Proposal for summer school

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Concepts and methods in ecology and evolution - pitfalls and solutions designed for molecular biologists

The idea for this summer school was that it will be designed for Ph.D. students and/or possibly PostDocs within the SPP who are primarily doing physiological and/or molecular work but are interested in the ecological and evolutionary implications of their results. The aim is to familiarize them with methods and, more important, the way of thinking in evolutionary ecology.

Key topics include:

1) Ecological and evolutionary thinking - approaching natural variation from a whole-plant perspective
2) The WHY as opposed to the HOW question - what are 'mechanisms' in evolution and ecology vs. molecular mechanisms?
3) Common and novel experimental approaches to studying natural variation
4) Introduction into evolutionary models and theory
5) Common pitfalls and misconceptions about 'ecological approaches', e.g. how empirical methods have been misinterpreted and mis-used
6) The course will further give the opportunity to discuss the specific projects of the Ph.D. students /PostDocs and how to integrate the methods (e.g. appropriate experimental designs, merging molecular with ecological methods) and theoretical concepts (e.g. the '*why*' question) presented in the course. Students will be expected to prepare and present a short research proposal into that direction.