



Checklist, taxonomy and distribution of the *Rhagovelia* Mayr, 1865 (Hemiptera: Heteroptera: Veliidae) of the Americas

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Abstract

The genus *Rhagovelia* Mayr, 1865 is distributed worldwide, especially in the Tropics, and contains 184 species in the Americas, which are listed and included in complexes or grades, and in 18 species groups. Geographical distributions and altitudinal ranges are presented for each species. A new synonym is proposed, and some biogeographical aspects of the genus are analyzed, such as its distinct tropical distribution (97% of the known American species), and the narrow altitudinal ranges of the *salina*, *tayloriella* and *cali* groups. South America is determined to be the geographical area with the highest diversity of species (77% of the species richness of the Americas), and Brazil as the most biodiverse country.

Key words: Aquatic insects, Neotropics, riffle bugs, taxonomy, water striders

Resumen

El género *Rhagovelia* Mayr, 1865, ampliamente distribuido en el mundo, principalmente en el trópico, presenta 184 especies en América, las cuales son listadas e incluidas en complejos o grados, y en 18 grupos. Para cada especie y grupo se incluyen los rangos geográficos y altitudinales. Se proporciona una nueva sinonimia, y se analizan algunos aspectos biogeográficos del género, como su distribución tropical definida (97% de las especies conocidas de América), y los límites altitudinales restringidos de los grupos *salina*, *tayloriella* y *cali*. Se muestra a Sudamérica como área geográfica con mayor diversidad (77% de la riqueza de especies del continente), y a Brasil como el país más biodiverso.

Palabras clave: Arañitas acuáticas, insectos acuáticos, Neotrópico, “riffle bugs”, taxonomía

Introduction

Representatives of *Rhagovelia* Mayr, 1865, known as water striders or riffle bugs, comprise a widely distributed genus, with preferences for Tropical latitudes. They are predators that live the surface film of fresh or brackish water bodies, varying from lentic or low-current habitats, to fast-running lotic environments.

Sexual dimorphism and alary polymorphism are well-expressed in *Rhagovelia*, with macropterous and apterous forms often occurring within a same population. The modifications of the thoracic structures are important for defining and distinguishing species and supra-specific taxa, and some species groups can only be separated based on the macropterous forms (e.g. the *bisignata* and *hambletoni* groups).

The most important studies dealing with the taxonomy of the *Rhagovelia* of the Americas are those of Bacon (1956) and Polhemus (1997), and, among others, the works of Polhemus and Manzano (1992), Nieser and