
Woods Hole Oceanographic Institution
Biology Department Seminar



Thursday, August 10, 2023 – 12:00 Noon

Dinner Time in the Deep: a Food Web Analysis of the OTZ

Kayla Gardner

WHOI – MIT Joint Program Student

Despite its impressive biomass and diversity of fishes, crustaceans, cephalopods, and gelatinous organisms, ocean ecologists remain remarkably ignorant to mesopelagic food web dynamics. This knowledge gap has stymied efforts to determine the effects of potential extraction of mesopelagic biomass by industrial fisheries on ecosystem services provided by the open ocean. I will present data from a study combining compound specific stable isotope analysis and gut metabarcoding techniques to explore the diet of several key mesopelagic fish species. This study highlights complexities that can exist from year to year in these food webs and also suggests a reliance on cyanobacteria and detrital end members. Additionally, I will provide some preliminary data from a study comparing mesopelagic food web seasonality. These studies provide new insights into the structure of mesopelagic food webs that are vital to increase our understanding of deep open ocean habitats and inform sustainable fishery practices.

HYBRID! **In person:** Redfield Auditorium **Zoom:** <https://whoi-edu.zoom.us/j/94801498446> Meeting ID: 948 0149 8446 **By phone:** Find your local number: <https://whoi-edu.zoom.us/u/alSvYldN>