



A new *Munidopsis* species (Galatheoidea, Munidopsidae) from the Southwestern Atlantic

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Abstract

Six *Munidopsis* species are recorded to the Southwestern Atlantic: *M. barbarae*; *M. erinacea*; *M. nitida*; *M. sigsbei*; *M. riveroi* and *M. transtridens*. Herein a new *Munidopsis* species from Southwestern Atlantic is described: *Munidopsis trindadensis* sp.nov., was sampled off Trindade Island (Espírito Santo, Brazil) at 360 m depth and differs from all six species previously recorded in this region by the telson with seven plates.

Key words: squat lobsters, Brazilian waters, systematics, diversity

Introduction

The Galatheoidea (squat lobsters) are an abundant, speciose and worldwide distributed group. According to Baba *et al.* (2008) 870 species of squat lobsters are recognized. They occur in all marine habitats, including anchialine caves and hydrothermal vent areas, and at depths ranging from near the surface of the sea to more than 5000 m. Squat lobsters are primarily found in tropical and temperate waters, with few records in high latitudes.

The higher classification of the Galatheoidea was recently reviewed on the basis of phylogenetic analysis (Ahyong *et al.* 2009; Schnabel *et al.* 2011). Based on these analyses, Ahyong *et al.* (2010) proposed a new classification comprising four families: Galatheidae Samouelle, 1819; Munidae Ahyong *et al.*, 2010; Munidopsidae Ortmann, 1898 and Porcellanidae Haworth, 1815. These four families can be distinguished by morphological and ecological features. Members of Munidopsidae are usually found in deep sea areas, this family includes four extant genera and at least 236 species that can be distinguished by the flagellum of maxilliped 1 being reduced or absent (Ahyong *et al.* 2010).

As a deep sea family, the Munidopsidae are still poorly known in some parts of the world. Two genera are recorded to the Western Atlantic: *Galacantha* A. Milne Edwards, 1880 and *Munidopsis* Witheaves, 1874. *Munidopsis* is very speciose, including 224 species (Baba *et al.* 2008), six being previously recorded from the Southwestern Atlantic: *M. barbarae* (Boone, 1927); *M. erinacea* (A. Milne Edwards, 1880); *M. nitida* (A. Milne Edwards, 1880); *M. sigsbei* (A. Milne Edwards, 1880); *M. riveroi* Chace, 1939 and *M. transtridens* Pequegnat & Pequegnat, 1971 (Henderson 1888; Coelho *et al.* 1980; Coelho *et al.* 1990; Tavares & Campinho 1998; Serejo *et al.* 2007; Rodrigues & Serejo 2010). The present paper contributes to the knowledge of the genus *Munidopsis* in the Southwestern Atlantic.

Material and methods

The material herein analyzed was sampled during the oceanographic Program REVIZEE—Central Score that sampled at the central Brazilian coast, using the R/V Thalassa (IFREMER), between the latitudes of 11°S—Rio Real, Bahia to 22°S—Cabo de São Tomé, Rio de Janeiro. During June and July of 2000 a total of 58 tows were

Right pereopod 1 (cheliped) 1.8 times longer than carapace, densely spinose and tuberculate; propodus with 5 stout teeth at extensor margin, flexor margin with numerous small teeth, dorsal and ventral surfaces with sparse striae, palm about 2.2 times as long as high; fixed finger and dactylus with dentate occlusal margins, fixed finger with acute apex and dactylus with simple apex; carpus and merus with three rows of strong teeth, at flexor and extensor margins and at mesial surface; ischium with dorsodistal tooth (Fig. 2C).

Pereopod 2–4 dactylus curved, flexor margin setose, terminating in corneous unguis (Fig. 2D–F). Pereopod 2 reaching anterior margin of pereopod 1 carpus. Pereopods 2–3 propodus tuberculate, extensor margin dentate; carpus extensor margin dentate, with a distal spine, dorsal margin with a row of small tubercles; merus extensor and flexor margins dentate, with distal spines (Fig. 2D, E). Pereopod 4 propodus, extensor margin dentate, dorsal surface with a proximal row of teeth; carpus extensor margin dentate, with a distal spine, dorsal margin with two rows of teeth, distal margin serrate; merus extensor margin dentate with a distal spine, dorsal margin densely dentate (Fig. 2F). Ischium unarmed at pereopod 2, with 3 blunt teeth and a dorsodistal tooth at pereopod 3; with 3 rows of small blunt teeth at pereopod 4 (Fig. 2D–F).

Pereopods without epipods.

Etymology. Derived from the type-locality, Trindade Island, southwestern Atlantic.

Distribution. Southwestern Atlantic, off Trindade Island, Espírito Santo, Brazil.

Remarks. All the six *Munidopsis* species previously recorded from the southwestern Atlantic (*M. barbarae*, *M. erinacea*; *M. nitida*, *M. sigsbei*, *M. riveroi* and *M. transtridens*) have a telson with eight or more plates while *M. trinidadensis* **sp. nov.** presents seven plates. *Munidopsis erinacea* is the only species in the area that can have seven, eight or more plates on the telson, but it can be distinguished from *M. trinidadensis* **sp. nov.** by the rostrum having a pair of large lateral spines.

Characters such as the triangular and dorsally carinate rostrum; prominent antennal spine; conical, divergent spine on the cornea; smooth abdomen and the absence of epipods on the pereopods are shared with *Munidopsis trinidadensis* **sp. nov.**, *M. acutispina* Benedict, 1902, *M. penescabra* Pequegnat & Williams, 1995, *M. kucki* Baba & Camp, 1998, *M. sharreri* (A. Milne Edwards, 1880), *M. tanneri* Faxon, 1893 and *M. scabra* Faxon, 1893. *Munidopsis acutispina* and *M. kucki* occur in the northeastern Atlantic, the first differs from *M. trinidadensis* **sp. nov.** mainly by the unarmed rostrum and the lateral carapace margins with five spines (Pequegnat & Williams 1995). The second can be distinguished from *M. trinidadensis* **sp. nov.** by the carapace lacking spines on the posterior margin and the telson with eight plates (Pequegnat & Williams 1995).

Munidopsis sharreri occurs in the Caribbean Sea and differs from *M. trinidadensis* **sp. nov.** by having a carapace covered with scale-like tubercles that are never developed into acute spines and a telson with eight plates (Pequegnat & Pequegnat 1971).

Munidopsis penescabra was described from the Gulf of Mexico and differs from *M. trinidadensis* **sp. nov.** mainly by the lateral carapace margins having six or seven spines, the carapace with a more spinose dorsal surface and the shape of cardiac region (Pequegnat & Williams 1995).

Munidopsis tanneri and *M. scabra* occur in the eastern Pacific; the first differs from *M. trinidadensis* **sp. nov.** by the slender rostrum and the quadrangular carapace being wider in the posterior half; *Munidopsis scabra* differs from *M. trinidadensis* **sp. nov.** mainly in the spination of the lateral carapace margins with 8–10 spines (versus 6 spines) (Pequegnat & Williams 1995).

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