



Mantidflies of Colombia (Neuroptera, Mantispidae)

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Abstract

This study revises the Mantispidae of Colombia. 151 adult specimens of 12 entomological museums of Colombia were examined and identified. On the basis of the specimens studied and a comprehensive literature search, it is determined that 20 nominal species (including two doubtful records) plus four proposed as new to science, in ten genera (*Anchieta*, *Plega*, *Trichoscelia*, *Gerstaeckerella*, *Buyda*, *Climaciella*, *Dicromantispa*, *Entanoneura*, *Leptomantispa*, and *Zeugomantispa*) and, three subfamilies (Symphrasinae, Drepanicinae, and Mantispinae) occur in Colombia. In addition, *A. eurydella* (Westwood), *C. amapaensis* Penny and *P. fasciatella* (Westwood) are redescribed, providing complementary information to the original descriptions. A list of Colombian Mantispidae, distribution maps and taxonomic keys to subfamilies, genera and species are included. Illustrations of the external morphology and male genitalia are provided for selected species. The taxonomic status of *P. hagenella* (Westwood) is discussed, and its diagnostic characters are redefined. *Anchieta remipes* (Gerstaecker) is newly transferred to this genus from *Trichoscelia*.

Key words: Neuroptera, taxonomy, species list, new species, Neotropics

Introduction

Mantispidae (Leach, 1815), is a small family of Neuroptera known by its remarkable appearance, resembling small praying mantis (Mantodea) with raptorial forelegs and elongated prothorax. This specific morphology is an evolutionary convergence in several groups of insects, including also several heteropterans (Nepidae and Emesinae) (Frantsevich 1998). These groups have developed these morphological adaptations to catch their prey, probably by similar selective pressures. Mantispids are considered to be the sister group of Berothidae + Rhachiberothidae, the last of which independently developed the same modifications of the forelegs (Aspöck & Mansell 1994; Aspöck *et al.* 2001; Aspöck & Aspöck 2008), although in a recent study, an alternative hypothesis proposes Rhachiberothidae as sister group of Mantispidae using both molecular and morphological characters, these results reject the probability of evolutionary convergence of the raptorial forelegs in the clade comprising Berothidae, Rhachiberothidae and Mantispidae (Liu *et al.* 2014). The family has a cosmopolitan distribution, shown the greatest diversity in the tropics (Oswald *et al.* 2002). Mantispidae is likely to form a monophyletic group which is composed of four subfamilies, Symphrasinae, Drepanicinae, Calomantispinae and Mantispinae, all present in the New World (Lambkin 1986). Following the recent world catalog of Ohl (2004) there are about 410 extant species and subspecies of mantidflies, assigned to 44 genera recognized as valid. More recently, some new taxa have been described (Machado & Rafael 2007, 2010; Dobosz 2008; Ohl 2009; Yang & Liu 2010; Snyman *et al.* 2012; Liu *et al.* 2014). Among Neuroptera the members of this family are distinguished by the elongation of the prothorax posterior to the articulation of the forelegs, conspicuous pterostigma, and in some groups, the presence of trichosors along the wing margin (Lambkin 1986; Aspöck & Mansell 1994). Immature stages are unique among the members of the order, because of their feeding behavior showing an evolution from predatory to parasitoidism and parasitism. Without considering the Old World and Australian fauna, where the immature stages are virtually unknown, the biology of several American taxa are well known, because of their parasitic behavior on spider hemolymph and predatory habits on spider eggs and immatures of aculeate Hymenoptera or other concealed holometabolous insects (Redborg 1998).

The knowledge of Colombian Mantispidae is rudimentary, only ten species are known from the country, the relative few records are found in Penny (1977, 1982b), Penny & da Costa (1983) Hoffman (1992, 2002), Ohl (2004) and Reynoso-Velasco & Contreras-Ramos (2008). Salazar (2001) provided information on some species,

(1983). Consequently *Mantispa* is restricted only to the Old World. Thus, the *gracilis* group, became *Dicromantispa* Hoffman, 2002, the *minuta* group, was divided into genera *Leptomantispa* Hoffman, 2002 and *Zeugomantispa* Hoffman, 2002; and the *phthisica* group is now referred to as the genus *Buyda* Navás, 1926. Other genera were proposed for species that could not be assigned to any of the above, as in the case of *Haematomantispa* Hoffman, 2002 and *Xeromantispa* Hoffman, 2002.

Incertae sedis

***Mantispa iridipennis* Guérin-Méneville, 1844**

Mantispa iridipennis Guérin-Méneville, 1844: 392. Holotype (or Syntypes): sex unknown, Colombia (depository unknown).

Remarks. According to Ohl (2004) the current depository of the type specimen is unknown, additionally the author indicates that it may be a synonym of *M. gracilis* Rambur.

Distribution. Colombia.

***Mantispa pehlkei* Enderlein, 1910**

Mantispa (Mantispilla) pehlkei Enderlein, 1910: 351. Syntypes: female, unknown sex, Colombia (depository unknown).

Remarks. Ohl (2004) indicates that the type specimen of *M. pehlkei* has been probably lost or destroyed and therefore it is impossible to assign any specimen to this species.

Distribution. Colombia.

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