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New species of *Myrmekioderma* (Demospongiae: Halichondrida: Heteroxyidae) from Brazil

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Abstract

The genus *Myrmekioderma* comprises eight species widely distributed, two of which occur in the Western Atlantic. We describe here a new species of *Myrmekioderma* from Northeastern Brazil with a discussion on the taxonomy of the Brazilian species. Samples were collected by trawling in the continental shelf of Sergipe and Alagoas States. *Myrmekioderma intrastrongyla* sp. nov. has strongyles in the choanosome, a single category of acanthoxea and two categories of trichodragmata. Regarding the external morphology, the closest species of *M. intrastrongyla* sp. nov. are *Myrmekioderma rea* and *M. granulatum*. However, the former differs from the new species by possessing oxeas and styles and the last by its unique category of trichodragmata. *Myrmekioderma rea* was the only species that was recorded for Brazil, occurring in Maranhão and Rio Grande do Sul States, but both records need to be reassessed.

Key words: Porifera, Taxonomy, *Myrmekioderma intrastrongyla* sp. nov., Brazilian coast

Introduction

The genus *Myrmekioderma* Ehlers, 1870 belongs to the family Heteroxyidae Dendy, 1905, that is comprised by 12 genera with about 60 species widely distributed in the world (van Soest *et al.*, 2013). It is characterized by the presence of ectosomal skeleton formed by smaller (acanth-)oxeas, perpendicular to the surface, and choanosome with halichondroid reticulation in its central portion, composed by (acanth-)oxeas, styles or strongyles, and trichodragmata of raphides (Hooper, 2002).

Studies show that the bioactive components of some species of *Myrmekioderma* have several pharmacological activities. The compounds of *Myrmekioderma rea* (De Laubenfels, 1934), for example, have been used against hepatitis, HIV, and tuberculosis (Peng *et al.*, 2002 as *Myrmekioderma styx* De Laubenfels, 1953) and the compounds of *M. granulatum* (Esper, 1794), have antimicrobial activity [Mishra *et al.*, 2009 as *M. granulata* (Esper, 1794)].

There are eight known species of *Myrmekioderma* widely distributed in tropical and subtropical oceans, which only *Myrmekioderma granulatum* presents a disjunct distribution, occurring in the Indian and Pacific Oceans. The other species have a restricted distribution: *Myrmekioderma dendyi* (Burton, 1959), *M. niveum* (Row, 1911) and *M. tuberculatum* (Keller, 1891) in the Indian Ocean; *M. pacificum* Pulitzer-Finali, 1996 in Pacific; *M. spelaum* (Pulitzer-Finali, 1983) in the Mediterranean; and *M. gyroderma* (Alcolado, 1984) and *M. rea* (De Laubenfels, 1934) in the Western Atlantic (van Soest *et al.*, 2013). *Myrmekioderma rea* was recorded from Brazil at Maranhão State (Mothes *et al.*, 2004) and Rio Grande do Sul State (De Rosa-Barbosa, 1995, as *M. styx*). In the present paper we describe a new species of *Myrmekioderma* from Sergipe and Alagoas States, Northeastern Brazil, with a brief discussion on the taxonomy of the Brazilian species.