

Postdoctoral scholarship in plant evolution

At the Department of Biological and Environmental Sciences (BioEnv) we have teaching and research activities that span from the alpine ecosystem, through forests, cultivated land and streams, to the marine environment. In these environments, we study different levels of biological organisation from genes, individuals and populations, to communities and ecosystems. We work within ecology, evolution, physiology, systematics and combinations of these fields in order to understand the impact of natural and anthropogenic changes of the environment.

The department is placed at two different localities: in Natrium at Medicinaregatan 7B in Gothenburg and at the Kristineberg marine research station operated by the Marine Infrastructure at the University of Gothenburg. The current employment is based in Natrium.

Subject area

Genomics and bioinformatics.

Subject area description

Mutualistic plant-pollinator interactions play a critical role in the diversification of flowering plants. Shifts in pollination systems can promote plant species diversification, increasing species diversity. Current knowledge on the spatiotemporal evolution of plant-pollinator interactions and their biotic and abiotic correlates remains fragmentary and is mostly lacking for biologically complex ecosystems, such as tropical rainforests. Here we aim to identify synergetic drivers of speciation in a tropical biodiversity hotspot.

Study description

This postdoc will focus on a manuscript regarding trait-based diversification in bromeliads. The primary assignments are:

1. Merge RAD and genome skim data together into a large genomic sampling of the bromeliad tribe Vrieseinae and develop a dated molecular phylogeny
2. Use trait data to develop hidden-state diversification models (e.g. HiSSE) to test for correlations between speciation rate and pollination syndrome.

In addition, there is the opportunity to development of hypotheses and analyses for these and other datasets generated within our research group or your own community.

Eligibility

The applicant must hold a PhD degree in genetics, bioinformatics, or a related field. The PhD degree must be completed by the time the decision of the scholarship holder is made.

In addition you:

- Shall have completed the doctoral degree no more than three years before the application deadline. In particular circumstances, such as leave due to illness, parental leave, clinical duties, commissions of trust within union organisations or similar, the degree may have been awarded earlier.

- May not have a current employment or have hold one for the last two years at the University of Gothenburg.
- Scholarship holders who are required, pursuant to the Tax Procedures Act (2011:1244), must submit a self-assessment and include information on the scholarship received.

Assessments

We are seeking a highly motivated and skilled person in bioinformatics with emphasis on plant adaptation in the face of climate change. The following criteria are assessed: Documented experience with Python is beneficial, but coding ability with command line tools within a unix environment (eg bash, zsh) is required

- Excellent communication skills, both written and spoken, in English is required
- Ability to work independently and within a group is required
- Experience in plants, adaptation, the Arctic region, and/or climate change is beneficial
- Experience with both short and long-read DNA sequencing data is beneficial
- Interest in and experience with project management is beneficial

Scholarship

The scholarship is for 12 months with an extent of 100%, placed at the Department of Biological and Environmental Science. Starting date is upon agreement.

The application should be written in English and must include:

- A cover letter with the applicant's motivation for application, describing how the applicant meets the selection criteria (max. two A4 pages)
- A list of qualifications (CV; including GitHub or repository where code is available)
- Certificate of PhD exam and other relevance education
- Complete list of publications, including submitted and accepted manuscripts
- Contact information for at least two referees that are familiar with the applicant's qualifications

Contact information

For further information please contact:

Åsa Arrhenius, Head of Department
asa.arrhenius@bioenv.gu.se

Christine Bacon, Senior Lecturer in Biodiversity
christine.bacon@bioenv.gu.se

Application

The application is emailed to Christine Bacon, christine.bacon@bioenv.gu.se, with the subject line "Postdoctoral scholarship in plant evolution".

Closing date: November 28th, 2023