

Graduate Opportunity for Benthic Ecologist
UMass Boston CaPE (Coastal Processes and Ecosystems) Laboratory

A research opportunity for a graduate student interested in benthic ecology is available starting immediately. The Coastal Processes and Ecosystems Laboratory, a joint research effort between the School for the Environment within the University of Massachusetts Boston and the Center for Coastal Studies in Provincetown, Massachusetts has a fully-funded, multi-year project with the National Park Service (NPS). We are looking for an enthusiastic graduate student to work on a disturbance study with us, that is one part of the larger NPS project. The successful candidate will be involved in vessel-based sample collection for invertebrate and grain size analysis with a sediment grab. The student will take on lab work such as picking and identifying invertebrates collected from the seafloor off of Herring Cove Beach in Provincetown. The invertebrate data collected will be used to evaluate how the faunal community is affected by disturbance (hydraulic clamming) and evolution of recovery post-disturbance. Spatial distribution of species identified will also be related to geological data (grain size, sediment compaction). The disturbance study encompasses roughly 1 km² in close proximity to Herring Cove Beach and includes various experimental treatments. The student may be involved in all aspects of the larger study and other ongoing work at both the Boston and Provincetown Labs. The student will be led by Drs. Agnes Mittermayr and Mark Borrelli.

The larger NPS project is a multidisciplinary study from Long Point to Race Point in Provincetown, MA and is investigating short-term (months to years) ecosystem evolution via geological and ecological data. Data being collected include the previously mentioned benthic grab samples as well as vessel-based acoustic seafloor mapping and waves and tidal currents from quarterly Acoustic Doppler Current Profiler (ADCP). ADCP data will document seasonal shifts in coastal oceanographic processes and provide insights into sediment transport. Sediment compaction data are being gathered with a free fall penetrometer (along with beach profiles and offshore acoustic profiles) along shore-normal transects. These data, together with information on sediment grain size will further our understanding of sediment transport in general as well as changes in coastal morphology and/or critical shear stress as a result of seasonal changes and/or anthropogenic disturbances.

Please send recent CV and brief cover letter, including dates of availability, to Drs. Agnes Mittermayr (amittermayr@coastalstudies.org) and Mark Borrelli (mark.borrelli@umb.edu).