



## Four new species of *Rhagovelia* in the *robusta* group from Colombia (Hemiptera: Heteroptera: Veliidae)

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### Abstract

Four new species from Colombia are described: *Rhagovelia cachipai* sp. n., *Rhagovelia nicolai* sp. n., *Rhagovelia nariñensis* sp. n., and *Rhagovelia imperatrix* sp. n., all belong to *robusta* group. A key to *Rhagovelia* species of the *robusta* group from Colombia is provided.

**Key words:** new species, tropical South America, ripple bugs, small water striders

### Introduction

Four new species of *Rhagovelia*, *R. cachipai* sp. n., *R. nicolai* sp. n., *R. nariñensis* sp. n., and *R. imperatrix* sp. n. are described from Colombia and placed in the *robusta* group as defined by Polhemus (1997). These species are characterized by having the male proctiger with lateral projections on the anterior sclerotized cone and well-developed lateral lobes on basal portion. All have highly incrassate male hind femora, bodies with orange-brown coloration, and moderate sized male parameres with sinuate margins.

Three of the new species were taken from the same type locality, the Río Ñambí, Altaquer, located on the Pacific slope of western Nariño: *R. nicolai* sp. n., *R. nariñensis* sp. n., and *R. imperatrix* sp. n. The fourth species, *R. cachipai* sp. n., is described being from Cachipay Municipality (Cundinamarca) in the center of the country (Fig. 1).

The vegetation of Río Ñambi, Altaquer, is premontane pluvial forest; this area supports predominantly primary forest, which is characterized by a moderate high canopy level (20–25 meters), very high levels of epiphytes and many palms. This habitat is unique and only found in two narrow bands within the Chocó-Hight Central Andes. The Río Ñambi and adjacent areas, support high concentrations of endemic species in most major groups (Salaman 1994). The aquatic insects, specially the genus *Rhagovelia* have high diversity in Ñambi, and all species are apparently endemic, including four species previously described from *cali* group (Padilla-Gil 2009) and the four new species of *robusta* group described here.

Four other species in the *robusta* group have been previously recorded from Colombia (see Polhemus 1997), *R. rubra* Polhemus, *R. sinuata* Gould, *R. venezuelana* Polhemus, and *R. zeteki* Drake & Capriles. *Rhagovelia sinuata* occurs on the eastern slopes of the Cordillera Oriental of Colombia, the Andes of Ecuador and the Amazon rain forest of Venezuela, and *R. venezuelana* is widely distributed in Venezuela and also occurs in Colombia in the Seranía de la Macarena, an isolated uplift near the eastern slope of the Cordillera Oriental; the other two species are located in lowland forests. Among the new species, *R. cachipai* sp. n. occurs on western slopes of the Cordillera Oriental; while *R. nicolai* sp. n., *R. nariñensis* sp. n., and *R. imperatrix* sp. n., occur in montane forests (1100–1900 m) of the Cordillera Occidental.

A new record for the *R. zeteki* in the department of Santander, in the middle Magdalena River Valley, is included, and a key to Colombian *robusta* group species is provided.