

MA projects offered by K. Præbel (email: kim.praebel@uit.no; phone: 77646107, Office: D305). Please contact me for further information about the projects.

I offer MA projects in genetic and molecular physiological/biological aspects of speciation (adaptive radiation), population structuring, and local adaptation in aquatic animal species. I'm also interested in genetic and molecular physiological aspects of biological invasions and climate change. The projects I offer, in part, require experimental aquarium tests or fieldwork/research cruises in addition to practical laboratory work and it is expected that the student actively participate in such activities. Courses and good skills in statistics and molecular biology are required for all projects. It will also be helpful to have insights in bioinformatics, genetics, biochemistry and the program R.

The projects are divided into two major bulks by type of system.

The genetics and physiological signatures of speciation and local adaptation in northern freshwater fishes

The following MA projects are offered:

- a. **Adaptive traits, natural selection, and random genetic drift in salmonids (2-3 theses)**
- b. **Early life stages of coregonids (2-3 theses)**
- c. **Molecular-environment correlations of the visual system in salmonids (1-2 theses)**
- d. **Evolution of the respiratory system in northern freshwater fishes (3 theses)**
- e. **Effect of standing genetic variation on disease gene complexes in northern freshwater fishes (1 thesis)**
- f. **Genetic patterns and processes of post-glacial colonization in northern freshwater fishes (1-2 theses)**

Molecular and population genetics of sub-arctic and arctic marine fishes and invertebrates

The following MA projects are offered:

- f. **Genetic/molecular consequences of divergent life histories in a highly variable marine fish species (2 theses)**
- g. **Gene flow vs. migrants in highly mobile marine Arctic fish species (1-2 theses)**
- h. **The genetic architecture of segregations of early life stage individuals of Arctic gadids (1-2 theses)**
- i. **Environment-phenotype and environment-genotype correlations in Arctic gadids (2 theses)**
- j. **Proportion of natural hybridization among Arctic gadid species (1 thesis)**
- k. **Mendelian inheritance of phenotypic traits in marine snails (1 thesis)**