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A new *Hydrophylita* (Hymenoptera: Trichogrammatidae) from the Neotropics, with a key to species

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Abstract

Hydrophylita neusae **n. sp.** is described and illustrated. *Hydrophylita* is a small genus of Trichogrammatidae which now includes four species, all known to attack eggs of damselflies (Odonata: Zygoptera). A key to species is included and those known from the Neotropics are illustrated.

Key words: Aquatic Hymenoptera, Zygoptera, egg parasitoid, Chalcidoidea, taxonomy

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Introduction

Trichogrammatidae remains one of the most poorly known families of Chalcidoidea. As is the case with several trichogrammatid genera, *Hydrophylita* Ghesquière, 1946, has been uncommonly collected and is poorly studied.

The genus was recently reviewed by Pinto (2006) and has included three species now assigned to two subgenera. The nominate subgenus contains two species, *H.* (*H.*) *aquivolans* (Matheson & Crosby 1912) from the United States and Canada, and *H.* (*H.*) *bachmanni* De Santis, 1964, from Argentina. The subgenus *Lutzimicron* Costa Lima includes *H.* (*L.*) *lestesi* Costa Lima (1960) from Brasil. Although all named species occur in the New World, several undescribed extralimital species assignable to *Lutzimicron* have been collected (Pinto 2006). This paper describes a second species of *Lutzimicron*, *H.* (*L.*) *neusae*, which is broadly distributed from Central America and the Caribbean to Bolivia and central Brasil. Included is a key to all known species of *Hydrophylita* and illustrations of those occurring in the Neotropics.

The new species of *Hydrophylita* occurs in aquatic habitats and parasitizes eggs of Zygoptera. Studies of the habits, life history, and taxonomy of minute hymenopterous insects that have assumed aquatic life are rare (Fursov 1995; Hagen 1996; Querino & Hamada 2005). The literature available suggests that all species of *Hydrophylita* are parasitoids of Zygoptera (Odonata) eggs (De Santis 1964; Lima 1960; Matheson & Crosby 1912). Odonata are sensitive and reliable indicators of environmental disturbance to forests and a variety of aquatic habitats (e.g. Chovanec *et al.* 2004; Stewart & Samways 1998; Hawking & New 2002; Lee Foote & Hornung 2005; Osborn 2005). For example, Stewart and Samways (1998) considered that a higher proportion of Anisoptera to Zygoptera species is an indication of a disturbed river. The importance of parasites and parasitoids as mortality factors on these insects is poorly understood. Although some work on adult impact has been carried out (e.g. Abro 1990), their significance on the egg and larval stages of Odonata remains unknown. *Hydrophylita neusae* is broadly distributed in the Neotropics and is commonly collected in aquatic habitats. This suggests that it is an important parasitoid of damselfly eggs.

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