

Thursday, 20.10.2016 – 11:00 AM in Wallace



Prof. Dr. Björn Lindahl
(Swedish University of Agricultural Sciences, Uppsala)

Ectomycorrhizal decomposers - a defining functional guild of boreal forests

Organic matter in soils is commonly assumed to be decomposed by saprotrophic microorganism as a source of metabolic carbon. In contrast, we have found that in the organic (mor) layers of boreal forests, decomposition seems to be carried out primarily by mycorrhizal fungi-symbiotic biotrophs that obtain sugar directly from their plant hosts and exploit organic matter primarily as a source of nitrogen. Decomposition by ectomycorrhizal fungi enables tight nutrient cycling and may be a defining characteristic of the strongly nutrient limited boreal forest biomes.

Björn Lindahl is professor of Soil biology at the Swedish University of Agricultural Sciences. Starting as a mycologist, he has adopted molecular techniques to analyse fungal communities, but also broadened into ecosystem ecology, with a particular focus on the pivotal role of fungi in decomposition and nutrient cycling in forest soils.

Thursday, 17.11.2016 – 10:00 AM in Hörsaal (“Lecture Hall”)



Dr. Pierre Taberlet
(Grenoble-Alpes University, Grenoble)

Environmental DNA and biodiversity

Since a few years, we focus on the analysis of environmental DNA that is extracted from soil, water, or air, without first isolating any target organisms. We implemented an approach called "DNA metabarcoding". It corresponds to the high-throughput and simultaneous taxa identification based on a very short but informative DNA fragment. Several results concerning diet analysis, biodiversity surveys, and reconstruction of past ecosystems will be presented.

Pierre Taberlet is a senior scientist in the “Laboratoire d'Ecologie Alpine” (Grenoble). He is heavily involved in the field of molecular ecology. Since about 10 years, he has been working on environmental DNA and is author or co-author of more than 200 scientific publications in peer-reviewed journals. He is currently editor of Molecular Ecology, Molecular Ecology Resources and Science Advances, and he received the Molecular Ecology Prize in 2007.

Thursday, 17.11.2016 – 11:00 AM in Hörsaal (“Lecture Hall”)



Prof. Dr. Eric Coissac
(Grenoble-Alpes University, Grenoble)

From barcodes to genomes: extending the concept of DNA barcoding

Biodiversity is now commonly described by DNA based methods. In 2003, the initiative for the barcoding of life has promoted these methods by providing a simple way to tag species relying on the ideas of standardization, quality controls and minimalism. Almost 15 years after the beginning of this adventure, can we reconsider what could be the new standard keeping the same constraints of high quality and minimalist and propose the genome skimming as the next-generation DNA barcode?

Eric Coissac is associate professor of bioinformatics at the “Laboratoire d'Ecologie Alpine” (Grenoble). He has been working in genomics since the beginning of this research field, and was involved in the first sequencing of an eucaryote genome. For ten years, he has been co-developing DNA based biodiversity assessment methods and the software required to analyze such data at LECA with Pierre Taberlet. Today he is managing the bioinformatics of the PhyloAlps project aiming to genome skim the complete alpine flora.

Monday, 05.12.2016 – 11:00 AM in Hörsaal (“Lecture Hall”)



Prof. Dr. David J. Currie
(University of Ottawa)

The curiously unsettled matter of why so many more species coexist in some places than in others

Species are distributed very unequally over the Earth. The question of why species richness gradients exist has great implications for predicting how species will respond to climate change and habitat conversion. Yet the drivers of richness gradients are contentious, not least because: 1) "the latitudinal gradient" refers to so many different things, and 2) hypotheses about them are rarely actually tested. I will present some simple models, which, I hope, may lead to a continental model of biogeography, analogous to MacArthur & Wilson's island model.

Prof. Dr. David J. Currie is a full professor at the Department of Biology at the University of Ottawa, Canada. Currently he works at the German Centre for Integrative Biodiversity Research (iDiv), Halle-Jena-Leipzig as part of his sabbatical. His current research focusses on 'Big Picture Ecology: The Patterns of Ecosystem Structure and Function'.

Thursday, 19.01.2017 – 11:00 AM in Wallace



Prof. Dr. Armin Grunwald
(Institute for Technology Assessment and systems analysis,
University of Karlsruhe)

The Future Earth Program – Motivation, Design, Status, and Perspectives

The Future Earth program is the successor of the former research programs on Global Change (IHDP, IGDP, BIODIVERSITAS). Its mission is to bundle research in order to provide solutions to sustainability problems. Key notions of its design are co-design of the research agenda and co-production of knowledge by involving stakeholders. The presentation gives an overview of the basic rationales behind Future Earth, introduces its governance and explains the status reached so far.

Armin Grunwald, Professor, received his PhD 1987 at Cologne University in Physics. He has been director of the Institute for Technology Assessment and systems analysis (ITAS) at Karlsruhe Institute of Technology (KIT) since 1999, director of the Office of Technology Assessment at the German Bundestag (TAB) since 2002 and full professor of philosophy at KIT since 2007. His working areas include technology assessment, ethics of technology, and sustainable development.

Thursday, 09.02.2017 – 11:00 AM in Wallace



Jun. Prof. Dr. Berta Martina-Lopez
(Leuphana University of Lüneburg)

Beyond dualism in biodiversity conservation: recognizing the diversity of values, institutions and knowledge systems

Conservation biology has evolved on the basis of how relationships between people and nature are framed, moving from safeguarding species toward an integrated perspective social-ecological systems. Under the social-ecological systems framework, three conservation challenges emerge that are related with the acknowledgement of the diversity of (1) biodiversity values, (2) institutions, and (3) knowledge systems. The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) allows to further explore this framing as it acknowledges the principles of value-pluralism and diversity of knowledge systems.

Berta Martín-López (PhD) is junior professor at the Institute of Ethics and Transdisciplinary Sustainability Research in Leuphana University of Lüneburg (Germany). Her research interests focus on analyzing the dynamics of social-ecological systems with a particular interest in the ecological, social and economic components of ecosystem service science. She is member of the Scientific Steering Committees of Future Earth Programs: ecoSERVICES and the Programme for Ecosystem Change and Society (PECS).