

PhD scholarship on spatial patterns of plant-herbivore feedback in Greenland

A 3-year PhD fellowship in terrestrial biology is offered by the Greenland Institute of Natural Resources, GINR (www.natur.gl).

Application Deadline: 15th October 2023

General description

The fellowship is part of a larger project investigating habitat use and grazing pressure by the main Greenlandic large herbivores: caribou, muskox, and sheep.

The PhD-project will build a framework to test different scenarios changing major factors affecting the feedback loop between herbivores' distribution and their foodscape (Figure 1). This feedback loop would consider how caribou distribution affects the main plant functional groups (structure and productivity) through herbivory (grazing, trampling, fertilizing) and, in turn, how these altered vegetation maps shift caribou distribution. The candidate work will enhance knowledge on how the main drivers – environment (climate, soil properties), land use (hunting, infrastructure), herbivore's density and competition for resources with other herbivore species – modify these plant-herbivore interactions.

Primarily focusing on caribou in West Greenland, the PhD would step by step:

- 1) Study the herbivores' diet to define essential plant functional groups to build dynamic habitat suitability maps.
- 2) Define herbivores habitat use (from telemetry and counts) and the resulting herbivory pressure on the vegetation communities.
- 3) Compare scenarios modulating major factors affecting the vegetation and/or caribou spatial patterns.

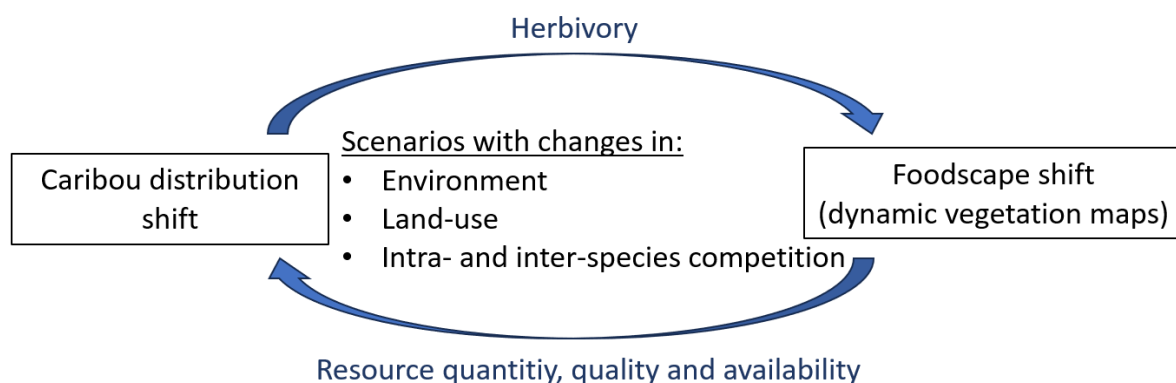


Figure 1. Schematic representation of the plant-herbivore feedback loop that the PhD-candidate will develop.

The student will be a member of the Department of Birds and Mammals and will closely work with the Department of Environment and Minerals, both located at the Greenland Institute of Natural Resources. The candidate must primarily be based in Nuuk, Greenland. He/she will also be affiliated to a university outside Greenland, where he/she will follow a number of PhD-courses.

Qualifications

The scholarship for the PhD degree is subject to academic approval by the host university. The candidate must have a Master's degree in biology (120 ECTS points), preferably within ecology and evolution with a minimum grade of B. You may apply prior to obtaining your master's degree but cannot begin before having received it.

We are looking for a student with a good biostatistical background and that is problem-solving oriented. The candidate will be trained by the supervisors in conducting field and lab work, as well as biomodelling. The work from the PhD is expected to be published in peer-reviewed international journals, thus, skills in scientific writing are valued. There will be opportunities to develop a strong network of national and international collaborators through the project partners and by attending conferences/workshops.

Preferred skills:

- Quantitative methods in ecology (in R)
- Tundra plant monitoring
- Spatial ecology
- Study design
- Field work experience in Alpine/Arctic areas

The candidate may only have some of the preferred skills. He/She can expect to gain this set of expertise throughout the fellowship. Be ready to conduct summer and winter field work in remote areas.

We offer

The Greenland Institute of Natural Resources is at the forefront of research and monitoring of living resources in Greenland. The institute is recognized for the excellence of their research, education, innovation and scientific advice. We offer a rewarding and challenging job in an international environment, which is also relevant for the local society. We strive for excellence in an environment characterized by collegial respect and academic freedom tempered by responsibility.

Salary and appointment terms

The allowance will be agreed upon with the relevant union. The period of employment is 3 years. Starting Date will be mutually agreed with the successful candidate.

The PhD candidate will be primarily living and working in Nuuk, Greenland.

Further information: Is available from researcher Mathilde Le Moullec, GINR, malm@natur.gl, or Head of Department of Birds and Mammals Fernando Ugarte, GINR, feug@natur.gl.

Application procedure

Your complete online application must be submitted no later than **15th October 24:00 (Danish time)**.

The application should be submitted to malm@natur.gl.

Applications must be submitted as one PDF file containing all materials to be given consideration. To apply, please forward your application to and attach all your materials in English in one PDF file. The file must include:

- A letter motivating the application (cover letter, max 2 pages)
- Academic Curriculum vitae
- Grade transcripts and BSc/MSc diploma
- Translation of grades to the ECTS grading scale system
- Two contact/recommendation persons (including their phone numbers and email)

All interested candidates irrespective of age, gender, race, disability, religion, or ethnic background are encouraged to apply.