



# Article

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## New records of bathyal Leptolida (Cnidaria: Hydrozoa: Leptothecata) from the Bay of Biscay and the northwestern Iberian Peninsula (northeastern Atlantic)

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### Abstract

Four uncommon bathyal thecate hydroids, *Plicatotheca anitae* Calder & Vervoort, 1986, *Zygophylax africana* Stechow, 1923, *Nemertesia falcicula* (Ramil & Vervoort, 1992a) and *Pseudoplumaria marocana* (Billard, 1930), were collected during benthic surveys of the Cantabrian Sea and the Galicia Bank (Spain, northeastern Atlantic). Northern ranges of all four are extended in the Atlantic Ocean. Elsewhere in the northeastern Atlantic, *Plicatotheca anitae* is known only from the Azores, while the nearest records of *Nemertesia falcicula* and *Pseudoplumaria marocana* are the Strait of Gibraltar and from a station northwest off Cape San Vicente in the south of Portugal, respectively. *Zygophylax africana*, known only from South Africa and Japan, is new to the European fauna and was obtained at an unusual depth. Each of the four species is described and illustrated, and their distributions and bathymetric ranges are revised.

**Key words:** Hydrozoa, *Plicatotheca*, *Zygophylax*, *Pseudoplumaria*, *Nemertesia*, deep-sea, Galicia Bank, Avilés Canyon System, Bay of Biscay, Spain

### Introduction

The hydroid fauna of the Bay of Biscay and the northwest Iberian Peninsula has long been a subject of investigation. Across the entire area some 213 papers have been published on these cnidarians, 81 of them dealing with taxonomy and systematics (Altuna 2007, 2008). In a review of the literature, Altuna (2007) listed 190 species in the region extending from 42° N to 48°30'N and westwards to 10°W. Of that number, 76 inhabit the Deep Benthic Realm (200 + m depth), with 29 being exclusive to that realm. Only rarely are species added to that list, and discovery of unrecorded species is more frequent in the Coastal Realm (0–200 m depth). This is related obviously to a lesser sampling of the deep sea, but also to significantly higher biodiversity of Hydrozoa at shallow depths, a circumstance that is general to other areas of the world based on current knowledge.

The Spanish Institute of Oceanography (IEO) has been intensively sampling north-Iberian bathyal benthos in recent years (DEMERSALES, ECOMARG and INDEMARES projects), and rich collections of new and rarely recorded species of hydroids and anthozoans have been assembled. The main objectives of these surveys are integrated studies of the benthic deep-sea ecosystem off the continental margins of Galicia (northwest of Spain) and the Cantabrian Sea (Serrano *et al.* 2005; Sánchez 2009), and an inventory of areas of biological interest for conservation purposes. Sampling is mainly focused on submarine canyons (Avilés Canyon) and banks (Galicia Bank, Le Danois Bank). Avilés Canyon and Galicia Bank are areas of great biological production and biodiversity (Serrano *et al.* 2005; Sánchez *et al.* 2008, 2009; Sánchez 2009). Located very close to the coast off the city of Avilés, Bay of Biscay, north of Spain, Avilés Canyon is one of the deepest canyons of the world (Louzao *et al.* 2010) and is composed of several sub-canyons (Avilés Canyon System). One of them is La Gavierra Canyon. Galicia Bank is located in an upwelling area 200 km west of Galicia (north-western Spain), at 42°67'N–11°74'W (Marcos & García Varas 2006). Le Danois Bank, located 65 km off Ribadesella (44°N–05°W, north of Spain), is a Marine Protected Area (MPA, Sánchez 2009).

Knowledge of hydroids in these areas is uneven. The Avilés Canyon System has been the subject of intensive studies and several species have been recorded (Álvarez-Claudio 1993; Louzao *et al.* 2010), but only a few