

Edgcomb Laboratory: Protists and Hydrocarbon Degradation

Selective grazing by protists can alter the structure of bacterial communities and effectively eliminate some types of bacteria while enabling others to flourish. It is well known that hydrocarbon degradation is typically limited by the bioavailability of nutrients such as nitrogen and phosphorous. As grazing protozoa are able to encourage re-mineralization of growth-limiting nutrients, predation can result in enhanced bacterial growth and activity, fostering the utilization of hydrocarbons as a carbon source for bacteria. The potential of protists as direct hydrocarbon degraders is still largely unexplored. We are examining the degradation of hydrocarbons in deep marine sediments from the Gulf of Mexico both in the presence and absence of oxygen and in the presence of varying nutrient (N and P) concentrations, and the effect of protists on the structure of the *in situ* bacterial community.



(Woods Hole Oceanographic Institution)

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