| SPIXIANA | 45 | 1 | 21–22 | München, November 2022 | ISSN 0341-8391 |
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**Scientific note**

# Recent expansion or global distribution? New records of the sea anemone *Anthopleura radians* raises new questions about its identity

**(Cnidaria, Actiniidae)**

**Carlos A. Spano, Francisco Diaz, Victor Molina-Valdivia & Verena Häussermann**

The sea anemone *Anthopleura radians* Spano & Häussermann, 2017 was originally described from a very narrow region of northern Chile (~ 26° to 30° S), appearing only abundantly in a boulder/cobble beach, near a Yacht Club, of the Coquimbo region (29°58'59'' S, 71°21'37'' W). Shortly after its publication, Zuñiga (2019) reported it from Ilo Bay (Peru) and Vassallo-Avalos et al. (2020) from the Baja California Peninsula (Mexican Pacific), revealing a much broader spatial distribution than previously thought. Spano & Häussermann (2017) indeed argued that *Anthopleura radians* may actually be a junior synonym of the poorly known *Anthopleura minima*, described by Stuckey & Walton (1910) from Manukau Harbor, New Zealand. Several pictures recently sent to CAS of specimens from Northland and Auckland support this idea, yet no individual has been examined in order to make a detailed comparison between the two, possibly synonymous species.

In Valparaíso (Chile), the actinofauna has been particularly monitored in the rocky intertidal of Montemar (32°57'27'' S, 71°33'00'' W), always finding, until a few years ago, the same species reported since the early studies of Carter (1965). After the ENSO events of 2016 and 2019 (which significantly raised the sea surface temperature), the epibenthic community changed visibly, highlighting the near disappearance of the zooxanthellate anemone *Anthopleura hermaphroditica*, the increasing abundance of *Anthothoe chilensis* and the novel occurrence of *Anthopleura radians* in mid-intertidal tide pools. The spatial gap between sightings from Valparaiso and Coquimbo were filled months later by FD, finding several aggregations of the latter species in Tongoy (30°14'59'' S, 71°29'50'' W), Los Vilos (31°53'13'' S, 71°29'57'' W), Quintero (32°47'01'' S, 71°32'25'' W) and Concon (32°55'13'' S, 71°31'26'' W).

Besides being the first published record of the species from the Valparaíso region, these new sightings extend the current geographic distribution of the species towards the south and into the "Intermediate Area" biogeographic transition zone (~ 30° S to ~ 40° S; Häussermann & Försterra 2005, Tellier et al. 2009). Considering the large spatial distance between the sites where it has been reported (Peru, Mexico and, possibly, New Zealand), it is quite likely its dispersion is frequently mediated by external agents, like rafting debris or anthropogenic (plastic) materials (see Glon et al. 2020). Likewise, its patchy distribution further endorses the hypothesis that *Anthopleura radians*, like other species of the genus, is capable of reproducing asexually.

**Acknowledgements.** We would like to thank Gianinna Clementi and Javier Polanco for their help on the field trips, and Matthew Jones for sharing photographic records of the anemones from New Zealand.

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Carlos A. Spano, Ecotecnos S. A., Limache 3405, Of. 31, Viña del Mar, Chile; e-mail: spanoperez.ca@gmail.com

Victor Molina-Valdivia, Programa de Magister en Ecología Marina, Universidad Católica de la Santísima Concepción, Concepción, Chile

Verena Häussermann, Departamento de Vinculación con el Medio, Facultad de Economía y Negocios, Universidad San Sebastian, Puerto Montt

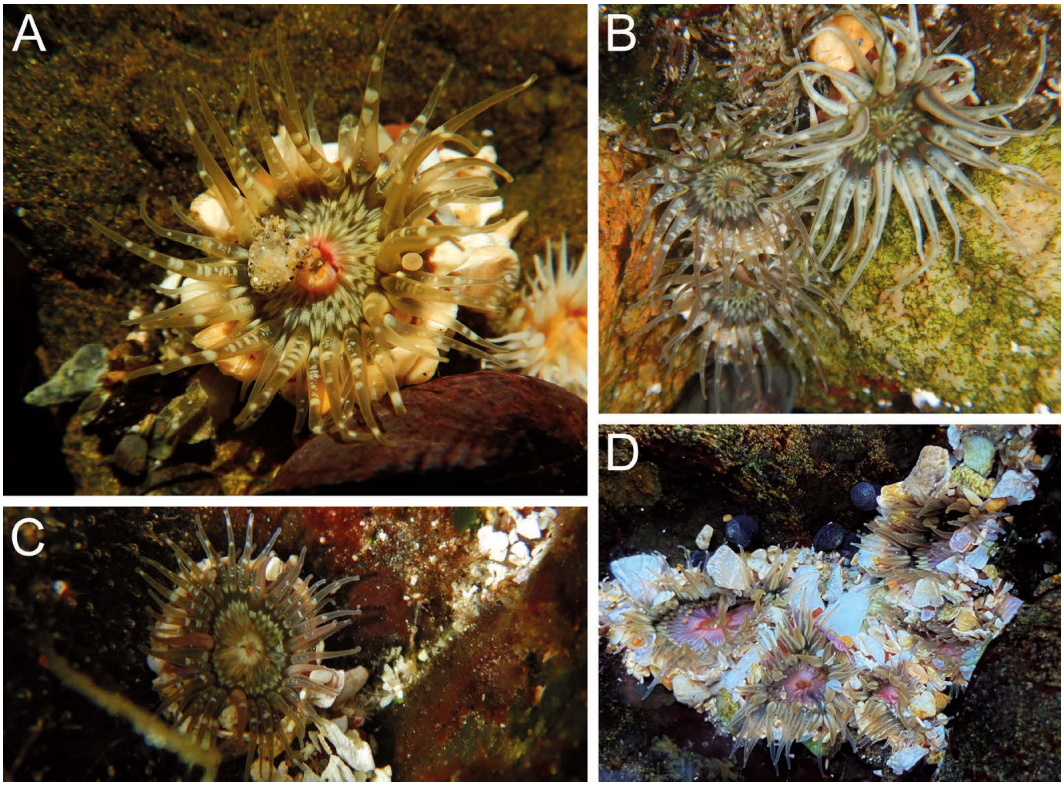


**Fig. 1.** Individuals of *Anthopleura radians* from **A.** Los Vilos, **B–C.** Quintero and **D.** Concon. Pedal disc diameter of anemones between 5 and 15 mm.

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