

PhD student position

100%

"Population genetic investigations of adaptation and maladaptation during species range expansion of *Arabis alpina*"

Hosted within Ecological Genomics Group, IPS, Bern

A PhD position is available in evolutionary biology to work in the Institute of Plant Sciences at the University of Bern, Switzerland. The position is funded for 4 years, to begin late summer or early autumn 2020. The ideal candidate will be self-motivated with a strong interest in integrating computational and empirical approaches. Experience working in R or python coding languages is highly desirable.

The research projects are in population genetics/genomics, with the main scientific goal being to understand how populations successfully expand their species ranges, adapting to novel environments as well as surviving detrimental mutation load incurred during this demographic process of expansion. These questions will be addressed with an integrative approach that combines theoretical simulation studies with empirical analysis of wild-sampled *Arabis alpina*. Field sampling in Italy and the Swiss Alps is an aspect of this project, but prior experience working with plants is not required

In general, I seek a student who is strongly motivated to learn, ask questions, and think critically about topics in evolutionary biology. Prior experience in bioinformatics is a plus; top candidates will be those interested and committed to working both on the computer and in the wet lab. A Master's degree in biology or a related field is a prerequisite for this position. Any significant changes in research field should be described and explained in the applicant's motivation letter.

The following tools will be used, so previous hands-on experience is desired in:

- Programming (Python, R, C++, bash)
- Wet lab experience (DNA extraction, PCR amplification, gel electrophoresis)
- Bioinformatics approaches (analysis of genomic data)
- Data visualisation, academic writing

The Institute for Plant Sciences is a vibrant community of evolutionary biologists, ecologists, and plant physiologists, located within the beautiful Botanical Gardens of Bern, the capital city of Switzerland. The projects are funded by a Swiss National Science Foundation (SNF) Ambizione grant to Dr. Kimberly Gilbert, who will be the main supervisor, within the lab of Prof. Dr. Christian Parisod. More information on previous research can be found here: <http://kjgilbert.github.io/> and https://www.ips.unibe.ch/research/ecogen/index_eng.html. The working language is English, but knowledge of German can be useful for everyday life. Quality of life in Switzerland is high, and Bern is

ideally located to both nature and several major cities. The salary during the PhD study is according to the Swiss National Science Foundation guidelines.

Application deadline: 29.02.2020

Beginning: September 2020 or upon agreement, duration: 4 years

To apply, please submit via email to Dr. Kimberly Gilbert at kjgilbert.evolution@gmail.com using the subject line "PhD Application" the following items:

- 1) letter describing motivation for joining this project, fit, and professional goals (1 page)
- 2) CV/Resumé that includes publications and previous research experience
- 3) summary of the master's thesis (1/2 page)
- 4) contact information for two professional references

Informal inquiries may also be directed to the same email address above. After a first round of consideration, candidates will be interviewed either in person or by video conference. A copy of the master's degree and transcript, along with evidence of writing experience may be requested at a later stage.