

One MSc thesis opportunity

Quantifying ecosystem functions using sentinels

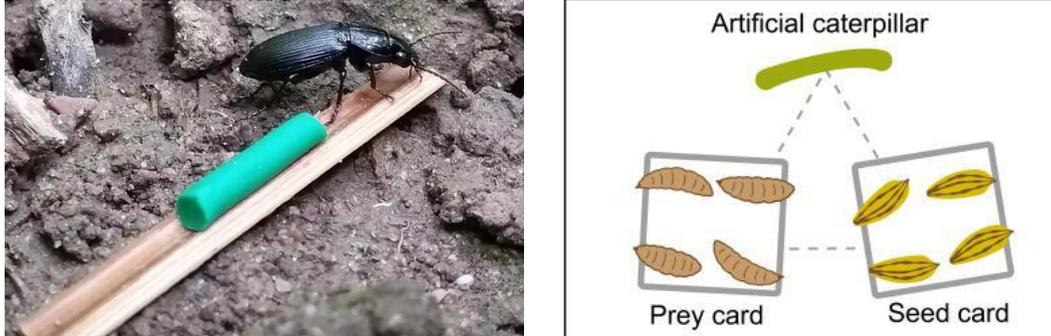


Fig.1 Artificial caterpillar with carabid (left) and sentinels to quantify predation, seed predation, and scavenging (right).

Biodiversity, through species interactions, underpins numerous ecosystem functions that can lead to ecosystem services and disservices. Quantifying these functions is crucial for evaluating the effectiveness of conservation and management strategies, as well as the impacts of land use change. In the HEAVEN project, we aim to investigate the contribution of non-crop habitats to the ecosystem services provided by vertebrates and invertebrates. We are interested in monitoring pest predation, scavenging, and seed predation in crop (wheat fields) and non-crop habitats (hedgerows, grasslands, grass margins, and flower fields).

We are looking for one MSc student who is interested in conducting his/her thesis on quantification of ecosystem functions.

Tasks: Quantification of ecosystem functions and data analysis using R.

Requirements: Interest in ecology and field-based research. Driving license and willingness to drive. Willingness to write the thesis in English. Basic knowledge of R.

Start: May/June 2026.

What you will gain: Hands-on experience in ecological field methods and ecosystem function measurements. Training in ecological data analysis using R. The opportunity to develop additional research questions and tailor the thesis to your interests. Possible topics include links between vegetation structure or predator nutritional status and ecosystem services, or the identification of key ecosystem service providers. If data collection and analysis are successful, there may be an opportunity to contribute to a scientific publication.

As part of the HEAVEN project ([Home - Georg-August-Universität Göttingen](#)), you will gain insights into how biodiversity and ecosystem functions can be conserved and promoted in agricultural landscapes.

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Literature:

[The sentinel approach to quantify ecosystem function intensities - Ferrante - Methods in Ecology and Evolution - Wiley Online Library](#)

[Research trends in ecosystem services provided by insects - ScienceDirect](#)

