

Oceanography Seminar

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“Trophic structure of a deep marine ecosystem: the Avilés Canyon”

Submarine canyons, which are found worldwide, connect continental margins with the deep ocean. They often present a higher abundance and biomass of fauna compared to the adjacent environment, however studies on the pathways of organic matter and their relation with the trophic ecology of the ecosystem are scarce. The Avilés Canyon (Central Cantabrian Coast) exhibits a depth range from 128 m at its head, located 12 km off the coast, down to 4766 m depth when it reaches the abyssal plain of the Bay of Biscay. I will talk about the communities present, their food source and the energy flux, analyzed using measures of carbon and nitrogen stable isotope ratios. The food web rely on organic matter produced by marine phytoplankton in the euphotic zone that reaches the benthos mainly from vertical transport. Seasonal changes experienced in the upper layer of the ocean highly affect the food web, especially those smaller size organisms occupying the lowest trophic levels. Thus, seasonal variations in primary production and its transport to the deep-sea are key drivers of the structure for the food web in the Avilés Canyon.

Thursday January 31st, 2019 3:00p.m. MSB 100