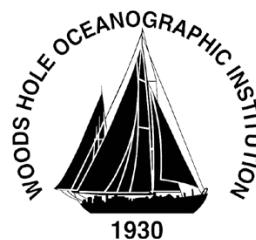

Woods Hole Oceanographic Institution
Biology Department Seminar



Thursday, May 12, 2016
Redfield Auditorium – 12:00 Noon

**Linking the physiology of host-associated
microbiomes to ecological interactions
and ecosystem processes**

Dr. Roxanne Beinart
**NSF Ocean Sciences Postdoctoral
Research Fellow, WHOI Geology and
Geophysics Department**

Eukaryotes in many ecosystems have evolved specific associations with prokaryotes (microbiomes) that allow them to capitalize on the relative diversity of prokaryotic metabolisms. Despite their ubiquity, mechanistic links from the physiology of host-associated microbiomes to ecological and ecosystem processes remain largely speculative. To fill this gap, I unite physiological, ecological, and biogeochemical approaches to characterize the functions of host-associated microbiomes and assess their impact on interactions with other organisms and the environment. Here I present a combination of observational and experimental work that is providing valuable insight into the physiology and ecology of the microbiomes associated with hydrothermal vent molluscs and protists from oxygen-depleted habitats. Altogether, this demonstrates the importance of microbiome activity to the distribution of hosts into specific niches, and interaction with the geochemical environment through uptake and excretion of chemicals.