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A new vermiform sea anemone (Anthozoa: Actiniaria) from Argentina: *Harenactis argentina* sp. nov.

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Abstract

During 2007, 2008, and 2010, 23 specimens of an undescribed vermiform sea anemone were collected on Punta Pardelas and Fracaso Beach (Península Valdés, Argentina). The specimens have longitudinal rows of cinclides distally, all mesenteries perfect, tentacles hexamerously arranged without acrospheres, column not divisible into regions, no marginal sphincter and no conchula. We describe these specimens as a new species within the genus *Harenactis* (family Haloclavidae). *Harenactis argentina* **sp. nov.** is the second species of *Harenactis*; it represents the first record of this genus in the southern hemisphere and the first record of a soft bottom-dwelling sea anemone in the Argentine continental zone. Furthermore, we discuss the familial placement and relationships of the genus *Harenactis* and other athenarian sea anemones.

Key words: Athenaria, Anthozoa, benthos, Chubut

Introduction

Athenarian sea anemones are usually found burrowing in soft bottoms. They are characterized by the lack of basilar muscles, elongated body, round aboral end, and strong retractor muscles of the mesenteries (Carlgren 1949). Although Carlgren's (1949) classification was intended to be practical rather than phylogenetic, Carlgren thought that the presence of basilar muscles was important and that athenarian sea anemones were a natural and primitive group (Carlgren 1942). Several authors have argued that the main morphological features unifying athenarians (lack of basilar muscles and elongated column) could be an adaptation to the burrowing way of life and hence a result of convergent evolution (Hand 1966; Riemann-Zürneck 1979; Rodríguez & López-González 2002; Schmidt 1974). Recent molecular work (Daly *et al.* 2008; Rodríguez & Daly 2010) has confirmed that athenarians are a polyphyletic group: some athenarian sea anemones nest within groups having basilar muscles such as Endomyaria (e. g. *Peachia* Gosse, 1855 and *Haloclava* Verrill, 1899; family Haloclavidae Verrill, 1899) and Acontiaria, a group of actiniarians characterized by acontia (e. g. *Andvakia* Danielssen, 1890 and *Halcampoides* Danielssen, 1890, families Andvakiidae Danielssen, 1890 and Halcampoididae Appellöf, 1896, respectively). Thus, we use the term "athenarian" hereafter to refer to actiniarians without basilar muscles but do not imply any close relationship among them.

We describe a new species of *Harenactis* Torrey, 1902 (Haloclavidae) from 23 specimens inhabiting soft bottoms around Península Valdés (Chubut, Argentina). *Harenactis argentina* **sp. nov.** differs from the only other species of the genus, *H. attenuata* Torrey, 1902, in size, tentacle coloration, fertility of mesenteries, cnidae, and geographical distribution. The finding of specimens of *Harenactis* in Argentinean waters is the first report of this genus for the southwest Atlantic and the first new record worldwide since 1925 (Uchida 1938). Furthermore, the description of *H. argentina* **sp. nov.** provides an opportunity to address the familial placement and relationships of the genus *Harenactis* and other athenarian sea anemones.

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