



Two new species of *Quadrimeaera* (Crustacea: Amphipoda: Melitidae) from Atol das Rocas, Brazil

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Abstract

A field collection of Crustacea was made in the Biological Reserve of Atol das Rocas, Northeastern Brazil, from October 2000 to October 2001. Specimens were obtained from washed algae, from the inner and outer parts of the annular reef between 0–20 m depths. In this paper we describe two new species of the genus *Quadrimeaera* Krapp-Schickel & Ruffo, 2000 (Amphipoda: Melitidae) from Atol das Rocas. *Quadrimeaera chaelata* **sp. nov.** differs from all other species of the genus by a strong process in the palmar corner on the propodus of gnathopod 2 that essentially makes it chelate; *Quadrimeaera rocasensis* **sp. nov.** differs from its congeners in size, shape, and order of excavations on the palm of gnathopod 2, by a robust spine on the inner margin of the dactylus of gnathopod 2 that opposes the first excavation of the palm, and by three long bifid setae and a nail with an apical seta, in each lobe of the telson.

The two new species are endemic to Atol das Rocas. This study raises to three the number of known species of the genus *Quadrimeaera* from the atoll: the two new species and *Quadrimeaera cristianae* Krapp-Schickel & Ruffo, 2000. A key to identification for the species of *Quadrimeaera* from Atol das Rocas is given.

Key words: Taxonomy, amphipods, melitids, *Quadrimeaera chaelata* **sp. nov.**, *Quadrimeaera rocasensis* **sp. nov.**, endemism, oceanic island, Northeastern Brazil

Introduction

The genus *Quadrimeaera*, type species *Gammarus quadrimanus* Dana, 1853, is characterized by the rectangular and broadened gnathopod 2 in both sexes, bifid dactyli on posterior pereopods, article 1 of mandibular palp rounded, and rami of uropod 3 distally truncate and spinose. The genus has its center of evolution in the Indo-Pacific Ocean, penetrating eastward to the Caribbean and North Atlantic American coasts, and westward to Madagascar and the Red and Mediterranean Seas (Krapp-Schickel, 2000). Until the present study, *Quadrimeaera* includes 21 species, five of them recorded from Brazilian waters: *Q. inaequipes* (Costa, 1851), *Q. quadrimana* (Dana, 1853), both in Wakabara (1972), *Q. miranda* (Ruffo, Krapp & Gable, 2000), *Q. cristianae* Krapp-Schickel & Ruffo, 2000 and *Q. pieteri* Krapp-Schickel & Ruffo, 2000. All species of this genus are marine and inhabit intertidal and infralittoral rocky shores (Krapp-Schickel, 2000) and coral reefs (Myers, 1985). Amphipods melitids nestle in crevices formed by algal interstices and pores of coral rubble or dead bases of fixed reef elements (Barnard, 1976).

Oceanic islands are an environment with a great propensity toward a high level of endemism because of the large distances that separate them geographically from the continental shelf. Examples of this endemism were observed with shore fish species recorded from São Pedro e São Paulo Archipelago, which represent 5% of the benthic fauna studied for these rocks (Edwards & Lubbock, 1983). Similarly, there are records of five sponge species of *Plakortis* and two of *Plakinastrella* from the Western Atlantic Ocean. Two of the *Plakortis*