The Chair of Ecosystem Physiology (https://uni-freiburg.de/enr-ecophys/) in the Faculty of Environment and Natural Resources of the University of Freiburg is looking for

# 1 Doctoral Researcher Root ecology, Ecophysiology, Root exudation

with start date 1st January 2027 for a fixed-term position of 3+1 years. In the DFG research unit FOR 5315 "FOREST FLOOR: Functioning, Dynamics, and Vulnerability in a Changing World", the Chair of Ecosystem Physiology will investigate the impact of soil drought on the compound specific root exudation and root development patterns of three temperate tree species in the Forest Floor and mineral soil. The project is embedded in the research unit Forest Floor (https://uni-freiburg.de/forestfloor/), which has the overarching aim to analyze the causal links between controls, properties and ecosystem services of Forest Floors in a changing climate. Project partners are distributed over Germany, Switzerland, Austria and Denmark. Regular project meetings will ensure close collaboration and exchange within the research unit.

**Your task:**

Within FOREST FLOOR you will regularly sample compound-specific root exudates in three temperate forest species with a focus on drought and recovery effects in the Forest Floor. These analyses will be complemented by minirhizotron installations for root development observations, ultimately allowing an upscaling of total root exudation fluxes to the Forest Floor. A special focus will be set on European beech, which will be drought-stressed with rain-out shelters to study the effects of drought in detail. The project is closely cooperating to assess the effect on microbial communities and mycorrhiza in the Forest Floor. To assess the ecophysiological response of the studied trees to drought, sap flow sensors and point dendrometers will be installed in the respective trees. Finally, you will study the impact of drought on litter derived N dispersal with stable $^{15}N$ isotopes.

**Your qualifications and contributions**

- You hold a Master's degree in Environmental Sciences, Geoecology, Biology or related fields
- Excellent background in plant physiology, including root ecology, nutrient cycling and stable isotopes
- Experience with GC-MS, minirhizotrons, sap flow and dendrometry is a plus
- A high degree of autonomy, responsibility, flexibility, team spirit and organizational skills
- Excellent English skills
- Great enthusiasm for field and lab work
- Great enthusiasm for working in a large interdisciplinary project and interest in collaborative research
- Drivers license (class B) is required

**We offer** a salary according to TV-L E13 (65%) and participation in an exciting, interdisciplinary scientific project at the interface of ecophysiology and soil ecology in in a very dynamic and interactive team with collaborative culture. You will work in well-connected groups with strong third-party funding in Freiburg in close cooperation with other scientists involved in the project. You will be able to develop your own research ideas, but also find support to qualify for a scientific career. The faculty offers the possibility to graduate in a formal PhD-program (www.gs.esgc.uni-freiburg.de). Women are explicitly encouraged to apply.

Please upload all documents (letter of application, CV, credentials, letter of recommendation) via the official system (Job Offerings) of the University of Freiburg (https://uni-freiburg.de/stellenangebot/00005179/). The deadline for applications is the **31st of October 2026**.
For any questions regarding the position, please contact Simon Haberstroh (simon.haberstroh@cep.uni-freiburg.de).