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A new *Rhagovelia* (Hemiptera: Heteroptera: Veliidae) from the Brazilian Amazon, with a key to species of the *robusta* group known from the country

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Abstract

Rhagovelia zecai sp. nov., from the Brazilian Amazon, is described, illustrated, compared with similar species, and included in a key to species of the *robusta* group recorded from the country.

Key words: Aquatic insects, Neotropical Region, taxonomy, waterstriders

Resumo

Rhagovelia zecai sp. nov., da Amazônia brasileira, é descrita, ilustrada, comparada com espécies similares e incluída numa chave para as espécies do grupo *robusta* registradas no país.

Palavras chave: Insetos aquáticos, região neotropical, taxonomia, percevejos patinadores

Introduction

Rhagovelia Mayr, 1865 is a group of predatory semiaquatic bugs very common in tropical regions, which can be easily recognized by the swimming fan present on the deeply cleft distal article of the middle tarsus (Schuh and Slater 1995; Polhemus 1997). Representatives of the genus are usually collected on the free surface of flowing freshwater bodies, like springs, streams, and rivers, but representatives of a few species can be caught on intertidal marine water (Andersen 1982).

The taxonomy and phylogeny of the genus in the Western Hemisphere have been studied by Polhemus (1997), who described countless species and reorganized the species groups of the Americas. In Brazil, the works of Nieser and Melo (1997), Nieser and Polhemus (1999), Moreira *et al.* (2010, 2012), and Moreira and Barbosa (2011, 2012) have contributed immensely to the knowledge of the *Rhagovelia* from the southeastern region of the country. However, taxonomic studies based on material from other regions remain rare, and there are still unknown species, like the one recently collected on the Amazon region and herein described and keyed.

Material and methods

Type-material has been deposited on the Coleção Entomológica Professor José Alfredo Pinheiro Dutra, Laboratório de Entomologia, Departamento de Zoologia, Instituto de Biologia, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil (DZRJ). Measurements are given in millimeters and abbreviated as follows: body length (BL), head length (HL), head width through eyes (HW), length of antennomeres I–IV [without

1	Hind tibia with several subequal spines, besides apical spur (Fig. 7).	2
-	Hind tibia with one or more distal spines greater than the others, besides apical spur (Fig. 6)	6
2	Sides of abdominal segment VII bearing patches of small black denticles (Fig. 8); paramere as in Fig. 9	
	..... <i>R. sooretama</i> Moreira, Nessimian & Rúdio, 2010	
-	Sides of abdominal segment VII without patches of small black denticles; paramere with different shape	3
3	Proepisternum bearing minute black denticles (Fig. 2) (sometimes in small numbers and only visible at higher magnifications)	4
-	Proepisternum lacking minute black denticles	5
4	Body length about 3.20 mm; hind trochanter with small subequal spines plus one much longer spine; paramere as in Fig. 10	
	..... <i>R. amazonensis</i> Gould, 1931	
-	Body length 3.75–3.85; hind trochanter only with small subequal spines; paramere as in Fig. 11	
	..... <i>R. pseudotijuca</i> Moreira & Barbosa, 2011	
5	Abdominal tergites V and VI laterally pruinose with ovate brown spots centrally; abdominal tergite VII with a dark yellowish spot centrally; hind femur with a long, sharp spine removed dorsally from the 2 rows of spines along the posterior margin; paramere as in Fig. 12	
	..... <i>R. traili</i> (White, 1879)	
-	Abdominal tergites V and VI dull black, lacking ovate brown spots centrally; abdominal tergite VII shining black, lacking a dark yellowish spot centrally; hind femur lacking a long, sharp spine removed dorsally from the 2 rows of spines along the posterior margin; paramere as in Fig. 13	
	..... <i>R. plaumanni</i> Polhemus, 1997	
6	Hind trochanter unarmed; hind femur with three regular rows of spines, without large conical spine near center (Fig. 6); paramere as in Fig. 4	
	..... <i>R. zecai</i> sp. nov.	
-	Hind trochanter with at least one spine, if unarmed (rarely in <i>R. bocaina</i>) then hind femur with a large conical spine near center and several rather irregular rows of spines; paramere with different shape	7
7	Sides of abdominal segment VII bearing patches of small black denticles (Fig. 8); hind trochanter armed with small subequal spines plus one to three larger spines	8
-	Sides of abdominal segment VII lacking patches of small black denticles; hind trochanter unarmed (rarely in <i>R. bocaina</i>) or armed only with small subequal spines	9
8	Dorsal coloration, including legs and antennae, uniformly orange brown, not heavily marked with black on appendages; hind femur bearing a long, sharp spine near middle displaced dorsally from the main rows of spines along posterior margin; paramere as in Fig. 14	
	..... <i>R. palea</i> Bacon, 1956	
-	Legs and antennae heavily marked with black on dorsal surfaces; hind femur lacking a long, sharp spine displaced dorsally from the main rows of spines along posterior margin; paramere as in Fig. 15	
	..... <i>R. jubata</i> Bacon, 1948	
9	Small black denticles absent from jugum and adjacent region of proepisternum; anterior margin of hind femur bearing numerous long, erect pilose setae in addition to the typical stout, erect black setae; paramere as in Fig. 16	
	..... <i>R. guianana</i> Polhemus, 1997	
-	Small black denticles present on jugum and adjacent region of proepisternum (sometimes in small numbers and only visible at higher magnifications); anterior margin of hind femur lacking numerous long, erect pilose setae, bearing only scattered stout, erect black setae; paramere with different shape	10
10	General color yellowish brown to orange brown; middle trochanter pale to light yellow; paramere as in Fig. 17	
	..... <i>R. bocaina</i> Moreira & Ribeiro, 2009	
-	General color black; middle trochanter dark brown to black; paramere with different shape	11
11	Hind femur with two parallel regular rows of spines, without large spine dorsally displaced; paramere as in Fig. 18	
	..... <i>R. relicta</i> Gould, 1931	
-	Hind femur with 3–4 irregular rows of spines, with large spine near its middle dorsally displaced from others; paramere as in Fig. 19	
 <i>R. robusta</i> Gould, 1931	

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