



New species of Leptohiphidae (Ephemeroptera) from northeastern Brazil

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Abstract

Two new species of Leptohiphidae are described based on nymphs and adults: *Traverhyphes* (*Traverhyphes*) *frevo* **sp. nov.** and *Tricorythopsis spongicola* **sp. nov.** *Traverhyphes* (*T.*) *frevo* can be distinguished from other species, among other characteristics, by the presence of curved penile spines inserted laterally, and posterolateral projections of styliiger plate very short and pointed distally in lateral view. *Tricorythopsis spongicola* can be distinguished from the others species, mainly by the presence of spine-like lateral projections present on apical part of penes in the male imago, and by the tarsal claws with four to five marginal denticles, and two rows of 2 + 3 submarginal denticles with apical setae in the nymphs.

Key words: aquatic insects, mayflies, taxonomy, Brazil, Neotropical Region

Introduction

The Pan-American family Leptohiphidae (Ephemeroptera) is currently represented by 12 genera and 72 species in South America, 31 of which are reported from Brazil (Molineri 2006; Dias *et al.* 2007; Dias *et al.* 2008; Dias *et al.* 2009; Gonçalves *et al.* 2010). *Traverhyphes* Molineri and *Tricorythopsis* Traver are restricted to South America and are widespread distributed in Brazil (Dominguez *et al.* 2006; Dias *et al.* 2007; Dias *et al.* 2008).

A significant advance in the taxonomic knowledge of this family occurred recently in Brazil (*e.g.* Dias & Salles 2005; Salles & Molineri 2006; Siegloch & Froehlich 2006; Dias *et al.* 2007; Dias *et al.* 2007; Dias *et al.* 2008; Dias *et al.* 2009; Gonçalves *et al.* 2010; Salles *et al.* 2010). Nevertheless, the fauna of the Northeast Region of the country is practically unknown, not only for Leptohiphidae, but for mayflies in general. Nowadays, only one species of this family is recorded from northeastern Brazil: *Tricorythopsis bahiensis* Dias, Salles & Ferreira (Dias *et al.* 2008).

In this paper, two new species of Leptohiphidae are described from Pernambuco State, northeastern Brazil.

Material and methods

Pictures were taken using an OPTON Q719K-AC microscope with a TA-0124S digital camera and a Leica (M165C) stereomicroscope with a DFC420 digital camera. In the case of pictures taken at the microscope, a series of partially focused images were used to drawn the body parts of nymphs and adults using the software Adobe Illustrator®.

The material is deposited in the following institutions: Coleção de Invertebrados do Instituto Nacional de Pesquisas da Amazônia (INPA), Manaus, Brazil; Coleção Zoológica do Programa de Pós-graduação em Biodiversidade Tropical (PPGBT) Espírito Santo, Brazil; Coleção Entomológica da Universidade Federal de Pernambuco (UFPE), Pernambuco, Brazil.