



PhD student: Marine ecology

The department for Marine Sciences (<http://marine.gu.se/english/>) is Sweden's most complete academic environment for marine research and education, and it is one of few such institutions in Europe. The Department for Marine Sciences, founded 2015, brings together expertise in physical oceanography, marine chemistry, marine biology, marine geology, and marine heritage conservation. Thus, the department has excellent opportunities to meet future challenges in marine research and education. The department of Marine Sciences are located with permanent staff in Gothenburg and at the research stations Kristineberg and Tjärnö on the Swedish west coast north of Gothenburg.

Subject area

Structure, function and ecosystem services of filter-feeding bivalves in coastal systems

Subject area description

Filter-feeding bivalves are conspicuous components of benthic systems in coastal systems around the globe. In fully marine areas in Sweden, epibenthic species such as *Mytilus edulis*, *Ostrea edulis* and the newly invaded *Magallana gigas*, and infaunal species *Cerastoderma edule* and *Mya arenaria*, are particularly abundant and widespread in various niches. These species contribute substantially to biomass production, nutrient cycling, food-web interactions and structural modification of habitats. Some of them are also collected by professional or recreational fishermen or cultivated in aquaculture operations. The fact that filter-feeding bivalves feed on natural food-sources and require no additional food make them particularly interesting for future sustainable food-production. Thus, these species are both important and interesting from several aspects of ecosystem services (e.g. supporting, regulating, provisioning and cultural).

The research group has previously developed research on the spatial distribution of benthic bivalves in the region. This has mainly been used to model and predict spatial distributions, assess conservation status in relation to exploitation due to fisheries and aquaculture. The fact that these species are free spawners which recruit by pelagic larvae, means that populations in natural and artificial habitats as well as cultivated and wild, are more or less mixed and interacting. Understanding this interplay and interdependence among these components is crucial both for management of natural populations and habitats and for a sustainable shellfish industry.

Job assignments

Together with the supervisor and in dialog with collaborators internally and externally at the department, the successful candidate will develop a PhD-project focusing on the ecology and importance of bivalves. One possible outcome is a broad approach involving several species, but it is also possible that the main focus will be on a particular species (e.g. *Mytilus edulis* or *Ostrea edulis*) following an initial scoping of research topics.

Previous work in the research group has resulted in several large datasets on the spatial distribution, recruitment and growth of several species of coastal bivalves. These are all available to the successful candidate and will most likely serve as a basis for further observations, experiments and modelling. We also have extensive networks and collaboration on fundamental and applied aspects of bivalve ecology, such as population genetics, dispersal, restoration and aquaculture. This expertise will also be involved in the planning and execution of the PhD-project.

The student is expected to use a variety of approaches, such as field- and laboratory-experiments, field-observations, statistical and analytical modelling, and the student is expected to interpret results in a societal context. The work will mainly be carried out at Department of Marine Science, at Tjärnö Marine Laboratory but there will also be opportunities for collaborative work in Sweden and abroad.

Eligibility

The qualifications for education on a doctoral level are: an advanced level degree, at least 240 university points, of which 60 are on an advanced level, or similar knowledge acquired in another way within or outside the country of Sweden.

The candidate should have a background in ecology, biology marine science or a related discipline.

Assessment

Regulations for the evaluation of qualifications for education on a doctoral level are given in SFS 1998:80. Only a person that is admitted to a doctoral level education can hold the position. The candidates will be judged for their ability to successfully complete the program. In addition to pursuing their own research studies, the holder of the position may be required to perform duties such as teaching, research, and administration according to special regulations.

We are seeking a highly motivated and independent person with a background in ecology or marine science to pursue PhD studies in natural science, specializing in marine science. The applicant is expected to have an interest in science-based development of marine ecology and a willingness to work in a team, flexibility in learning new tasks, and excellent data handling and communication skills.

Communication skills in oral and written English are a requirement.

The highest ranked candidates will be invited for an interview that may be conducted in English and in some cases via phone/internet.

Employment

Type of employment: Fixed-term employment, 48 months

Extent: 100%

Location: Department of Marine Sciences at Tjärnö

First day of employment: As agreed

For further information about the position

Please contact professor Mats Lindegarth (mats.lindegarth@marine.gu.se).

Unions

Union representatives at the University of Gothenburg:

http://www.gu.se/english/about_the_university/job-opportunities/union-representatives

How to apply

In order to apply for a position at the University of Gothenburg, you have to register an account in our online recruitment system, and submit the following documents:

- Personal letter explaining the applicants merits in relation to the position
- CV, with a complete list of university courses that the applicant has passed
- Electronic copies of earlier scientific contributions (e.g. master thesis)
- Description of other relevant merits.
- Certificates and other documents that you wish to refer to.
- Name of 1 reference persons (e.g. earlier supervisor).

It is the responsibility of the candidate to ensure that the application is complete in accordance with the instructions in the job advertisement, and that it is submitted before the deadline. The selection of candidates is made on the basis of the qualifications registered in the application.

The application is to be written in English.

Closing date: 2019-11-10

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