

Molecular characterization of the diet of the planktonic community in Málaga Bay (NW Alboran Sea).

Lidia Yebra¹, Alma Hernández de Rojas², Nerea Valcárcel-Pérez¹, M. Carmen Castro², Dolores Cortés¹, Jesús M. Mercado¹, Raúl Laiz-Carrión¹, Alberto García¹, Francisco Gómez-Jakobsen¹, José M. Quintanilla¹, Soluna Salles¹, Amaya Uriarte¹

¹Instituto Español de Oceanografía, C.O. Málaga, Puerto Pesquero s/n, 29640, Fuengirola, Málaga, Spain. E-mail: lidia.yebra@ma.ieo.es

²Instituto Español de Oceanografía, C.O. Gijón, Av. Príncipe de Asturias 70 bis, Gijón, 33212, Spain.

The seasonal changes in structure and functioning of the pelagic trophic web in Málaga Bay (NW Alboran Sea) are related to the annual hydrological cycle. However, time series analyses have shown that the relationship between interannual hydrological variability and the plankton community composition is weak. This might be due to different human-induced pressures (nutrient pollution, coastal fisheries) acting on different compartments of the trophic web. The net effect of all these factors would depend on how the ecosystem channels changes in the composition and abundance of each trophic level. Interactions of phytoplankton-ciliates-zooplankton might have a central role in the regulation of the trophic web in Málaga Bay, although the trophic relations of the dominant groups remain still undefined. In order to identify the dominant trophic relationships we aimed to characterise the diet of key ichthyo- and mesozooplankton species in the field. Given that gut content preys (phyto- and microplankton) are fragile and not easy to identify visually, we developed species-specific molecular markers to detect their presence/absence within the predators gut.

Keywords: diet, ichthyoplankton, PCR, zooplankton

Contact author: Lidia Yebra, Instituto Español de Oceanografía, C.O. Málaga, lidia.yebra@ma.ieo.es.