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## ***Clathria* (*Clathria*) Schmidt, 1862 from Brazil with description of a new species and a review of records (Poecilosclerida: Demospongiae: Porifera)**

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### **Abstract**

We report and describe material of *Clathria* (*Clathria*) (Poecilosclerida: Microcionina: Microcionidae) collected from the coast of Brazil: *Clathria* (*C.*) *nicoleae* **sp. nov.**, *Clathria* (*C.*) *calypso* and *Clathria* (*C.*) *prolifera*. *Clathria* (*C.*) *calypso* is also redescribed. Specimens previously recorded from Brazil as *Clathria* (*C.*) *prolifera* were considered to fit better in the taxon *Clathria* (*Wilsonella*). The new species was compared with all other (twenty-five) *Clathria* (*C.*) species occurring in the Atlantic. The new species differs from the other species by overall morphology and presence of auxiliary tylostrongyle megascleres.

**Key words:** Porifera, *Clathria*, new species, Paraíba, Rio Grande do Norte, taxonomy, Brazil

### **Introduction**

The family Microcionidae Carter, 1875 is one of the largest families of Demospongiae. It is widespread and most species have been recorded from shallow-waters but some range down to 2500 m depth (Hartman 1982). It is, clearly, one of the major and most ecologically successful Porifera groups (Hooper 1996). Nine valid genera and 12 subgenera are included (Hooper 2002b). Among them, *Clathria* (*Clathria*) Schmidt, 1862 with 114 valid species, however, only 25 of them are recorded in the Atlantic Ocean (van Soest *et al.* 2012). The genus is defined by having only a single category of auxiliary style forming a sparse paratangential ectosomal skeleton and a choanosome without marked difference between axial and extra-axial regions (Hooper 2002b). This genus is poorly represented in Brazil with only two species formally recorded: *Clathria* (*C.*) *calypso* Boury-Esnault, 1973 and *Clathria* (*C.*) *prolifera* (Ellis & Solander, 1786). Nevertheless, the Brazilian record of *Clathria* (*C.*) *prolifera* needs to be re-examined and is expected to belong to a different species (van Soest 1984). Here we re-examine records of *Clathria* (*Clathria*) from Brazil, redescribe *Clathria* (*C.*) *calypso* and erect a new species *Clathria* (*C.*) *nicoleae* **sp. nov.**

### **Materials and methods**

Specimens of *Clathria* (*C.*) *nicoleae* **sp. nov.** were collected by SCUBA or free diving and by bottom trawl in three localities in Northeastern Brazil (Figure 1). The sponges are deposited in the Coleção de Porifera of Universidade Federal de Pernambuco (UFPEPOR), Coleção de Invertebrados Paulo Young (CIPY) of Universidade Federal da Paraíba (UFPB), LABOMAR (UFC) and Muséum National d'Histoire Naturelle, Paris (MNHN). Dissociated spicule mounts and skeletal sections were made using classical procedures for Demospongiae (Hajdu *et al.* 1994). Images of specimens, sections and SEM preparations were obtained digitally. Abbreviations are: CAPES, Coordenação de Aperfeiçoamento de Pessoal de Nível Superior; LABOMAR, Instituto de Ciências do Mar, Universidade Federal do Ceará; MNHN, Muséum National d'Histoire Naturelle, Paris; PB, Paraíba State; RN, Rio Grande do Norte State; UFC, Universidade Federal do Ceará; UEPB, Universidade Estadual da Paraíba.