

***Asterocheres siphunculus*, a new species of Asterocheridae (Copepoda, Siphonostomatoida) associated with *Eucidaris tribuloides* (Lamarck, 1816) (Echinodermata, Echinoidea) in Brazil**

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Abstract

Asterocheres Boeck, 1859 is the most speciose genus within the copepod family Asterocheridae Giesbrecht, 1899. Its main hosts are sponges, cnidarians, bryozoans, and echinoderms. Among the latter there are records of *Asterocheres* associations with some species of the echinoid genus *Eucidaris* Pomel, 1883. Despite the wide distribution of *Eucidaris tribuloides* (Lamarck, 1883) in the coastal waters of Brazil, no records exist as yet of any copepod associated with this species. *Asterocheres siphunculus* **sp. nov.** is described herein based on samples collected from *E. tribuloides* sampled from two different sites off the coast of Salvador city, Bahia state, in northeastern Brazil. The new species shares a 20-segmented antennule with 20 congeners, but differs from them by having a very short siphon that reaches the insertion of the maxilla, a very wide rostrum that occupies the entire area between the antennules, and a pedigerous somite 4 with pointed and narrow posterolateral corners and a concave posterior margin.

Key words: Associated copepod, symbiotic fauna, sea urchin, Cidaridae

Introduction

Although there are some families among the order Siphonostomatoida Burmeister, 1835, such as Brychiopontiidae Humes, 1974, Calverocheidae Stock, 1968, Cancerillidae Giesbrecht, 1897, Micropontiidae Gooding, 1957, Nanaspididae Humes & Cressey, 1959, and Stellicomitidae Humes & Cressey, 1958, that live exclusively in association with echinoderms (Boxshall & Halsey 2004), the family Asterocheridae Giesbrecht, 1899, especially members of its type genus *Asterocheres* Boeck, 1860, can be commonly found associated with many invertebrate hosts (Ivanenko & Smurov 1997; Johnsson 2002; Johnsson *et al.* 2002; Kim 2010). For example, *Asterocheres unicus* Johnsson, 2001 has been recorded from irregular echinoids and ascidians, and *A. spinopaulus* Johnsson, 1998 and *A. spongius* Johnsson, 2002 were found in the washings of crinoids but also from sponges and bryozoans. Exclusively associated with echinoderms, *A. crinoidicola* Humes, 2000, *A. pilosus* Kim, 2004, and *A. unioviger* Kim, 2010 are included, together with *A. trisetatus* Kim, 2010 (found in association with a sponge), in a group called the “*crinoidicola* group”, which is characterized by a distal prolongation on the third endopodal segment of leg 1 (Kim 2010). Within this group, *A.*