PROJECT SUMMARY REPORT - 2014 CAMBRIDGE BAY CAMPAIGN

Subproject: Identification and characterization of mycosporine-like amino acids in Arctic sea-ice associated algal communities

Actual field dates: May 31- June 21, 2014
Field site: Cambridge Bay, Nunavut, Canada
Number of man-days in the field: 21

Summary:

I arrived in June to Cambridge Bay where they had already set up the Polar Haven out on the sea ice. We accessed the ice by snow machine everyday and returned to a laboratory in Cambridge Bay or the cabin for the night. Water column samples (0 and 5m) and melted sea ice samples (bottom and top 5 cm) were filtered to collect particulate for pigment and mycosporine-like amino acid analysis. Sea ice cores were collected to determine the bulk salinity and temperature profile of the ice. Light measurements (PAR) were done in order to observe the daily albedo and transmission of light through the ice. It was expected that the snow would be melting and the ice would develop melt ponds during my time in Cambridge Bay but the low temperatures continued later then expected, therefore I was not able to collect melt pond samples as hoped. Ice samples of the bottom 5 cm of ice will provide me with insight into the production of mycosporine-like amino acids in the sea ice algae community in conjunction with pigment concentrations to determine the presence of different taxonomic groups.

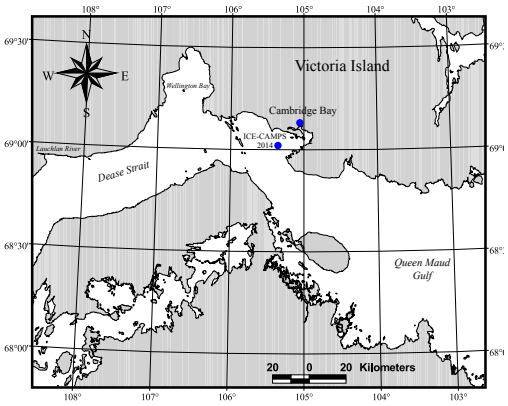

Figure 1

Figure 2

Photos:

Fig.1: Map of field site
Credit: CJ Mundy
Fig. 2: Collecting bottom ice core samples.
Credit: Ashley Elliott
Fig. 3: Polar haven
Credit: Ashley Elliott

Figure 3

Participants:

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