PhD student in Biology

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Department of Ecology
The Department of Ecology conducts internationally strong empirical and theoretical research and education aimed towards sustainable agriculture, forestry and biological conservation. We generate knowledge on how land use and climate affects animals, plants, nutrient cycling and greenhouse gas balance. Solutions are sought to mitigate climate change, preserve threatened species, benefit biological diversity and ecosystem services and control non-native species in agricultural and forest landscapes as well as in urban environments. See also: https://www.slu.se/en/departments/ecology/

We are searching for a highly motivated PhD-student interested in working with insect and plant based circular systems. This is a 4-year employment and the successful candidate will enter a strong international research environment at the Department of Ecology.

PhD student in Biology: Insect - plant circular systems

Description:
Insects as human food are rapidly developing in many food production systems around the world. One of the main sustainability benefits of using insects for food is that insects can feed on materials that humans cannot, and thus convert inedible matter into edible protein. This potential for insects to feed on waste and food bi-products, reduces pressure on the amount of land otherwise needed for feed production. This opens up the possibility that food-insects can be grown under circumstances that allow us to reduce our impacts on the environment. Insects also produce faeces, which may be suitable as fertilizer for plants. As we strive towards circular systems in our use of resources, these two components offer interesting opportunities when combined. In this project the PhD candidate will study the main ecological factors of an insect – plant rearing system. The study insect is the house cricket Acheta domestica and is one of the main focus species for current food production systems. The fertilizer effect of insect faeces on plants will be studied using agricultural crops relevant for human food production. This PhD project will examine different aspects of this system to increase our knowledge of the main ecological factors relevant for insects and plants here considered a part of a circular system.

The PhD candidate will set up and carry out experiments to investigate key ecological factors such as growth and survival for insects and plants. The experiments will be conducted both in laboratory settings and in outdoor field experiments. The candidate will analyse data collected as well as write scientific manuscripts. Depending on external factors, physical conferences and visits abroad can be included.
Qualifications:
The applicants should have a Master’s degree (or equivalent) in biology or environmental science with specialization in ecology, and should have a strong interest in both theoretical and applied ecology. Advanced level courses in population ecology or conservation biology are considered a merit, as is experience with insects and plants. Skills in planning, executing and reporting scientific studies as well as experience with statistical analyses are also merits. Particular emphasis will be placed on personal skills as a team player as well as an ability to take initiatives and work independently. Proven ability to communicate excellently in written and spoken English is essential.

Place of work:
Uppsala

Forms for funding or employment:
Employment as a PhD student 4 years.

Starting date:
By agreement, but no later than 1 October 2021.

Application:
We welcome your application no later than 2021-05-30, 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: 1) a written application describing the motivation for applying for the positions and research interests, as well as addressing the required and desired qualifications 2) a curriculum vitae that includes publications (if any), 3) certified copies of degrees and transcripts of academic records, 4) a list of at least two references familiar with the applicant's qualifications, 5) certified knowledge of the English language. An interview be the final part of the selection for top candidates.

If the applicant is a non-swedish citizen we require a certified copy of the page in the passport with the applicant's personal data and photography.

Read about the PhD education at SLU at 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.

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SLU is an equal opportunity employer.

**Contact person**

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