



Donnerstag: 29.11.2018 16:00 s.t.

Zentrum für Bioinformatik, Bundesstraße 43, Raum 16

Phytoplankton Adaptation to Global Warming – Insights from Resurrection Experiments and Ecosystem Modelling

Some phytoplankton species produce long-living resting stages that can survive decades in the sediment. We activated 100- and 2-year-old resting stages of a spring bloom dinoflagellate from the sediment of the Gulf of Finland (Baltic Sea) and investigated whether differences in temperature dependent traits exist between historic and recent strains. Our resurrection experiments indicate that the rate of resting stage formation is significantly lower in recent compared to historic strains. Using an ecosystem model that considers mutation and selection of phytoplankton, we demonstrate that lowering the resting stage formation rate is in fact beneficial under global warming. However, the magnitude of change in the resting stage formation rate is only reproduced by the model if additional factors are taken into account.

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Everyone is welcome!