Sommersemester 2009

BayCEER Kolloquium

Vortragsreihe Ökologie und Umweltforschung

Donnerstag 07.05.2009, 16:15 Uhr, H6
Anschließend Postkolloquium mit Bier und Brezeln im Foyer H6

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Plant-plant interactions & biodiversity - and their connection to the restoration of degraded sites

Positive interactions between plants and their knock-on effects on the functioning of ecosystems are receiving increasing attention in ecological research. In addition, biodiversity-ecosystem functioning experiments have often found positive effects of mixtures of species with different functional traits on ecosystem productivity and nutrient cycling. The challenge now is to address the question of how relevant positive interactions found in biodiversity experiments are under different environmental settings. It could be that environmental factors such as the availability of nutrients override any positive biodiversity effects in one habitat, whereas in other habitats the effects act synergistically.

In my group we are testing positive interactions (usually found in mesic grassland biodiversity experiments) across nutrient stress gradients both in the field and in controlled glasshouses and climate chambers to see if they become stronger under nutrient stress. In the case of more positive interactions and concomitant positive effects on functioning of ecosystems, this should prove to be very useful in applying to degraded ecosystem needing restoration (such as ex-mining sites or eutrophic sites).

The particular focus is on N2-fixing plants and their positive effects on neighbors as modulated by the diversity of the mixtures, and we use stable isotope techniques to investigate
these questions.