

Can we breed heat resistant corals for reef restoration?

Initiative: "Experiment!" (beendet)

Ausschreibung: Explorative Phase

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Laufzeit: 1 Jahre 6 Monate

The heatwave-induced coral bleaching events of 2016 and 2017 have had dramatic global consequences for tropical corals, with e.g. high mortality and detrimental transformation of the three-dimensional structures. Future warming and increased prevalence of heatwaves will further destroy global reefs. To date there are no published multi-generation selection studies available that could illustrate, whether tropical corals could rapidly adapt to higher temperatures and what the underlying mechanisms of adaptation to warmer water could be. This project aims to contribute to this very important gap in knowledge by conducting the first laboratory multi-generation heat selection experiment using the model coral species *Acropora millepora* from the Great Barrier Reef, recent advances in coral reproductive biology, as well as sequencing approaches. The aim is to generate and characterize heat tolerant coral lines in order to understand mechanisms and limits of adaptation to a warming ocean. Ideally, a proof-of-concept will be provided to answer the question whether it is possible to create heat resistant coral lines for usage in reef restoration of heat damaged-reefs.

Projektbeteiligte

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