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First record and new species of *Tortopsis* Molineri, 2010 (Ephemeroptera, Polymitarcyidae) from Brazil

INÊS C. GONÇALVES[1], ELIDIOMAR R. DA-SILVA[2] & JORGE L. NESSIMIAN[3]

[1]*Programa de Pós-Graduação em Zoologia, Museu Nacional do Rio de Janeiro, Laboratório de Entomologia, Departamento de Zoologia, Instituto de Biologia, Universidade Federal do Rio de Janeiro, Caixa Postal 68044, 21941–971, Rio de Janeiro, RJ, Brasil. E-mail: inescg.bio@gmail.com*

[2]*Laboratório de Insetos Aquáticos, Departamento de Zoologia, Instituto de Biociências, Universidade Federal do Estado do Rio de Janeiro, 22290–240, Rio de Janeiro, RJ, Brasil. E-mail: elidiomar@pq.cnpq.br*

[3]*Laboratório de Entomologia, Departamento de Zoologia, Instituto de Biologia, Universidade Federal do Rio de Janeiro, Caixa Postal 68044, 21941–971, Rio de Janeiro, RJ, Brasil. E-mail: nessimia@acd.ufrj.br*

Abstract

A new species of the recently erected genus *Tortopsis* is described from males and females imagos collected in Macaé river, Rio de Janeiro State. *Tortopsis canum* **sp. nov.** can be recognized by the color pattern of the head and pronotum, strongly shaded with black in both sexes, male genitalia with parastyli long and straight and female parastyli receptor "C" shaped, with receptors large, occupying nearly all extension of sternum VIII. This new species represents the first record of the genus *Tortopsis* in Brazil.

Key words: Atlantic Rainforest, Campsurinae, Mayfly, new species, Rio de Janeiro state

Introduction

On a recent revision of the genus *Tortopus*, Molineri (2010) described several new species and stages of *Tortopus l.s.*, as well as performed a phylogenetic analysis that led into the establishment of a new genus named *Tortopsis*. These two genera were recovered as sister-groups and separated as distinct clades on his analysis based on characteristics from males, females and eggs. Nymphs of *Tortopsis* and *Tortopus* were described by Scott *et al.* (1959), Molineri (2008) and Molineri *et al.* (2010) but nymphs of most species remain unknown and characteristics of this stage were not used by Molineri (2010) on his analysis. Despite that, morphological disparities allowing identification between *Tortopus* and *Tortopsis* were also found at nymphal stage.

According to Molineri (2010), imagos of *Tortopsis* are distinctive because females present: R sector of forewing lacking additional veins between R_2 and IR, parastyli receptors large and sublateral in position, parastyli receptors C or V-shaped with sockets opening towards median line. In males: gonopore associated with a claw-like structure, penes separated from base, parastyli more than 5 times the length of pedestals, curved in lateral view. In nymphs: single subapical tubercle on mandibular tusks. The well developed parastyli present on males of *Tortopsis* as well as the receptors of the females are part of an important coupling system with reproductive function properly described by McCafferty and Bloodgood (1989).

The genus is composed by nine species, none of them with records from Brazil. *Tortopsis* ranges from Canada on its northern limits to Argentina on its southern limits. On South America the genus is reported from Colombia, Ecuador, Bolivia, and Argentina. This is the first record of this newly erected genus from Brazil, Rio de Janeiro State. Such distributional pattern suggests lack of collects and that *Tortopsis* is probably widely distributed through South America.

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