GATERSLEBEN LECTURE

IPK LEIBNIZ-INSTITUT

Speaker: **Prof. Dr. Meredith C. Schuman**
Department of Georgraphy and
Department of Chemistry, Spatial Genetics,
University of Zurich, Swizerland
Website: https://www.geo.uzh.ch/en/units/sg.html

Title: **Chemical ecology and spatial genetics as tools to help us live and let live**

Time: **Tuesday, August 20, 2024, 2 pm**

Place: **IPK Lecture Hall and via Zoom** (Hybrid Meeting)
https://ipk-gatersleben-de.zoom.us/j/65894815837?pwd=4Q2C7eFN63IN9aBfbS5r729KaZTCEK.1
Meeting-ID: 658 9481 5837 Kenncode: 366723

Abstract:
It is becoming increasingly urgent for humans to maintain actively Earth's living systems that enable and support our life: to live and let live. This is clearly not an easy task. How can we produce enough food from agroecosystems without poisoning their components or degrading the surrounding ecosystems, which we also need? How can we keep track of the essential resources that biodiversity provides for the ecosystem services supporting human societies, at scales that promote timely and well-targeted intervention? I will talk about recent and ongoing work in the Spatial Genetics group in two areas. One encompasses studies of the occurrence, distribution, and effects of chemical mediators in agroecosystems, including fields of smallholder farmers practicing mixed cropping, and vineyards of regional winegrowers, to support sustainable management of these systems while achieving higher yields. The second comprises projects applying remote sensing and Earth observation technologies to the scalable assessment and monitoring of genetic diversity for different species. This second set of projects aims to support biodiversity monitoring and management according to the global biodiversity framework, particularly the protection of species' adaptive potential and the maintenance of ecosystem services.

Short CV
Meredith Schuman (Merry) is a member of the Remote Sensing Laboratories and the University Research Priority Program on Global Change and Biodiversity at the University of Zurich. Her background is in the chemical ecology and functional genetics of plant interactions, and plant ecophysiology. She works on projects combining direct analyses of plant tissue, and remote sensing techniques with the aim of developing approaches to assess genetic and chemotypic variation, plasticity, and adaptive potential within plant species, and their interactions in the context of global change. She was previously a Group Leader in the Department of Molecular Ecology at the Max Planck Institute for Chemical Ecology (MPICE) in Jena and a Junior Group Leader in the German Center for Integrative Biodiversity Research (iDiv) on the ecological functions of plant genes.

APPROVED RESEARCH PROJECTS
2024 – 2026 Co-PI, NOMIS project Remotely Sensing Ecological Genomics
2023 – 2026 Co-PI and Consortium Leader, BLW-funded research project Smart Grape
2023 – 2025 Co-Lead, ISSI International Team Genes from Space: scientific workshops
PI. UZH Foundation Research Grant (STWF), field micro-weather stations

Prof. Dr. Nils Stein (Organizer) *Dr. John C. D'Auria (Host)*