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Description of three new species of *Labena* Cresson from Mexico (Hymenoptera, Ichneumonidae, Labeninae), with notes on tropical species richness

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Abstract

Three new species of *Labena* Cresson (Ichneumonidae, Labeninae); *L. littoralis* **sp. nov.**, *L. tekalina* **sp. nov.** and *L. madoricola* **sp. nov.** are described and illustrated. Material was collected with Malaise traps in 2008 and 2009 in the Biosphere Reserve Ria Lagartos (Mexico). Diagnostic characters to distinguish them from all other New World species of the genus are provided. In addition, the tropical species richness of the genus is shortly discussed.

Key words: Parasitoids, Yucatán, Protected area, taxonomy

Introduction

Labena Cresson, 1864 is the most species rich genus of the ichneumonid subfamily Labeninae (Ichneumonidae). It comprises 43 species which are mostly of Australasian, Oriental and Neotropical distribution. Only two species are known from the Nearctic region, *L. grallator* (Say 1835) and *L. tinctipennis* Rohwer, 1920 (Yu *et al.* 2012). However, many undescribed species are known to occur especially in the tropics. Porter (1997) estimated that there are around 100 species in the Neotropical region and Gauld (2000) reported that there are at least 50 undescribed species deposited in collections harbouring Neotropical ichneumonids.

In Mexico, nine species have been previously reported and keyed by Khalaim & Ruíz-Cancino (2009): *L. acerba* Khalaim & Ruíz-Cancino, 2009; *L. delta* Gauld, 2000; *L. eremica* Gauld, 2000; *L. espinita* Gauld, 2000; *L. gloriosa* Cresson, 1874; *L. grallator* (Say,1835); *L. marginata* Szépligeti, 1914; *L. schausi* Cushman, 1922; *L. tarsata* Gauld, 2000 and *L. zerita* Gauld, 2000. Furthermore, two new species were described by Bordera *et al.* (2010): *L. gauldiana* Bordera, González-Moreno & Sääksjärvi, 2010 and *L. yucatanica* González-Moreno, Bordera & Sääksjärvi, 2010.

Labena species are ectoparasitoids of wood-boring Coleoptera belonging to the families Buprestidae, Cerambycidae and Curculionidae (Yu *et al*. 2012).

Studying material collected in the Ria Lagartos Biosphere Reserve (Yucatán, Mexico), three new species were found. The aim of this paper is to describe and illustrate these species and provide diagnostic characters to distinguish them from all other New World species of *Labena*.

Material and methods

Material was collected using Malaise traps in the Ria Lagartos Biosphere Reserve (Reserva de la Biosfera Ría Lagartos), located approximately 21º36'N, 88º10'W in Northeastern Yucatán. Malaise trap collecting bottles were replaced fortnightly from June 2008 to August 2009. Traps were placed in locations representing three vegetation

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