Specialisation modul and/or thesis available in Landscape Ecology / Animal Ecology

AI in ecological landscape experiments

Pics: Automated insect monitoring (https://diopsis.eu) classica pan traps (bugnet.org), identification under a stereo microscope (u.osu.edu/pinningblock)

Landscape experiments require the quantification of biodiversity in treatments and controls with many replicates. Classical methods for determining insect diversity, e.g. pan trapping or pit-fall trapping, collect large samples of mixed individuals, and often result in immense collections of wet (alcohol) samples which then require drying and determination under the stereomicroscope. The method allows the determination to species level, but is often painstakingly slow. Systems with artificial Intelligence (AI) in insect determination promise low impact and a quick analysis, but currently lack precision. In this project we will compare outcomes of different classical and AI monitoring methods, measuring the treatment effects in our ongoing landscape experiments. There are several subprojects available depending on project and method, field work can be experienced in the experiments below.

Projects are co-supervised by Prof. Fournier (Landscape Ecology, AI bertrand.fournier@uni-potsdam.de) and Prof. Eccard (Experimental Animal Ecology, eccard@uni-potsdam.de). **Please get in touch and join our team.**

Experiment 1: https://zwillenberg-tietz-stiftung.de/linde-bluehflaechen-experiment/

The **Wildflower-experiment in Linde (Havelland)** compares insect abundance and diversity among wildflower and cropping areas, and among different types of wildflower elements (ephemeral strips, and permanent, rolling blocks)

Experiment 2: https://www.feda.bio/de/projekte/biodivgesundheit/dcrops4onehealth-diversifizierung-von-pflanzenbausystemen/

DCrops at Innohof (Groß Kreutz): In the DCrops4OneHEalth project we compare insect abundance and diversity among cropping systems (diversified, classic). Several strips with different experimental conditions are layed out in three experimental blocks within large grain fields.