



Three new species of *Leptonema* Guérin (Trichoptera: Hydropsychidae) from southeastern Brazil

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Abstract

The genus *Leptonema* is one of the most diverse within the order Trichoptera, being widespread in the Neotropics. Three new species of *Leptonema*: *Leptonema ferelunatum*, *L. santosi*, and *L. serratum* are described and illustrated from male specimens collected in Rio de Janeiro State, southeastern Brazil.

Key words: *Leptonema ferelunatum*, *Leptonema santosi*, *Leptonema serratum*, Neotropical Region, Atlantic Forest, taxonomy

Introduction

The caddisfly family Hydropsychidae, with about 1500 described species, is the third largest in the order Trichoptera and the most diverse of the suborder Annulipalpia. The family is currently divided into five subfamilies: Arctopsychinae, Macronematinae, Hydropsychinae, Diplectroninae, and Smicrideinae (Holzenthal *et al.* 2007). The genus *Leptonema* Guérin is the most diverse in the subfamily Macronematinae, containing over 120 species, which makes it one of the largest genera in the order Trichoptera (Flint *et al.* 1987; Flint 2008). The genus is widespread in the Neotropics, with more than 100 species widely distributed from southwestern United States to northwestern and eastern Argentina (Flint 2008). Some species are also described from Afrotropical Region, with 21 species recorded from subsaharian Africa and Madagascar (Morse 2010). In Brazil, 27 species were recorded until now (Paprocki *et al.* 2004; Flint 2008; Dumas & Nessimian 2009).

The specimens of the genus *Leptonema* are among the largest caddisflies, with some having wingspans of about 60 mm. The larvae are often abundant at all types of flowing water, where they comprise one of the major portions of invertebrate biomass (Flint *et al.* 1987).

Following the revision of the world *Leptonema* (Flint *et al.* 1987), several new species have been described (Flint 1991; Muñoz-Quesada 1997, 1999; Bueno-Soria *et al.* 2001; Flint 2008; Dumas & Nessimian 2009). This indicates that the diversity of the genus in this region may be even greater. In the present work, we describe and illustrate the males of 3 new species collected at Rio de Janeiro state, southeastern Brazil. The females and immature stages are unknown.

Material and methods

The specimens were collected with Pennsylvania light traps and conserved in 80% ethanol. In order to observe the genital structures, the abdomen was removed and cleared in 10% KOH. The illustrations were made under a stereomicroscope and an optical microscope, both equipped with a camera lucida. The terminology used in the descriptions follows that of Nielsen (1970), Flint *et al.* (1987), and Muñoz-Quesada