



Doctoral Student in Biology

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Lunds universitet, Naturvetenskapliga fakulteten, Biologiska institutionen

Lund University was founded in 1666 and is repeatedly ranked among the world's top 100 universities. The University has 40 000 students and 7 600 staff based in Lund, Helsingborg and Malmö. We are united in our efforts to understand, explain and improve our world and the human condition.

The Faculty of Science conducts research and education within Biology, Astronomy, Physics, Geosciences, Chemistry, Mathematics and Environmental Sciences. The Faculty is organized into nine departments, gathered in the northern campus area. The Faculty has approximately 1500 students, 330 PhD students and 700 employees.

Project description

The worlds' insect populations are declining and face challenges from habitat destruction and fragmentation and climate change. For insects to adapt to a changing climate, within-species variation on which selection can act is crucial. In this PhD-project, the effect of landscape structure and land use on genetic diversity and evolvability will be investigated.

The PhD-student will address how genetic diversity and evolvability of species vary depending on landscape composition. Comparisons of diversity of modern and museum samples from the same locations will be made to address how genetic and phenotypic variation is affected by changes in land use in this project. A second topic addressed in this project is how species interactions are affected by climate change. Anthropogenic change may result in altered biotic interactions among and within species. While much research has been done on how abiotic requirements determine a species' fundamental niche, it remains a challenge to investigate how its local distribution reflects interspecific interactions.

Work description

In this project landscape effects on genetic diversity and evolvability will be investigated. The main task will consist in genetic analysis including e.g. landscape genomics, inference of adaptation based on whole genome re-sequencing data, and comparisons with museum data. Field collection of insects and extraction of DNA both from contemporary and museum samples are also integral parts of the project.

There are possibilities to develop own ideas within the frame of the main research question in collaboration with the supervisor, Dr. Anna Runemark. The doctoral student will be part of the "The evolutionary ecology of plant-insect interactions" lab and partly involve collaborations with a post doc and students. The student will also be a part of a larger research environment BECC (Biodiversity and Ecosystem services in a Changing Climate) which will provide ample opportunities for interactions with conservation biologists and climate researchers.

Qualifications

To be eligible the applicant must hold a University degree e.g. a MSc or equivalent in a biological discipline including evolutionary biology, ecology, genetics. Alternatively the student could have a bioinformatics degree including biology courses or a conservation degree including evolutionary and bioinformatics courses. The exam should include some form of statistics course. The applicant must be proficient in spoken and written English. A genuine interest in evolutionary processes and conservation genetics and an interest in science and a future academic career are

meriting, and high grades in courses with evolutionary and conservation perspectives are appreciated.

Documented ability to independently have developed, modified and used r programming and/or bash scripts is strongly meriting, and an interest in developing these skills and working with these tools is a requirement. Practical experience from planning and conducting field work with insects, molecular lab skills and problem solving skills and ability to work independently are important qualities. Strong motivation and willingness to cooperate are also important qualities. The candidate is expected to hold or have obtained a Swedish drivers license or equivalent which is valid in Sweden within 6 months of the employment.

Eligibility

Students with basic eligibility for third-cycle studies are those who- have completed a second-cycle degree- have completed courses of at least 240 credits, of which at least 60 credits are from second-cycle courses, or- have acquired largely equivalent knowledge in some other way, in Sweden or abroad.

The employment of doctoral students is regulated in the Swedish Code of Statutes 1998: 80. Only those who are or have been admitted to PhD-studies may be appointed to doctoral studentships. When an appointment to a doctoral studentship is made, the ability of the student to benefit from PhD-studies shall primarily be taken into account. In addition to devoting themselves to their studies, those appointed to doctoral studentships may be required to work with educational tasks, research and administration, in accordance with specific regulations in the ordinance.

Type of employment

Limit of tenure, four years according to HF 5 kap 7§.

Lund University welcomes applicants with diverse backgrounds and experiences. We regard gender equality and diversity as a strength and an asset. We kindly decline all sales and marketing contacts.

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Type of employment	Temporary position longer than 6 months
First day of employment	2020-02-03 or according to agreement
Salary	Monthly salary
Number of positions	1
Working hours	100
City	Lund
County	Skåne län
Country	Sweden
Reference number	PA2019/3476
Contact	Anna Runemark, +46 462223789 anna.runemark@biol.lu.se OFR/ST:Fackförbundet ST:s kansli, +46 46222 93 62
Union representative	SACO:Saco-s-rådet vid Lunds universitet, +46 46222 93 64 SEKO: Seko Civil, +46 46222 93 66
Published	22.Oct.2019
Last application date	17.Nov.2019 11:59 PM CET

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