

On authorship of Chilean anemone '*Bunodactis hermaphroditica*' (Cnidaria: Actiniaria) and its generic assignment

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Authorship of the species currently known as '*Bunodactis hermaphroditica*' should be attributed to Carlgren (1959) but not to McMurrich (1904) as commonly maintained. The species belongs to the genus *Gyractis* and should be cited as *Gyractis hermaphroditica* (Carlgren, 1959).

Key words: sea anemone, South America, Pacific, nomenclature, taxonomy, Cnidaria, Actiniaria, *Gyractis hermaphroditica*, authorship

INTRODUCTION

Two small sea anemones from Chile, *Anthopleura hermaphroditica* (Carlgren, 1899) and a species commonly named '*Bunodactis hermaphroditica*' have been discussed in recent literature (Yanagi & Daly, 2004; Schories et al., submitted). The first species, *A. hermaphroditica*, is ecologically important species inhabiting intertidal mudflats where it can attain an average abundance of 11000 specimens per square meter and where it almost completely displaces other intertidal benthos (Schories et al., submitted). The second species, '*Bunodactis hermaphroditica*', is often mentioned in the literature as a very similar species often found together with *Anthopleura hermaphroditica*. The authorship of '*Bunodactis hermaphroditica*' is commonly ascribed to McMurrich (1904) (see Carlgren, 1959; Yanagi & Daly, 2004), however, as is shown in the present paper, this attribution is erroneous and the taxon should be ascribed to Carlgren (1959).

DISCUSSION

Gyractis hermaphroditica (Carlgren, 1959)

Cribrina hermaphroditica (misid.) McMurrich, 1904: 287.

Bunodactis hermaphroditica Carlgren, 1959: 23.

Bunodactis hermaphroditica: Yanagi & Daly, 2004: 419 (discussion).

The brief history of description and applying different names to this species and related *Anthopleura hermaphroditica* is as follows.

1. Carlgren (1899: 23) described *Bunodes hermaphroditicus* from "Chile, Talcahuano".

2. McMurrich (1904: 287) described the specimens from Chile he thought be identical with Carlgren's species: "I have identified these specimens with Carlgren's *Bunodes hermaphroditicus* (1899) from Talcahuano on account on their marked similarity in every particular except the number of perfect mesenteries". He placed the species to the genus *Cribrina* and referred it as *Cribrina hermaphroditica* (Carlgren, 1899).

3. Carlgren (1927) briefly discussed differences between his specimens and the specimens described by McMurrich (1904) and explained these differences partly by different size of the specimens, and partly by probably incorrect data reported by McMurrich. Carlgren (1927) had no doubt about conspecificity of his and McMurrich specimens. He found acrorhagi ("real marginal spherules, not pseudo-marginal spherules") in his specimens and transferred the species to the genus *Anthopleura* listed as *A. hermaphroditica* (Carlgren).

4. Carlgren (1959), after examining numerous specimens from Chile, come to a conclusion that the specimens described by him in 1899 and the specimens described by McMurrich (1904) belong to different species. He briefly described two species, for his species he used the name *Anthopleura hermafroditica* (Carlgren) and for the species described by McMurrich *Bunodactis hermafroditica* (McMurrich); spelling with *f* instead of *ph* keeps the name identical according to Art. 58 of the International Code of Zoological Nomenclature (International Commission on Zoological Nomenclature, 1999) (the Code).

Yanagi & Daly (2004) discussed the taxonomy and nomenclature of both species in details. To achieve the status and authorship of the name *Cribrina hermaphroditica* as used by McMurrich they refer to Art 11.6 and 50.7 of International Code of Zoological Nomenclature. However, these articles are not appropriate in this case since they apply to the names first published as junior synonyms. Actually the name *Cribrina hermaphroditica* was not first published as junior synonym, this name is just a new combination for *Bunodes hermaphroditicus* Carlgren, 1899. Yanagi & Daly (2004: 419) expressed an opinion that the Carlgren's (1959) description constitutes a new combination for *C. hermaphroditica* McMurrich 1904 rather than an original description.

However, the name *Cribrina hermaphroditica* in McMurrich, 1904 is misidentification and thus unavailable (even if the species belongs or was subsequently transferred to another genus, Art. 49 of the Code). The name *Bunodactis hermafroditica* Carlgren, 1959 may be treated as an available name (Art. 13 of the Code), and the attribution to McMurrich may be considered a reference. It is not a homonym of *Bunodes hermaphroditicus* Carlgren, 1899 for it is described in a different genus.

Generic assignment. The species, as described, clearly falls to the genus *Bunodactis* Verrill, 1899 as defined by Carlgren (1949) and is in agreement with Carlgren's under-

standing of the genus. Dunn et al. (1980) synonymized *Bunodactis* with *Aulactinia* Verrill, 1864. Then, England (1987: 255) transferred all species having prominent marginal spherules from *Aulactinia* to *Gyractis* Boveri, 1893. According to England (1992), the type species of *Bunodactis*, *B. verrucosa* (Pennant, 1777), should be assigned to *Gyractis* for it has marginal spherules according to existing descriptions of the species.

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REFERENCES

- Carlgren, O.** 1899. Zoantharien. *Hamburger Magalhaensische Sammelreise*, **4**(1): 1–47.
- Carlgren, O.** 1927. Actiniaria and Zoantharia. *Further Zoological Results of the Swedish Antarctic Expedition 1901–1903*, **2**(3): 1–102.
- Carlgren, O.** 1949. A survey of the Ptychodactiaria, Corallimorpharia and Actiniaria. *Kungliga Svenska Vetenskapsakademiens Handlingar Ser. 4*, **1**(1): 1–121.
- Carlgren, O.** 1959. Corallimorpharia and Actiniaria with description of a new genus and species from Peru. *Reports of the Lund University Chile Expedition 1848–49*, **38**. *Lunds Universitets Arsskrift. (N.F.) Adv 2*, **56**(6): 1–39.
- Dunn, D.F., Chia, F. & Levine, R.** 1980. Nomenclature of *Aulactinia* (= *Bunodactis*), with description of *Aulactinia incubans* n.sp. (Coelenterata: Actiniaria), an internally brooding sea anemone from Puget Sound. *Canadian Journal of Zoology*, **58**: 2071–2080.
- England, K.W.** 1987. Certain Actiniaria (Cnidaria, Anthozoa) from the Red Sea and tropical Indo-Pacific Ocean. *Bulletin of the British Museum (Natural History) (Zoology)* **53**(4): 205–29.
- England, K.W.** 1992. Actiniaria (Cnidaria: Anthozoa) from Hong Kong with additional data on similar species from Aden, Bahrain and Singapore. In: **Morton, B.** (Ed.). *Proceedings of the Fourth International Marine Biological Workshop: the Marine Flora and Fauna of Hong Kong and the Southern China, Hong Kong, 11–29 April 1989*. University Press, Hong Kong: 49–95.

- International Commission on Zoological Nomenclature.** 1999. *International Code of Zoological Nomenclature adopted by the International Union of Biological Sciences*, 4th edition. The International Trust for Zoological Nomenclature, London. xxix + 306 p.
- McMurrich, J.P.** 1904. The Actiniae of the Plate collection (Fauna Chilensis 3). *Zoologische Jahrbucher Jena, Supplement* 6: 215–305.
- Schories, D., Reise, K., Sanamyan, K., Sanamyan, N., Clasing, E. & Reise, A.** Submitted. Actinian dominance on intertidal mudflats: an alternate state to the classic food web? *Journal of the Marine Biological Association*.
- Yanagi, K. & Daly, M.** 2004. The hermaphroditic sea anemone *Anthopleura atodai* n. sp. (Anthozoa: Actiniaria: Actiniidae) from Japan, with a redescription of *A. hermaphroditica*. *Proceedings of the Biological Society of Washington*, 117: 408–422.

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