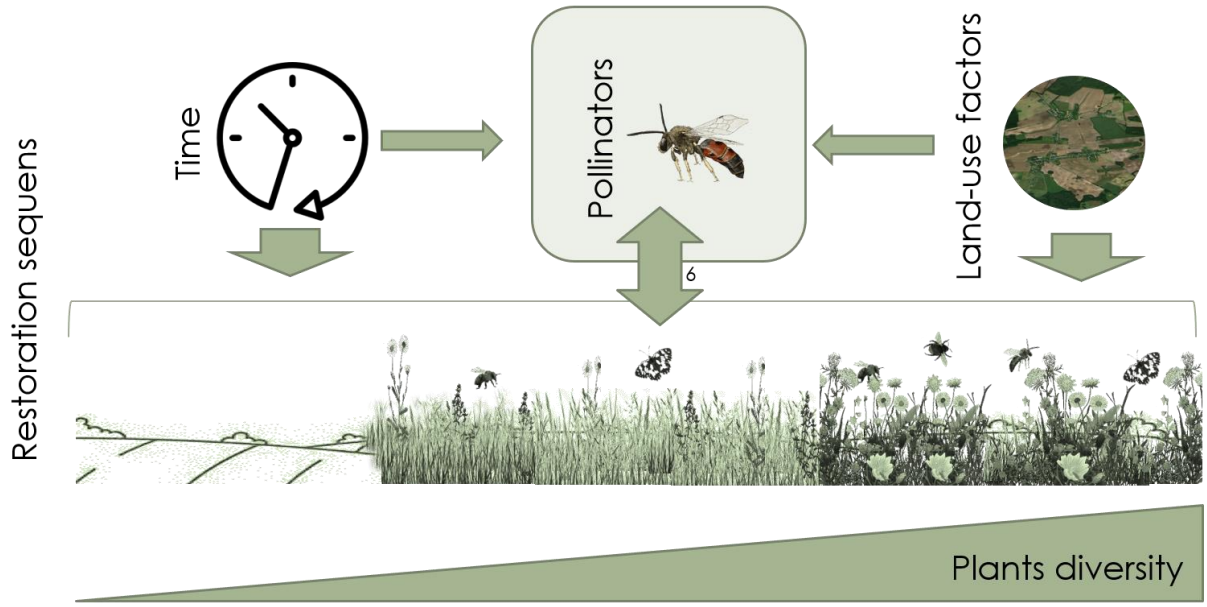
Bachelor thesis and Research group internships (Forschungsgruppenpraktika) advertisement

We offer two bachelor thesis or research group internship (six weeks) opertuneties on the **restoration of plant-pollinator interactions and pollination services in semi-natural grasslands of Saxony Anhalt**.

Semi-natural grasslands managed by extensive grazing or mowing play an important role for biodiversity, carbon sequestration, soil health and water regulation in Europe. However, this grassland has been degraded by intensive farming and conversion to arable land. The restoration of species-rich grasslands is crucial to ensure future ecosystem services. This is therefore the aim of numerous nature conservation initiatives. However, grassland restoration focuses primarily on the restoration of plant communities. However, it is unclear whether plant-centered restoration measures are effective in restoring other parts of the community, such as pollinators. To understand how successfully grassland communities reassemble during restoration, it is important not only to study how plant communities change over time, but also to include pollinator communities and their interactions with plants. In Europe, pollination is mainly carried out by four insect orders; Hymenoptera, Diptera, Lepidoptera and Coleoptera, and the planned study near Halle/Magdeburg (Saxony-Anhalt) will investigate how plant and pollinator communities and their interactions recover in the temporally differentially restored areas in relation to their ecosystem services. Using classical taxonomy and statistical methods, we will test (1) whether plant and pollinator communities develop similarly along a time gradient on restored areas and what role individual plant community traits (dominance patterns, diversity, composition) and landscape factors play for restoration success and (2) how the reestablishment of interaction networks between plants and pollinators depends on the recovery of plant and pollinator communities.



Figurative experiment design

Thesis/internship supervision will be carried out by a member of the Species Interaction Ecology Department (SIE) of the Helmholtz Centre for Environmental Research (UFZ), in co-operation with the German Centre for integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig.

Tasks:

- Fieldwork in Saxony Anhalt (end of June and beginning of July **or** end of July and beginning of August) to sample data on plant-pollinator interactions in restored and reference grassland sites. Exact sampling dates will be communicated at the earliest possible date.
- Preparation of insect specimens and curation of collections resulting from the field work (Hymenoptera, Diptera and Lepidoptera).
- Identification of pollinators belonging to either one of the three focal orders (Lepidoptera, Hymenoptera or Diptera). You may choose your preferred focal group.
- Statistical analyses using R of the data sampled
- Writing of a scientific thesis for bachelor students.
- Making a R Markdown script, giving a scientific talk or writing a scientific protocol for internship students (preferably in English).
- Interacting with the international team at SIE/iDiv (group meetings, iDiv seminar series, etc.)

Requirements:

- Strong interest in ecology/interaction ecology
- Basic plant and insect identification skills (or willingness to acquire these skills)
- Motivation to work in the field
- Motivation to work in an international team
- Good excel & at least a basic knowledge of R would be ideal
- English speaking and writing abilities are optional
- Diver license is optional

If interested please contact me under felicitas.wolf@idiv.de

Exemplary picture of fieldwork