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Elmidae Curtis, 1830 (Coleoptera, Polyphaga, Byrrhoidea) of the Neotropical region

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Abstract

A bibliography of significant taxonomic papers on Elmidae (Coleoptera, Polyphaga, Byrrhoidea), and a checklist of valid species and subspecies and their geographic distributions are provided. Forty-seven genera and 430 valid species are included. Maps show the geographic distribution of the genera by country.

Key words: Aquatic Insecta, distribution, Tropics, species list, Riffle beetles

Introduction

The family Elmidae has the fourth largest number of species among the aquatic Coleoptera and has a worldwide distribution, comprising about 146 genera and 1330 species Jäch & Balke (2008). Adults and larvae of most species are considered as truly aquatic, preferring shallow, rapid and well-oxygenated water (Brown 1987); in general, both occupy the same habitat, where they feed by grazing on the surface of stones, wood, roots and leaves, consuming periphyton, detritus and some animal or mineral matter (Seagle Jr, 1982).

Our knowledge of the Elmidae diversity in the Neotropical Region has grown in recent years, thanks to the contributions of South American researchers (Manzo 2003, 2006, 2007; Passos & Felix 2004a; Passos & Felix 2004b, Archangelsky & Manzo 2006; Gómez & Bello 2006; Fernandes *et al.* 2010a; Fernandes *et al.* 2010b, Manzo & Moya 2010; Fernandes *et al.* 2011; Sampaio *et al.* 2011; Segura *et al.* 2011; Miranda *et al.* 2012) and other researchers around the world (Shepard 2004, Shepard & Megna 2006; Maier & Spangler 2011; Maier 2012; Kodada *et al.* 2012; Monte & Mascagni 2012). Figure 1 is a histogram showing the number of species described in each decade since 1806, when the first record was made, up to the present. The decade in which the largest number of species was described was 1936–1945, reflecting the contribution of Dr. Howard Everest Hinton. In the decade 1966–1975, besides Hinton, some other researchers were also outstanding, such as Dr. Joseph Delève.

This article is a checklist of the family Elmidae in the Neotropical Region (including the Mexico and the Caribbean), based on the literature, which has been assembled with the aim of easier the data search process in taxonomy, biodiversity, biogeography or conservation.

Material and methods

This checklist is based on a survey and critical assessment of the available literature embracing the Neotropical Region, from 1806 to 2013. Species cited in informal papers (theses, reports) were not taken into account. The list was divided into the two recognized subfamilies, Elminae and Larainae, after Jäch & Balke (2008). In the entries, information is given as follows: current name of the taxon, synonyms, geographic distribution in the Neotropical region (as given by various authors), notes, any additional information regarded as relevant.

Maps in Figures 2, 3 and 4 show the published distribution of genera in the Neotropical Region by country.