

Öffentlicher Vortrag

Life in the Plastisphere:

Global impacts of microbial interactions on plastic marine debris

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The “Plastisphere” encompasses a diverse microbial and metazoan community living on plastic marine debris (PMD). There is substantial public and scientific interest in PMD and the problems of entanglement and ingestion by fish, turtles, birds, and marine mammals, but the microbial community on this manufactured substrate is just beginning to be studied. Global plastic production exceeds 300 million tons per year and it is estimated that up to 5% of plastic waste is entering the ocean. As a result, plastic is now the most common form of debris in the ocean, reaching concentrations of over 1 million pieces per square kilometer in ocean accumulation zones. Each of these pieces develops a microbial biofilm that may contribute to global nutrient cycling, toxin transport, trophic web interactions, plastic degradation, and the spread of potentially pathogens. Using a combination of imaging, culture work, next-generation amplicon sequencing, and metagenomics on both field and experimental samples we are investigating the diversity and function of the Plastisphere community.



Veranstalter: Exzellenzcluster „Ozean der Zukunft“

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