PhD student in Marine Sciences specialising in biology

Ref PAR 2021/511

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The University of Gothenburg promotes equal opportunities, equality and diversity.

PhD student in Marine Sciences specialising in biology

Type of employment: Fixed-term employment, 4 years
Extent: 100%
Location: Department of Marine Sciences, University of Gothenburg

First day of employment: As soon as possible
Reference number:

The Department of Marine Sciences, the Faculty of Science, University of Gothenburg, was recently launched (July 1, 2015) with the purpose to achieve the vision of "A University with marine research, teaching and cooperation of the highest international class" (https://www.gu.se/en/marina-vetenskaper). The department has about 110 employees - researchers, teachers, PhD students, technicians and administrators. The department carries out teaching and research in the various marine specializations, biology, oceanography, chemistry, marine geology, conservation of underwater cultural heritage, and environmental science. The Department is situated in Gothenburg and at the University’s research stations at Tjärnö and Kristineberg. This position is placed at the Tjärnö Marine Laboratory, a stimulating work place on an island on the Swedish west coast, ca 2hrs North of Gothenburg (https://www.gu.se/en/tjarno).

Project description

We have one PhD position available to work on the new research project funded by the research council FORMAS "Genetic population structure of Baltic Sea eelgrass - urgent information for conservation of a foundation species under climate change".

Biodiversity loss and climate change are two of the grand challenges of our time. Maintaining biodiversity, within and between species and ecosystems, will become increasingly important to avoid the worst impacts of climate change. Despite the fact that genetic diversity is the level where natural selection and evolution of new adaptations affect individual and species survival, genetic diversity is rarely considered in environmental conservation.

The seagrass *Zostera marina* (eelgrass) is one of the most important habitat-forming species along northern temperate coasts world-wide, as well as around the Swedish coast. Eelgrass meadows have declined considerably and are at risk of further decline due to climate change, not least in the Baltic Sea. To mitigate further losses, genetic diversity must be taken in to consideration when developing management plans. This is clearly demonstrated by our earlier work showing a surprising genetic complexity of eelgrass on the Swedish west coast. Focusing on the Baltic Sea, we will use I) genomics to provide a baseline of current genetic diversity and connectivity for future genetic monitoring of Baltic eelgrass and to explore local adaptation; II) oceanographic modelling of current and future climate scenarios, useful for prioritizing meadows for protection and restoration; and III) demographic modelling to assess meadows’ ability to recover and adapt in the
future. We encourage applicants that are keen to develop their own research within and beyond the above described project.

We are seeking an independent and collaborative person with a background in population genetics/genomics to pursue PhD studies in Marine Sciences. The PhD project will focus on population genomic assessments of a seagrass in the Baltic Sea to provide a baseline for future temporal conservation genetic monitoring of eelgrass in Sweden. Investigating into local adaptation, genetic demographic modelling and species distribution modelling can then help to address persistence and adaptation potential under predicted climate change. The research project itself is very collaborative and will involve collaboration with international and Swedish researchers.

**Job assignments**

The main task is to conduct a PhD thesis under supervision within the research theme described above.

Techniques used within the project include: molecular lab skills (DNA extractions, PCR, library preparation, gel electrophoresis etc), bioinformatic skills for genomic data analysis, statistical analyses, writing of scientific articles and dissemination of scientific results at both international and national conferences and seminars. There will also be opportunities for field work and mesocosm experiments.

Previous knowledge on molecular lab and bioinformatic analyses of SNP data-sets, as well as experience of computer programming, e.g. in R, is an advantage. Scientific writing is a merit.

As member of the project team it is expected that the PhD student communicates and actively collaborates within the group. The PhD student will present results at conferences, seminars and at project meetings. A core part of the PhD student assignment is publication in international peer-reviewed journals and the writing of the final summarizing thesis, which is defended during a public dissertation. A Swedish Ph. D. thesis should be completed within 4 years full time work, including participation in courses equivalent to 1 year (60 ECTS): Pedagogic and other soft-skill courses as well as courses to develop technical skills and knowledge (please see below). The 4 years can be prolonged with teaching (up to 20%).

**Qualification/merits**

We seek a motivated person for PhD studies in marine biology, with emphasis on conservation genetics of eelgrass.

Important selection criteria are that the applicant must hold a Master’s degree or equivalent in biology, ecology, marine biology, genetics or related fields. The applicant should possess the ability to work independently, as well as to collaborate as part of the research team, and that the applicant takes responsibility for his/her own learning and research. The candidate should have an interest in both practical laboratory as well as theoretical work tasks. Previous research experience is an added qualification, for example, conference attendance, grant funding and scientific publications with a short description of the applicant’s role in the work. Excellent communication skills in English, both written and spoken, are necessary since we work in an international environment.

In addition to the formal qualification requirements, great emphasis will be placed on personal qualities and suitability for the position.

**Eligibility**

The qualifications for education on a doctoral level are: degree in advanced level, at least 240 university ECTS, of which 60 are on an advanced level, or in another way acquired similar knowledge. Only applicants who are admitted to the postgraduate level may be hired. Upon appointment the degree of ability to successfully complete the PhD program must first be evaluated. Only applicants who are admitted to the PhD program at the Dep. of Marine Sciences may be hired.

**Third cycle education**
Admission to third cycle education is aiming at a PhD in Natural Science, specializing in Marine Sciences. The education runs for four years of fulltime studies, containing three years of thesis work and one year of academic education (i.e. course work and literature studies). A selection of courses at the Department/Faculty is available, but national/international courses can also be selected. Some teaching and/or course administration can be included which extends the contract to the same extent. You will be employed at University of Gothenburg, and salary follows the regulations at University of Gothenburg. In addition to pursuing his/her own research studies, PhD students may be required to perform other duties, such as teaching, research and administrative work according to special regulations.

Assessment

Regulations for the evaluation of qualifications for education on a doctoral level are given in SFS 1998:80. The main assessment is an judgement for the applicant to successfully complete the PhD education.

Appointment Procedure

Please apply online.
The following should be included:

- A short cover letter in English describing the applicant’s motivation for the position, how the applicant meets the selection criteria, and how the application is well suited for the proposed work (max. two A4 page).
- An attested list of qualifications (CV)
- Examination certificates and transcript of courses with grades.
- Relevant publications, including accepted academic papers or research thesis.
- Contact information (phone, email) of two personal references

The highest ranked applicants will be contacted for interviews.

The University of Gothenburg promotes equal opportunities, equality and diversity. Applications will be destroyed or returned (upon request) two years after the decision of employment has become final. Applications from the employed and from those who appeal the decision will not be returned.

For further information about the position

We'd encourage you to contact Dr Marlene Jahnke (marlene.jahnke@gu.se) to discuss your interest before you apply.

Labour union

Information on union representatives can be found here:


Closing date 2021-05-09

In connection to this recruitment, we have already decided which recruitment channels we should use. We therefore decline further contact with vendors, recruitment and staffing companies.

Apply