

1. Activities during the internship

From September 1st, 2023, to February 29th, 2024, I interned at my host organization in the Romanian Carpathians. The work during my internship period concerned three main activities: wildlife monitoring of red deer and lynx, bryophyte collection, and bryophyte determination.

In terms of wildlife monitoring, I assisted trained rangers in the set-up and checking of wildlife cameras set up as part of two projects, for the monitoring of Eurasian lynx (*Lynx lynx*) and red deer (*Cervus elaphus* L.). The setup entailed installing cameras at the right height and angle with the correct settings, and documenting all steps and meta-data (e.g., camera number, SD card number). Checking cameras involved reading out the images taken by the camera, correcting the camera if necessary, changing batteries and SD cards, and documenting everything accordingly.

Bryophyte collection I executed together with one of my internship partners. He would work on his microclimate data collection, whilst I would document the plot area, photograph all vegetation on the plot, and document and collect bryophytes using capsule herbariums.

Bryophyte determination therefore was the main part of the research, where using a microscope lent to me by the head of the host organization, I would inspect my specimens document all required characteristics, and determine species per specimen. I used several pieces of literature for the determination, which per Plot I sent to my supervising professor for evaluation of my work.

2. Skill Development During the Internship

I learned a lot of different things during the internship, from the applied and theoretical skills related to the three main activities described above. Moreover, I also gained valuable experience regarding the history and culture of Romania – about the communist era and the effect, it has had and still has in the context of nature conservation, local culture and rural versus urban economic development. I wish I would have invested more time in learning Romanian, so I would have been able to properly interact with the people I met, especially in the town where I lived, but also when visiting other places over the weekends.

During the wildlife monitoring I learned more about all steps necessary for consistent and reliable longitudinal wildlife monitoring research, i.e., more than simply how to use wildlife monitoring cameras. In addition, I also learned about assessing tracks and traces left by wildlife, such as paw prints, typical browsing damage and scat and hair determination.

During the bryophyte collection I strengthened my experience regarding how to properly collect bryophytes and improved my general understanding of how to observe and evaluate bryophyte habitats and species in the field.

document and determine bryophyte species. As I had not had any education on how to do this beforehand, and despite having written out my methodology which was approved by my supervisor, the learning process involved the necessary trial and errors. This taught me a lot about how precise one needs to be in preparation and determination, I developed an eye for morphological characteristics necessary for bryophyte determination, and learned how to document them so that all resulting images would properly serve determination. As this was my first real bryophyte collection and determination experience, this internship provided a great foundation for further development of my practical skills and my knowledge about bryophyte morphology and ecology. I had done some botanical fieldwork before and knew that it is work I very much enjoy doing, but the focus on bryophytes was new and something I wanted to explore. The experience, despite my physical limitations, was satisfying and stimulating,

and I see the work I have done during the internship as work I would like to continue in the future. As such I would say that overall, the experience was very valuable for my further career as an aspiring ecologist and researcher.

3. Contribution to the Internship Host

In terms of what my work during the internship has resulted in, I would like to reflect on my contribution to the goals of the FCC beyond the personal experiences already described above. Especially as I was not able to participate in the wildlife monitoring as much as I had planned in the beginning, in the end only a handful of times instead of on average once a week. I am however very grateful that my supervisor on this front was very understanding, and happy that overall, there were enough volunteers to complete the work that needed to be done.

In terms of how my bryophyte research may contribute to the goals of the FCC, I am quite confident that my work will be of value once I deliver my report of all species detected in the investigated area, with an overview of which species were found together in relation to what kind of forest characteristics (tree species, canopy cover, lying deadwood volume, altitude, microclimate). This because bryophyte research is a lot of work, and results are highly specific to a certain area. Findings regarding rare species with high conservation value will be especially valuable to the organization, as these can be used for further decision-making regarding forest conservation and management efforts.

4. Overall Internship Experience

Generally, I have had a very good experience during the internship: I learned a lot, had an enjoyable social life, and felt supported by the organization.

In terms of the fieldwork that I had set out to do, due to unexpected personal health limitations and thereafter due to weather circumstances (lots of snow) I was only able to complete 6 of all 12 plots I had planned to investigate. This at times was frustrating, but I have felt supported by my internship partners, the organization, and friends and family back at home. In the end I was able to leave with results that both the organization and I are happy with.

On the social front, the internship has been good, but not without challenges. I worked together with students I knew before and was able to deepen my friendships. At times it was stressful to live together with people that are both friends and colleagues, as there is no distinction between work and private dynamics and pressure can build up easily. It's something I would suggest future interns to prepare themselves for and align with their internship partners about, to ensure everyone's needs and expectations can be considered.

With regards to my host organization, I would also say I had an overall positive experience, and my needs were met. As my internship partners and I had to do quite some fieldwork in remote places, and the research of one of my internship partners was crucial for a larger longitudinal research project, the organization provided us with our own car. They also provided us with housing and 100 euros a month for groceries. Upon arrival we received a safety training, and the person in charge of the interns was available for questions and advice, to help with doctor visits, and even organized we were invited to the organization's Christmas party. Moreover, the head of the organization lent me her own compound microscope for my lab work, which was of great help. When my health limited my capacity for field work, the people from the organization were very supportive and made sure I could still do the work I wanted and needed to do without overburdening myself. Upon my presentation of the fieldwork, I had done at that point, the people from the organization provided positive feedback

and interest, and I'm planning to visit in the summer to finish the fieldwork I didn't manage to finish.

An important side note I would like to add is that not every research topic fits so well into the framework of the organization, and this has been a challenge for some other interns I worked and lived with. I therefore feel extra lucky that my research fit very well, and I would definitely advise future interns to have a clear agreement on research plans and necessary support in advance.

Another critical note would be regarding expectations of leisure-time activities. The free housing, we were granted was located in a very small town with limited access to public transport. As we were asked not to use the organization's car for private use, getting out for the weekend to explore the country was complicated. I therefore did not manage to see some of the places I would have loved to visit. However, several of our colleagues were incredibly kind and invited us on weekends in the mountains to go hiking with them and organized that we were allowed to stay in ranger huts over the weekend.

Overall, I had a broad range of interesting experiences during the internship, both in terms of the official work and the activities I was able to undertake in my free time. My internship partners, the people from the organization and locals I met where I lived have made it an experience that I will look back on very fondly. I am therefore grateful to have done my research internship with the FCC and am looking forward to return and continue my research with them.

5. Acknowledgments

I would like to thank the Erasmus+ Program for funding my research internship with the FCC – having no access to the usual German student grant, and no capacity to work next to the internship, the fund made it possible to have this internship experience. I am also grateful to all the people at the host organization who have welcomed me and supported me in my internship activities. Finally, I would like to acknowledge the connections provided by my primary supervisor, and all the support provided by my secondary supervisor – because of her it has been an incredible learning experience that I look forward to continuing.