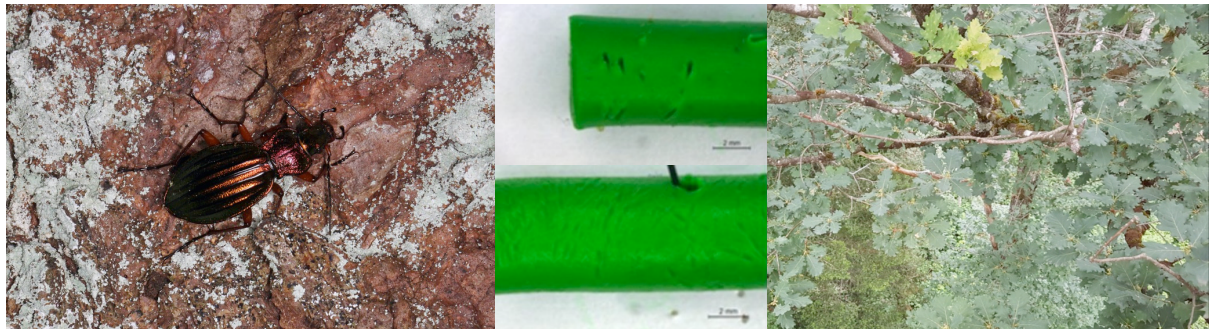


Biotic interactions across scales – using salivary DNA on dummy caterpillars to measure predation pressure by insects



Biotic interactions are important drivers of biodiversity and ecosystem processes, but are increasingly altered by global change drivers such as climate and land use change. Insects dominate most terrestrial ecosystems and interact among each other and with other organisms in multiple ways which emphasizes their large functional role in ecosystems. Quantifying biotic interactions involving insects such as predation is, however, challenging. Therefore, novel methods that enable a reliable estimation of predation pressure by insects as well as the identification of interacting species across large temporal and spatial scales are urgently needed.

This project aims to (1) test and optimise the identification of insects from salivary DNA left behind when attacking dummy caterpillars in laboratory experiments with carabid species, and (2) testing whether this method can be applied to caterpillars exposed in different vertical layers of beech and oak in the field trial at the crane site Hölstein near Basel. The caterpillars from the field study are already stored in the freezer. Further ideas for additional experiments can be developed and carried out by the student in consultation with the supervisors during the master thesis.

Project Leader

Prof. Dr. Martin Gossner, martin.gossner@wsl.ch

Dr. Christoph Sperisen, christoph.sperisen@wsl.ch

Major

Ecology and Evolution

Forest and landscape management

Group work

possible

Season

Spring, Summer