



## Bryozoans from Rio Grande do Sul Continental Shelf, Southern Brazil

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### Abstract

The continental shelf of Rio Grande do Sul (RS) is predominantly composed of unconsolidated sediments with a few hard substrates represented principally by beachrock. In this area there are elongate deposits of shell gravel material which are interpreted as indicators of the palaeo-shorelines. These Pleistocene deposits are overlapped by Holocene sediments (Recent), but are exposed during erosive events caused by extra-tropical cyclones, which provide the mixture of both sediments mainly during autumn and winter. The few studies on bryozoans made in this area previously recorded seven species, one fossil and the other six from Recent fluvial and marine environments. The aim of the present study was to describe the eight most abundant bryozoan species that occur in the inner RS shelf. Of these, four are new records for RS State (*Arachnopusia* aff. *pusae*, *Hippomonavella brasiliensis*, *Turbicellepora pourtalesi*, and *Lifuella gorgonensis*), and the other four are new to science (*Chaperia taylori*, *Micropora nodimagna*, *Cellaria riograndensis*, and *Exochella moyani*).

**Keywords:** Taxonomy, Cheilostomata, *Chaperia*, *Micropora*, *Cellaria*, *Arachnopusia*, *Exochella*, *Hippomonavella*, *Turbicellepora*, and *Lifuella*.

### Introduction

Brazil has several sedimentary basins (both palaeo and Recent) with an enormous number of fossil and recent species recorded for both invertebrates and vertebrates. The fact that the continental shelf of Rio Grande do Sul (RS) is basically composed of unconsolidated sediments, plus a few hard substrates represented by beachrock, limits the bryozoan fauna to those which prefer to colonize hard substrates. Additionally, few studies on bryozoans have been made in this area (Meissner 1893; Gliesh 1925; Hastings 1929; Barbosa 1967). These previous studies reported only one fossil bryozoan (*Biflustra arborescens* (Canu & Bassler, 1928) (cited as *Conopeum commensale* Kirkpatrick & Metzelaar, 1922) that was found on a mollusc shell collected in an area of shell deposition known as the Concheiros do Albardão (Barbosa 1967). Six Recent bryozoan species were also identified, three of fluvial origin: *Lophopus iheringi* Meissner, 1893, *L. crystallinus* (Pallas, 1766) and *L. lendenfeldi* Ridley, 1886 (Meissner 1893; Hasting 1929) and three marine bryozoan species, *Membranipora* sp., *Alcyonidium gelatinosum* Linnaeus, 1766 and *Membraniporopsis tubigera* (Osburn, 1940) with the first two species found in the northern littoral zone of RS and the other at the southern littoral zone (Gliesch 1925; López Gappa *et al.* 2010). Among these marine species previously recorded for the RS state, *A. gelatinosum* and *Membranipora* sp. can occur in the estuarine environment.

The aim of the present study is to describe the eight most abundant bryozoan species that occur on the RS inner shelf. The eight species here described are marine with four of them new records for RS State (*Arachnopusia* aff. *pusae* Marcus, 1955, *Hippomonavella brasiliensis* Ramalho *et al.*, 2008, *Turbicellepora pourtalesi* Winston, 2005, and *Lifuella gorgonensis* (Hastings, 1930)). The other four species are new to science, *Chaperia taylori* n. sp., *Micropora nodimagna* n. sp., *Cellaria riograndensis* n. sp., and *Exochella moyanoi* n. sp.