



## A new species of *Phylloicus* Müller, 1880 (Trichoptera: Calamoceratidae), from southeastern Brazil, including descriptions of larval and pupal stages

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### Abstract

The cosmopolitan family Calamoceratidae Ulmer, 1906, has 8 living genera, among them *Phylloicus* Müller, 1880, with species distributed from South to Central America. This genus is characterized by its dark-colored adults (brown to black) with diurnal to crepuscular habits. In this paper, the adults, pupae, and larvae of *Phylloicus camargoi* n. sp. are described and illustrated. The new species is easily diagnosed by male tergum X bearing a short, digitate, setose, basodorsal process; 2 short, digitate, hairless, lateral processes; and 2 pairs of very short processes on the posterior margin: a pair of digitate, hairless, posterolateral processes, and a pair of posteromesal processes. Additional diagnostic characters are the presence of 3 color bands on the forewings, 2 golden longitudinal bands and a white transversal one.

**Key words:** adults, caddisflies, immatures, Integripalpia, Neotropics, taxonomy

### Introduction

The family Calamoceratidae Ulmer has a cosmopolitan distribution and includes 1 fossil genus with only 1 species, *Palaeocentropus placidus* Sukatsheva & Jarzembowski, 2001, and approximately 175 described extant species in 8 extant genera: *Anisocentropus* McLachlan, 1863; *Phylloicus* Müller, 1880; *Banyallarga* Navás, 1916; *Ganonema* McLachlan, 1866; *Ascalaphomerus* Walker, 1852; *Calamoceras* Brauer, 1865; *Georgium* Fischer, 1964; and *Heteroplectron* McLachlan, 1871 (Prather 2003, 2004; Holzenthal *et al.* 2007). In the Neotropical region, 2 endemic genera have been recorded, *Phylloicus* and *Banyallarga*, but only the first occurs in Brazil. Recently, Prather (2003, 2004) reviewed the genera *Phylloicus* and *Banyallarga*, respectively.

Müller (1880) erected the genus *Phylloicus* for 3 species (*P. major* Müller, *P. medius* Müller, and *P. bromeliarum* Müller), but did not establish a type species. Flint (1964) selected *P. major* as the type species. Unlike most caddisflies, the genus is characterized by day-active adults, which have brownish yellow bodies and dark, generally brown to black wings with golden, orange, white and, sometimes, iridescent setae (Prather 2003). The larvae are known by their flattened cases made of leaf pieces and they are found generally in stream pools.

The Neotropical genus *Phylloicus* has 56 described species (Morse 2010, Dumas & Nessimian 2010), with 20 species recorded from Brazil (Dumas & Nessimian 2010). Among these, only the larvae of *P. bromeliarum* Müller and *P. abdominalis* (Ulmer) have been described by Ulmer (1955) and Huamantínco *et al.* (2005), respectively.

Holzenthal (2004) remarked that “probably no more than 2% of the Neotropical caddisfly species are known in the larval stage” among the recorded 2,230 species (Flint *et al.* 1999) and consequently the description and association of immature stages with the adults allow us its practical application in biological monitoring of water quality. In this paper, a new species, *Phylloicus camargoi* n. sp., is proposed based on descriptions of the adults (males and females), 5<sup>th</sup> instar larva, and pupa.