

SHORT COMMUNICATION

First record of the starfish *Goniaster tessellatus* at Madeira Island

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INTRODUCTION

Numerous new records of marine species, have been made at Madeira Island in recent years (e. g. Ramalhosa et al. 2014, 2017, Wirtz 2020 a, Wirtz & Araujo 2021). Some of these species appear to have extended their range northwards (e. g. Wirtz & Berenger 2017, Schäfer et al. 2019, Wirtz 2021), possibly due to global warming (Siemer et al. 2021).

Eleven shallow-water starfish species are known from Madeira Island (Wirtz 2020 b). We report here on one more species previous unrecorded for Madeiran waters.

MATERIAL AND METHODS

All observations were made while scuba diving. Comparative observations of the same species were made at various locations from the Cape Verde Islands and São Tomé Island. No specimens were collected.

RESULTS

A single individual of the starfish species

Goniaster tessellatus (Lamarck, 1816) was seen and photographed 14 August 2021 at about 10 m depth just west of Funchal harbour, 32°38'30"N 16°55'05"W. (Figure 1). Apparently, the same individual was then seen repeatedly in the same area until 31 August 2021.

DISCUSSION

Goniaster tessellatus is an amphi-Atlantic species (Clark & Downey 1992). In the western Atlantic, it is known from North Carolina to Brazil, including the West Indies and Gulf of Mexico; in the Eastern Atlantic it has been recorded from São Tomé northwards to Morocco, including the Cabo Verde Islands but not the Canary Islands (Halpern 1970, Pérez-Ruzafa *et al.* 2000, Wirtz 2003). At São Tomé and at the Cabo Verde Islands, the species is dark red (Figure 2). The Madeira individual has a much paler colour. It may have come from a different population. In the Western Atlantic the species is quite variable in colour (https://www.inaturalist.org/taxa/255639-goniaster-tessellatus/browse_photos) and a colour pattern similar to the Madeiran one has been observed there (<https://twitter.com/echinoblog/status/781257392268906497>).



Figure 1: *Goniaster tessellatus* at Madeira Island (photo Jorge Machado)



Figure 2: *Goniaster tessellatus* at São Vicente Island, Cabo Verde (photo Peter Wirtz).

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The site of discovery of the Madeiran individual is less than 2 km from the main port of Funchal city. Thus, it may have been transported to Madeira Island by marine traffic.

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REFERENCES

- Clark A. M., Downey M.E. 1992. *Starfishes of the Atlantic*. London: Chapman and Hall. 794 pp.
- Halpern, J. A. 1970. Biological investigations of the deep sea. 51. Goniasteridae (Echinodermata: Asteroidea) of the Straits of Florida. *Bulletin of Marine Science* 20(1): 193-286.
- Pérez-Ruzafa, A., L. Entrambasaquas and J.L. Bacallado 2000. Fauna de equinodermos (Echinodermata) de los fondos rocosos infralitorales del archipiélago de Cabo Verde. *Revista Academia Canarias Ciencias* 11: 43-62 (for 1999).
- Ramalhosa P, K. Camacho-Cruz, R. Bastida-Zavala and J. Canning-Clode 2014. First record of *Branchiomma bairdi* McIntosh, 1885 (Annelida: Sabellidae) from Madeira Island, Portugal (Northeastern Atlantic Ocean). *Bioinvasions Records* 3:235–239.
- Ramalhosa P, J. Souto and J. Canning-Clode 2017. Diversity of Bugulidae (Bryozoa, Cheilostomata) colonizing artificial substrates in the Madeira Archipelago (NE Atlantic Ocean). *Helgoland Marine Research* 71: 1–20.
- Schäfer, S. J. Monteiro, N. Castro et al. 2019. *Cronius ruber* (Lamarck, 1818) arrives to Madeira Island: a new indication of the ongoing tropicalization of the northeastern Atlantic. *Marine Biodiversity* 49(6): 2699–2707.
- Siemer, J.P. et al 2021. Recent trends in SST, Chl-a, productivity and wind stress in upwelling and open ocean areas in the upper Eastern North Atlantic subtropical gyre. *Journal of Geophysical Research: Oceans* 126. e2021JC017268. <https://doi.org/10.1029/2021JC017268>
- Wirtz, P. 2003 New records of marine invertebrates from São Tomé Island (Gulf of Guinea) *Journal of Marine Association of the United Kingdom* 83:735–736.
- Wirtz, P. 2020a https://www.researchgate.net/publication/344738495_A_pictorial_catalogue_of_the_shallow-water_Hippolytidae_Thoridae_and_Lysmatidae_of_Madeira_Island .
- Wirtz, P. 2020 b https://www.researchgate.net/publication/346206799_A_pictorial_catalogue_of_the_shallow_water_starfishes_and_feather_stars_of_Madeira_Echinodermata_Asteroidea_and_Crinoidea .
- Wirtz, P. 2021 https://www.researchgate.net/publication/353378338_Revised_pictorial_catalogue_of_the_shallow_waters_Calappidae_Eriphiidae_and_Parthenopidae_Crustacea_Brachyura_of_Madeira .
- Wirtz, P. & Araujo, R. 2021 https://www.researchgate.net/publication/349319245_A_pictorial_catalogue_of_the_Cirripedia_Arthropoda_Crustacea_of_Madeira .
- Wirtz, P. & L. Berenger 2017. Range extension of *Pseudocorynactis caribbeorum* den Hartog, 1980, in the eastern Atlantic. *Revista de la Academia Canarias* 29:203-206. Submitted 13 Sep 2022. Accepted 23 Sep 2022. Published online 12 Jan 2023.