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“IT WAS VERY EXCITING IN THOSE DAYS.  
WE WERE EXPLORERS.”

Marie-Tharp [1920-2006], Oceanographer

**Online Seminar** Tuesday, 09<sup>th</sup> November 2021, 13:00 CET

# Flexibility matters!



**The role of biodiversity and trait adaptation for ecosystem functioning: Evidence from generic simulation models and observation of a natural plankton food web.**

Recurrent failures to model observed dynamics of phytoplankton and microzooplankton in the context of climate change with e.g., the established marine ecosystem model ERSEM stimulated a profound reconsideration of previous concepts. The modelling efforts revealed the important role of the inherent flexibility of functionally diverse species and groups of organisms to adjust to ambient conditions. For example, under strong grazing pressure, prey organisms likely develop defence strategies and their consumers counteract subsequently by developing strategies to overcome the defence. This leads to eco-evolutionary dynamics or biomass-trait feedbacks in multitrophic food webs where the functional traits (properties) of the component organisms change in accordance with changes in the biomasses.