



PhD student, biology - Future Yields- impacts of browsing on stand structure, forest growth and revenue in forestry

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Department of wildlife, fish & environmental studies

The Swedish University of Agricultural Sciences, SLU, provides knowledge and finds solutions for a sustainable future through critical thought and transdisciplinary approaches, using state of the art technologies. The Department of wildlife, fish and environmental studies (VFM) contributes towards SLU:s ambition to be world leading in Life Sciences through education, research and environmental monitoring in collaboration with society. Our activities cover plants, animals and people across the world, often focusing on how land use affects ecosystems and interactions which influence the delivery of ecosystem services.

Today, SLU is among the top ranked universities in the world in forestry and agriculture; we want you to be a part of our vision for a sustainable future.

Description:

Ungulates provide important ecosystem services, e.g. through hunting and nature tourism, but may also limit other ecosystem services. In particular, ungulate browsing is often viewed as one of the major factors limiting forest growth as well as yields and revenue from forestry. Thus, successful co-management of ungulates and forests is based on finding trade-offs between competing ecosystem services. This, in turn, requires an understanding of ecological relationships between ungulates, their habitats, and various management actions, as well as an understanding of sociological relationships between stakeholders. Furthermore, accurate methods for monitoring actions and goal fulfilment in management are required, as well as systems for monitoring stakeholder attitudes

towards the size of game populations, to ecosystem services and to disservices from ungulates.

Numerous scientific studies cover interactions and causal relationships between forest management, ungulates and forest damage in Scandinavia, mainly focusing on damage to pine caused by moose. However, Swedish wildlife communities are changing, partly as a result of climate change. On the one hand, this means increasing damage from other ungulates, and on the other hand, shifting competition within ungulate communities influencing the amount of damage caused by moose. Currently, we lack sufficient understanding of the multi-species aspects of ungulate damage for adapting ungulate management and silvicultural practices to reduce damage.

Furthermore, the majority of all research and monitoring of forest damage from ungulates is based on single snapshots in time of damage levels in young stands. Thus, there is a lack of knowledge of how damage accumulates during the rotation period, how browsing pressure shapes the tree species composition in future stands and how ungulate damage impacts the future yields from forestry.

The focus of the advertised position is the links between the composition of ungulate communities, forage availability, forage utilization and damage to forests across a latitudinal gradient in Sweden. Central questions include:

- How does damage accumulate in young stands with different ungulate communities?
- How does browsing pressure affect the composition of the future stand?
- What are the future losses in yield and revenue under different damage scenarios?
- What are the pros and cons of different methods for monitoring ungulate damage?
- What are the stakeholder attitudes to ungulate communities and to ungulate damage?

The position is placed at VFM, where the holder will interact with researchers and Ph.D.-students from our competence areas, but is also part of the Ph.D.-school within the Forest Damage Centre at SLU. Thus, the successful candidate will be part of a dynamic and interdisciplinary environment with close links to the forest sector and the rest of society. The project is run as a collaboration between SLU and Skogforsk.

Qualifications:

You have a M.Sc. or equivalent in ecology, forest sciences or a closely related subject area. The work includes collecting and analysing large amounts of data using multivariate methods; experience from spatiotemporal analyses of species interactions and from database management are strong merits. Experience from studying attitudes is considered a merit, as is experience from modelling stand development and yields using the decision-support system Heureka.

We are looking for someone who is meticulous and structured, as well as creative and enthusiastic. We believe that you have a strong interest in the co-management of natural resources, preferably with a focus on the interaction between wildlife and forest management. You have excellent communication skills in English (speech and writing). It is a strong merit to master Swedish or another Scandinavian language, as many external contacts are in Swedish. A valid driver's license is required.

Place of work:

Umeå

Forms for funding or employment:

Employment 4 years

Starting date:

Expected start date 03-10-2022 or according to agreement.

Application:

Click the “Apply” button to submit your application. The deadline is 08-08-2022.

To qualify for third-cycle (Doctoral) courses and study programmes, you must have a second-cycle (Master’s) qualification. Alternatively, you must have conducted a minimum of four years of full-time study, of which a minimum of one year at second-cycle level.

Applicants will be selected based on their written application and CV, degree project, copies of their degree certificate and transcript of records from previous first and second-cycle studies at a university or higher education institution, two personal references, and knowledge of English. More information about the English language requirements can be found here: www.slu.se/en/education/programmes-courses/doctoral-studies/new-doctoral-students/english-language-requirements/

Please note that applicants invited to interview must submit attested copies of their degree certificate, a transcript of records from previous first and second-cycle studies at a university or higher education institution. Applicants who are not Swedish citizens need to submit an attested copy of their passport’s information page containing their photograph and personal details.

Read about the PhD education at SLU at www.slu.se/en/education/programmes-courses/doctoral-studies/

Academic union representatives:

<https://internt.slu.se/en/my-employment/employee-associations/kontaktpersoner-vid-rekrytering/>

The Swedish University of Agricultural Sciences (SLU) is a world-class international university with research, education and environmental assessment within the sciences for sustainable life. Its principal sites are in Alnarp, Umeå and Uppsala, but activities are also conducted at research stations, experimental parks and educational establishments throughout Sweden. We bring together people who have different perspectives, but they all have one and the same goal: to create the best conditions for a sustainable, thriving and better world.

SLU has just over 3,000 employees, 5,000 students and a turnover of SEK 3 billion. The university has invested heavily in a modern, attractive environment on its campuses.

www.slu.se

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