

Microbial-faunal interactions shaping soil processes



Workshop of the GfÖ Soil Ecology Group 5th to 7th of October 2011

Humboldt-Universität zu Berlin
Unter den Linden 6
Hauptgebäude (Main Building), Hörsaal 2014a

5th of October - 18.00: Kick-off talk

Sébastien Barot (IRD-Laboratoire bioemco; Paris, France)

Finding the principles of soil ecology or bridging the gap between soil ecology and general ecology?

Afterwards: Ice breaker

6th of October - Morning Session “Model organisms in soil ecology”

8.30 Anne Winding (Aarhus University, Denmark)

Palatability of bacteria and implications for their microfaunal predators

9.15 Kornelia Smalla (JKI Braunschweig, Germany)

Cultivation-independent methods to unravel complex interactions in the rhizosphere

10.00 Coffee break

10.30 Discussion rounds

Models to decrypt predator-prey interactions and evolution (Chair: Alex Jousset)

Model organisms in soil ecology - challenges and promises in the omics-age
(Chair: Antonis Chatzinotas)

12.00 Plenum discussion and summary

12.30 Lunch

Afternoon Session “Linking soil properties and biota to functional networks”

14.00 Marcus Horn (University of Bayreuth, Germany)

Unravelling of earthworm-microbe interactions in soil

14.45 Tim Urich (University of Vienna, Austria)

Beech litter degrading microbial communities probed by metatranscriptomics

15.30 Coffee break and Poster Session

16.30 Discussion rounds:

The role of biotic interactions in nitrogen cycling in soil (Chair: Kristina Kleineidam)

What determines ecosystem services in soil ? Potential of single cells vs microbial networks (Chair: Michael Schloter)

18.00 Plenum discussion and summary

7th of October - Morning Session “Soil chemical ecology”

8.30 **Michael Bonkowski (University of Cologne, Germany)**

Microbial food web interactions mediated by signals and toxins in the plant rhizosphere

9.15 **Ivan Hiltbold (University of Neuchâtel, Switzerland)**

*Manipulating belowground tritrophic interactions to enhance biological control of the western corn rootworm *Diabrotica v. virgifera**

10.00 Coffee break

10.30 Discussion rounds

Soil organisms’ interactions and the provision of ecosystem services – knowledge gaps and management options (Chair: Silvia Pieper)

Chemical and molecular mechanisms in soil food web regulation – conceptual and methodological challenges (Chair: Martin Schädler)

12.00 Plenum discussion and summary

12.30 Lunch

Afternoon Session “Energy channels and food webs”

14.00 **Gerlinde de Deyn (University of Wageningen, The Netherlands)**

Fuels and engines under our feet

14.45 **Katarina Hedlund (University of Lund, Sweden)**

Stable isotopes guide us towards the understanding of multiple interactions in soil food webs

15.30 Coffee break

16.00 Discussion rounds

Integrating stoichiometry into energy channels and food web models (Chair: Robert Koller)

Stable isotope techniques – light in the “black box” soil ? (Chair: Liliane Rueß)

17.30 Plenum discussion, summary and conclusion

18.00 End of Workshop