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Two new species of *Aptos* (Demospongiae, Hadromerida) from Brazil (western Atlantic)

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Abstract

Twenty-one species of *Aptos* Gray, 1867 are known world-wide, of which only three were reported from Brazil. Two new species of this genus are here described from the Brazilian coast (Potiguar Basin, Northeastern Brazil): *A. hajdui* **sp. nov.** and *A. potiguarensis* **sp. nov.** Both possess only one category of stronglyxeas and one of styles, although both with wide size variation, suggesting that the diagnosis of the genus should be revised. Previous Brazilian records of *A. aptos* have their status re-evaluated here, and only three species of the genus can be considered valid in Brazil: *A. glutinans*, *A. hajdui* **sp. nov.** and *A. potiguarensis* **sp. nov.**

Key words: Porifera, Suberitidae, Taxonomy, Rio Grande do Norte State, Potiguar Basin

Introduction

Aptos Gray, 1867 is a cosmopolitan genus with 21 species known world-wide, although many other may be hidden among the widespread records of *A. aptos* (Schmidt, 1864; van Soest 2002, van Soest *et al.* 2013). The genus poses special challenges to the Porifera taxonomists due to a shortage of conspicuous anatomical characters. Species may have stronglyxeas in three overlapping size categories frequently hard to tell apart and the intermediate and smaller spicules are occasionally oxeas, styles or tylostyles. The distinction between the species is very difficult as the descriptions currently provide little basis for species definition, because spicule dimensions, general morphology and skeletal details vary little between species in the literature (Kelly-Borges & Bergquist 1994).

Only three species of *Aptos* are known from Brasil: *A. aptos* from Espírito Santo State (Solé-Cava *et al.* 1981), Santa Catarina State (Mothes & Lerner 1994, as *A. aff. aptos*), and Atol das Rocas (Moraes 2011); *A. bergmanni* de Laubenfels, 1950 from Bahia State (Hechtel 1976) and Pernambuco State (Boury-Esnault 1973 as *A. aptos*); and *A. glutinans* Moraes, 2011 from Atol das Rocas (Moraes 2011). This is the first time that the genus is found at the continental shelf of Rio Grande do Norte State. There are other several records of unidentified *Aptos* spp. from Brazil, *viz.* Bahia, Rio Grande do Norte (Atol das Rocas) Espírito Santo, São Paulo, and Santa Catarina States (see Muricy *et al.*, 2011).

In this paper, we describe two new species of *Aptos* from Potiguar Basin, Rio Grande do Norte State, Brazil and provide a brief review of bibliographic records of other species of the genus from Brazil.

Material and methods

The Potiguar Basin is located on the north continental shelf of Rio Grande do Norte and Ceará States (Northeastern Brazil; Fig. 1). The studied specimens were collected by trawling on board of the R.V. ‘Astro Garoupa’ in two

bergmanni has strongyloxeas up to 950 µm and styles with 150 µm, and the figures available in Boury-Esnault (1973) show that they are actually a smaller category of strongyloxeas, not styles. Furthermore, the spicular dimensions of the specimens studied by Boury-Esnault (1973) do not approach those of any species of *Aaptos*, neither with *A. bergmanni* nor with *A. aaptos*, which possesses strongyloxeas and true styles. Thus, we consider invalid all records of *A. bergmanni* from Brazil (from Bahia and Pernambuco State; *sensu* Hechtel, 1976), until the revision of these specimens. They probably belong to another species, yet undescribed in the Brazilian coast, and are better referred to as *Aaptos* sp.

According to Van Soest *et al.* (2013), *A. durissima* was described from the Caribbean. However, despite the name of the species has been proposed by Carter (1882, p. 357 as *Trachya durissima*), the description of the species was published by Carter (1876, p. 393) from South Africa's material. Anyway, according to his description, *A. durissima* presents strongyloxeas with tylostyle-like modifications, differing from the styles of both new species.

Based on the above discussion, only three species of *Aaptos* can be considered valid in Brazil: *A. glutinans*, *A. hajdui* **sp. nov.** and *A. potiguarensis* **sp. nov.**, while the records of *A. aaptos* and *A. bergmanni* are not accepted here and should be better examined. A comprehensive revision of all Brazilian *Aaptos* is in progress.

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