

Ceriantharia (Cnidaria) from Australia, New Zealand and Antarctica with Descriptions of Four New Species

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ABSTRACT. The fauna of Ceriantharia (tube-anemones) in the South Pacific is poorly studied with only four shallow-water species formally described and these animals are known from few regions in very specific reports. Cerianthids are organisms that live in a tube constructed with a special type of cnidae and are currently grouped in an exclusive subclass of Anthozoa. This study addresses specimens from three natural history collections, the Australian Museum and the Museum and Art Gallery of the Northern Territory (both Australia), and the National Institute of Water & Atmospheric Research (NIWA) Invertebrate Collection (New Zealand), focusing on specimens from the Coral Sea, Tasman Sea and Antarctic Ocean. As a result, four new species are described and one synonymized. This highlights the ongoing need for taxonomic studies in the region, especially for marine organisms. Also, in this study, we offer tables with morphological characters that can be useful for species identification in each genus.

Introduction

Members of the subclass Ceriantharia are often the focus of photographic records in several regions of the world, but especially in areas where diving activities are concentrated (Stampar *et al.*, 2010, 2016a), including Australia and New Zealand (e.g., Grange & Brook, 2010; Wallace & Crowther, 2019). Despite this, Ceriantharia diversity is poorly studied in most parts of the world, especially because of the difficulties in sampling (Stampar *et al.*, 2016a). The Tasman Sea, between Australian and New Zealand coasts, is well studied for some taxa and locations (e.g., Polychaeta—Hutchings, 1992; Williams, 2019) but is contiguous with the Southern

Ocean, in which the level of biodiversity exploration is still incipient (Butler *et al.*, 2010; Griffiths, 2010). Within the Tasman Sea, there are only four species of Ceriantharia recorded and these are so far known from very limited localities. From Australia, *Pachycerianthus nobilis* Haddon & Shackleton, 1893, was described as a member of the genus *Cerianthus* from Torres Strait, Queensland. *Arachnanthus australiae* Carlgren (1937) is from Low Island (north of Port Douglas) also in Queensland. Two species were described by from Sydney Harbor, New South Wales, *Pachycerianthus delwynae* Carter, 1995 and *P. longistriatus* Carter, 1995. The state of knowledge about Ceriantharia from New Zealand is substantially poorest, because there are few records, without

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