

SHORT COMMUNICATION

New geographic distribution records for Northeastern Atlantic species from Peniche and Berlengas Archipelago

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Rodrigues, N.V. 2012. New geographic distribution records for Northeastern Atlantic species. *Arquipelago. Life and Marine Sciences* 29: 63-66.

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INTRODUCTION

During SCUBA dives and intertidal surveys carried out in 2006 and 2007 at Peniche and the Berlengas Archipelago (Portugal), undertaken as part of a research project with the objective of publishing an underwater marine guide, a photographic register of several species not yet recorded for the area was produced.

Subsequent identification and bibliographic research confirmed that these records were made beyond the previously known geographic distribution boundaries for each of the species mentioned here.

MATERIAL & METHODS

Most of the records were made by underwater cameras during daytime dives with SCUBA gear, along the coast of Berlengas, an archipelago seven miles off Peniche, Portugal. A further two records were made along the Peniche coast, one was observed underwater and the other in the intertidal area of Gamboa beach. All photographic records were made between between 0.1m and 30m depth

RESULTS

CNIDARIA: ACTINIARIA

Alicia mirabilis Johnson, 1861

This species occurs in the Eastern Atlantic, from the Canary Islands (Ocaña 1994), Azores (Wirtz et al. 2003) and Madeira (Wirtz 1995) to the Portuguese continental coast as far north as Cascais (Wirtz & Debelius 2004). It was very recently recorded in Senegal (Wirtz 2011). *A. mirabilis* is also common in the western Mediterranean (Ocaña et al. 2000) and has been recorded in the Adriatic Sea (Kruzic et al. 2002) and Aegean Sea (Katsanevakis & Thessalou-Legaki 2007). In the Western Atlantic, it is known from Florida and the Bahamas to Brazil (Humann 1992; Zamponi et al. 1998).

This species was observed in Peniche (39°21.64'N 9°25.28'W) while diving at about 17 meters depth over rocky substrate (Fig. 1a). Another specimen was observed while diving in Farilhões (Berlengas Archipelago; 39°28.35'N, 9°32.76'W) at the entrance of a cave, at about 27 m depth.

Bunodosoma biscayense (Fischer, 1874)

This species is known from the Bay of Biscay, a region comprising northern Spain and southwestern France. According to den Hartog (1987) “if not an endemic of the southeastern Bay of Biscay, the further area of distribution is likely to include the poorly investigated Atlantic coasts of Portugal



Fig. 1. a) *Alicia mirabilis* and b) *Bunodosoma biscayensis* in Peniche and c) *Holothuria arguinensis* in Berlengas Island.

south-western Spain, Morocco and Mauritania, and possibly the south-western Mediterranean". A specimen was photographed and collected at Gamboa beach, Peniche (39°21.09'N 9°22.34'W), in a tide pool, at about 10 cm depth (Fig. 1b). Another isolated specimen was observed at Carcavelos (38°40.57'N, 9°19.72'W), Portugal but was neither collected nor photographed (Gonçalo Prista pers. comm.).

CRUSTACEA: DECAPODA

Scyllarides latus (Latreille, 1803)

The Mediterranean slipper lobster, *Scyllarides latus*, lives in the Mediterranean (Fisher 1973) and eastern Atlantic (Holthuis 1991), from the coast of Portugal (near Lisbon) to Senegal, Azores, Madeira, Selvagens Islands (Debelius

2001), Canary Islands (González-Pérez 1995) and Cape Verde Islands (Debelius 2001). A specimen of *S. latus* was observed and photographed at Berlengas (39°25.07'N 9°30.20'W), in a cave over a rocky bottom at about 4 m depth. This was the only observation of the species by the author in the area.

ECHINODERMATA: HOLOTHUROIDEA

Holothuria arguinensis Koehler and Vaney, 1906

The sea-cucumber *Holothuria arguinensis* is known along the African coast from Mauritania to North Senegal and South Morocco (Massin 1993), as well as in the Canary Islands (Moro et al. 2003). The species was observed and photographed at Berlengas (39°24.56'N 9°30.88'W) over a rocky bottom at about 8 m depth (Fig 1c).

CHORDATA: PERCIFORMES

Parapristipoma octolineatum

(Valenciennes, 1833)

The African striped grunt, *Parapristipoma octolineatum*, is known from Africa (Debelius 1997) to South Portugal (Santos et al. 2002). It is also known in the Mediterranean (rare), Cape Verde, Canary Islands, Madeira (Debelius 1997) and Selvagens Islands (observed by the author during the “EMEPC M@rbi Selvagens 2010” expedition). The author observed two specimens swimming together over a rocky bottom, about 15 m depth at Berlengas (39°25.40'N, 9°30.06'W).

DISCUSSION

The geographic distribution boundaries of species are being redesigned almost every day (Wirtz 2005; Ocaña & Wirtz 2007). Global warming may be one of the main reasons for this, driving tropical and sub-tropical species to migrate to places where previously the climate wasn't warm enough. However, and as demonstrated by these new records, it is not only recordings of tropical and subtropical species in temperate regions (e.g. *Alicia mirabilis*, *Scyllarides latus*, *Holothuria arguinensis*, *Parapristipoma octolineatum*) but also cold water species in temperate regions (e.g. *Bunodosoma biscayensis*). Therefore, a possible explanation for this lack of knowledge on the true geographic distribution range for some species may be simply the limited number of scientific studies on biogeography for some groups of organisms in some particular areas. In the present case, this could be a reflex of the reduced number of experts doing underwater records in the area when compared to other places such as the Mediterranean or the Caribbean Sea.

ACKNOWLEDGEMENTS

Peter Wirtz for the help given in some species identification (*Holothuria arguinensis* and confirmation of my provisional identification of *Scyllarides latus*) and for his permanent encouragement while I was doing this study; Oscar Ocaña

confirmed my provisional identification of *Bunodosoma biscayensis* and Gonçalo Prista for his precious information about occurrence of *B. biscayensis*; José Alberto for allowing the use of their photos; Instituto Politécnico de Leiria and *Haliotis - Aventuras Submersas* funded the project.

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Received 17 May 2011. Accepted 19 Jan 2012,
Published online 02 February 2012.