

Moose distribution and browsing pressure in populations migrating across the border between Norway and Sweden

Moose is the dominant large herbivore of the boreal forest. It is a browsing herbivore, which means that it prefers to feed on twigs and leaves from trees and shrubs, as opposed to grazing species that prefer grasses and herbs. Due to their large body size and the poor digestibility of what they eat, moose need to browse a lot. In winter, when access to leaves and small shrubs is reduced, moose start browsing on commercially important young pine trees in commercial forest stands. A high browsing pressure will ultimately lead to reduced growth and damaged stems of the pine trees, which in turn affects timber quality and economic revenue from forestry. On the other side, moose is the economically most important game species in Scandinavia, and moose harvest has a high cultural value for the local society. Moose of the boreal forest are also the most important prey for wolves, and newborn calves in summer are prey for bears and sometimes also for wolverines. Large carnivores are therefore often perceived as competitors by moose hunters and landowners, and there is a considerable conflict regarding moose harvest and carnivore conservation.

The Interreg-funded research project [GRENSEVILT](#) is studying the interactions between moose, hunters, forestry, wolves and wolverines in a partially migrating moose population. Partially migrating means that parts of the moose population show a seasonal migration between a winter and a summer area. In the winter area moose aggregate and can inflict large damage to forestry, while in the summer areas, moose harvest adds to the economical and recreational value for the local community. This uneven distribution of benefits and costs is a source of conflict, especially if winter and summer areas are in different administrative areas. GRENSEVILT aims at producing knowledge that can help to manage moose, forests and carnivores across administrative borders. Our main study area is in Finnskogen, a vast forest along the border between Norway and Sweden in south-central Scandinavia. We have GPS-collared moose, three neighbouring packs of wolves and also some wolverines.



In 2021, we need to find out how moose, and not just the GPS-collared ones, distribute in this area, and how the browsing damage differs between typical summer and winter areas. We do this by means of fecal pellet counts. Moose produce nice piles of fecal pellets, and we count the number of piles on sample plots of 100 m². These sample plots are regularly distributed across the wolf

territories. On the sample plots, we will in addition measure the browsing damage on commercial pine trees. We will combine the Swedish and Norwegian methods for surveying browsing damage, to translate data across borders, communicate with management, and compare methods. All data is entered on hand-held tablets, and for navigation, you will learn how to use GPS and maps.

As a practice student, you will be part of a large research group with a master student, a PhD-student, field coordinators and several practice students. Fieldwork is planned for the whole of May and June 2021. Days can be long, sometimes with a lot of mosquitoes and rain, but also with wonderful nature experiences and adventures – maybe you have to cross an ice-cold river, or you can take a dive in one of the many small lakes to cool down from the summer heat. We may stay in a cabin in the forest for a large part of the period, but take breaks in the weekend where you will stay at Campus. Driving license or even an own car is advantageous, but not compulsory. You will live in a field station together with the other students. We do not cover any of your living costs, except of lodging in the field station and fuel money in case you need to use your own car during fieldwork. However, there may be possibilities to apply to Erasmus or other scholarships through your institution. Due to corona, there may be restrictions on the size of student groups, transport across the border, and quarantine, that we have to take into account.

Interested? Contact Erik Versluijs erikversluijs@posteo.net for information about the fieldwork. For administrative issues, lodging, Erasmus etc., contact our international coordinator Elisabeth Nybakk Riseth elisabeth.riseth@inn.no