



Article

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Aulactinia sinensis, a new species of sea anemone (Cnidaria: Anthozoa: Actiniaria) from Yellow Sea

YANG LI^{1,2} & RUI-YU LIU (J. Y. LIU)^{1,3}

¹Institute of Oceanology, Chinese Academy of Sciences, Qingdao 266071, China

²Graduate University of Chinese Academy of Sciences, Beijing 100049, China

³Corresponding author: E-mail: jyliu@qdio.ac.cn

Abstract

Aulactinia sinensis, a new species of sea anemone collected from the intertidal zone of Qingdao, Yellow Sea, is described and illustrated. This species is elongated, becoming plump distally, has circumscribed sphincter, and with 48 vertical rows of verrucae in upper column, 48 pairs of mesenteries and 96 short tentacles. It is similar in shape to *A. capitata* Agassiz in Verrill, 1864, but distinguished by its smaller basitrichs in tentacles and larger microbasic *p*-mastigophores in actinopharynx and mesenterial filaments.

Key words: Actiniidae, Hexacorallia, new species, Yellow Sea

Introduction

The sea anemone genus *Aulactinia* (Anthozoa: Actiniidae) was established by Agassiz in Verrill (1864) for *A. capitata*, a species collected from the southeastern United States. Carlgren (1949) treated *Aulactinia* Agassiz in Verrill, 1864 as a junior synonym of *Bunodactis* Verrill, 1899. Dunn et al. (1980) deemed *Aulactinia* a valid genus, and employed it for *Aulactinia incubans*. Afterwards, *Aulactinia* was used for *A. sulcata* (Clubb, 1902) and *A. veratra* (Drayton in Dana, 1846) (Dunn, 1983; Edmands & Fautin, 1991). Fautin (2011) listed seven valid species in *Aulactinia*: *A. capitata* Agassiz in Verrill, 1864, *A. incubans* Dunn, Chia, and Levine, 1980, *A. marplatensis* (Zamponi, 1977), *A. stella* (Verrill, 1864), *A. sulcata* (Clubb, 1902), *A. veratra* (Drayton in Dana, 1846), and *A. verrucosa* (Pennant, 1777). Most of these species inhabit temperate or polar waters, and none has been previously recorded from Chinese waters.

While studying species of Actiniidae Rafinesque, 1815 in Chinese seas, one was found to fall in with the definition of *Aulactinia*; further study revealed that it was a new species, which is now described as *Aulactinia sinensis* sp. nov. This species has been reported only from Qingdao, along Yellow Sea coast, but it may possibly be a temperate species of North China as species of *Aulactinia* have rarely been recorded from tropic or subtropics. Its full range will be surveyed in subsequent studies of the actiniarias fauna of the Yellow Sea.

Materials and Methods

Three specimens collected from Qingdao coast during 1951 to 1954 were preserved in formalin or 70% ethanol. Live individuals were observed and photographed in situ in the mud of low intertidal zone on Cangkou and Huiquan Bay, Qingdao; some were brought back, settled in aquariums for morphological observation, and then were preserved in formalin and stored in 70% ethanol by the first author. Type and voucher specimens have been deposited in the Institute of Oceanology, Chinese Academy of Sciences (IOCAS), Qingdao, China. For histological examinations, paraffin sections cut at 6 µm were stained with hematoxylin-eosin. Cnidaria from tentacle, column,