Three postdoc positions in the Linnaeus project Adaptation to Changing Marine Environments (ACME) at the Faculty of Science, University of Gothenburg

ACME is a research programme in marine evolutionary biology that links research in theoretical biology, population genetics, ecological genomics, developmental biology, physiology and ecology. About thirty researchers work jointly in the programme, which is funded by the Science Research Councils (VR and Formas) and University of Gothenburg, starting 2008 and aiming for a research period of 10 years.

We now seek 3 dedicated young researchers with PhD degrees (see specification of fields under each position) to be appointed as postdocs in the fields described below. Good communication abilities in written and spoken English are required qualifications for all position. Each postdoc is 2 years and starting date is as soon as possible.

For specific information contact the postdoc hosts indicated for each position below. For general information about ACME contact the programme coordinator, Professor Kerstin Johannesson (Kerstin.Johannesson@marecol.gu.se) or the programme officer Eva Marie Rödström (Eva.Marie.Rodstrom@loven.gu.se). For information about salaries, appointment rules etc. contact the head of the department, Professor Per Åberg (per.aberg@marecol.gu.se), or representatives for the unions:
SACO Martin Björkman, phone: +46-31-786 3608, SEKO Lennart Olsson, phone: +46-31-786 1173, OFR-S Eva Sjögren, phone: +46-31-786 1169.

Applications, labelled with the reference number **(see under each position)** should include a complete CV including a publication list, copies of the 3 most important publications by the applicant, a letter describing the applicant's motivation for applying (one page limit), copies of diplomas and transcripts of academic record, copy of passport or ID-card, letters of recommendation, name and contact information for two independent reference persons, and other relevant documents the applicant wish to refer to (all attested).

If you apply for more than one position, you should write a separate application for each of them.

The application should be addressed to
The Registrar, University of Gothenburg, Box 100, SE-405 30 Gothenburg, Sweden.

Stating **reference number for the chosen position.**
The application should reach the above address **no later than April 14, 2009.**

Union representatives: SACO Martin Björkman, tel +46 31-786 3608, SEKO Lennart Olsson, tel +46 31-786 1173, OFR-S Astrid Igerud, tel +46 31-786 1167.

Postdoc 1. Local adaptation and plasticity in ecophysiological traits in marine crustacean herbivores

Ref no E 36 1041/09

This position is at the Department of Marine Ecology-Kristineberg, Fiskebäckskil.

Organisms are subject to physical, biological and chemical selection pressures at all stages of their life cycle. Subtle changes over evolutionary time in an organism's developmental timetable are a powerful source of overall evolutionary change. Among physiological traits induced responses (phenotypic plasticity) may in itself be under selection and exposed to evolutionary changes.

The isopod *Idothea baltica* is a common herbivore on brown macroalgae of the genus *Fucus*. Along the Skagerack-Kattegatt-Baltic transect the algae and the isopod tolerate a broad span of salinities (8-25‰) and in addition the herbivore respond to the local quality of its host algae. We expect environmental differences along this cline to shape plant–herbivore interactions by selection on ecophysiological responses of the crustacean. This postdoc project aims to examine the importance of plasticity (at phenotypic and molecular level) to local adaptation in these traits.

The work is experimental, using live animals, and molecular, ecological and physiological techniques. Studies will be conducted on different plant-herbivore communities along the SKB gradient. The work will be performed in close collaboration with the post-doc in plasticity and adaptations of macrophytes (see below) and three senior scientists (Eriksson, Pavia and Toth) and additional PhD students.

We are seeking a PhD with a degree in marine zoology, zoophysiology or the equivalent **and with an interest in evolutionary ecology and plant-herbivore interactions.**. Competence in molecular and/or physiological techniques is a merit.

Information about the position is available from Associate Professor Susanne Eriksson, Tel # +46-523-185 50, e-mail: susanne.eriksson@marecol.gu.se

Postdoc 2. Phenotypic plasticity and local adaptation in marine macrophytes

Ref no. R 36 1042/09

This position is at the Department of Marine Ecology-Tjärnö, Strömstad

A main research issue within ACME is the relative importance of plasticity versus genetic differentiation in local adaptation of marine species exposed to changes in environmental variables.

This project within ACME will investigate induced versus genetically fixed components of phenotypic variation and local adaptation in marine macrophytes inside and outside the Baltic Sea. Macroalgae and seagrasses show high phenotypic variability in a range of fitness related traits such as phenology, morphology, and resistance to herbivory. The project has the overall aim to assess the genetic and environmental basis for the variation in these traits in a few model species (e.g. *Fucus vesiculosus*, *Zostera marina*) along an environmental gradient, through a combination of population genetic and ecological methods.

We seek a PhD with a degree in marine ecology, ecology or the equivalent. and with an interest in evolutionary ecology and plant-herbivore interactions. Experience of manipulative field and lab experiments and competence in molecular techniques are meriting.

Information about the position is available from Professor Henrik Pavia, Tel # +46-526-686 85, e-mail: henrik.pavia@marecol.gu.se

Postdoc 3. Modelling evolutionary biology in variable marine environments

Ref no E 36 1043/09

This position is at the Department of Marine Ecology-Gothenburg or at the Department of Marine Ecology-Tjärnö

The world's oceans and coasts are exposed to rapid changes, e.g. global warming and habitat loss. These changes introduce new challenges for marine organisms, which may either go locally extinct or tolerate the new conditions. With time there is also the possibility for evolution of new traits enabling a population to persist. To understand how evolution works under these conditions also provides a scientific challenge and requires the development of new mathematical models.

Data analysis and the development of mathematical models in evolutionary population biology is a core issue of the theoretical part of the ACME programme. This work will be performed in close collaboration with a team of one biology PhD-student and two senior scientists (Harding, Jonsson), but also in interaction with researchers generating empirical data.

We seek an applicant with a PhD degree or equivalent, and with a strong background in physics and/or applied mathematics. The applicant should have experience in model formulation and numerical methods. Experience of work with population ecology, population genetics and evolutionary models are considered additional qualifications.

Information about the position is available from Associate professor Karin Harding (karin.harding@marecol.gu.se) and Professor Per Jonsson (per.jonsson@marecol.gu.se).