



Swiss Federal Institute for Forest, Snow and Landscape Research WSL

The Swiss Federal Institute for Forest, Snow and Landscape Research WSL is part of the ETH Domain. Approximately 600 people work on the sustainable use and protection of the environment and on the handling of natural hazards.

In the framework of the Project "PhytOakmeter" the Research Unit 'Forest Health and Biotic Interactions' and its 'Forest Entomology' Group is searching for the duration of **2 years** (with option for a 2-year extension), with a start in **fall/winter 2023** for a

PostDoc in "Chemical Ecology, Oak-Herbivore Interactions" 80-100% (f/m/d)

"PhytOakmeter" is a research unit project funded by the German Research Foundation and the Swiss National Science Foundation revolving around acclimatization and adaptation of pedunculate oak. It explores a common oak clone from a holobiont perspective. Pedunculate oak displays a distinct endogenous rhythmic growth which is characterized by multiple alternating root and shoot flushes. Changes in a plant growth stage can have profound effects on phyto-chemistry and plant-herbivore interactions. However, only little is known about how the interaction between growth stages, defense chemistry and the trade-offs between growth and chemical defenses are modulated by environmental variation and stress.

Based on Ecotron and field experiments you will explore the interaction between oak growth and defense and its consequences for insect herbivores in response to drought and herbivory. Furthermore, you will study how changes in vertical microclimatic conditions within a forest affect the relationship between shoot flushes, leaf chemistry, and herbivory. Finally, you will support the development of a tool aiming to automatically detect and quantify herbivory based on digital images captured by Phenocams.

The successful candidate holds a PhD degree in Biology or Environmental Sciences with a strong background in chemical ecology, plant-herbivore interactions, statistical analyses, and experimental design. Moreover, you should be keen on combining field observations with controlled experiments and analyses in the lab. "PhytOakmeter" allows scientist with different scientific backgrounds to work on the same experimental oak system, thereby strongly fostering interdisciplinary work. Consequently, most research projects will be conducted in close collaboration with other "PhytOakmeter" research groups. As such it is essential that you possess excellent skills in interacting with scientists of an interdisciplinary team, spread over several institutions. Furthermore, we expect good knowledge in R programming, a good command of English, as well as the capability for scientific paper writing. Conceptual skills, an independent and structured way of working and a demonstrated high level of motivation and team spirit complete this profile.

Please send your complete application to Michèle Bucher, Human Resources WSL, by uploading the requested documents through our webpage. Applications via email will not be considered. Martin Gossner, martin.gossner(at)wsl.ch and Michael Eisenring, michael.eisenring(at)wsl.ch will be happy to answer any questions or offer further information. The WSL strives to increase the proportion of women in its employment, which is why qualified women are particularly called upon to apply for this position.

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