

MSc thesis / Examensarbete

Determination of phenology and/or classification of activity patterns and detectability of ungulate species based on images of camera traps.

Background

In Sweden, the introduction of non-native species, as well as range expansions of native species and shifts in human land-use practices have strongly changed ungulate communities. Areas with communities of previously single or two species – moose and/or roe deer – shifted to much more diverse communities including species such as red deer, fallow deer, and wild boar. These ungulate communities inhabit landscapes that are increasingly modified by humans in ways that affect the ungulates, but also increase human-wildlife conflicts.

The MSc project is connected to the ‘ecosystem impacts’ part of the BEYOND MOOSE research framework where we aim to understand and quantify the impact of multispecies ungulate systems on forestry, agriculture and hunting in human-modified landscapes.

One of our projects deals with exclosures to understand the impacts of ungulates on tree recruitment and field layer structure. The study takes place in and around Öster Malma, where we have 10 replicates of 4 different seasonal exclosures. Besides measuring tree density and browsing damage, the “exclosures” that are open (all year and per season) have camera traps installed that continuously take pictures of animals passing by (mostly mammals).

Within this suggested Master thesis project it would be possible to look at and work with the pictures we have recorded. Possibilities would be to investigate phenology based on the pictures in order to better understand the mechanisms of seasonal browsing of ungulates. A second possibility would be to have a closer look at visitation rates and activity patterns dependent on the detection probability of the different deer species in the different exclosures. Alternatively, and depending on the interest of the student, it would also be possible to investigate (additionally) the browsing behavior of the ungulate species.

Keywords: Camera traps, ungulates, human-wildlife conflict, herbivory

Requirements

We are looking for a reliable and enthusiastic candidate with good English skills (including writing). Experience with the statistical software R is recommended.

Extent

30 or 60 credits

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