



MSc project

Effects of the ash dieback disease on emerald ash borer performance

We are looking for a MSc student interested in exploring the interaction between plants-pathogens-and insect using European ash as a relevant model system. The project is led by Dr. Michael Eisenring and based in the workgroup of Prof. Dr. Martin Gossner (Forest Entomology) at Swiss Federal Research Institute WSL in Birmensdorf. **Start: June/July 2023 (or by arrangement)**



Background: European ash is heavily decimated by the ash dieback disease which is caused by an invasive fungus native to East Asia. An additional future threat for European ash is the emerald ash borer, a wood-boring beetle that was first introduced from China to the USA where it killed millions of ash trees. Over the last years the beetle has expanded its range towards Central Europe. Therefore, the emerald ash borer and the ash dieback-causing fungus will inevitably co-attack European ash trees in the near future. However, it is currently unclear how emerald ash borer performance is affected when feeding on trees that are already infected with the ash dieback disease.

Goals: Controlled experiments in a safety level 3 greenhouse at WSL will be conducted to: (1) artificially co-infest ash saplings with the ash dieback pathogen and emerald ash borer beetles, (2) study how emerald ash borer is affected by the ash dieback disease (3) explore if phytochemical changes induced by the ash dieback disease can explain changes in the emerald ash borer performance.

Requirements: You should have a strong interest in plant-insect interactions. Basic skills in statistics with *R* are advantageous. In-depth knowledge in analytical chemistry is not mandatory for this project. For application or additional information, please contact Dr. Michael Eisenring (michael.eisenring@wsl.ch)

More information about the forest entomology group can be found here:

