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***Nematocarcinus* Milne Edwards, 1881 (Crustacea, Decapoda) from Southwestern Atlantic, including the Southern Mid-Atlantic Ridge area**

IRENE A. CARDOSO¹ & RUDOLF N. BURUKOVSKY²

¹*Setor de Carcinologia, Museu Nacional/UFRJ, Quinta da Boa Vista, São Cristóvão s/n, 20940-040, Rio de Janeiro, Brazil.*

E-mail: irenecardoso@mn.ufrj.br

²*Kaliningrad State Technical University 1, Sovetsky avenue, Kaliningrad 236022, Russia.*

E-mail: burukovsky@klgtu.ru.

Abstract

The deep sea shrimp genus *Nematocarcinus* Milne Edwards, 1881 includes 47 species, ten of them have been recorded from the Atlantic Ocean. Herein, material sampled during three scientific projects (REVIZEE Central Fishery project; Campos Basin Deep Sea Environmental Project; Evaluation of Environmental Heterogeneity in the Campos Basin) made in the Southwestern Atlantic, off Brazil, is examined. In addition, material sampled from the South Mid Atlantic Ridge (MAR-ECO Project) was also examined. Four species are recorded for the first time to the southwestern Atlantic Ocean including Mid Atlantic Ridge area: *Nematocarcinus faxoni* Burukovsky, 2001; *N. gracilipes* Filhol, 1884; *N. rotundus* Crosnier & Forest, 1973 and *N. tenuipes* Spence-Bate, 1888.

Key words: deep sea, *Nematocarcinus*, systematics, South Atlantic

Introduction

Nematocarcinidae Smith, 1884 is a caridean shrimp family exclusively occurring in deep-sea. It includes six genera, *Nematocarcinus* Milne Edwards, 1881 is the most species rich, represented by 47 species (De Grave & Fransen 2011; Burukovsky 2012). Ten species are known from the Atlantic Ocean: *Nematocarcinus africanus* Crosnier & Forest, 1973; *N. cursor* Milne Edwards, 1881; *N. ensifer* (Smith, 1882); *N. exilis* (Spence-Bate, 1888); *Nematocarcinus faxoni* Burukovsky, 2001; *N. gracilipes* Filhol, 1884; *N. romenskyi* Burukovsky, 2000; *N. rotundus* Crosnier & Forest, 1973; *N. sigmoideus* Macpherson, 1984 and *Nematocarcinus tenuipes* Spence-Bate, 1888 (Spence-Bate 1888; Crosnier & Forest 1973; Burukovsky 2000c; 2001a; 2001b; 2007; 2009; 2012). None of these species had been recorded from the southwestern Atlantic, until the work of Cardoso & Serejo (2007) that recorded *N. ensifer* to this region. Examining herein more material from southwestern Atlantic revealed that this previous record was based on a misidentification, and that the material examined by Cardoso & Serejo (2007) actually belongs to *N. tenuipes* Spence-Bate, 1888. In this way, the nematocarcinid fauna of southwestern Atlantic region is, until the present work, almost unknown.

Nematocarcinus species are benthic, living in soft mud deep sea bottom; their pereopods are quite long and slender with tufts of long setae at dactyls forming “mud shoes” that prevent sinking and improve locomotion. Due this fragility many times pereopods are lost during sample activities so they are not commonly used as diagnostic features. According Burukovsky (2004; 2012) the main diagnostic features to *Nematocarcinus* species are rostrum teeth and shape; third abdominal tergite shape; fifth abdominal pleura shape; inner surface of the anterior margin of the pleura of the fifth abdominal segment; accessory teeth on telson and sixth abdominal somite ventral margin (distoventral organ). Using this features Burukovsky (2004; 2012) presented a synoptic table to all *Nematocarcinus* species that is a very useful tool to species identification.

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