



## New records of Ichneumonidae (Hymenoptera: Ichneumonoidea) from Mexico

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### Abstract

A total of 55 first records of Ichneumonidae are reported from Mexico, raising the total number of known species from Mexico to 1,115. Two genera, *Picrostigeus* and *Paraphylax*, are reported for the first time from the Neotropical Region. Material was collected over a one year period by Malaise traps in three habitats; dry forest, savannah and coastal dune scrubland in the Ria Lagartos Biosphere Reserve, Yucatán, Southeast Mexico. A total of 1,302 individuals of Ichneumonidae are included in this paper. 45 species (81%) of the new records have a Neotropical distribution; seven species (12%) have been reported previously only from the Nearctic; and one species (2%) are recorded from both the Nearctic and Neotropical regions. Most species have a higher abundance in the rainy season, and the dry forest habitat provided more new records than the other habitats.

**Key words:** Neotropical, Nearctic, distribution, Yucatán, Ria Lagartos Biosphere Reserve

### Introduction

Ichneumonidae is a hyperdiverse family of Hymenoptera and is considered one of the largest in the Insecta, with 100,000 estimated species worldwide (Gauld 2000). The family comprises 23,331 species in 1,538 genera, of which 3,586 species have a Neotropical distribution and 4,929 have Nearctic distribution (Yu *et al.* 2005). Many authors have contributed to the knowledge of Neotropical and Nearctic species (e.g. Dasch 1964a, 1964b, 1971, 1979, 1984, 1988, 1992; Gauld 1991, 1997, 2000; Gauld *et al.* 2002; Kasparyan & Ruiz-Cancino 2005, 2008; Khalaim 2009; Porter 1980; Townes 1944, 1945; Townes & Gupta 1962; Townes & Townes 1951, 1959, 1962, 1966, 1978; Townes *et al.* 1960).

The Mexican ichneumonid fauna includes approx. 1,060 species (Yu *et al.* 2005 and later works, e.g. Bordera *et al.* 2010; González-Moreno *et al.* 2010; Kasparyan & Ruiz 2004; Kasparyan & Ruiz-Cancino 2005, 2008; Khalaim & Hernández 2008; Khalaim & Ruiz-Cancino 2009; Ruiz-Cancino *et al.* 2002, 2010). Nonetheless, knowledge of Mexican ichneumonids is relatively scarce reflecting the taxonomic complexity of this group and the lack of regional studies. Otherwise, the number of reported species could be considered relatively low taking into account that Mexico represents a transition zone between the Nearctic and the Neotropical regions (Morrone 2006). In an effort to further understand the richness and distribution of the ichneumonids from Mexico, a large number of first records are reported here.

### Material and methods

Specimens were collected using Malaise traps in the Ria Lagartos Biosphere Reserve (Reserva de la Biósfera Ría Lagartos), approximately 21°36'N, 88°10'W in Northeastern Yucatán, Mexico. Four traps were placed in each kind of vegetation, coastal dune scrubland, savannah and a dry forest. The collecting jars contained 70% ethanol and were replaced fortnightly from June 2008 to August 2009.

The coastal dune scrubland is composed mainly of shrub species such as *Coccoloba uvifera* (Polygonaceae), *Caesalpinia vesicaria* (Fabaceae), *Metopium brownei* (Anacardiaceae), *Agave angustifolia* (Agavaceae); several