



## An overview of the shallow-water calcified hydroids from Brazil (Hydrozoa: Cnidaria), including the description of a new species

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### Abstract

Five species of calcified hydroids occur in shallow waters along the Brazilian coast: four milleporids –*Millepora alcicornis* Linnaeus, *Millepora braziliensis* Verrill, *Millepora nitida* Verrill, and a new species, *Millepora laboreli* – and one stylasterid – *Stylaster roseus* (Pallas). Compared to the scleractinian corals, the calcified hydroids of Brazil have received little attention. Nevertheless, Milleporidae are an important component of Brazilian reefs, with colonies that can reach up to 2 m in diameter. Among the aspects that have been studied for *Millepora* spp, their distributions and skeletal morphometries are the most distinctive. Due to their complex taxonomy, several morphometric characters have been used to facilitate their identification. Molecular systematics has also been used as a complementary technique to traditional taxonomic tools. Other aspects of Brazilian *Millepora* spp, such as their nematocysts, medusae and ecology, have received less attention; nevertheless, the few existing studies reveal several remarkable features of this genus. Comprehensive studies of Brazilian stylasterids are still lacking.

**Key words:** Calcified hydroids, Brazil, *Millepora*, *Millepora laboreli* n. sp., *Stylaster roseus*

### Introduction

Milleporidae and Stylasteridae currently are included in Class Hydrozoa, but before Agassiz (1858) studied the structure of their tissue in detail these organisms were classified as scleractinian Anthozoa (Boschma 1956; Moseley 1881). These two families are also commonly grouped as “calcified hydroids”, “calcareous hydrocorals” or, simply, “hydrocorals”—terms that refer to hydrozoans that secrete a calcareous skeleton. They are, however, a polyphyletic grouping that includes families from two different orders. The one order that represented this grouping, Hydrocorallia, was discontinued in 1979 (Petersen 1979). Here we use the term “calcified hydroids”, which includes Milleporidae, Stylasteridae, and a few species, such as *Janaria* spp., in the family Hydractiniidae, a family that does not occur in the western Atlantic Ocean.

The genus *Millepora* has a circum-tropical distribution with up to 17 recognized species, including eight in the Indian Ocean, nine in the western and central Pacific Ocean, four in the eastern Pacific Ocean, and six in the western Atlantic Ocean (Cairns *et al.* 1999). On the Brazilian coast, four species of *Millepora* have been identified (Amaral 1997; Amaral *et al.* 2002): *Millepora alcicornis* Linnaeus, 1758; *M. braziliensis* Verrill,