PARIS LODRON UNIVERSITÄT SALZBURG

Umwelt & Biodiversität

SEMINAR SERIES ENVIRONMENT & BIODIVERSITY

Guest Lecture

Prof. Dr. Linda Amaral-Zettler und Dr. Erik Zettler

Royal Netherlands Institute for Sea Research

Department Marine Microbiology and Biochemistry

Host: Univ.-Prof. Dr. Ulrike Gabriele Berninger

The Plastisphere and Plastic Pollution

The discovery that ~8 million metric tons of plastic litter finds its way from land to the ocean per year, with the largest measured concentrations ending up in the very remote reaches of the ocean's "garbage patches", has mobilized the scientific, citizen science, government, NGO, and media communities to action in search of solutions to prevent further waste mismanagement in the future. Attention has focused on the smallest of marine organisms - the microbes - some of which call this plastic pollution "home" as a potential solution to this growing global problem. Collectively, we refer to this collection of life on plastics as the "Plastisphere". Broadening interest in the topic has extended to plastic debris in rivers and other freshwater environments. Our research team has been studying microbial interactions with PMD using a multiphasic approach including high-throughput amplicon and metagenomics sequencing, culturing, Scanning Electron Microscopy, and more recently Combinatorial Labelling and Spectral Imaging – Fluorescence In Situ Hybridization (CLASI-FISH). Over the past several years, our laboratory has been invested in understanding the relationship between microbial diversity and biodegradation in the marine environment, including performing respirometry experiments following established standard test methods. This lecture will review what is known about diversity in the "Plastisphere" to date and discuss the advantages and disadvantages different technologies present in addressing some of the most urgent questions regarding this newest of marine habitats.

Friday, October 4, 3 PM

NLW-Faculty, Room 435, 3rd floor

SCAN ME