



CHARLES UNIVERSITY
Faculty of science

NEW funded PhD position in bee research

Population genetics of *Andrena* bees (Hymenoptera: Andrenidae) with respect to parasitisation rate and flower specialization

A four year funded PhD Studentship is available for a highly motivated candidate.

Importance of pollinators for ecological services in agriculture and maintaining the stability of natural ecosystems has recently been acknowledged. However, nearly 10% of wild bees are threatened by extinction in Europe and very little is known about the reasons causing population decline across different species. As the problems are likely caused by a combination of factors, we focused on effects of parasites and flower specialization in a species rich lineage of bees from the family Andrenidae as a model group (genus *Andrena*). Population genetics of tens of bee species will be studied on the continental scale. The new research brings first comprehensive and widely comparable data for high number of species. Moreover, we will accumulate data about parasitisation rate and host flower specialization from sampled populations for further statistical analysis. The research will be conducted using microsatellites processed by next generation sequencing methods and consist of work from field collection of material to laboratory work with DNA samples, and further optimization of PCR multiplexes, NGS library preparation and population genetic data analysis. The project aims to uncover general principles of pollinator-parasite interactions through quantitative analysis of three trophic levels (plants-pollinators-parasites) on population genetic level.

The deadline for applications is 13th March 2020, with start date from October 2020. The student will receive stipend which comfortably covers living expenses in the Czech Republic. The working language is English and applicants from all countries are eligible.

Required

- A master's degree in biological sciences in the onset, but preferably within July

Recommended

- Experience in ecological statistics or bioinformatics
- Experience with molecular biology laboratory work
- Driving license and fieldwork experience

Application

- Exclusively through web: <https://stars-natur.cz/phd-positions/biology/population-genetics-of-andrena-bees-hymenoptera-andrenidae-with-respect-to-parasitisation-rate-and-flower-specialization>

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