

### Subproject: Assessment of productivity and environmental factors affecting ice algae

Actual field dates: March 1- June 10, 2014

Field site: Cambridge Bay, Nunavut, Canada

Number of man-days in the field: 90

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#### Summary:

We were successful in sampling the sea ice environment of Dease Strait, Nunavut from March –June, 2014. Productivity of the bottom ice algae and bacteria community was quantified, and supporting variables including under-ice light, nutrients, speciation and organic carbon were collected. Although sampling took place over the spring ice algal bloom, snowfall into the late spring delayed the bloom peak beyond our sampling period. Nevertheless, our measurements will provide a comprehensive description of the bottom-ice biological community and their influence on carbon exchange with surrounding mediums. It will also produce estimates of sea ice gross production via new measurement techniques.

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#### Photos:

Fig. 1: Break time in the cold!

Credit: Karley Campbell

Fig. 2: Looking for algae! Karley Campbell (CEOS) and Phillip Carew (Uof Calgary) using an ice auger to go through 2m of sea ice.

Credit: Karley Campbell

Fig. 3: Algae!

Credit: Karley Campbell

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#### Participants:

Karley Campbell (CEOS); CJ Mundy (CEOS); Søren Rysgaard (CEOS)

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Figure 1



Figure 2



Figure 3