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## Description of the egg and immature stages of *Potamobates anchicaya* J. Polhemus & D. Polhemus, 1995 (Hemiptera: Heteroptera: Gerridae) and intersexual variation in adults

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### Abstract

The egg and five nymphal stages, of the Neotropical species *Potamobates anchicaya* are described and illustrated for the first time. Intra- and intersexual variation in the abdominal terminalia of apterous adults is also illustrated. Adults and nymphs were collected from three populations in southwestern Colombia.

**Key words:** water striders, semiaquatic bugs, egg, nymphal instars, Neotropical

### Introduction

The genus *Potamobates* Champion, 1901 is Neotropical in distribution, with 19 species occurring from Mexico to Peru. Their phylogenetic relationships are known, based on parsimony analysis of morphological characters (J. Polhemus & D. Polhemus, 1995; Padilla-Gil & Damgaard, 2011).

Studies of the immature stages of Neotropical species of the Gerridae have been published for the following species: *Eurygerris fuscinervis* Berg, 1898 (see Padilla-Gil & Arcos, 2010); the genus *Trepobates* Uhler, 1894 (see Konopko & Mazzucconi, 2011); three species of the genus *Rheumatobates* Bergroth, 1892 (*R. longisetosus* J. Polhemus & Manzano, 1992; *R. peculiaris* J. Polhemus & Spangler, 1989; *R. probolicornis* J. Polhemus & Manzano, 1992); *Telmatometra whitei* Bergroth, 1908; and *Telmatometroides rozeboomi* (Drake & Harris, 1937) (see Padilla-Gil, 2013a). By contrast, the biology, development, and ecology of the species in the genus *Potamobates* are unknown.

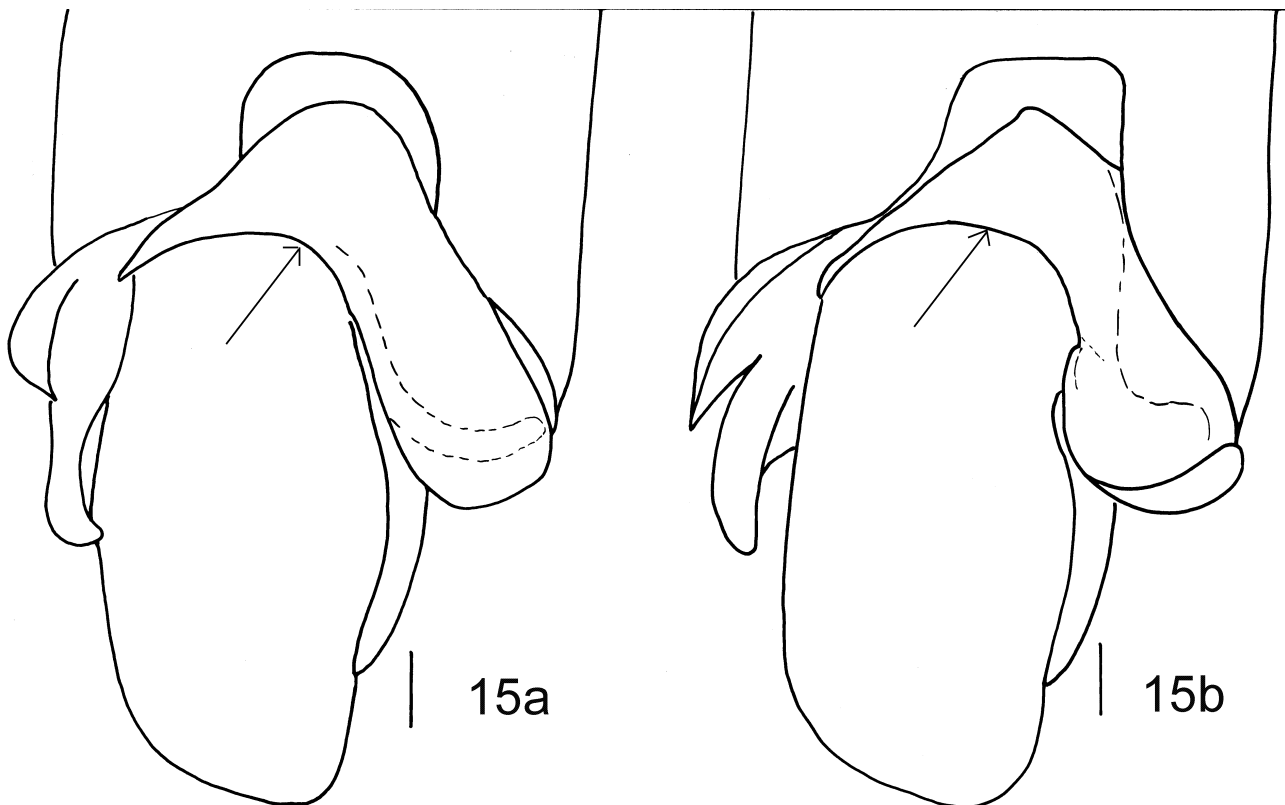
In Colombia the genus *Potamobates* is widely distributed in the Pacific, Andean, Caribbean and Amazon regions. *Potamobates anchicaya* is frequently found in highly conserved forest in the foothills of the Colombian Pacific and the Pacific Plain (Padilla-Gil & García, 2013). Its geographical range extends from Panama through Colombia to Ecuador (Polhemus & Polhemus, 1995; Buzzetti, 2006).

Three populations of *Potamobates anchicaya* were studied, from Ñambi (1200 m –1310 m) and Diviso (900 m) in the municipality of Barbacoas, in the southwestern foothills of the Andes, and from Mar Agrícola (10 m) in the Tumaco municipality, in the plain of the Colombian Pacific. This work describes the egg and five nymphal stages, including the fourth and fifth of the apterous form. Variations in the terminal abdominal segments of females and male apterous adults are also illustrated.

### Materials and methods

The specimens were collected with a hand net (mesh 0.1 mm) and preserved in 70% alcohol. Ripe ovarian eggs were dissected from the female's abdomen.

All measurements are in mm. Specimens were deposited in the Colección de Entomología, Universidad de Nariño, Pasto, Colombia (PSO-CZ).



**FIGURE 15.** *Potamobates anchicaya*, apterous male, terminal abdomen, ventral view. 15a. form one, 15b. form two. Scale 0.15 mm.

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### References

- Buzzetti, F.M. (2006) The genus *Potamobates* Champion in Ecuador, with description of *P. shuar* n. sp. (Hemiptera: Gerridae). *Zootaxa*, 1306, 51–56.
- Konopko, S.A. & Mazzucconi, S.A. (2011) The immature stages of the genus *Trepobates* Uhler (Hemiptera: Heteroptera: Gerridae), with an identification key to instars and the description of the nymphs of *T. taylori* (Kirkaldy). *Zootaxa*, 2733, 1–15.
- Padilla-Gil, D.N. (2013) Immature stages of five species of Gerridae (Heteroptera: Gerromorpha) from the Eastern Tropical Pacific. *International Journal of Tropical Insect Science*, 33 (2), 91–98.  
<http://dx.doi.org/10.1017/s1742758413000106>
- Padilla-Gil, D.N. & Arcos, O. (2010) Estadios y variación temporal de *Eurygerris fuscinervis* (Heteroptera: Gerridae) en los Andes de Colombia. *Revista Colombiana de Entomología*, 36 (2), 300–303.
- Padilla-Gil, D.N. & Damgaard, J. (2011) A new species of *Potamobates* Champion from Colombia with a re-analysis of phylogenetic relationships (Hemiptera: Gerridae). *Zootaxa*, 2879, 41–49.
- Padilla-Gil, D.N. & García, J.P. (2013) Análisis de la distribución geográfica de las Gerridae (Hemiptera, Gerromorpha) en los Andes del Suroeste de Colombia. *Acta Biológica Colombiana*, 18 (2), 381–389.
- Polhemus, J.T. & Polhemus, D.A. (1995) A phylogenetic review of the *Potamobates* fauna of Colombia (Heteroptera: Geridae), with descriptions of three new species. *Proceedings of the Entomological Society of Washington*, 97 (2), 350–372.