



## A new species of *Potamobates* Champion from Colombia with a re-analysis of phylogenetic relationships (Hemiptera: Gerridae)

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### Abstract

*Potamobates tumaquensis* n. sp. from Colombia is described and its phylogenetic relationships and biogeographical characteristics discussed. An updated identification key to *Potamobates* species is also provided.

**Key words:** taxonomy, phylogeny, key, morphology

### Introduction

The Neotropical water strider genus *Potamobates* Champion (Gerridae: Cylirostethinae) includes 17 described species with distributions ranging from Mexico to Peru.

Species of *Potamobates* inhabit the surface film of rivers and streams with low velocity, clear waters, absence of floating vegetation, variable depth, and sandy or rocky substrate, in areas of primary rainforest (personal observations). They are gregarious in open waters or along stream margins, and most species do not occur syntopically with other congeners.

The genus appears to represent the Western Hemisphere equivalent of the Oriental genus *Ptilomera* Amyot & Serville (Polhemus & Polhemus 1995). However, Buzzetti (2006) recorded *Potamobates horvathi* Esaki 1926 and *P. anchicaya* Polhemus & Polhemus 1985 from a swampy area along a slow river in La Mayronga on the coastal plain forest of Ecuador.

Compared to other genera of Neotropical water striders, *Potamobates* has received considerable interest from systematists. The genus was described by Champion (1898) and redescribed by Drake & Harris (1934), Kuitert (1942) and Matsuda (1960). Polhemus & Polhemus (1995) described three new species, provided a key and checklist of all 15 known species, presented the first phylogenetic analysis based on 10 morphological characters, with *Cylindrostethus linearis* (Erichson 1848) as outgroup. Based on their results, they established 4 species-groups: the monotypic *P. thomasi* and *P. carvalhoi* groups comprising *P. thomasi* Hungerford 1937 and *P. carvalhoi* J. & D. Polhemus 1995 respectively; the *P. unidentatus* group comprising *P. bidentatus* Champion 1898, *P. horvathi* Esaki 1926, *P. manzanoae* J. & D. Polhemus 1995, *P. osborni* Drake & Harris 1928 and *P. unidentatus* Champion 1898; and the *P. tridentatus* group comprising *P. anchicaya* J. & D. Polhemus 1995, *P. peruvianus* Hungerford 1936, *P. spiculus* J. & D. Polhemus 1983, *P. tridentatus* Esaki 1926, *P. variabilis* Hungerford 1938, *P. vivatus* Drake & Roze 1954, *P. williamsi* Hungerford 1932 and *P. woytkowskii* Hungerford 1937. Later, Cognato (1998) and Buzzetti (2006) described two additional species, *P. sumaco* Cognato 1998 and *P. shuar* Buzzetti 2006, and placed them in a phylogeny based on Polhemus & Polhemus (1995) as members of the *P. tridentatus*-group.

In this paper yet another species is described from Colombia. The new species is placed in the *Potamobates*-phylogeny from Polhemus & Polhemus (1995) and their identification key is updated. The new species is found in the municipality of Tumaco (Fig. 1), on the Pacific Plain of the Chocó biogeographical region, which supports one of world's greatest concentrations of endemic flora and fauna and high biological diversity. Polhemus & Manzano