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Two new species of the family Niphatidae van Soest, 1980 from Northeastern Brazil (Haplosclerida: Demospongiae: Porifera)

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Abstract

This paper deals with niphatid sponges from the coast of the Bahia State, northeastern coast of the Brazilian shelf (south-western Atlantic). Two new species are described, *Amphimedon estelae* sp. nov. and *Niphates luizae* sp. nov. A taxonomic study of those samples is given, including description and illustrations. Both species were compared with their congeners present in the Atlantic Ocean.

Keywords: Porifera, *Amphimedon*, *Niphates*, new species, Bahia State, taxonomy, Brazil

Introduction

Niphatidae contains nine valid genera (*Amphimedon* Duchassaing & Michelotti, 1864; *Cribochalina* Schmidt, 1870; *Dasychalina* Ridley & Dendy, 1886; *Gelliodes* Ridley, 1884; *Halicionissa* Burton, 1932; *Hemigellius* Burton, 1932; *Microxina* Topsent, 1916; *Niphates* Duchassaing & Michelotti, 1864 and *Pachychalina* Schmidt, 1868) and a large account of nominal species with a worldwide distribution (Desqueyroux-Faúndez & Valentine 2002). It is defined by the three dimensional ectosomal skeleton of multispicular fibres, choanosomal skeleton of multispicular fibres, cored by oxeas, often strongylote or stylote and microscleres if present, sigmas or microxeas. The niphatid sponges are usually found in shallow waters, although Hartman (1982) stated that some species of genus *Amphimedon* could occur in depths up to 2400 m. Over 100 species are included in this worldwide family and in the Brazilian coast only 11 species have been recorded to four genera: *Amphimedon* (5 species); *Gelliodes* (1); *Niphates* (4) and *Pachychalina* (1) (Muricy *et al.* 2011). However, the number of unidentified niphatids recorded along the Brazilian coast is more than 20 (Muricy *et al.* 2011) due to its taxonomy be difficult.

Among the genera of Niphatidae, *Amphimedon* is the most representative with 52 valid species and of these, 15 are present in the Atlantic Ocean (van Soest *et al.* 2013). The genus is poorly represented in Brazil with only five species formally recorded: *A. caribica* (Pulitzer-Finali, 1986) (by Campos *et al.* 2005); *A. complanata* (Duchassaing, 1850; as *Spongia complanata*, by Sarmiento & Correia 2002); *A. compressa* Duchassaing & Michelotti, 1864 (e.g. Muricy *et al.* 2008; as *A. aff compressa*); *A. erina* (de Laubenfels, 1936; 1956) and *A. viridis* Duchassaing & Michelotti, 1864 (e.g. Muricy & Ribeiro 1999).

The genus *Niphates* has 19 valid species (van Soest *et al.* 2013) with seven records from the Atlantic Ocean and only four species from Brazil: *Niphates alba* van Soest, 1980 (by Mothes *et al.* 2006); *Niphates amorpha* Wiedenmayer, 1977 (e.g. Muricy & Moraes 1998); *Niphates erecta* Duchassaing & Michelotti, 1864 (e.g. Muricy & Moraes 1998); and *Niphates lutea* Lehnert & van Soest, 1999 (by Campos *et al.* 2005).

In this paper, we describe two new species of the family Niphatidae collected in Northeastern Brazil.

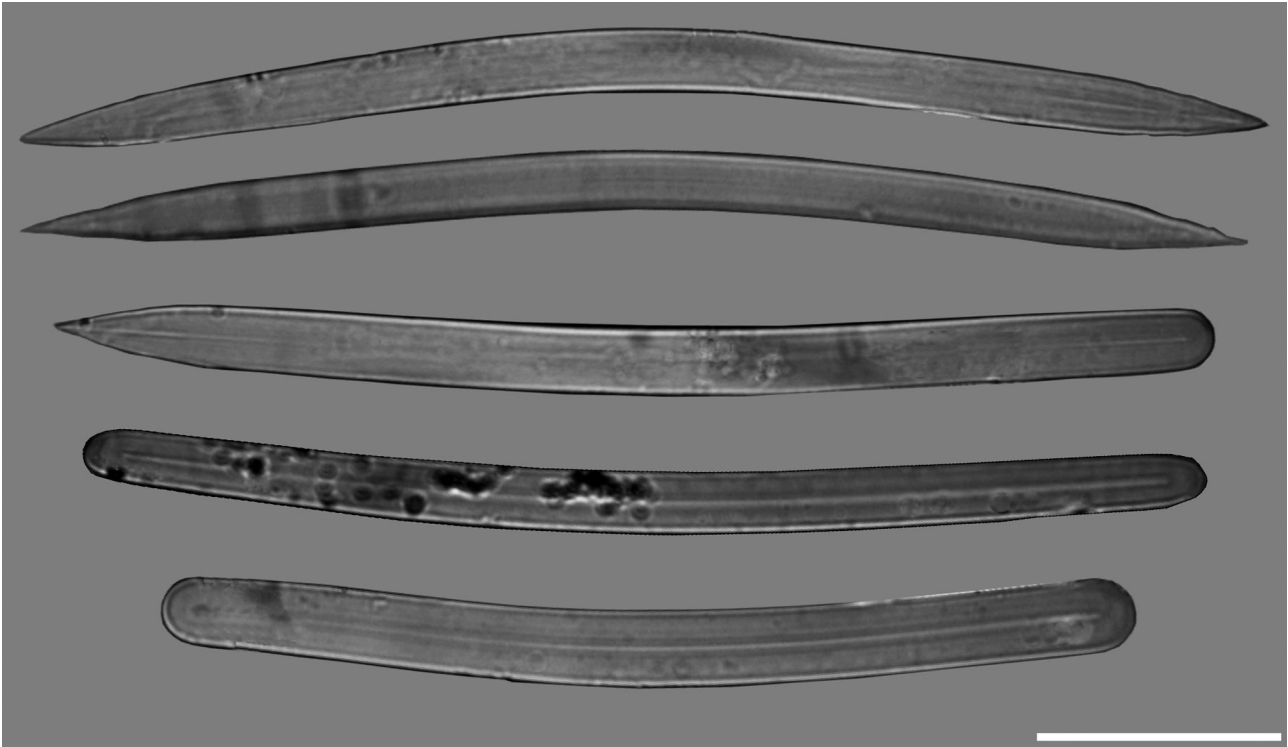


FIGURE 5. Spicule composition of *Niphates luizae* **sp. nov.**, holotype (UFPEPOR 690) in light microscopy. Scale bar: 30 μ m.

The presence of sigmas, even rare, is diagnostic of some *Niphates* (e.g.: *N. amorfa*, *N. digitalis* (Lamarck, 1814), *N. erecta* and *N. recondita*). In the case of *N. erecta* and *N. digitalis*, the rarity or non-existence of microsclera is normal (van Soest 1980). This presence or absence of sigma microscleres in *Niphates* is considered an unreliable generic character (see van Soest 1980; Fromont 1993). In this matter, the proposal of *Niphates luizae* **sp. nov.** is not only based on absence of this character, but it considers the difference in shape, color and spicule morphology, as well as the size of spicules among others species as discussed above.

This description of *Niphates luizae* **sp. nov.** increased to eight the number of *Niphates* for the Atlantic Ocean, becoming the more diverse ocean to this genus.

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