



Checklist of the Elmidae (Coleoptera: Byrrhoidea) of Brazil

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Abstract

Information on the Elmidae that occur in a country is important for the advancement of ecological knowledge and the use of these organisms in biomonitoring programs. To date, there are checklists of elmids recorded in two regions of Brazil—one for the Amazon region, listing 48 species in 14 genera, and another for the state of Rio de Janeiro, listing 13 species in 7 genera. Thus, there is no checklist of the Elmidae for Brazil as a whole, and only inconsistent estimates of the number of species present. Therefore, the aim of this paper is to present a checklist of the Elmidae recorded from Brazil. We based this checklist on literature produced between 1882 and 2011. A total of 148 species named plus 1 unnamed species of Elmidae are cited for Brazil, distributed in 24 genera. Moreover, we include taxonomic notes, such as changes in genus, and information about bibliography and distribution.

Keywords: Riffle beetles, Neotropics, geographic distribution

Introduction

Elmidae Curtis, 1830 is the fourth most specious family among aquatic Coleoptera, with approximately 1330 species distributed worldwide among 146 genera. This family has a cosmopolitan distribution, occurring in all zoogeographic regions. Its species are organized into two subfamilies: Larainae LeConte, 1861 (26 genera, 130 species) and Elminae Curtis, 1830 (120 genera, 1200 species) (Jäch & Balke 2008). The adults and larvae of the majority of species generally are aquatic, although adults of many species of Larainae live on the banks of lotic systems and on partially submerged substrate, such as rocks and wood. Adult Larainae go into the water to oviposit (Brown 1987).

The first studies on the Elmidae of Brazil were carried out by Grouvelle (1889), more than 100 years ago, when he recorded 16 species—all in the state of Santa Catarina. In the 20th century, Howard E. Hinton made the most significant contribution to the taxonomy, biology and distribution of Elmidae in Brazil. His first papers were published in the 1930s and he described a total of 11 genera and 99 species (Hinton 1934; 1936a,b,c; 1937a,b,c; 1939a,b,c,d; 1940a,b,c,d,e; 1941; 1945a,b,c; 1946a,b; 1951; 1968; 1969; 1971a,b,c; 1972a,b; 1976). Other important contributions came from Paul J. Spangler (Spangler & Santiago 1987; Spangler & Perkins 1989; Spangler 1990; Spangler & Santiago-Fragoso 1992; Spangler & Staines 2003) and Harley P. Brown (Brown 1970; 1972; 1975; 1981; 1984 and 1987).

In recent years, studies have been published on the taxonomy of the Elmidae of Brazil, with descriptions of ten species in the southeastern (Passos & Felix 2004a; Passos & Felix 2004b; Sampaio *et al.* 2011) and Amazon regions (Fernandes *et al.* 2010a; Fernandes *et al.* 2010b; Fernandes *et al.* 2011). Forty-eight species belonging to 14 genera have been recorded for the Amazon region (Passos *et al.* 2010) and 13 species distributed in seven genera are listed for the state of Rio de Janeiro (Passos *et al.* 2009). However, there is no nominal checklist of Elmidae for Brazil as a whole. This paper presents a list of all Elmidae known to be in Brazil, with notes on their geographic distribution.