



## Three new species of *Tetilla* Schmidt, 1868 (Tetillidae, Spirophorida, Demospongiae) from Bahia, northeastern Brazil

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### Abstract

In this paper we describe three new species of *Tetilla* from stretches of the coast of Bahia, northeastern Brazil, all collected in shallow waters and soft bottoms. *Tetilla pentatriaena* **sp. nov.** is distinct from other species of the genus by the unique possession of five categories of triaenes: two of protriaenes and three of anatriaenes. *Tetilla muricyi* **sp. nov.** and *Tetilla rodriguesi* **sp. nov.** are the first species in the genus registered exclusively from mangrove ecosystems and are distinct from most species of *Tetilla* by their lack of microscleres. *Tetilla muricyi* **sp. nov.** differs from all species by its spiculation and by having a reticulate skeleton of secondary oxeas. *Tetilla rodriguesi* **sp. nov.** differs from other species without sigmaspires by the presence of three categories of oxeas, two of trichoidal protriaenes and one of exclusively rhizoidal anatriaenes. In addition to the three new species described here we also provided one identification key to the *Tetilla* species occurring in the Atlantic Ocean.

**Key words:** taxonomy, marine sponges, soft bottom, mangrove, estuary

### Introduction

The family Tetillidae Sollas, 1886 is represented mostly by globular sponges distributed in eight genera, which are differentiated by the presence or absence of a cortical skeleton, specialized pores and special spicules (Van Soest & Rützler, 2002). Two of these genera, *Craniella* Schmidt, 1870 and *Tetilla* Schmidt, 1868, usually share external characteristics such as globular shape, rhizoids and apical oscule, as well as similar categories of spicules. To sort among representatives of both taxa special attention has to be paid to the presence of a cortex with exclusive special oxeas in *Craniella* and the absence of this structure in *Tetilla* (Van Soest & Rützler, 2002). Due to the higher number of shared characteristics and the existence of only one distinction, the taxonomic history of both genera is marked by various ping-pong assignments. This leaves some doubt regarding the actual number of species in both taxa (Van Soest & Rützler, 2002, Lehnert & Stone, 2010). However, 45 species are currently recorded as valid for *Craniella* and 49 for *Tetilla* (Van Soest *et al.*, 2011). In the latter taxon, 11 species occur in the Atlantic and only two off the coast of Brazil, *T. euplocamos* Schmidt, 1868 and *T. radiata* Selenka, 1879 (Table 3).

The materials dredged from some areas of the coast of Bahia revealed three distinct species belonging to the same taxonomic group. These species will be described below. An important collecting area was Camamu Bay, the fifth largest bay in Brazil, with about 380 km<sup>2</sup> (Hatje *et al.*, 2008). This is a notoriously understudied area, with only three species of marine sponges reported until the present, *Craniella quirimure* Peixinho *et al.*, 2005, *Thrombus kittoni* (Carter, 1874) and *Strongylacidon oxychaetum* Menegola *et al.* (In press), registered by Peixinho *et al.* (2005) Menegola *et al.* (2009) and Menegola *et al.* (In press), respectively.