

“How important is the forest floor compared to the mineral soil for nutrient availability under different tree species?”

It is often assumed that nutrients are immobilized within the forest floor (FF) and not relevant for tree nutrition. However, trees hosting ectomycorrhizal fungi mainly use organic matter as nutrient source and the FF therefore may play a crucial role for nutrient mobilization. In contrast, arbuscular fungi associated trees mainly feed on inorganic nutrient sources postulating a higher relevance of the mineral topsoil for nutrient mobilization. Yet, the importance of the FF for nutrient mobilization under different tree species has not been studied so far.



FF under maple (left) and under spruce (right) on the common garden site Kragelund in Denmark.

Within the master thesis nutrient availability in soil samples from the common garden sites in Denmark from beech (*Fagus sylvatica*), maple (*Acer pseudoplatanus*) and spruce (*Picea abies*) will be determined. Soil samples will be provided, which enables a more in-depth insight in soil chemistry methods.

We expect:

- Interest in soil ecology
- Responsibility and reliability
- Experience in lab work and data analysis is an advantage

We offer:

- Clearly defined topic
- Demand-orientated supervision
- Insights into a dynamic working group

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More information on the research group FOREST FLOOR:

<https://www.bodenkunde.uni-freiburg.de/de/forest-floor-for-5315>