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Literature analysis and present state of knowledge of benthic Medusozoa (Cnidaria) from the Bay of Biscay and nearby areas (northeastern Atlantic), with emphasis on biodiversity

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Abstract

The literature on benthic Medusozoa (Cnidaria) from the Bay of Biscay and nearby areas (roughly between 42º–48º30' N and 2°–10º W) is reviewed. Some 213 papers have been inventoried and classified in 17 groups based on their main contents. The present state of knowledge is analyzed, and papers covering each administrative territory of both adjacent countries, Spain and France, are listed. Around 2000, the accumulative curve of new papers and new records reached its ceiling. Some 205 species are known, with the suborder Conica (class Hydrozoa, order Leptothecata) accounting for the highest number of species (110), while the Proboscoida (Hydrozoa: Leptothecata), Filifera and Capitata (both Hydrozoa: Anthoathecata) account for much fewer species (21, 32 and 27 respectively). Only a few species are referable to the remaining subtaxa of Medusozoa, *i.e.* four to class Staurozoa, six to class Scyphozoa, four to subclass Trachylina (Hydrozoa), and one to order Limnomedusae (Hydrozoa). Species of suborders Capitata and Filifera (Hydrozoa, order Anthoathecata) will probably monopolize new discoveries of species. Knowledge of biodiversity is uneven amongst the different administrative provinces, with Guipúzcoa having the highest number of reported species (111 species, 54% of those known from the whole study area). Little information is available for certain areas, especially the French coasts. The fauna of every Spanish province has been the subject of MSc or PhD taxonomy-targeted research, but no such studies have been undertaken along the French coast. In Spain, the littoral fauna of Cantabria merits more intensive study because it represents an interface between the "cold" southwestern (from Asturias to Pontevedra) and "warm" southeastern (from Vizcaya to Gironde) areas of the Bay of Biscay.

Key words: Medusozoa, literature, biodiversity, Bay of Biscay, northeastern Atlantic

Introduction

The Bay of Biscay is an area partially encircled by Spain and France, and extending from the northwesternmost point of France (Bretagne) to its geographic equivalent in Spain (Galicia) (Crisp & Fischer-Piette 1959) (Figure 1). It was defined by Koutsikopoulos & Le Cann (1996) as an open oceanic bay bordered by the Spanish coast in its southern part (orientation W-E), and the French coast in its eastern part (orientation S-N) (Figure 1). With a maximum depth slightly exceeding 5000 m (Le Danois, 1948), it is an area of significant physical heterogeneity, of rich biotic communities, and of considerable oceanographic interest. The northern limit of the bay is close to the border of two biogeographical regions (Mediterranean-Atlantic and Eastern Atlantic-Boreal) located in the vicinity of the English Channel (see Ekman 1967; Briggs 1974), and the latitudinal distribution limits of many species are situated in the bay. The coastal area of the shelf is entirely within the Lusitanian province, a part of the Mediterranean Atlantic Region (Briggs 1974). The rest of the fauna occurs within the Deep Benthic Realm II (see Hayden *et al.* 1984).

Given the scientific interest of this region and its proximity to countries having a recognized scientific tra-

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