



Two new species and a new genus of Calloporidae (Bryozoa: Cheilostomata) from the Southwest Atlantic

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Abstract

The family Calloporidae occupies a basal position in the classification of the Cheilostomata, the relatively simple calloporid morphology seeming to be the basic pattern for the adaptive radiation of cheilostome bryozoans. The ovicells of the Calloporidae may be formed by the maternal zooid or the distal zooid, which can be an autozooid, a vicarious avicularium or a kenozooid. Examination of new calloporid material from the southern Patagonian shelf revealed the existence of two new species and a new genus. *Kenoaplousina fissurata* **gen. nov., sp. nov.** is characterized by its distinctive kenozooidal ooecium. The new genus is also deemed to include *Aplousina grandipora* Moyano, an allied species from the Chilean continental slope. *Alderina simplicissima* **sp. nov.**, is also described from the Magellanic region.

Key words: bryozoan, kenozooid, ovicell structure, taxonomy, Argentina

Introduction

The family Calloporidae is regarded as occupying a basal position in the classification of the Cheilostomata, as several clades of this order seem to have originated, since the early Middle Cretaceous, from ancestors having relatively simple calloporid zooidal morphology (Taylor 1988). For example, the tatiform ancestrula of many ascophoran bryozoans possesses a frontal membrane surrounded by spines, which resembles the basic calloporid structure.

Notwithstanding, the family as presently circumscribed is rather large and heterogeneous and several authors have emphasized that it is much in need of taxonomic revision, especially in view of the wide range of characters exhibited by the included genera (Ryland & Hayward 1977; Cook & Bock 2000). For example, recent studies (Ostrovsky & Schäfer 2003; Ostrovsky *et al.* 2003, 2007, 2009; Ostrovsky & Taylor 2005) have noted the structural diversity and evolutionary trends of the brood chambers in different members of the family. The aim of the present study is to describe two new species and a new genus of Calloporidae from the Southwest Atlantic and to discuss their affinities with morphologically similar taxa in the family.

Materials and methods

Samples came from two separate cruises. The benthic survey of the R/V *Shinkai Maru* was carried out in July–August 1978 (Cousseau *et al.* 1979). Samples from the Patagonian shelf off the Atlantic coast of Tierra del Fuego province were collected on December 2011 by the AHTS *Lenga* using a 13.49 dm² Van Veen grab.

Specimens were cleaned in diluted domestic bleach (NaOCl solution) and coated with gold-palladium (40%–60%). Digital images were obtained using a conventional SEM (Phillips XL–30) at the Museo Argentino de Ciencias Naturales (MACN). The length and width of zooids and ovicells were measured using a stereomicroscope with a micrometer eyepiece.

All the material under study has been deposited in the collection of invertebrates of the MACN (MACN–In).