

**Subproject: Phytoplankton dynamics under sea-ice in the Canadian Arctic Archipelago – Case study of Cambridge Bay**

Actual field dates: March 1- June 30, 2014

Field site: Cambridge Bay, Nunavut, Canada

Number of man-days in the field: 97

**Summary:**

Biological (phytoplankton and zooplankton taxonomy composition, phytoplankton genes), chemical (nutrients, pigment composition), hydrological (salinity, temperature, depth) and physical (light intensity) measurements were successfully collected from Dease Strait, located just outside of Cambridge Bay. Water samples in support of this work were collected using a Kemmerer bottle and submersible pump deployed through an auger hole covered by a pop-up fishing tent (March) and through the main camp hole located in the heated Polar Haven tent (April-June). We were able to collect a data series throughout the entire field campaign.

Our measurements will help to understand the evolution of phytoplankton dynamics throughout the end of winter into the spring season. The data obtained will help us set a baseline database concerning the regional taxonomy for both phytoplankton and zooplankton groups. Moreover, through the use of genetic analyses, we will be able to determine which phytoplankton cells were physiologically active within the community throughout the sampling period.

**Photos:**

Fig. 1: Set up for our sampling station during March.

Credit: Aurélie Delaforge

Fig. 2: Flying over the ice-camp

Credit: Aurélie Delaforge

Fig. 3: An insight into the phytoplankton and zooplankton biodiversity.

Credit: Aurélie Delaforge

**Participants:**

Aurélie Delaforge (CEOS); Karley Campbell (CEOS); CJ Mundy (CEOS)

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For more information contact Aurelie Delaforge: [delafora@myumanitoba.ca](mailto:delafora@myumanitoba.ca) or [CJ.Mundy@umanitoba.ca](mailto:CJ.Mundy@umanitoba.ca)



Figure 1



Figure 2



Figure 3