

Agnes Mols Mortensen

CONTACT

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EDUCATION

2008 – 2014 **PhD in Macroalgal Biology, University of New Hampshire, USA**

Dissertation title: The foliose Bangiales (Rhodophyta) In the northern part of the North Atlantic and the relationship with the North Pacific foliose Bangiales - diversity, distribution, phylogeny and phylogeography.

Supervised by: Dr. Christopher D. Neefus and Prof. Juliet Brodie.

Synopsis: The thesis investigated the species diversity of foliose Bangiales in the North Atlantic with special focus on Greenland, Iceland, Faroe Islands, northern Norway and the USA east coast. Phylogenetic analyses were carried out based on molecular sequences from new collections and historic herbarium material. The phylogenetic relationship between the North Atlantic and the North Pacific was also explored.

2004 – 2007 **MSC Biology – University of Copenhagen**

Thesis title: *Porphyra* (Rhodophyta) species In the Faroe Islands - an ecological, morphological and molecular approach.

2002 **BSC Biology – University of Faroe Islands**

RESEARCH INTERESTS

My main research interests are within macroalgal cultivation, species diversity, biology and ecology. I am interested in developing macroalgal cultivation and processing methods with regard to improving quality, and understanding the interactions between the macroalgae and the environment where they are grown. Building a biologically sustainable blue bioeconomy will rely on how well we understand the ecological interactions in the farming area.

My research focus is on the effect of the environment and season on the macroalgal quality, potential uses of macroalgae in an Integrated aquaculture system (IMTA), and Interactions between Increasing macroalgal cultivation and the natural environment.

RESEARCH EXPERIENCE

2015 - current Researcher at Fiskaaling

I have led and participated in project on macroalgal cultivation, quality and ecological Interactions. I have also contributed to a Danish macroalgal flora with writing a chapter on the foliose Bangiales species.

2008 - current Science Director at TARI - Faroe Seaweed

2008 - 2014 PhD student at University of New Hampshire, USA.

2004 - 2006 Participating as biology and diving assistant on Nordic Seaweed Project in South Greenland, University of Copenhagen.

GRANTS AND COLLABORATIONS

RESEARCH GRANTS:

2019-2022	SW-Grow. Coordinated by Lewis Castle College. Building the seaweed Industry in the Northern Periphery and Arctic region. Funded by the EU through the Northern Periphery and Arctic Programme. https://sw-grow.eu/
2019 -2020	Robusthet mot ytre stressfaktorer hos mikrosporofytter fra makroalger under automatisert innfestning på rep og transport. Coordinated by Eukaryo. Funded by Fondsregion Nord-Norge.
2018-2020	ALGET2. Coordinated by Norges Vel. Nordic network of macroalgal producers, researchers and stakeholders. Funded by NORA.
2017-2021	Sureaqua. Coordinated by NORCE. Nordic Centre of Excellence. Funded by NordForsk's Nordic Bioeconomy Programme. http://www.sureaqua.no
2014-2020	Alaria esculenta from spore to dinner plate: effects of seasonal variation, nutrient availability and current/wave exposure on quality and growth. Coordinated by TARI - Faroe Seaweed. Funded by the Faroese Research Council.
2015-2017	ALGET. Coordinated by Norges Vel. Funded by Nora.
2015-2017	CapMafi. Conservation and processing marine macroalgae for feed Ingredients. Coordinated by Eukaryo. Funded by Nordic Innovation and Innovation Norway.

- 2014 Forsøgsdyrkning af tang i Grønland. Coordinated by Greenland Institute of Natural Resources. Funded by Nordregio.
- 2012-2014 Macrobiotech. Macroalgae cultivation rig and ocean biotechnology. Coordinated by Ocean Rainforest. Funded by Nora.

PUBLICATIONS

PEER REVIEWED:

Bak, U.G., **Mols-Mortensen, A.** and Gregersen, Ó. (2018). Production method and cost of commercial-scale offshore cultivation of kelp in the Faroe Islands using multiple partial harvesting. *Algal Research* **33**: 36-47.

Mols-Mortensen, A., Ortind, E. á.G., Jacobsen, C. and Holdt, S.L. (2017). Variation in growth, yield and protein concentrations in *Saccharina latissima* (Laminariales, Phaeophyceae) cultivated with different wave and current exposures in the Faroe Islands. *Journal of Applied Phycology* **29**: 2227-2286.

Mols-Mortensen, A., Neefus, C. D., Pedersen, P. M. and Brodie, J. (2014). Diversity and distribution of foliose Bangiales (Rhodophyta) species in West Greenland: a link between the North Atlantic and the North Pacific. *European Journal of Phycology* **49**: 1–10.

Mols-Mortensen, A., Neefus, C. D., Nielsen, R., Gunnarsson, K., Egilsdóttir, S., Pedersen, P. M. and Brodie, J. (2012). New insights into the biodiversity and generic relationships of foliose Bangiales (Rhodophyta) in Iceland and the Faroe Islands. *European Journal of Phycology* **47** (2): 146-159.

Sutherland, J., Lindstrom, S.C., Nelson, W., Brodie, J., Lynch, M., Hwang, M.S., Choi, H.G., Miyata, M., Kikuchi, N., Oliveira, M., Farr, T., Neefus, C., **Mols-Mortensen, A.**, Milstein, D. and Müller, K. (2011). A new look at an ancient order: generic revision of the Bangiales. *Journal of Phycology* **47**: 1131-1151.

Brodie, J., **Mortensen, A.M.**, Ramirez, M. E., Russel, S. and Rinkel, B. (2008). Making the links: towards a global taxonomy of the red algal genus *Porphyra* (Bangiales, Rhodophyta). *Journal of Applied Phycology* **20**: 939-949.

BOOK PUBLICATIONS:

Nielsen, R. og Lundsteen, S. (2019). Danmarks Havalger 1, Rødalger (Rhodophyta). Bangiophyceae: Agnes Mols-Mortensen.

Pedersen, P. M. (2010). Grønlands Havalger. Purpurhinder: Agnes Mols-Mortensen.

SELECTED REPORTS:

Ortind, E.á.G. (2015). Seasonal variations in growth, yield and amino acid profile of Sugar kelp (*Saccharina latissima*) cultivated in a sound in the Faroe Islands. MSc

thesis, Danish Technological University and Fiskaaling; advisors: Susan Løvstad Holdt, **Agnes Mols-Mortensen**, Charlotte Jacobsen.

Wegeberg, S., **Mols-Mortensen, A.** and Engell-Sørensen, K. (2013). Integreret akvakultur i Grønland og på Færøerne. Undersøgelse af potentialet for dyrkning af tang og mulig grønlandsk fiskeopdræt. Aarhus Universitet, DCE – Nationalt Center for Miljø og Energi, 48 s. – Videnskabelig rapport fra DCE - Nationalt Center for Miljø og Energi nr. 82. <http://dce2.au.dk/pub/SR82.pdf>

COMMUNICATION OF SCIENCE

- Lectures at the university of the Faroe Islands for Bachelors of Science in Biology.