



Two new genera and three new species of freshwater crabs (Crustacea: Pseudothelphusidae: Potamocarcinini) from Chiapas, Mexico

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Abstract

Two new genera, *Sylvathelphusa* **n. gen.** and *Tzotzilthelphusa* **n. gen.**, and three new species, *Sylvathelphusa kalebi* **n. sp.**, *S. cavernicola* **n. sp.** and *Tzotzilthelphusa villarosalensis* **n. sp.**, of the tribe Potamocarcinini, family Pseudothelphusidae, are described from Chiapas, Mexico. *Sylvathelphusa* **n. gen.** is characterized by a male gonopod with the marginal plate between the caudal and mesial surfaces abruptly widening distally and forming a triangular apical projection; and a mesial process as a strong, acute spine forming a 90° angle with respect to the principal axis of the gonopod. *Tzotzilthelphusa* **n. gen.** exhibits a male gonopod strongly bent laterally in the distal third, and a mesial surface rounded distally with acute spinules. *Sylvathelphusa* **n. gen.** is similar to *Potamocarcinus* in gonopod morphology, in both straight and with a mesial process developed as strong tooth in a similar shape and position. *Tzotzilthelphusa* **n. gen.** is similar to *Phrygiopilus* in that the gonopods of both genera develop a supra-apical process that is a continuation of the mesial surface. The new taxa come from the Los Altos de Chiapas region and bring the total number of pseudothelphusid genera in Chiapas to 11.

Key words: Freshwater crab, Pseudothelphusidae, Potamocarcinini, new genera, new species, Chiapas, Mexico

Introduction

The freshwater crabs of the family Pseudothelphusidae Ortmann, 1893, distributed in southern Mexico make up a highly diversified group including several different lineages. Three tribes with 13 genera and 36 species occur in a restricted area in the states of Oaxaca, Veracruz, Tabasco and Chiapas, a region with the highest diversity of tribes and genera in the entire range of the family (Villalobos & Álvarez 2008, Álvarez *et al.* 2011).

The tribe Potamocarcinini Ortmann, 1897, is the best represented throughout southern Mexico with 7 genera and 19 species (Villalobos & Álvarez 2008). The Potamocarcinini range from Veracruz, Mexico, throughout Central America to northern Colombia (Rodríguez 1982, von Prael & Ramos 1987). The diversity of potamocarcinids in the Mexican states of Chiapas, Veracruz and Oaxaca indicates the uniqueness of this area in having several lineages that coexist as different genera. As a consequence of the range of the tribe, the pseudothelphusids of Chiapas are more closely related morphologically to species from Central and South America, than to species of the tribe Pseudothelphusini, distributed throughout central and western Mexico.

The new genera described herein, from the State of Chiapas (Fig. 1), are close morphologically to other genera in the Potamocarcinini. *Sylvathelphusa* **n. gen.** is similar to *Potamocarcinus* H. Milne-Edwards, 1853 in that both genera exhibit a straight gonopod with a mesial process present as a strong, conical tooth with the same shape and in the same position. *Tzotzilthelphusa* **n. gen.** is similar to *Phrygiopilus* Smalley, 1970 in that the gonopods of both genera develop a supra-apical process that is a continuation of the mesial surface. In *Phrygiopilus* the supra-apical process can develop to an extent so as to make the apex cavity face proximally (Álvarez & Villalobos 1998), whereas in *Tzotzilthelphusa* **n. gen.** the development of the mesial surface leaves the apex cavity facing laterally. The new genera are proposed based on the unique morphological features of the male gonopods. The distinguishing characters found for *Sylvathelphusa* **n. gen.** are: a mesial surface ending apically in a tongue-like