Phd student, research subject Biology with specialisation in Ecology

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Mixed cropping, ecosystem functioning and ecological resilience in African small-holder systems

PhD student position at Department of Ecology

Description:

Are you looking for a PhD project where you can study how to improve crop production and ecosystem functioning for smallholder farmers in Africa? Are you interested in agroecology, and would like to explore the links between biodiversity, food webs and resilience? Would you like to collaborate internationally and communicate with stakeholders? Then this PhD position at the Department of Ecology, SLU should be of interest to you. Our doctoral education aims to develop your creative and analytical thinking and to strengthen your research, communication, and outreach skills. The successful applicant will enter a dynamic and internationally distinguished research environment with an extensive collaborative network.

Push-pull is a novel cropping system that can help to reduce pest and weed problems and improve soil fertility for smallholder farmers in East Africa. However, we do not have a good understanding of the environmental conditions under which this technology works best. We also lack information about how push-pull impacts invertebrate food webs and whether push-pull can contribute to more resilient ecosystem functioning. The main aims of this project are to 1) assess how landscape structure, climatic conditions and soil conditions determine the efficacy of push-pull to enhance pest control and other ecosystem functions; 2) assess how predator-prey food webs are affected by the aforementioned variables and how this might contribute to resilience of pest control in the future. The project will be part of a large international collaboration with several European and African partners aiming to find ways of upscaling the push-pull technology.

The position is based at the Ecology Centre at the Swedish University of Agricultural Sciences, in Uppsala, Sweden, but field work will take place in Kenya, Uganda, Rwanda, Tanzania and Ethiopia. The Ecology Centre includes the Department of Ecology where we conduct research and education for sustainable agriculture, forest production and biological conservation. Our basic research on populations, communities and ecosystems forms the foundation for understanding the impact of land use and climate on animals,
plants, soil nutrient status and greenhouse gas balance. Solutions are sought that will mitigate climate change, preserve threatened species, benefit biological diversity and ecosystem services and control pests in managed agricultural, forested and urban landscapes. Active dissemination, outreach and frequent contacts with stakeholders are key activities.

Qualifications:

Applicants must have a Master's degree (or equivalent) in biology, agronomy, environmental science or similar subjects with specialization in ecology, and should be interested in community ecology, landscape ecology and in developing applications based on ecological understanding and experimentation. Advanced level courses in population and community ecology, landscape ecology, conservation biology, plant protection, molecular ecology and soil ecology are considered a merit, as are experiences of field work with insects, soil and plants. Skills in planning, executing, and reporting scientific studies are considered a merit, as is experience with statistical analyses. The applicant should have the ability to work both independently and in a team. Proven ability to communicate excellently in written and spoken English is essential.

Place of work:

Uppsala

Forms for funding or employment:

Employment 4 years

Starting date:

According to agreement, but no later than 1 February 2021

Application:

We welcome your application no later than 2020-11-15, use the button below.

A person has basic eligibility for third cycle education if he or she has taken a second cycle qualification or has completed course requirements of at least 240 higher education credits, including at least 60 higher education credits at second cycle education. Upper secondary school grades equivalent to English B/English 6 are a basic requirement.

Selection among applicants meeting the requirements is made with reference to written application including curriculum vitae, copies of degrees and transcripts of academic records, one copy of the dissertation for masters or undergraduate degree, a list of at least two references familiar with the applicant's qualifications, certified knowledge of the English language and an interview.

Please observe that applicant/s chosen to participate in an interview shall hand in certified true copies of certificates, diplomas and transcripts from previous studies at an internationally recognized higher education institution (university or university college) and transcripts in connection to the interview. If the applicant is a foreign citizen we
require a certified copy of the page in your passport with your personal data and photography.

Read about the PhD education at SLU at [www.slu.se/en/education/programmes-courses/doctoral-studies/](http://www.slu.se/en/education/programmes-courses/doctoral-studies/)

**Academic union representatives:**


**The Swedish University of Agricultural Sciences** (SLU) develops the understanding and sustainable use and management of biological natural resources. The university ranks well internationally within its subject areas. SLU is a research-intensive university that also offers unique degree programmes in for example rural development and natural resource management, environmental economics, animal science and landscape architecture.

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 in Alnarp, Umeå and Uppsala.

[www.slu.se](http://www.slu.se)

SLU is an equal opportunity employer.

**Contact person**

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