UNIVERSITÄT BAYREUTH

Bayceer
Bayreuther Zentrum für Ökologie und Umweltforschung

Wintersemester 2009/2010

Gebäude GEO I
Hörsaal H6

BayCEER Kolloquium

Vortragsreihe Ökologie und Umweltforschung

Donnerstag 07.01.2010, 16:15 Uhr, H6

Anschließend Postkolloquium mit Bier und Brezeln im Foyer H6

Dr. Torsten Meiners

Angewandte Zoologie/Ökologie der Tiere, FU Berlin

Chemical diversity in tritrophic interactions - when things get complex

Volatile cues released from insect habitats, single plants or other animals play a key role in the foraging process of herbivores and carnivores. Resource-indicating odors encountered by insects in their natural environment need to be detected within a huge variety of other environmental odors and are often both complex and variable mixtures themselves. I will address the questions how foraging insects cope with the problems of complexity and variability of the infochemical web and how this complexity arises in multitrophic interactions itself.

First I will present studies showing two different strategies for insects to deal with odor complexity: a) avoiding areas with enhanced plant and odor diversity and b) “digging through” all the odorous information.

Second I will detail how a plant releases a blend of volatiles after feeding and egg deposition by an insect herbivore and how these induced volatiles attract an egg parasitoid. Quantitative headspace analysis of the field elm revealed mainly terpenoids.

To figure out which terpenoids play an important role for elms in “talking” to egg parasitoids, terpene formation was inhibited physiologically and the odour of oviposition induced, terpenoid inhibited plants was offered to the parasitoids in olfactometer bioassays. I will outline how molecular ecological approaches (using EST databases, proteomics, transgenic elms) might help to unravel the regulation, emission and perception of these synomones in a complex odorous environment.

Die Vortragsreihe ist eine interdisziplinäre Plattform zur Information und Diskussion für Studierende, Forschende und Lehrende

Gäste sind herzlich willkommen