

M.L. Fernández de Puellas, V. Macías, L. Vicente, J.C. Molinero, 2014. [Seasonal spatial pattern and community structure of zooplankton in waters off the Balears archipelago \(Central Western Mediterranean\)](#)

Abstract: We investigated the zooplankton community in two different areas of the Balears Archipelago, Western Mediterranean, using data obtained in autumn (December 2009) and summer (July 2010). Micrometazooplankton and mesozooplankton samples were collected in the 0–200 m layer above the shelf (200 m) and the slope (900 m) of each area by a 53 µm and a 200 µm mesh size net respectively. The zooplankton biomass (expressed as dry weight) was higher in autumn than in summer (9.30 and 6.95 mg m⁻³, respectively) with an important contribution of micrometazooplankters (29% and 41% of total biomass respectively). The latter fraction overwhelmed in the entire metazooplankton abundance, suggesting a non-negligible role as potential food for fish in the epipelagic waters of the Balears archipelago. The abundance of micrometazooplankton was two-fold higher in December (3581 ind. m⁻³) than in July (1585 ind. m⁻³), represented mainly by small copepods and nauplii. Likewise, the mesozooplankton community showed smaller difference between months (554 and 390 ind. m⁻³, in December and July). Micrometazooplankton abundance was higher in the northern area than in the southern area during autumn, probably linked to the presence of a front, while the opposite was found in summer. In both periods and areas copepods dominated, and within the highly diverse community ten species and their juveniles accounted for 70% of the community. In both areas, *Clausocalanus* (*C. pergens* + *paululus* and *C. arcuicornis*), *Paracalanus parvus*, *Oncaea media*

Oithona plumifera

and

Acartia clausi

were abundant in autumn, whereas

Centropages typicus

Temora stylifera

and

Mecynocera clausi

were mainly present in summer. ANOSIM analysis revealed significant differences in the mesozooplankton community composition between months while differences between areas were detected only in summer.

Keywords: Micrometazooplankton, Mesozooplankton, Copepod structure, Seasonal, Oligotrophic, Western Mediterranean