The deep-sea squat lobster *Munidopsis transtridens* Pequegnat and Pequegnat, 1971 (Decapoda: Anomura: Galatheidae) from the Southwestern Atlantic

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Abstract

Munidopsis transtridens Pequegnat and Pequegnat, 1971, previously known from the Gulf of Mexico, Florida, and Guyana, is recorded for the first time from the Southwestern Atlantic (southeastern Brazil). *M. transtridens* is closely related to *M. tridens* (A. Milne-Edwards, 1880). The morphological differences between the two species are briefly discussed.

Key words: *Munidopsis,* squat lobster, deep-sea; benthos, Atlantic.

Introduction

Munidopsis transtridens Pequegnat and Pequegnat, 1971, was described upon a single female caught at 1280 meters depth in the southeastern Gulf of Mexico (Pequegnat and Pequegnat, 1971: 15; Baba *et al.,* 2008: 166). *M. transtridens* has been mentioned from Florida and Guyana by Fierro Rengifo *et al.* (2008: 9), based on Mayo (1974) [not seen]. Otherwise, no additional records of *M. transtridens* are known to date. The species is recorded herein for the first time from the Southwestern Atlantic. Opportunity is taken to elaborate on its taxonomy.

Morphological terminology follows Baba (2005). Abbreviations used includes: MZUSP (Museu de Zoologia, Universidade de São Paulo, São Paulo); USNM (National Museum of Natural History, Smithsonian Institution, Washington D. C.); Mxp3, third maxilliped; P1, cheliped; P2-5, pereiopods; cl, carapace length measured from the tip of the rostrum to the posterior margin of the carapace; cw, maximal carapace width.

Munidopsis transtridens Pequegnat and Pequegnat, 1971 (Figures 1A-C; 2; 3)

Munidopsis transtridens Pequegnat and Pequegnat, 1971: 15.

Munidopsis transtridens – McLaughlin *et al.,* 2005: 239; Baba *et al.,* 2008: 166; Fierro Rengifo *et al.,* 2008: 9.

Material examined: Brazil: Bacia de Campos, ROV Support Vessel "Toisa Conqueror", 22°25'4 4.211"S-45°57'32.305"W, 23.vii.2005, deep-sea corals, 1048 m: 1 female cl 16.5 mm, cw 10 mm (MZUSP 18839).

Description: The following are additions to the previously published data. Carapace dorsal surface with minute, widely spaced granules anteriorly, and numerous tubercles arranged in several transverse rows posteriorly. Regions of carapace well delimited. Antennal spine strong, sharp. Epigastric spines distinct, sharp, directed inward. Carapace lateral margins with four spines: one anterolateral and three branchial. Posterior margin unarmed. Rostrum broad, tridentate. Lateral teeth minute, acute, slightly directed outward; mid-tooth sharp, upturned, about as long as distance between lateral teeth. Sides of rostrum from base to lateral teeth slightly convex. Dorsal rostral carina well marked, reaching backwards as far as anterior epigastric spines. Eyes reaching to fourth antennal article, movable, spineless; cornea unpigmented, omatidia hardly recognizable. Antennular basal article with three spines: distomesial small, broadly triangular; distolateral strong, sharp, longer than lateral; lateral strong, acute. Antennal peduncle consisting of

Figure 1. *Munidopsis transtridens* Pequegnat and Pequegnat, 1971. Female cl 16.5 mm, cw 10 mm (MZUSP 18839). A, *habitus,* dorsal view. B, lateral view of the right cheliped (setae not shown). C, lateral view of the left cheliped (setae not shown). Scale bars: A, 5 mm; B-C, 3.5 mm

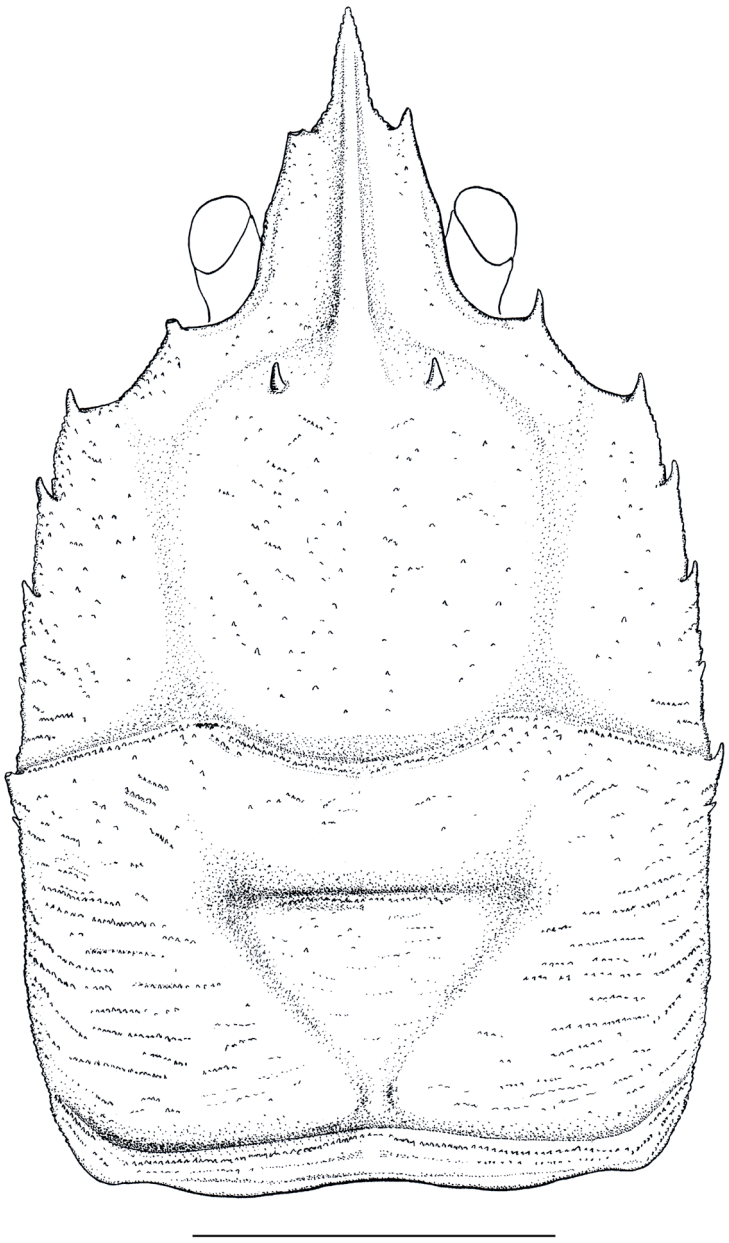

Figure 2. *Munidopsis transtridens* Pequegnat and Pequegnat, 1971. Female cl 16.5 mm, cw 10 mm (MZUSP 18839). Dorsal view of carapace (setae not represented). Note the tubercles arranged in transverse rows posteriorly. Scale bar: 5 mm.

four articles: basal article unmovable, ventromesial spine strong, lateral spine smaller than ventromesial; second article with lateral spine strong, acute. A strong, sharp spine between eye and antennal peduncle.

Flexor margin of merus of Mxp3 with three strong, sharp spines arranged in a longitudinal row: proximal one strongest; distal one shortest; one denticule between each two adjacent spines. Flexor margin of ischium with strong, acute, distal spine; mesial ridge well developed. Chelipeds slender, distinctly setose, slightly more than two times length of carapace. Fixed and movable fingers distinctly shorter than palm; cutting edges of fingers crenulate, teeth low, rounded, rather similar to one another; teeth at tips of fingers strong, acute. Subdistomesial spine of carpus strong, acute; distal margins of carpus with three spines: one dorsal; one lateral; and one ventral spine. Merus approximately equal to carapace length. Dorsal side of merus with seven to eight spines arranged in a longitudinal row: five to six proximal spines; one spine at about mid-length of merus; and one distal spine. Mesial side of merus with four spines arranged in

a longitudinal row: one distal and three proximal spines. A longitudinal row of three to four spines just above mesial side of merus. P2 reaching almost to distal end of carpus of P1; P3-P4 progressively shorter. Dactyli massive; upper margin weakly convex; lower margin straight, armed with ten to eleven corneous spines directed forward. Ventral side of propodi with two distal spines. Carpi with two distinct, longitudinal ridges: dorsomesial ridge armed with two or three strong, forward-directed spines, distal spine largest; dorsolateral ridge showing as a row of low, directed forward tubercles. Mesial side of carpi smooth. Meri with dorsal row of seven, strong, forward-directed spines, increasing in size regularly from proximal to distal end. Abdominal tergites of second through fourth segments transversely ridged; fifth and sixth segments not ridged. Margins of exopod of uropod with minute, corneous spines of about same size; margins of endopod dentate; teeth strong, unequal in size. Telson divided into seven plates.

Variations: The southwestern Atlantic specimen resembles with the description and figures of the female holotype of *M. transtridens* (USNM 138236) provided by Pequegnat and Pequegnat (1971: 16-17, fig. 9, 10 a-c). In the Brazilian female, however, the convexity of the sides of the rostrum, from base to lateral teeth, is less pronounced than in the Gulf specimen; the ventrolateral side of the merus of Mxp3 has two strong spines followed by one smaller spine, instead of two spines and two or three denticles distally as in the Gulf material. Furthermore, in the Brazilian specimen there is a small denticle between the ventrolateral meral spines, not mentioned or figured by Pequegnat and Pequegnat (1971: fig. 9b).

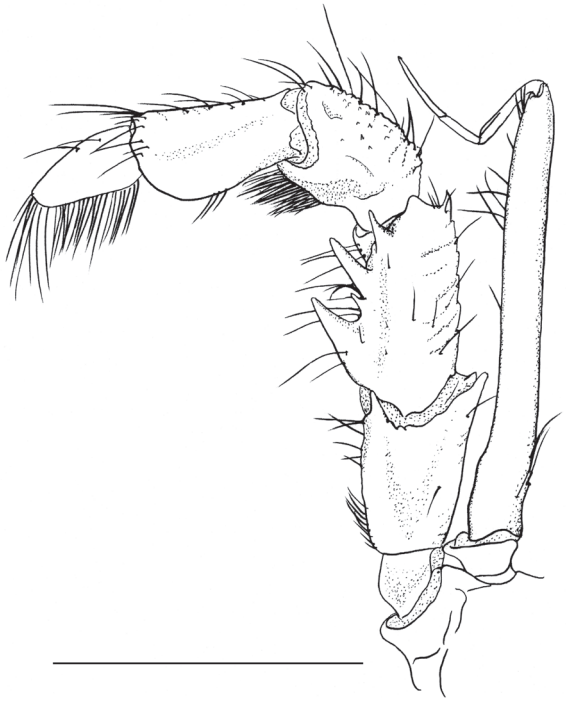

Figure 3. *Munidopsis transtridens* Pequegnat and Pequegnat, 1971. Female cl 16.5 mm, cw 10 mm (MZUSP 18839). Left third maxilliped. Note the three strong spines on the flexor margin of the merus. Scale bar: 3 mm.

Remarks: *Munidopsis transtridens* closely resembles *M. tridens* (A. Milne-Edwards, 1880) known from St. Kitts (A. Milne-Edwards, 1880; A. Milne-Edwards and Bouvier, 1894; 1897; Benedict, 1902; Chace, 1942), Cuba (Chace, 1942), and southeast Gulf of Mexico (Chace, 1942; Pequegnat and Pequegnat, 1970). Morphological differences between *M. transtridens* and *M. tridens* include: in *M. transtridens* (i) merus of P1 approximately equal to carapace length (rostrum not included) (whereas in *M. tridens* the merus is shorter than carapace length); (ii) dorsal side of the merus of P1 with seven to eight spines arranged in a longitudinal row (instead of three or four in *M. tridens*); (iii) mesial side of the merus of P1 with four spines arranged in a longitudinal row (instead of only one spine in *M. tridens*).

Distribution: *M. transtridens* is known so far from the southeastern Gulf of Mexico (Pequegnat and Pequegnat, 1971); Florida and Guyana (Mayo, 1974); and off the coast of southeastern Brazil.

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