
Ph.D. course – June 16th to 23rd 2013 – Ecophysiology of macroalgae

Responsible scientists

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Contact and registration:

Peter Stæhr pst@dmu.dk. Deadline for application is May 1st 2013.

Place (Molslaboratoriet):

<http://www.naturhistoriskmuseum.dk/molslaboratoriet/molslab.htm>

Webpage : <http://phd.au.dk/graduate-schools/scienceandtechnology/courses/scientificcourses/>

Background of participants

Priority will be given to PhD-students, but other students (including MSc-students) may be admitted.



Ph.D. course

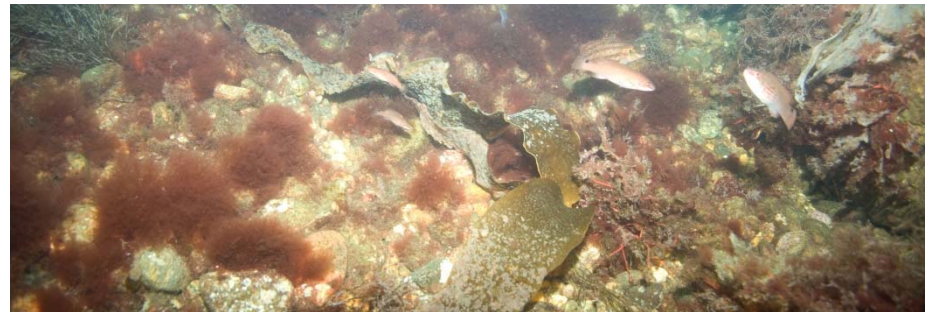
Aarhus University, Department of Bioscience

Time: June 16th to 23rd 2013 - 5 ECTS

ECOPHYSIOLOGY OF MACROALGAE

Macroalgae are macroscopic, multicellular, benthic algae also known as seaweeds. They dominate primary production in coastal waters characterized by hard bottom substrates, and provide important habitats for the associated fauna. Species composition, - richness, diversity, and biomass are determined by the ecological and physiological traits in combination with availability of light and nutrients as well as physical exposure and salinity.

Knowledge about the ecophysiology of macroalgae is fundamental for understanding changes in species composition and abundance, and accordingly important in the assessment of environmental status of coastal ecosystems and for the use of macroalgae as a marine resource.



This course will address at Ph.D. level

1. Methods for sampling and mapping macroalgal communities
2. Taxonomy, life cycle and growth of different form-functional groups
3. Measurement of macroalgal photosynthesis and respiration
4. Techniques for growing and recruiting macroalgae

The course will combine lecture and field sampling with laboratory experiments. Students will present results and deliver a report.

Course evaluation

Course participation will be assessed from:

- Active participation in field and labwork
- Presentation of scientific papers and group project
- Evaluation of a project report

Evening lectures

- Taxonomy, lifeforms, reproduction and growth of macroalgae
- Macroalgae as environmental indicators
- Macroalgae as resources
- Photoacclimation of macroalgae
- Invasive macroalgae

Course fee

The course is financially supported by Aarhus University, but there will be a registration fee of DKr. 4.500,- /600 € per student to cover accommodation, meals and field trips.

Course schedule

Sunday June 16th

Evening/afternoon: Welcome, introduction and lecture on life-forms

Monday June 17th

- Field trip to collect macroalgae and learn field techniques
- Labwork: Species identification and photosynthesis

Tuesday June 18th

- Field trip to collect macroalgae and learn field techniques
- Labwork: Species identification and photosynthesis

Wednesday June 19th

- Visit to algae center, introduction to cultivation techniques
- Lab experiments on photosynthesis

Thursday June 20th

- Visit to algae center, introduction to cultivation techniques
- Lab experiments on photosynthesis

Friday June 21th

- Analyse lab and field data
- Student presentations

Saturday June 22nd

- Write reports
- Dinner and farewell party

Sunday June 23rd

Morning: Departure