

{rokbox title=| Biplot results of the CCA analysis showing the ordination of samples (symbols) along eight significant gradients (black arrows) :: Image:

Authors|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-molluscan-assemblages-shelf-ordinas-2023-thumb-et-al.jpg|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-molluscan-assemblages-shelf-ordinas-2023-et-al.jpg{/rokbox}

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[**Molluscan assemblages in shelf and slope sedimentary habitats of the Northern Alboran Sea and their linkage to environmental variables.**](#)

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Abstract: The composition and structure of molluscan assemblages inhabiting circalittoral and upper and middle slope soft bottoms along the northern Alboran Sea, including the Alboran Ridge, was studied in relation to sediment characteristics and water bottom variables. Samples were collected using a beam-trawl (50 sampling stations) during 2014, 2015 and 2016 MEDITS expeditions. A total of 29 464 individuals were collected and 215 taxa of six different classes have been found, with gastropods and bivalves representing the most diverse and abundant ones. It is remarkable the presence of rare and uncommon species such as *Parthenina palazzii*, *Cerithiopsis nofronii* and *Thyasira obsoleta*, as well as a new record for Spanish waters: *Xanthodaphne dalmasi* and two new records for Andalusian waters: *Turbonilla amoena* and *Emarginula pustula*. Multivariate analyses using abundance data of living molluscs indicated the presence of seven assemblages in relation to depth and type of sediment. The assemblages identified on circalittoral soft bottoms displayed high species richness and abundance values, and were related to different sediment types. The assemblages located on the platform of the Alboran Ridge displayed the highest species richness values, with a large amount of exclusive species. Some sediment characteristics such as percentage of mud (>80%) and organic matter content, together with depth, were the most influential variables regarding the spatial distribution of the molluscan assemblages. The geographic position of the Alboran Sea, the peculiar oceanographic and hydrological conditions, the diverse sediment types promoting habitat heterogeneity, and the wide depth range may promote the high molluscan biodiversity reported in the present study. The information provided in this study is of importance for improving the knowledge on the diversity of circalittoral and bathyal soft bottoms of the northern Alboran Sea, and provides a baseline for monitoring programs under the framework of different directives such as the Marine Strategy Framework Directive.

Keywords: Bivalves, Gastropods, Mediterranean sea, Biodiversity, Soft bottoms.