



The larva of *Neoneura ethela* Williamson, 1917 (Odonata: Protoneuridae)

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Abstract

The last-instar larva of *Neoneura ethela* Williamson is described and illustrated based on one larva collected from a thermal water river in Brazil, State of Goiás and reared in the laboratory. The larva of *N. ethela* can be distinguished from all other South America *Neoneura* larvae by the following combination of characters: one pair of premental setae, S8–10 with a row of short spines along distal border, lateral gills a little longer than length of abdomen, ventral border of lateral gill armed with a row of about 24 spines. We provide a key to the species of known South American larvae of *Neoneura*.

Key words: Brazil; key; *Neoneura*; taxonomy; thermal water; Zygoptera

Introduction

The Neotropical genus *Neoneura* Selys includes 29 species (Garrison *et al.* 2010; Schorr *et al.* 2011). Of these, 24 occur in South America and 20 in Brazil (Garrison 1999; Lencioni 2005, 2006; Paulson 2011). Most of the taxonomic studies of dragonflies and damselflies are based on the adults, with fewer species having larvae described from the Neotropical region. Among the 24 South American species of *Neoneura*, the larvae of only three have been described: *Neoneura kiautai* Machado (Anjos-Santos *et al.* 2011), *Neoneura fulvicollis* Selys, (De Marmels 2007) and *Neoneura joana* Williamson (Geijskes 1954).

Here, we describe the larva of *Neoneura ethela* Williamson and distinguish it from other South American species of *Neoneura*. This species has a wide geographical distribution with records from Bolivia, Paraguay, Uruguay, Argentina and southernmost Brazil (Rio Grande do Sul State). A key to the species of known South America *Neoneura* larvae is provided.

Material and methods

A male last-instar larva was collected in streamside vegetation of the Rio Quente in Caldas Novas City, Goiás State, Brazil. The larva was collected on 08.vi.2008 and maintained in a Styrofoam box with water until adult emergence on 05.vii.2008. The larva was fed larvae of midges (Chironomidae) until emergence. Illustrations were made with the aid of a Wild M8 stereomicroscope coupled with a camera lucida. All measurements are in millimeters. Total length and abdominal length excludes appendages. Mandibular formulae follow Watson (1956). Abbreviations: S1–S10: abdominal segments 1 to 10. The specimen is deposited in the collection of Museu Nacional (MN/UFRJ), Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil.