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The genus *Paravelia* Breddin, 1898 (Hemiptera: Heteroptera: Veliidae) in Brazil, with descriptions of eight new species

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Abstract

Eight new species of *Paravelia* Breddin, 1898 from Brazil are described and illustrated: *P. amapaensis* **sp. nov.** from Amapá State, *P. bipunctata* **sp. nov.** from Minas Gerais, Mato Grosso and Mato Grosso do Sul States, *P. bilobata* **sp. nov.** and *P. polhemusi* **sp. nov.** from Mato Grosso State, *P. bahiana* **sp. nov.** from Bahia State, *P. lacrymosa* **sp. nov.** from Minas Gerais State, *P. micromaculata* **sp. nov.** from Maranhão State, and *P. ornata* **sp. nov.** from Amazonas State. The genus is redescribed, with photos of the dorsal view for nineteen species: *P. basalis* (Spinola), *P. biae* Spangler, *P. boliviana* Breddin, *P. bullialata* Polhemus & Polhemus, *P. capillata* (Drake & Harris), *P. capixaba* Moreira, Nessimian & Rúdio, *P. conata* (Hungerford), *P. dilatata* Polhemus & Polhemus, *P. foveata* Polhemus & Polhemus, *P. itatiayana* (Drake), *P. lanemelo* Moreira & Barbosa, *P. manausana* Polhemus & Polhemus, *P. nieseri* Moreira & Barbosa, *P. platensis* (Berg), *P. recens* (Drake & Harris), *P. rotundanotata* (Hungerford), *P. spinifera* Polhemus & Polhemus, *P. splendoris* (Drake & Harris) and *P. williamsi* (Hungerford). Three of these species are recorded for the first time from Brazil: *P. platensis*, *P. spinifera* and *P. williamsi*. Also, the macropterous forms of *P. capixaba* and *P. dilatata* are described. Lastly, an identification key to the 36 species of *Paravelia* recorded from Brazil and a checklist of described species are presented.

Key words: Aquatic insects, Gerromorpha, Neotropical region, taxonomy, Veliinae, water striders

Introduction

The water striders of the genus *Paravelia* Breddin, 1898 (Insecta: Hemiptera: Heteroptera: Gerromorpha: Veliidae) are semiaquatic bugs which occur in a wide variety of lentic and lotic freshwater habitats, and can be found for example among emergent vegetation, on top of large rocks, above fallen logs and roots that penetrate the water, or even on moist terrestrial environments (Mazzucconi *et al.* 2009). Together with the *Microvelia* Westwood, 1834, they are also the only gerromorphan bugs so far found on the pockets of bromeliads (Polhemus & Polhemus 1991). The genus is mainly Neotropical, ranging from Mexico to Argentina (Polhemus 1976; Polhemus & Polhemus 1993). The only exception is *Paravelia taiapiensis* (Cheesman, 1926), described from the Marquesas Islands, eastern Pacific (Andersen 1981).

Forty-nine species have been described in the genus, making it by far the most diverse in the subfamily Veliinae. Twenty-five species are known to occur in Brazil, some of which are known only from the original description (Moreira *et al.* 2010, 2011b; Moreira & Barbosa 2011, 2012). Besides that, many of these descriptions lack illustrations, a fact that makes the prompt recognition of the species difficult. In addition, the taxonomy of the genus has been seriously overlooked, and it is known to be a paraphyletic entity, from which several genera will be removed if a taxonomic revision and a cladistic analysis are made (Polhemus 1976; Andersen 1982).

Based on material collected on four different regions of Brazil (Northern, Northeastern, Central-Western, and Southeastern), eight new species of the genus were discovered and herein described. Also, descriptions of the previously unknown macropterous forms of *P. capixaba* and *P. dilatata* are presented. Material from other localities of Brazil and Peru provided new records, which are presented together with a checklist of the species of the genus and their known geographic distributions (Table 1). Finally, aiming to facilitate the identification of studied species, an identification key to the Brazilian *Paravelia* is provided, and colored photographs of the dorsal habitus of the examined species have been taken. These photographs show the pattern of wing maculae, which is an important characteristic and makes even females identifiable, because apparently there is no sexual dimorphism concerning this feature. If necessary, important characteristics, measurements, and illustrations of male genital capsule were also included.

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