et al.* 1989).

In this paper the adult male, pupa and larva of a new species of *Goeldichironomus* from Amazon is described and illustrated. New records based on adults for *G. neopictus* Trivinho-Strixino & Strixino, 1998, *G. maculatus* Trivinho-Strixino & Strixino, 1991, *G. pictus* and *G. fluctuans* are also provided.

Material and methods

First-instar larvae of the new species were collected in a 5000 L phytoplankton culture tank at Instituto Nacional de Pesquisas da Amazônia (INPA, Manaus, Brazil). The collected larvae were later transferred to plastic trays (19.5 x 31 x 6.5 cm), containing 1.5 L of water and burned sand in muffle for 500°C by 4 hours as substrate, fed on fish food (TETRAMIM) every 48 hours. The trays were covered with wooden structures (40 x 21 x 32 cm) with screens (2 mm mesh), based on Fonseca & Rocha (2004).

The larval and pupal exuviae, and adult male were slide-mounted using Euparal. Morphological terminology follows Sæther (1980) and Langton (1994), morphological measurements follow Epler (1988). The holotype and paratype are housed in the Invertebrate Collection of the Instituto Nacional de Pesquisas da Amazônia (INPA), Manaus, Amazonas, Brazil. Voucher specimens of newly recorded species are housed in the above mentioned institution and in the Entomological Collection of Universidade Federal de Santa Catarina (UFSC).