

Kolloquium des Institutes für Landschaftsökologie WS 18/19

Dienstags 18 Uhr c.t.
Hörsaal Heisenbergstr. 2

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Exotic plant invasion under increased environmental variability

Plant invasions are amongst the most important drivers of global change, and cause substantial economic and ecological damage. Recent studies indicate that novel climatic conditions, such as changes in mean temperature and precipitation, can promote the spread of invasive plants. One dimension of climate change, however, that is changes in environmental variability, remains understudied. In a pilot experiment I showed that increased variability of nutrient supply, a common consequence of climatic variability, can strongly promote invasion. I will present a series of follow-up studies with different experimental approaches used to understand several dimensions of this phenomenon: (1) the underlying mechanisms -from tracking the uptake and investment of a nitrogen pulse in pairwise competition with native species, (2) the generality -after testing the relative importance of genetic and species diversity for biotic resistance of native communities in a greenhouse mesocosms, and finally (3) the ecological relevance -by manipulating the resource supply either for rapid-turnover annual communities in the experimental garden or for real invasive populations in the field.