

advanced phase Postdoc "Evolution and maintenance of mutualisms: Identification of the causal ecological factors" MPI (NICHT Universität Osnabrück)

Initiative: Evolutionsbiologie (beendet)

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Laufzeit: 5 Jahre

Mutualisms are cooperative interactions between two species to the mutual benefit of both parties. Despite their fundamental ecological importance, does their existence pose an evolutionary conundrum: Why does one species invest costly resources into another one and not use them for itself. This long-neglected question is the main focus of this project. In particular, ecological factors and evolutionary conditions will be identified that contribute to the evolution and maintenance of mutualisms. In an experimental approach, two bacterial species will be exposed to ecological conditions and selection pressures that are predicted by theoretical models to promote the evolution and maintenance of mutualisms. The corresponding longterm coevolution experiments will start with different precisely defined, synthetically designed ecological interactions. A detailed analysis of the coevolving bacterial populations will allow to identify the causal environmental conditions as well as to study the underlying process on both a phenotypic and genetic level.

Projektbeteiligte

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