MA07-015 - Multidimensional adaptive dynamics and the evolution of phenotype determination

Zusammenfassung

There is a long tradition to analyze the process of Darwinian evolution with mathematical models. The issue that is addressed in this project by means of a mathematical modeling approach concerns mechanisms that generate phenotypic diversity within a species in response to diversifying selection. Several such mechanisms are known; some produce diversity already at the genetic level, others act only on the phenotype. These mechanisms play an important role in maintaining the biological diversity that we see in nature. Currently, however, we only have a poor understanding of how ecological factors, on the one hand, and the genetic and developmental constraints, on the other hand, favor or disfavor different such mechanisms on an evolutionary time scale. In this project we will address this question in an interdisciplinary team of bio-mathematicians, theoretical biologists and developmental biologists.

Keywords:
adaptive dynamics, dynamical systems, evolutionary development,phenotype determination, polymorphism, population genetics,quantitative genetics

---

Principal Investigator: Claus Rüffler

Institution: University of Vienna

Status: Abgeschlossen (01.01.2008 - 30.09.2012)

Weiterführende Links zu den beteiligten Personen und zum Projekt finden Sie unter
https://www.wwtf.at/funding/programmes/past/ma/MA07-015/