

Phd Student in Evolutionary Biology

Uppsala University,

Uppsala University is an international research university focused on the development of science and education. Our most important assets are all the individuals who with their curiosity and their dedication make Uppsala University one of Sweden's most exciting work places. Uppsala University has 40,000 students, 7,000 employees and a turnover of SEK 6,5 billion.

The Department of Ecology and Genetics is an international environment with faculty and students from all over the world. Our research spans from evolutionary ecology and genetics to studies of ecosystems. We conduct a number of high-profile projects on, for example, the processes of natural and sexual selection, local adaptation, speciation, molecular evolution, microbial diversity, and ecosystem processes. Various fundamental and applied aspects of conservation biology and environmental science, including effects of global change, are also part of our research. Approaches used range from field experiments to large-scale genome analyses.

The Program of Evolutionary Biology is one of four sub-departments and runs a graduate research program in Evolutionary Genetics. The research groups within the program have expertise in evolutionary genetics and genomics, molecular ecology, molecular evolution and population genetics. We have access to state-of-the-art sequencing and computational infrastructure through SciLifeLab and Uppsala Multidisciplinary Center for Advanced Computational Science.

Project description: The structurally complex parts of most genomes – centromeres, telomeres, and large transposable elements (TEs) – remain poorly understood due to their repetitive nature. Recent resolution of this genomic 'dark matter' in humans suggests that many centromeres, telomeres, and TEs play important roles in adaptation, 3D genome folding, and disease. In contrast, virtually nothing is known about genomic 'dark matter' in birds, which are important study systems for evolutionary ecology and genomics. The student will investigate complex genomic regions in birds, using long-read sequencing, optical genome mapping, and chromosome conformation capture. This will permit assembly of a high-quality, high-contiguity reference genome of the paradise crow *Lycocorax pyrrhopterus*, including the highly repetitive female-specific W chromosome. The student will then use these reference data and Illumina short-read data of similar genomic regions across all 38 species of birds-of-paradise to reconstruct the impact of complex structural variation on the adaptive radiation of birds-of-paradise and the evolution of sex chromosomes.

Requirements: To be eligible for a PhD-student position the applicant must hold a master's degree (or equivalent) in evolutionary biology, genetics, bioinformatics or another relevant field. Candidates must be fluent in spoken as well as written English. Experience with analysis of genomics data or repetitive elements is of merit but is not essential. More important are enthusiasm for doing research and motivation for learning new techniques.

Position: The graduate program covers four years of full-time study. The position can be combined with teaching or other departmental duties (maximum 20%), which prolongs the employment with the corresponding time. The salary will be set according to local agreements.

More information about postgraduate studies at Uppsala University is available at <http://www.teknat.uu.se/education/postgraduate/>. Rules governing PhD candidates are set out in the Higher Education Ordinance Chapter 5, §§ 1-7 and in Uppsala university's rules and guidelines http://regler.uu.se/Rules_and_regulations_in_English/

Application: The application should include 1) a letter of intent describing yourself, your research interests and motivation of why you want to do a PhD, 2) a short description of your education, 3) a CV, 4) a copy of your master degree and course grades, 5) the names and contact information (address, e-mail address, and phone number) of at least two referees, 6) relevant publications (including master thesis). The application should be written in English.

Uppsala University aims for gender balance and diversity in all activities in order to achieve a higher quality at all levels of the organization. We therefore welcome applicants of any gender and with different birth background, functionality and life experience.

Pay: According to local agreements

Starting: 2017-04-01 or as otherwise agreed.

Working hours: 100 %

For further information about the position please contact Dr. Alexander Suh, e-mail alexander.suh@ebc.uu.se, phone no. +46 18 471 64 66.

You are welcome to submit your application no later than 2017-03-01, UFV-PA 2017/238

We decline offers of recruitment and advertising help.

Type of employment

Temporary position longer than 6 months

Contract type

Full time

First day of employment

2017-04-01 or otherwise agreed

Salary

Fixed pay

Number of positions

1

Working hours

100%

City

Uppsala

County

Uppsala län

Country

Sweden

Reference number

UFV-PA 2017/238

Union representative

Marie Ols, TCO/ST, 018-471 2459

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Last application date

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