

Final report

Name of intern: Marleen Schwarze

Home University/Country: Leuphana University

Subject: Environmental Sciences and Sustainability Studies

Guest University/Country: Swedish University of Agricultural Science Uppsala (SLU), Sweden

Name of supervisor: Jenny Nilsson



Part 1. General information about

1.1 your application (motivation)

I am keen on doing the internship with the topic "Climate change impacts on Arctic ecosystem: How changes in nutrient input will affect freshwater food webs" under the Department of Aquatic Sciences and Assessment in the Swedish University of Agricultural Sciences (SLU, Uppsala).

Presently, I am pursuing my bachelor's degree Environmental and Sustainability Studies from the Leuphana University, Lüneburg. Since my bachelor programme contains an obligatory exchange year at a partner university, I have chosen Karlstad University (KAU) and enjoy the Swedish academic environment. That is why I also wanted to extend my stay after the semester ended in the beginning of June.

Researching on freshwater food webs in the Arctic environment is of high interest for me and I am eager to contribute to such important research work. During my studies I focus on the climate crisis and impacts on ecosystems. Additionally I took complementary biodiversity and chemistry courses. Therefore, I think that I have a good basic knowledge to get into the research topic of the internship. I am looking forward to gaining hands-on knowledge in lab work and field sampling because it will

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complement my theoretical knowledge and help me hone in my skills. Hence, when there is knowledge required I do not have so far, I am motivated to prepare myself. As I speak a bit of Swedish and fluent English, communication would not be an issue for me. Also, I can easily get along with people. I am an ambitious and open minded person, so that the internship experience will be enriching for both sides.

1.2 your preparation

I prepared myself by reading about the relevant topics of the internship, like climate change impacts on arctic ecosystems, also about taxonomic identification of invertebrates. Besides I practiced my Swedish to be able to follow instructions which might not always be in English.

1.3 your travel

I was already living in Sweden because of the exchange year at Karlstad university which is part of my Bachelor program. Therefore my travel was easy to organize. I just had to move from Karlstad to Uppsala.

1.4 your accommodation

My supervisor sent out a note to the University staff that I was looking for accommodation. Thus, I got a room in a family house from a woman who is currently working at SLU. It is a really good contact, since I can ask everything about life in Uppsala and SLU. Additionally, it feels like staying in a host family.

1.5 your life in the host country

Due to the restrictions to cope with the pandemic I could not join free time activities like usually. Luckily, I could join an aerial silk acrobatics course and go climbing, since social distancing could be practiced there.

Part 2 Information about the project and your tasks

2.1 Information about the research project (short description of the project and your tasks)



Due to covid19-restrictions the university had to adjust the original plan for the project. I took part in several related research projects covering a breadth of sampling and analysis methods for freshwater ecosystems, performing following tasks:

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- Fieldwork at Fulufjället Nationalpark for the interdisciplinary research EU-funded project ARCTIC-BIODIVER
 - Training of the use of various sampling equipment at the River Hågaån
 - Sampling of water chemistry, phytoplankton, zooplankton, benthic algae, benthic macroinvertebrate & habitat measurements using different standardized methods like kick sampling, cylindrical brush sampler
- Preparing invertebrate samples for Stable Isotope Analysis (i.e. freeze drying, weighing, packing)
- Preparing sediment samples for paleolimnological research (*Quantitative reconstructions based on chironomids for reconstructing past abrupt and extreme climate change*)
- Fieldwork for the research project EUROPONDS
 - Kick sampling for macroinvertebrate samples, trapping of emerging insects with traps
- Participation in pilot experiment for ARCTIC – BIODIVER
 - create culture of chironomids, snails, preparing culture media, inoculate algae on a reference culture, analyzing algae growth with the image processing program ImageJ®



2.2 your colleagues

My colleagues were researcher from different countries, so that I had the chance to work in an international atmosphere. The work language was English.

2.3 the research institution



Sveriges Lantbruksuniversitet (SLU, German: Schwedische Universität für Agrarwissenschaften) is a state university in Sweden. Its main campus is located in Uppsala, with other campuses in Alnarp, Skara and Umeå. The university, unlike other state universities, is funded by the Ministry of Agriculture.

The university has four faculties: Faculty of Landscape Planning, Horticulture and Agricultural Sciences, Faculty of Natural Resources and Agriculture Sciences, Faculty of Veterinary Medicine and Animal Science and Faculty of Forest Sciences.

2.4 your experience working within the project

All in all it was an enriching experience for me to work at SLU. I am grateful that this internship was possible despite the pandemic. My supervisor arranged that I could join different research projects about aquatic ecosystems. Therefore I had various tasks and got a great insight into scientific research. It was a pleasant balance between field and lab work. In general, I enjoyed a friendly work atmosphere and flatter hierarchies. I felt respected from the other researchers although I am still in my Bachelor program. With my tasks I learned new research methods and skills, like kick sampling for macro invertebrates, preparing soil samples and creating medium for algae growth. It was very interesting to follow the researcher in their everyday live at SLU and see the reality of work at university. I feel that I now understand way more how the whole academic world functions. This is a valuable experience for me contributing also to the decision about my further studies. My highlight was the field work at Fulufjället National Park where we took samples over the treeline in very cold conditions. The only negative experience was that I got my work schedule sometimes very spontaneous. But on the other hand they were very flexible as well, so it was not a big problem.





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A handwritten signature in black ink, appearing to read "Niklas Johansson", is positioned below the text. The signature is written in a cursive style with a long horizontal stroke extending to the right.

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