

Four new sympatric species of *Tethya* (Demospongiae: Hadromerida) from Abrolhos Archipelago (Bahia State, Brazil)

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Abstract

Four new species of *Tethya* are described from coral reefs in Abrolhos Archipelago (Brazil). *Tethya brasiliiana* **sp. nov.** is green or yellow externally, yellowish orange internally, and its micrasters are strongylasters, microspherasters and microoxyasters. *Tethya cyanae* **sp. nov.** is dark blue externally; its micrasters are tylasters, oxyasters and microoxyasters. *Tethya ignis* **sp. nov.** is orange externally and internally, and its micrasters are tylasters and completely microspined oxyasters. *Tethya rubra* **sp. nov.** is red or yellow externally, and it has tylasters and oxyasters with branched and twisted rays. Scanning electron microscopy of microscleres was essential for distinction of Brazilian species of *Tethya*. The diversity of *Tethya* from the Brazilian coast has increased from five to nine species. Abrolhos Archipelago harbors the greatest diversity of *Tethya* in the Atlantic, with four species, three of which are provisional endemics.

Key words: Porifera, Tethyidae, *Tethya*, SEM, taxonomy, new species, Southwestern Atlantic, Brazil, Abrolhos Archipelago

Introduction

Tethya Lamarck, 1814 is a widely distributed, cosmopolitan sponge genus with spherical shape, a radial arrangement of strongyloxeas and euasters. It is the most specious genus of the family Tethyidae Gray, 1848, with 56 species described (Sarà 2002). Taxonomic identification of species of *Tethya* is a hard task (Sarà 1987). The genus is largely homogeneous in features such as body shape, skeletal organization, and morphology of megascleres. Aster morphology is difficult to define in light microscopy (LM), which has been used by most earlier authors (e.g., Schmidt 1870; Bowerbank 1872; Carter 1882; Crozier 1918; Hechtel 1965; Boury-Esnault 1973; Mothes de Moraes 1980, 1987).

Species of *Tethya* live in many different habitats, such as caves (Sarà & Bavestrello 1995; Bavestrello et al. 1996), mangroves (Crozier 1918), lagoons (Bavestrello et al. 1992;