

{rokbox title=|Location of the samples collected with beam-trawl in circalittoral and bathyal soft bottoms of the northern sector of the Alboran Sea and the Alboran Ridge during the MEDITS survey expeditions :: Image: Authors| thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-echinoderm-assemblages-circalittoral-bathyal-sedimentary-habitats-alboran-sea-moya-et-al-2025-thumb.jpg|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-echinoderm-assemblages-circalittoral-bathyal-sedimentary-habitats-alboran-sea-moya-et-al-2025.jpg{/rokbox}

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Echinoderm Assemblages From Circalittoral and Bathyal Sedimentary Habitats of the Northern Alboran Sea (Western Mediterranean): Diversity, Distribution and Relationships with Environmental Variables.

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Abstract: The composition and structure of circalittoral and bathyal soft bottom echinoderm assemblages along the northern Alboran Sea, including the Alboran Ridge, have been studied in relation to sediment and near-bottom water masses characteristics. Samples were taken using a beam-trawl (50 sampling stations from 40 to 774 m depth) during 2014, 2015 and 2016 MEDITS surveys (30 to 800 m depth range). A total of 99,390 individuals were collected and 53 taxa of the five classes of echinoderms were found, with ophiuroids and holothuroids being the most diverse and abundant taxa. A high abundance of *Ophiocten abyssicolum* was detected in some samples, probably related to the high productivity of the Alboran Sea. Multivariate analyses using echinoderm abundance data indicated the presence of six assemblages in relation to depth, salinity and sediment type. The geographic location of the Alboran Sea, its singular oceanographic and hydrological conditions and diverse sediment types promoting habitat heterogeneity, as well as the wide depth range may promote the high echinoderm biodiversity reported in the present study. The information provided for this important benthic component improves the current knowledge on the biodiversity of circalittoral and bathyal soft bottoms of the northern Alboran Sea, and could be used as a baseline for further monitoring programs under the framework of different directives such as the Marine Strategy Framework Directive.

Keywords: Echinodermata, Soft Bottoms, Alboran Sea, Diversity, Bottom Trawling