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A new species of *Diadumene* (Actiniaria: Diadumenidae) from the subtropical coast of Brazil

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Abstract

Diadumene paranaensis n. sp., collected from the Yacht Club of Paranaguá (Paranaguá Bay, Paraná State, southern Brazil), is described as a new species of sea anemone, based on external and internal morphology, cnidome, and molecular data for 16S/CO3 mitochondrial DNA. This species is partially similar to *D. cincta* due to the presence of macrobasic p-amastigophores in the tentacles, but is distinguished by the cinclides arranged in longitudinal rows and microbasic p-amastigophores in the acontia.

Key words: Cnidaria, Anthozoa, taxonomy, sea anemone, cnidae, South Atlantic

Introduction

Sea anemones are among the most familiar invertebrates of rocky shores and sand beaches in some regions of the Brazilian coast (Corrêa 1964; Pires *et al.* 1992; Zamponi *et al.* 1998; Castro *et al.* 1999). There are records of 42 species in the country (Fautin 2013), but this number is a small fraction of the 1,100 known species in the world (Fautin 2013), especially in light of the extensive (8,000 km) coastline of Brazil. Most of the recorded species, such as *Bunodosoma caissarum* Corrêa in Belém, 1988 and *B. cangicum* Corrêa in Belém & Preslercravo, 1973, have large polyps and are quite conspicuous on rocky shores and in shallow waters (Belém & Preslercravo 1973; Belém 1988). Species with small polyps or that are found in cryptic environments (Corrêa 1973; Pires 1988; Pires *et al.* 1992; Excoffon *et al.* 1997; Silva *et al.* 2010) have been infrequently recorded, which may indicate that there are still many species to be recorded or described.

A species of the genus *Diadumene* Stephenson, 1920 has been recorded on the southwestern Atlantic coast of Brazil since 1977 (Belém & Monteiro 1977, as genus *Haliplanella* Hand, 1956). Some members of this genus form clusters of clonal polyps through asexual reproduction by longitudinal fission or pedal laceration (Chia 1976; Belém & Monteiro 1977; Shick 1991). Also, the genus has been recorded in various regions of the world and other areas of the southwestern Atlantic Ocean, as on the coast of Argentina (Excoffon *et al.* 2004, Molina *et al.* 2009). However, almost all of these records are of a single species, *Diadumene lineata* (Verrill, 1869) (= *Haliplanella lineata*), which is considered an introduced species in several parts of the world and often described as a ship fouling organism (Gollasch & Riemann-Zürneck 1996; Zabin *et al.* 2004).

Specimens of *Diadumene* have been found colonizing mussels, barnacles and artificial substrates in Paranaguá Bay. A population of *Diadumene*-like anemones was recorded by Correia & Loyola e Silva (1990) in the area but they did not attribute the specimens to a species. Here, we describe a species of *Diadumene* from Paranaguá Bay as *Diadumene paranaensis* n. sp. and compare it to the nine other known species of the genus.