



GÖTEBORGS UNIVERSITET

Would you like to contribute to the development of a sustainable aquaculture industry in Scandinavia?

Masters student position available within the project; "NORD-OSTRON", at the Department of Marine Ecology (Tjärnö), University of Gothenburg, Sweden

PROJECT TITLE: *Optimizing hatchery production of juvenile oysters: Broodstock conditioning and feeding regimes to maximize larval quality*

Project background: The Department of Marine Ecology at Tjärnö is managing "Nord-Ostron", a three year project within the EU Interreg programme (IVA Kattegat-Skagerrak). The project involves collaboration between Swedish, Norwegian and Danish universities, organizations and enterprises in the marine sector. The aim of the project is to develop trans-national models and tools among participating partners to support marine innovation and business development in the Skagerrak region. The project will develop and implement technologies for farming of the native oyster (*Ostrea edulis*). Nord-Ostron started 1st June 2009, and is ongoing until June 2012. The main goals of the "Nord-Ostron" project are to:

- a) promote collaboration within the three participating countries in order to promote shellfish aquaculture industry development;
- b) advance innovation within the aquaculture sector, including development of new technologies for oyster farming;
- c) develop communications and strategic plans with relevant actors regarding strategies and technologies for further shellfish industry growth.

Three specific needs have been identified in order to develop the oyster aquaculture industry (1) optimize hatchery production of juvenile oysters ("spat"); (2) identify and test techniques for grow-out of mature oysters in coastal waters, and (3) assess potential markets and develop supply chain management in order to maximize the benefits of production.

Project description: These master's student projects focus on (1) optimizing hatchery production of juvenile oysters. A key factor for the expansion of an oyster farming industry is to produce spat in hatcheries, which will be sold for on-growth at aquaculture sites. Spat production in a hatchery is a complex procedure and involves several steps including conditioning of broodstock for release of larvae, settlement and metamorphosis of the larvae, and their eventual growth into "spat". In all these steps, further research is required to gain a solid understanding of factors influencing larval survival and growth. One potential project is possible on the effects of broodstock conditioning on larval quality in order to evaluate how different temperature and feeding practices affect larval quality. A second project will experiment with different feeding regimes at the larval stage to determine the role of nutrient availability during larval development. In both conditioning and larval development, pH and temperature may play a role, and experiments will be designed to account for these potential factors. Photoperiod may also play a role and may be a topic of potential exploration.

Qualifications: We are looking for applicants who possess a bachelor's degree in biology, natural resources management or marine ecology.

Additional information: These positions are based at the Department of Marine Ecology at the University of Gothenburg (Tjärnö). The project can provide some support for travel abroad and collaboration with other university partners, including the Danish Shellfish Center and University of Life Sciences in Ås, Norway. If you are interested, please contact the project leader Susanne Lindegarth, susanne.lindegarth@marecol.gu.se, tel. +(46) 526-68678, or +(46) 76 1145757.