



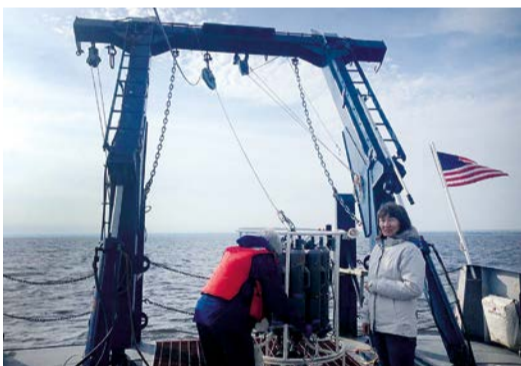
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Wednesday, 29th June, 2016, 01:30 p.m. (13:30h)
GEOMAR Lecture Hall West (R.54) | Düsternbrooker Weg 20, 24105 Kiel

Trait-based approaches to phytoplankton ecology and evolution



Phytoplankton account for about half of global primary productivity, form the base of the most aquatic food webs and play important roles in major biogeochemical cycles. Changing environmental conditions shift community composition with consequences for higher trophic levels and biogeochemistry.

Trait-based approaches provide a mechanistic foundation for understanding how phytoplankton communities respond to interacting abiotic and biotic drivers. I discuss examples of how functional traits can provide insights into community assembly and dynamics. The new frontiers in trait-based research include looking at intraspecific trait variation due to genotypic differences and phenotypic plasticity and comparing it to interspecific variation to predict patterns in community responses. Investigating trait evolution due to interacting environmental pressures and incorporating it into predictive models of plankton communities and biogeochemistry is another experimental and theoretical challenge facing marine ecologists.