Department of Physical Geography and Ecosystem Science

NGEA51 – Internship

Internship at the University of Freiburg im Breisgau (Germany) at the Geobotanic

Website: https://confobi.uni-freiburg.de/en

Duration: 1st of September – 31st of October 2021

Internship in the ConFoBi project at the Geobotanic (University Freiburg)

I did a two-month internship at the university-based project Conservation of Forest Biodiversity in Multiple-Use Landscapes of Central Europe (ConFoBi). ConFoBi is an interdisciplinary project and aims to identify the impact of structural retention measures like habitat trees and dead wood regarding biodiversity.

ConFoBi contains various projects from a wide range of subjects, such as remote sensing, plant-insect interaction, effects of large herbivores, fungi, birds, and mechanisms of vegetation change. My internship took place in the subproject mechanisms of vegetation change. The focus of research in this project is the underlying mechanisms of vegetation change and diversity in retention forestry. Furthermore, they determine the importance of light heterogeneity regarding plant communities. Results show that the management of the forest by non-uniform cutting of trees causes diversified light conditions and thus increases the diversity of the understory.

To determine whether there are differences between the characteristics of plants – inter- and intraspecific – along a light gradient in terms of nutrient content, I studied the nitrogen (N) and carbon (C) content of leaves. Mainly, a Near Infrared Radiation Spectroscopy (NIRS) was used for nutrient analysis. Different leaves showed different light absorption spectra. The measured light absorption was used to estimate the N content [% DW] using the computer programme RStudio. For calibration purposes, the N content of some leaves was determined chemically. The chemical analysis was the main task I carried out in the laboratory.

The internship deepened my knowledge in laboratory work, statistical analysis, and critical thinking. I enjoyed the diversity of tasks during the internship. I was able to do fieldwork, be in the laboratory, carry out some data analysis and literature research as well as gain knowledge in weekly group meetings.