distant but shallower (2700 m). Several multiple-corer deployments at three stations within each area and the vertical sectioning of the sediment samples allowed the detailed study of horizontal and vertical meiofaunal distribution. Data analyses indicated differences between the two studied areas and among sediment horizons when richness and community structure at major taxa level were used, but these patterns do not stand for overall metazoan meiofaunal abundance. Nevertheless, nematode and copepod standing stocks follow diversity community patterns that could even indicate differences among stations of the same area. The results of this study suggest that meiofaunal richness and community structure are rather related to depth than distance to coast, exhibiting the well-known decreasing bathymetric trend even in an enclosed, event driven system.

Deep-sea harpacticoid copepods: habitat heterogeneity at the 10-km scale on the continental rise off California O09

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At the time when the sediment-covered, deep-sea floor was discovered to be inhabited by vast numbers of species, it was thought to be environmentally homogenous. To resolve this apparent paradox, deep-sea ecologists have been searching for ecologically important environmental heterogeneities. We studied harpacticoid copepods from two sites at ∼3150 m depth on the continental rise. One was in the mouth of a submarine canyon, and one was on an escarpment. The sites differed significantly in multivariate faunal similarity. At the canyon site, absolute abundance, the ratio of subadult copepodites to adults, species density, the proportion of the harpacticoid species that emerged, and the proportion that lived in tubes were significantly less than at the escarpment site. These marked differences imply that ecologically important environmental heterogeneities exist at each site. We speculate as to the identity of these environmental differences.

A multifaceted approach to understanding spatial turnover and connectivity in the deep sea O10

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Productivity at the surface waters, together with the flux of organic matter to the seafloor and disturbance effects are considered to structure benthic communities dwelling the deep seabed. Nevertheless, it is still unclear to what extent these processes control benthic local and regional biodiversity. In this study, by means of an integrative approach, we examined ten stations at the Western Iberian Margin located within two isobathic parallel transects. The shallower transect was situated at the shelf break (∼300 m) and deeper transect at the mid-slope (∼1000 m). We tested whether food resources and hydrodynamic effects at the seafloor similarly alter nematode resource utilization at different depths. Moreover, we examined the role of connectivity as a result of potential nematode dispersal between different depth zones. By applying integrative taxonomy using molecular and morphological approaches in combination with environmental factors, this study intended to explain spatial turnover and connectivity in relation to depth in the deep sea. Results revealed that high variability in resource availability is directly linked to high alpha diversity and spatial heterogeneity. Moreover, communities dwelling in deeper regions showed to be able to use resources complementarily and promote species coexistence. Our study also demonstrated that higher hydrodynamics at the shallower habitats near the shelf break, as inferred from the high sediment heterogeneity, promoted higher beta diversity compared to the mid-slope. Lastly, phylogenetic relationships revealed no evidence for depth-endemic lineages or isolation per habitat, indicating regular interchanges across different depths.

011 Metazoan meiofaunal distributions and environmental parameters in the bathyal sediments affected by the 2011 off the Pacific coast of Tohoku earthquake and tsunami

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We investigated the abundances and vertical distributions of metazoan meiofauna in sediments after the disturbances caused by the 2011 off the Pacific coast of Tohoku earthquake and tsunami. We collected surface sediment cores from eight bathyal stations off Tohoku in March 2012, November 2013, and November 2015, and examined meiofaunal abundances, sedimentological and geochemical parameters. Copepods always showed peak densities in the sediment surface layer. Nematodes densities, on the contrary, were lower in the surface event-deposit layers compared to those in deeper sediments at most of the investigated stations. Nematodes at these area originally showed peak densities at the surface sediments in general before the earthquake, suggesting the subsurface peak in our study were rather unusual distributions. Based on multivariate analysis, the subsurface peak of nematodes were mainly explained by NH_4^+ concentrations, while copepods density were explained by both NH_4^+ and O_2 concentrations. The subsurface peaks of nematodes were continuously observed in the samples collected in November 2013, suggesting that