



***Elmohardya* Rafael (Diptera, Pipunculidae) from northeastern Brazil: new records and description of new species**

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Abstract

Eleven species of *Elmohardya* are recorded for the first time in northeastern Brazil, the most arid Brazilian region. There are two new records, *E. lindneri* (Collin) and *E. trinidadensis* (Hardy), and nine new species, which are here described and illustrated: *Elmohardya cearensis* sp. nov.; *E. cheliformis* sp. nov.; *E. distincta* sp. nov.; *E. formosa* sp. nov.; *E. limeirai* sp. nov.; *E. martae* sp. nov.; *E. potiguar* sp. nov.; *E. quadricornis* sp. nov. and *E. rosalinae* sp. nov.

Key words: Pipunculinae, Eudorylini, taxonomy

Introduction

Pipunculidae, or big-headed flies, are inconspicuous flies (body length 2.0–11.5 mm), closely related to the flower flies (Syrphidae) (Rafael & Skevington 2010). They are almost exclusively endoparasitoids of Auchenorrhyncha (Hemiptera) during their larval stage (Rafael & Skevington 2010), except for *Nephrocerus* whose larvae develop in adult specimens of Tipulidae flies (Koenig & Young 2007). Pipunculidae occur in all biogeographic regions and slightly more than 1.400 species are described worldwide (Kehlmaier *et al.* 2014). Previous to this study, only two species of Pipunculidae were recorded in northeastern Brazil, *Clistoabdominalis spinitibialis* (Hardy) and *Cephalosphaera miriamae* Rafael, collected in Bahia and Piauí states, respectively (Rafael 1992, 1995).

Elmohardya Rafael was proposed for a group of species called "complex *doelloi*" by Hardy (1965a, b). Specimens can readily be identified by the following combination of characters (Rafael 1987, 1988; Skevington & Yeates 2001): no ocellar bristles, postpedicel with obtuse apex, dorsocentral bristles diminute, no propleural fan of bristles, no vein M₂, pterostigma present, tegula with cluster of setae, scutellum occasionally rugose on posterior third, mid femur with rows of ventral spines, tergites with inconspicuous setae and commonly with oblique spot of gray pruinescence posterolaterally, larger in the posterior tergites; sternite 1 absent; male specimens with tergite 6 and sternite 7 visible dorsally; sternite 6 swollen with sclerotized subapical protuberances; tergite 7 reduced to wispy band, sternite 7 and syntergosternite 8 partially to entirely fused, the latter with membranous area rarely absent; epandrium swollen, partially visible dorsally on the right side; surstyli usually markedly asymmetrical, gonopods usually asymmetrical, right gonopod usually protruding, phallic guide generally with complex structures; phallus simple, not divided, membranous, with a subapical spicule, ejaculatory apodeme funnel-shaped; female ovipositor somewhat short and straight.

Elmohardya belongs to the Eudorylini (Pipunculinae) and is closely related to *Amazunculus*, which is considered as its sister group (Rafael & De Meyer 1992; Skevington & Yeates 2001). The genus has a New World distribution with the peak diversity in the Neotropics. *Elmohardya* has 52 known species, but only 51 of them were listed in Skevington (2005a) since *E. nicaraguaensis* Rafael was omitted. These constitute the first records of *Elmohardya* in northeastern Brazil that has shown to be a high place of diversity for Pipunculidae. This region has three main biomes, Caatinga, Cerrado and Atlantic Forest biomes.