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Biodiversity patterns of megabenthic non-crustacean invertebrates from an exploited ecosystem of the Northwestern Mediterranean Sea

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1 **Biodiversity patterns of megabenthic non-crustacean invertebrates from an exploited**
2 **ecosystem of the Northwestern Mediterranean Sea**

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15 **ABSTRACT**

16 We evaluated seasonal patterns of biodiversity of the megabenthic non-crustacean
17 invertebrates on soft bottoms of the continental shelf and slope of the Catalan Sea (Balearic Sea,
18 Northwestern Mediterranean). Scientific demersal trawls were carried out between 30 and 400 m during
19 winter and summer of 2013 in 37 and 45 stations respectively. Among a total of 188 species, a limited
20 number of echinoderms, cephalopods and occasionally ascidians dominated the bulk of the community,
21 covering up to 95% of the total wet weight. Seasonal and bathymetric variations were found in the
22 different biodiversity patterns, with higher values in summer and in shallower depths, regarding overall
23 wet weight (>14,000 kg/km²), density (>1 million ind/km²), richness and diversity (143 species; H'[']=1.74).
24 The statistical differences in density and wet weight between bathymetric strata reflected in particular
25 groups of species typifying each environment, but without any exclusiveness in depth preferences,
26 since generalist species were the main components of the community. Depth was the main driver of

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