Zootaxa 2531: 29–38 (2010)
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

The madicolous nymph of *Heteropodagrion sanguinipes* Selys (Odonata: Megapodagrionidae)

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Abstract

Nymphs of the genus *Heteropodagrion* are described and illustrated for the first time based on supposed specimens of *H. sanguinipes* taken in vertical sheet flow adjacent to small montane streams in western Ecuador. The nymph of *Heteropodagrion* resembles *Paraphlebia* and *Sciotropis*, but is unique among Megapodagrionidae in possessing a slightly curved row of very small transverse ridges on each side of the prementum.

Resumen

Las ninfas del género *Heteropodagrion* se describen e ilustran por primera vez sobre la base de supuestos especímenes de *H. sanguinipes*, recolectados de una corriente laminar vertical adyacente a pequeños arroyos montanos en Ecuador occidental. La larva de *Heteropodagrion* se parece a las de *Paraphlebia* y *Sciotropis*, pero es única entre los Megapodagrionidae por poseer una hilera ligeramente curvada de pequeñas crestas transversales a cada lado del prementón.

Introduction

Knowledge of the nymphs of Neotropical Megapodagrionidae is grossly incomplete. Five of the 14 Neotropical genera currently included in this heterogeneous "family" are still unknown in the nymph stage. Of the approximately 135 described species in the New World, only 29 (21 %) are known in the nymph stage (Garrison *et al.* 2010). Probable reasons for this paucity of knowledge are: 1) most species are limited in geographic range, 2) their population densities are usually low, 3) nymphs of many species occupy edges of aquatic habitats that are difficult to sample, and 4) few people study or collect nymphs. I recently discovered nymphs of *Heteropodagrion sanguinipes* Selys and possibly a second undescribed species in Ecuador, which form the basis for the following description and notes on microhabitat and behavior.

Methodology

I searched for nymphs of *Heteropodagrion* in the western Andes Mountains of Ecuador by closely inspecting sheet flow running down near-vertical rock faces along small waterfall streams. The easiest method of detection was to probe the shallow water with my index finger and move the tip over the rock, watching for movement. I was not able to rear the nymphs I found, but I determined they were *Heteropodagrion* by preponderance of adults at the habitat and elimination of known nymphs of other megapodagrionid species present.

Use of the term nymph instead of larva follows Truman and Riddiford (1999). Drawings of mouthparts were made with aid of a camera lucida. Lateral caudal gills were photographed with a Nikon D70s digital

Accepted by R. Garrison: 17 Jun. 2010; published: 9 Jul. 2010