



Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

MSc thesis opportunity at VFM (30-60 credits)

Community ecology of European ungulates using eDNA

Intro: Europe is inhabited by multiple species of ungulates, such as roe deer, red deer, and moose that may share a fairly similar diet dominated by woody species and herbs. It is not fully clear if and how these species partition their diet to be able to coexist. In Sweden, several of these ungulate species have entered the country during recent decades (especially, fallow deer, red deer, and wild boar) and are now strongly increasing. Knowledge on how these species coexist with each other and with the species already present (moose, roe deer) is essential to predict how the future ungulate communities of Sweden will look like. Will they all live happily ever after, or will some species start dominating over others? In this project we compare resource selection among multiple ungulate species in areas in southern Sweden where multi-species communities have only recently established with Białowieża Primeval Forest, Poland, where they have coexisted for centuries. Białowieża Primeval Forest represents one of the few fragments of pristine European lowland forest.

Project: You will apply a novel technique that can identify which species took a bite from a plant by analyzing the DNA in the saliva left on the plant. You will collect browsed twigs from shrubs and trees and analyze the DNA on these twigs in the lab at VFM. Twig samples will be collected in areas in Sweden (e.g. Öster Malma) and/or in Białowieża Primeval Forest.

Project type and duration: A 60 credit project will allow field work in Sweden and Poland. A 30 credit project will have to limit field work to Sweden or Poland. Field work in Poland will be based at the Mammal Research Institute (MRI), in Białowieża, with a local supervisor.

Requirements: Experience or at least affinity with molecular methods and ecological field work.

Supervisors: Dr.'s Joris Cromsigt & Göran Spong (VFM), Dr. Dries Kuijper (MRI).

For more info please contact Joris Cromsigt (joris.cromsigt@slu.se).

