



# Fall Faculty Lecture Series

## Plastic Pollution & the Ocean Environment

*Dr. Erik Zettler*

**Sunday, November 15 at 1 p.m.**  
**Free and Open to the Public**

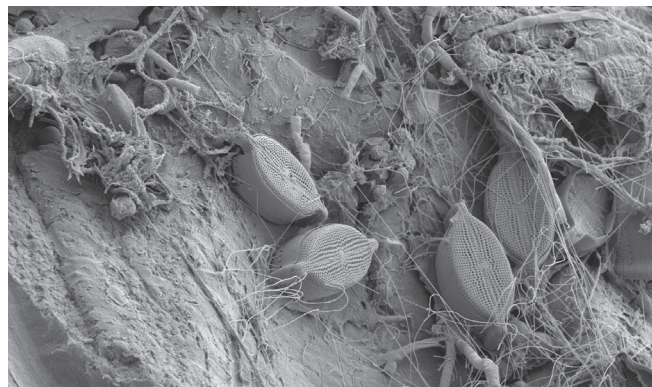
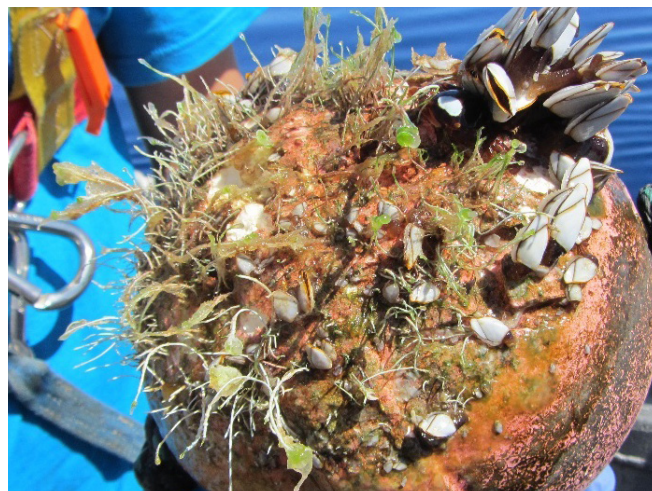
### Sea Education Association

James L. Madden Center Lecture Hall  
 171 Woods Hole Road in Falmouth

**Plastic is now the most common form of ocean debris**, with concentrations of more than 1 million pieces per square kilometer in certain areas. You've probably heard about the problems that arise when fish, turtles, birds, and marine mammals ingest or get entangled in this litter. But recent research reveals lesser-known aspect of this story: An entire community of tiny microbes is living on these plastics.

In this lecture, Dr. Erik Zettler will discuss recent findings about the **"Plastisphere,"** the name for the miniature ecosystem in the layer of slimy film that plastics develop after immersion in sea water. Using SEA Semester sailing vessels and incorporating student research projects, a joint research team from Sea Education Association, Marine Biological Laboratory, and Woods Hole Oceanographic Institution has been exploring the diversity and functions of the Plastisphere community through a variety of cutting-edge research methods.

There's still much more to understand about the Plastisphere, but scientists have observed **millions of tiny organisms** that play different roles. Some of these plastic hitchhikers are passive and harmless travelers, but others have the potential to break down plastic, pose threats as invasive species, or may cause diseases in marine animals and even humans. Join us for an illustrated look at what local scientists are uncovering about these fascinating creatures.



SEA Semester students and Woods Hole scientists are examining communities of tiny sea creatures on plastic debris in the ocean (*above*: buoy collected at sea, *below*: organisms on plastic seen via an electron microscope).

### About the Lecturer

**Dr. Erik Zettler** is a Professor of Oceanography and Associate Dean for Institutional Relations at Sea Education Association. He has been a member of the Woods Hole scientific community since 1985 and joined SEA in 1994. Whenever possible, he escapes his desk for the field, including more than 50 research cruises aboard SEA and UNOLS vessels in the Atlantic, Pacific, Mediterranean, and Caribbean.

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