



Impact of tree species richness and mycorrhizal types on leaf trait expression within the MyDiv experiment

We offer a **bachelor or master project** testing the effects of tree diversity and mycorrhizal association on leaf trait expression as part of the MyDiv experiment.

The MyDiv Experiment is located in Bad Lauchstädt, close to Halle and Leipzig. Aim of this experiment is to better understand the effects of tree diversity and different associated mycorrhizal types on ecosystem functions in a forest ecosystem (Ferlian et al., 2018). Multiple studies in grasslands and forests have shown that species-rich plant communities promote higher biomass production than species-poor plant communities. This is strongly correlated with higher complementarity via changing leaf trait expression along the diversity gradient.

Aim of the thesis is to test, whether also in the MyDiv Experiment the expression of leaf traits (e.g. specific leaf area (SLA), carbon and nutrient concentrations (C, N, P), stomatal density, etc.) change with increasing tree diversity. Another aim is to test whether such diversity-related changes differ in tree communities with different mycorrhizal types (i.e., communities with trees interacting only with arbuscular or ectomycorrhiza, or communities with both mycorrhizal types). For this you will collect leaf samples in the MyDiv experiment and measure the traits in the lab (Leipzig and Halle) with different methods (e.g., near-infrared spectroscopy).

Start of the project would be in **May or June 2023**.

If you are interested, contact Elisabeth Bönisch¹ (PhD student; elisabeth.boenisch@idiv.de) or Dr. Peter Dietrich² (Postdoc; peter.dietrich@botanik.uni-halle.de).

More information about the MyDiv experiment:

- <https://www.idiv.de/de/research/platforms-and-networks/mydiv.html>
- Ferlian et al. (2018). Mycorrhiza in tree diversity–ecosystem function relationships: conceptual framework and experimental implementation. *Ecosphere*, 9: e02226. <https://doi.org/10.1002/ecs2.2226>

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