PROJECT SUMMARY REPORT - 2016 NUUK CAMPAIGN

Subproject: Drivers and patterns of thermal tolerance of Greenland marine biota

Actual field dates: 25.August - 2. September
Field site: Godthåbsfjordsystem, incl. Kobbefjord and Kapisillit
Number of man-days in the field: 24

Photo 1

Summary:

We collected macroalgae (*Fucus vesiculosus* and *Ascophyllum nodosum*) from two different sites for temperature tolerance experiments in the laboratory. The algae were exposed to a temperature gradient from 5 to 30 degrees and their response will be compared with that of the same species elsewhere along the geographical distribution range of the species to test for latitudinal differences.
Moreover, we completed the following tasks:

- Nuuk Basis monitoring of Ascophyllum growth and demography in Kobbefjord.
- Collection of sediment samples for eDNA analyses in order to explore the contribution of macroalgae to sediment C-sinks
- Collection and deployment of settling plates to study patterns of settling across the Godthåbsfjodsystem (for Sarah Bachmann Ørbergs master project)

Photo 2

Photos:

Photo 1: Sampling tidal algae in inner Kobbefjord
Credit: Scott Bennett
Photo 2: Tidal algae (Fucus vesiculosus and Ascophyllum nodosum) at low tide in inner Kobbefjord
Credit: Scott Bennett
Photo 3: Tidal algae (Fucus vesiculosus and Ascophyllum nodosum) at high tide in inner Kobbefjord
Credit: Scott Bennett

Photo 3

Participants:

AU: AU: Sarah Bachmann Ørberg, Dorte Krause-Jensen
Other : IMEDEA, Spain : Núria Marbà, Scott Bennett

Acknowledgements:

Carlsberg (project # CF15-0639: Field expeditions - Drivers and patterns of thermal tolerance of Greenland marine biota); The Greenland Ecosystem Monitoring Program (GEM); the Arctic Research Center (ARC), Aarhus University.