

Wintersemester / Winter Term 2012-2013

BayCEER Kolloquium

Vortragsreihe Ökologie und Umweltforschung
*Lectures in Ecology and Environmental Research***Donnerstag 29.11.2012, 17:00 Uhr, H6**

Anschließend Postkolloquium mit Bier und Brezeln im Foyer H6

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New insights into functional diversity of plant and soil inhabiting fungal communities

The process of plant litter decomposition is opposed to photosynthesis in the global nutrient cycles and therefore of outermost importance for the functioning of most ecosystems. In forest ecosystems, highly complex microbial communities dominated by fungi degrade the plant remains. By preferably utilizing the most easily degradable compounds at a time, their activity causes changes in the chemical composition of the plant litter. This again entails compositional shifts in the fungal community towards taxa or genotypes being most capable of degrading the respective compounds. In temperate regions, the resulting changes in fungal community composition along vertical soil profiles become even more complex due to different temperatures favoring different fungal taxa throughout the year's course.

While the decomposer community is usually dominated by saprobic soil fungi, recent studies provide evidence that also endophytic fungi play a major role. There is growing evidence that mycorrhizal fungi, benefitting from energy supply from the host plants, may contribute to this process, but their involvement in litter degradation is still under debate. Nevertheless, recent advances in methodology greatly facilitated unraveling the complex processes accomplished by litter degrading fungi and the interrelations among the different ecological groups. These methods include massive parallel sequencing ('Next Generation Sequencing') as well as high-density microarrays and the miniaturization of enzyme assays for high throughput application.

Do. / Thu. 17 st
Gebäude / Building
GEO
Hörsaal / Lect. hall
H6Die Vortragsreihe
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