

087 - ARE PELAGIC CEPHALOPODS IN THE MEDITERRANEAN AS ABUNDANT AS SUGGEST THE STOMACH CONTENTS OF THEIR PREDATORS?

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According to most specialists, the dearth of information on oceanic cephalopods reflects the inability of present day sampling equipments to catch them, since stomach content analyses of their predators suggest that they are very abundant along the water column. Stomach analyses, however, have an important inherent problem that should be taken into account when addressing this hypothesis. Cephalopod flesh digests more quickly than fish flesh and, in most cases, the identification of cephalopod remains is done from beaks, which are difficult to digest and may accumulate for long times in the stomachs. Such beak accumulations obviously bring forth an overestimation of the importance of cephalopods in the predator's diet. With the expectation of determining if pelagic cephalopod abundances in the Mediterranean are in agreement with inferences from teutophagous predator's diet, we analysed the structure and dynamics of cephalopod assemblages at different bathymetric strata from the surface to bottom grounds down to 900 m depth: 1) near surface (SUR); 2) in the benthic boundary layer (BBL); 3) in the deep scattering layer (DSL); and 4) on the bottom (BOT). Pelagic trawls were carried out in the strongest acoustic sound layers. Although bottom trawl samples were only available from daytime hours, mid-water trawl samples were taken both during the day and night, which allowed comparisons of day-night cephalopod abundances and diel movements along the water column. A total of 26 cephalopod species belonging to 12 Families were caught. On the slope, diversity increased with depth from near the surface to the bottom; on the shelf, diversity was also highest at BOT. Total species richness did not show important differences at SUR, DSL and BBL levels, but increased at bottom levels both on shelf and slope. Mean species richness on the slope was higher at BBL and BOT than at SUR and DSL. On the shelf, mean species richness was markedly higher at the bottom strata than at SUR and BBL. Abundance and biomass were by far highest at BOT and, within this level, higher on the shelf than on the slope. Abundances in both areas in general were markedly higher at night than during daytime. Despite focusing our pelagic samplings on the strongest acoustic sound layers, our results showed that pelagic cephalopod diversities and abundances were very low compared to close to bottom grounds and in no way in accordance with the high abundances inferred from diet studies.

KEYWORDS: Cephalopod communities; Bathymetric patterns; Diurnal migration

