Master's Thesis Project description

Title
Can we use remote sensing data to estimate relative ungulate forage availability?

Background, study question(s)/Hypotheses
The goal of Swedish moose and deer management is to maintain populations of high quality at the same time as minimising damage to forests and crops. A key factor in obtaining such a balance is to make sure there's enough forage available in the landscape. It is therefore important for managers to have good tools for estimating forage availability. In today's management, maps are provided showing the area of regenerating forests within browsing height. What this measure lacks is information about which forage species are present there and in which quantities. We also lack estimates of forage availability in more mature forests. In this project we use remote sensing data to model the abundance of forage trees across all forest land in Sweden, focussing on six important forage tree species. The resultant maps will be used in practical management in Sweden in the near future. But first our predictive models need to be validated in the field. The student will conduct inventories in selected areas in southern Sweden, to answer the research question whether our predictive maps are satisfactory or in need of improvement.

Topic available from/to
Feb 2024 to Nov 2024

Supervisor(s)
Annika Felton (annika.felton@slu.se, 040-415177; 073-8454793)
Lukas Graf (Lukas.graf@slu.se, 076-6698796)

Special conditions/requirements
This project requires several weeks of field work in rural forest environments, in Sweden. The choice of study areas is flexible and can be adjusted according to the student's wishes. The inventory can be done any time of the year, as long as the sites are accessible. Driver's licence is needed.

Other information
This project is a collaboration between SLU and Sveaskog, and part of the PhD research program of Lukas Graf

Pictures: