



Cyclostomata (Bryozoa, Stenolaemata) from Rio de Janeiro State, Brazil

L.V. RAMALHO¹, G. MURICY¹ & P. D. TAYLOR²

¹Museu Nacional, Departamento de Invertebrados, Laboratório Biologia de Porifera, Quinta da Boa Vista s/n, São Cristóvão, Rio de Janeiro, Brazil. E-mail: laiscs@uol.com.br

²Natural History Museum, Department of Palaeontology, London, United Kingdom. E-mail: p.taylor@nhm.ac.uk

Abstract

Research on cyclostome bryozoan taxonomy has been neglected compared to that on cheilostomes, especially in Brazil. Between 1890 and 1979, only 25 cyclostome species have been identified from Brazil, distributed among 11 genera and seven families. This study describes eight cyclostome species (*Crisia pseudosolena*, *Nevianipora floridana*, *Mecynoecia* cf. *delicatula*, *Disporella pila*, *Patinella* sp., *Crisia fragosa* **sp. nov.**, *Exidmonea zagorsek* **sp. nov.**, *Supercytis savii* **sp. nov.**), including a first record of the genus *Supercytis* in Brazilian waters.

Key words: Taxonomy, *Supercytis*, *Crisia*, *Nevianipora*, *Exidmonea*, *Patinella*, *Mecynoecia*, *Disporella*

Introduction

All living species of the bryozoan class Stenolaemata, which has a rich fossil record, are classified in the order Cyclostomata (Hayward & Ryland 1985). Research on cyclostomes has been generally neglected, especially in Brazil. Cyclostomes are characterized by having cylindrical autozooids with calcified walls and terminal apertures that are simple and circular, elliptical or polygonal in shape. All cyclostomes are marine and, compared with cheilostome bryozoans, they exhibit limited zooidal polymorphism. The most important morphological characters in the taxonomy of Cyclostomata are skeletal organization (free- or fixed-walled), budding pattern, the form of the colony, arrangement of autozooidal apertures, and the shape of the gonozooid (used to brood embryos) and its opening — the ooeciopore and associated ooeciostome (e.g., Hayward & Ryland 1985; Taylor & Gordon 2001). Soft-part anatomy is known in a small number of species (see Boardman 1998), and molecular sequence data in even fewer (Waeschenbach *et al.* 2009). Owing to the limited range of available taxonomic characters, the identification of cyclostome species can present serious difficulties. Scanning electron microscopy is beginning to clarify species identities but much remains to be done before bryozoologists can be confident about the systematics of the group. The Cyclostomata contains about 850 living species (Horowitz & Pachut 1996). Studies of Brazilian bryozoans started with d'Orbigny (1839) but more than fifty years elapsed before the first Brazilian cyclostome was described by Kirkpatrick (1890) from Fernando de Noronha. Subsequently, Canu and Bassler (1928) described three cyclostomes among 47 bryozoan species from Bahia and Pernambuco States. Between 1937 and 1955, Ernst Marcus published on 12 cyclostomes from Bahia, Pernambuco, Espírito Santo, Rio de Janeiro, São Paulo, and Paraná states, doubling the number of cyclostomes known from the Brazil fauna (Marcus 1937, 1938, 1939, 1941, 1955). Braga (1968) collected bryozoans around Cabo Frio (Rio de Janeiro State) and mentioned the occurrence of one cyclostome. Another important work was published by Buge (1979) on cyclostomes from South America. This included 14 species collected from Pernambuco to São Paulo states. In summary, between 1890 and 1979 a total of 25 cyclostome species were identified from Brazil, distributed between 11 genera and seven families (Table 1). This diversity seems low when compared with the almost 200