{rokbox title=|Map of the Mediterranean Sea showing the MEDITS stations sampled during 1994–2012 :: Image: Authors|
thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-patrones-espacio-temporal-biodiversidad-cefalopodos-mediterraneo-keller-et-al-plosone-2016-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-patrones-espacio-temporal-biodiversidad-cefalopodos-mediterraneo-keller-et-al-plosone-2016.jpg{/rokbox}

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, 2016.
Large-Scale Spatio-Temporal Patterns of Mediterranean Cephalopod Diversity
. PLoS ONE 11(1): e0146469. doi:10.1371/journal.pone.0146469.

Abstract: Species diversity is widely recognized as an important trait of ecosystems' functioning and resilience. Understanding the causes of diversity patterns and their interaction with the environmental conditions is essential in order to effectively assess and preserve existing diversity. While diversity patterns of most recurrent groups such as fish are commonly studied, other important taxa such as cephalopods have received less attention. In this work we present spatio-temporal trends of cephalopod diversity across the entire Mediterranean Sea during the last 19 years, analysing data from the annual bottom trawl survey MEDITS conducted by 5 different Mediterranean countries using standardized gears and sampling protocols. The influence of local and regional environmental variability in different Mediterranean regions is analysed applying generalized additive models, using species richness and the Shannon Wiener index as diversity descriptors. While the western basin showed a high diversity, our analyses do not support a steady eastward decrease of diversity as proposed in some previous studies. Instead, high Shannon diversity was also found in the Adriatic and Aegean Seas, and high species richness in the eastern Ionian Sea. Overall diversity did not show any consistent trend over the last two decades. Except in the Adriatic Sea, diversity showed a hump-shaped trend with depth in all regions, being highest between 200–400 m depth. Our results indicate that high Chlorophyll a concentrations and warmer temperatures seem to enhance species diversity, and the influence of these parameters is stronger for richness than for Shannon diversity.

Keywords: Species diversity, Cephalopods, Biodiversity, Shannon index, Malacology, Mediterranean Sea, Ecosystems, Marine fish