Project Title: Paleoenvironments and Thule Social Change on Melville Peninsula, NU
Researcher Name and Affiliation: Dr Sarah Finkelstein (Department of Geography, University of Toronto)
Project Location: Hall Beach and Sarcpa Lake on the Melville Peninsula
Timeframe: June 1, 2008 – July 15, 2008
Project Description:
Purpose The archaeological record indicates that significant cultural changes took place in the eastern Arctic during the past 1000 years. Major climatic changes, notably, the Medieval Warm Period and the Little Ice Age, also took place during this time. This project forms part of a larger IPY project titled "Dynamic Inuit social strategies in changing environments". The purpose of this sub-project is to produce the first reconstructions of climatic change for the past 1000 years on Melville Peninsula and to provide a climatic context for the archaeological work.
Goals and objectives Lake sediments will be used to study the Medieval Warm Period and the Little Ice Age and the impacts of these climatic changes on aquatic and terrestrial ecosystems. IPY project collaborators are studying Thule houses near Hall Beach. Data on timing of site occupation, and on resource procurement, will be compared to the reconstructed climate to understand how climatic change could have impacted the economy of the houses' inhabitants.
Method of transportation A twin-otter will drop off and pick up the field party at Sarcpa Lake using the abandoned airstrip. At Sarcpa Lake, we will move around on foot. For our work around Hall Beach, we will use truck or ATV.
Structures We will make a small camp (4-person) at Sarcpa Lake. The camp will consist of 4 sleeping tents and 1 cook/lab tent. No permanent structures will be erected. For our work at Hall Beach, no structures will be erected; no camps will be used as we will stay in the hamlet.
Restoration/Abandonment We use a minimal impact camping approach. No structures, devices or garbage are ever left on the land.

Methodology: We collect sediment core samples from small or medium-sized lakes (about 10 m deep) using a hollow tube of 5-cm diameter (hand powered). These cores are taken for analysis to the laboratory where we study their physical properties and the microscopic biological remains preserved in them, including algae and pollen grains. When examined under the microscope, these are useful indicators of long-term environmental changes. This region was selected for our research because of its archaeological importance.

Data: The data will enable two graduate students to complete theses and produce paleoclimatic reconstructions for this region. The data will be published in scientific journals and made publicly available via our laboratory website (see below) for unrestricted use.

Reporting: The results of our research will be communicated back to interested communities and individuals through the NRI reporting process, through publications, and through the website of our research lab (http://www.geog.utoronto.ca/info/facweb/finkelstein/data.html). This project is part of a collaboration with the Govt. of Nunavut (Dept. of Culture, Language, Elders and Youth), and the Inuit Heritage Trust. The project has its own website in development, where we will also post field reports, data and summaries.

ᐱᓕᕆᐊᖑᔪᑦ ᑖᐃᔭᐅᓂᖓ: Paleoenvironments ᐊᒻᒪᓗ ᑐᓴᑦ ᐃᓄᖃᑎᒌᖃᑦᑎᓐᖏᓪᒍ ᐊᔾᔨᕐᓂᓕᕐᒥᑦ Melville Peninsula-ᒥ, ᓄᓇᕗᒻᒥ

ᖃᐅᔨᓴᖅᑎᐅᑉ ᐊᑎᖓ ᐱᓕᕆᖃᑎᒋᖃᑦᑕᖅᑕᖓᓗ: ᑐ�́ᓐᖅ ᓴᐃᐊ ᕿᖕᑐᓐᑕᐃ� (ᓄᓇᓕᓐᖓᕆᔭᐅᖅᑐᖅ, ᑐᖅᑐᒦᑎᐅᑦ ᓯᓚᑦᑐᖅᓴᕐᕕᕐᔪᐊᒦᓂ)

ᐱᓕᕆᐊᖑᔪᑦ ᓇᓂᐅᓂᖓ: ᓴᓂᕋᔾᓈᒥ ᕿᖏᕋᒥᓗ Melville Peninsula-ᒥ

ᖃᖕᑲᓴᓅᕋᑦᓂᖓ: ᔫᓂ 1, 2008-ᒥᑦ – ᔪᓚᐃ 15, 2008-ᒍᑦ

ᐱᓕᕆᐊᖑᔪᑦ ᐅᓂᒃᖃᖅᓯᒪᓂᖓ:

ᐱᓐᔪᑎᒃᔭᖅᓇ ᐃᓄᑦᓂᓴᓂᓂᖓᒍᑦ ᑎᑎᕋᖅᑕᐅᕐᓛᓴᐅᖅᑐᑦ ᓄᓇᔭᕐᓅᖅᑎᑎᐊᖅ ᐅᔾᔨᖅᑐᒐᓕᓐᓄ ᐊᔾᔨᖅᑳᓐᕋᐊᓂᖃᖅᓯᒪ�゚ᒃ ᐅᐅᐸᖅᑕᐅᑐ́ᒃ ᐊᑭᖅᖃᕿᕝᑕᓂ ᐊᖐᒌᖅᑐᓂ 1000-ᓂ. ᐊᖕᑎᔾᒐᓕᖕᓅᑦ ᓯᓚᐅᑦ ᐊᔾᔨᖅᖃᕿᕝᑕᓂᓕᕐᓅᕋᓐᖅ, ᐱᓗᐊᖑᔭᖅᑐᓂ ᐅᓗᐊᖅ Medieval Warm Period ᐅᓇᓗ Little Ice Age, ᐊᑐᓕᐅᒻᒫᖅᑐᓂ ᐸᖃ ᖃᖕᒃ゙ᔩᖅᔭᕐᑕᐊᓂ ᐊᑐᖅᑎᓐᒐᒍ. ᐸᖃ ᐱᓕᕆᐊᖑᔭᖅ ᐃᓇᒃᕐᐅᔭᖅ ᐊᖕᑎᓂᖅᓴᒍᑦ IPY-ᒍᑦ ᐱᓕᕆᐊᖑᔭᒍᑦ ᑖᐃᔭᐅᖅᑐᒍᑦ "ᐅᔾᔨᖃᖅᑐᒐᓕᓐᑦ ᐃᓄᐃᑦ ᐃᓅᖃᑎᖃᖃᑦᓂᒍᑦ ᖃᓄᐃᓯᐅᖅᑲᕿᓐᐊᔪᒃᔭᕐᑕᐃ ᐊᕿᓐᕋᔭᐅᔨᓂ". ᐱᓐᔪᑎᔭᖅᓇ ᑕᒍᒪᓕ ᖃᐅᔨᓴᕐᓂᒃᓂᐅᑦᒃᐃᓐᒃᓅᔾ ᓴᖅᐱᒐᓐᑎᑎᒃᔪᒍᑦ ᓯᕕᓐᒃᖃᒃᔨᐅᑎᓐᒃ ᖃᓄᐃᒐᐊᒃᓯᓇᒃᓐᐅᖅᑕᖅᓐᒥᓐᒃ ᓴᖅᐱᒐᓐᑎᑎᓐᖅ ᓯᓚᐅᑦ ᐊᔾᔨᖅᓇᓂᐅᖅᑲᕿᓂᒃᓄᑦ ᐊᖐᒌᖅᑐᓂ 1000-ᓂ Melville Peninsula-ᒥ ᓴᖅᐱᒐᓐᑎᑎᒃᔪᒍᑦᓗ ᓯᓐᒍᑦ ᖃᓄᐃᒐᐊᒃᓯᓂᓐᒃᖃᑎᒃᔭᕐᕕᕐᒥᓄᑦ ᐃᓇᓕᐅᑎᒃᓗᒍ ᑕᒍᒍᒃᓇ ᐃᓄᑦᓂᓴᓂᓂᓐᒃᒐᑦᔭᒍ.

ᑐᕿᓕᒃᔭᐅᔨᕐᑦ ᓐᐱᑕᐅᔨᕐᑦᓗ ᑕᓯᐅᑦ ᐃᖅᖃᐅᓂᖅᑐᑦ ᕿᖕᑲᔭᒃ ᐊᑐᖅᑕᐅᓇᖅᕝᒃ ᖃᐅᔨᓴᖃᑕᐅᓐᐃᒃ Medieval Warm Period-ᒥᒃ ᐃᒃᕐᓇᓗ Little Ice Age ᐊᒃᑐᖅᓇᓂᓂᓕᕐᑕᖓᓗ ᑕᒍᒍᒃᓇ ᓯᓚᐅᑦ ᐊᔾᔨᖅᓇᓂᐅᖃᒃᓇᓗᓄᑦ ᑕᒪᒃᑰᒃᓇ ᐃᒪᒌᒐᖅᑐᐊᒃᓄᑦ ᓄᓇᒌᒃᕐᒃᑐᒐᒃᓗ ᑕᒪᒌᒃᕐᒃᑐᒐᒃᓄᑦ. IPY-ᒍᑦ ᐱᓕᕆᖃᑎᒌᖕᓅᒍᑦ ᐱᓕᕆᖃᑎᒌᒃᖃᒃᑐᑦ ᖃᐅᔨᓴᖅᖅᑐᑦ ᑐᓴᑦ ᐊᖕᑎᖃᓂᖃᒃᑕᑎᓇᕐᒃᓂᓐᒃ ᓴᓂᕋᔾᒥᐅᑦ ᖃᓂᕐᔭᓂ. ᑎᑎᕋᖅᑕᐅᔭᒃᔭᖅ ᖃᖕᑲᒃᔭᓂᓇᔭᐊᓂᒃᑕ ᐃᓯᐅᑦ ᐃᓄᖃᖅᓂᓇᔭᐊᓂᒃᓇᑕ, ᐊᑐᖅᑕᐅᔭᐅᖅᑐᓂᒃᓗ ᐱᔭᖃᖅᖃᓕᕐᓇᔭᐅᖅᓂᓂᓐᒃ, ᖃᐅᔨᓴᖅᑕᐅᔨᕐᑦᒃ ᓯᓚᐅᑦ ᖃᓄᐃᓯᔭᒃᓂᓇᓕᕐᑕᖓᓐᒃᒃ ᑐᐱᕐᐅᓂᓐᑲᒻᒥᒃ ᖃᓄᒃ ᓯᓚᐅᑦ ᐊᔾᔨᖅᓇᓂᐊᓂᖅ ᐊᒃᑐᖅᔭᓂᒃᖃᕐᓂᐅᔨᕐᔭᖕᑲᓐᒃ ᐱᖅᖅᓂᓇᔪᓂᕐᖃᒃᖅᓐᒃᒥᓐᒃ ᑕᒪᓂ ᓄᓇᖅᖅᕐᒐᐅᖅᑐᑦ ᑕᒪᒃᑰᒃᓇ ᐊᖕᑎᓇᖅᖅᓇᑕᒃᒃ.

ᖃᓄᒃ ᑕᐅᕘᖕᒥᔪᓐᒃᖃᓯᓇᐊᒐᒃᓂᓐᒃ ᒪᔭᑕᕿᒃᕐᒃ ᑕᐅᕘᖕᒥᐅᔾᔭᓯᒃᕐᖃᒃᑕᓂᐊᖅᑐᖅ ᐊᐃᕐᓇᖅᕐᓪᓴᓂᓗ ᑕᐅᕝᓂ ᕿᖏᕋᒥ, ᐊᑐᖅᑕᓇᓂ ᑕᐅᕝᓂ ᒻᒐᓐᖅᕐᒥᑕᓂᕐᓐᒃ. ᑕᐅᕝᒃᓐᐃᓯᕝᕐᓂ ᕿᖏᕋᒥ, ᐅᓇᑦᑐᐅᐱᔭᕐᓂᒃᖃᒃᓐᐊᔪᒃᓐᔪᒃ ᐱᓯᖕᓗᒃ. ᓴᓂᕋᔭᐅᑕ ᖃᓂᕐᔭᓂ ᐱᓕᕆᓂᓇᑕᓐᐅᓐᒃ, ᐊᑐᖅᒃᑕᓇᓂᓇᔪᒃᔭᖅᑐᓂᒃ ᓄᓇᔭᐅᑎᓂᓐᒃ ᓐᑲᓕᓇᕐᓂᐅᔭᓐᕐᖓᐅᓐᒃ. ᐅᑉᑏᖃᖅᑕᐅᔭᒃᔪᖅ ᒻᒐᓐᑐᒃᒥᒃ (ᓐᑲᓕᓂ ᐃᓄᖕᓇᓐᑦ ᓀᖕᒃᑕᓐᒐᑦᒥᒃ) ᓐᖕᓚᖅᔭᓇᖅᓚᖅ゚ᖃᖅᑕᓐᒐᖅᑐᒍᑦ ᑕᐅᕝᓂ ᕿᖏᕋᒥ. ᑕᐅᕝᓂ ᓐᖕᓚᖅᔭᓇᓂᑦᑦ ᓐᑲᓕᓂ ᓯᓂᕐᓐᑲᐅᖃᒃᓯᕐᖃᒃᓐᐊᔪᒃᑐᖅᒥᒃ ᐊᑕᐅᔨᕐᔭᐅᓐᓗ ᓂᖅᖅᑐᐅᔾᖕᒥᑦ/ᖃᐅᔨᓴᐅᑎᖅᖅᕐᖃᒃᓐᐊᔪᒃᑐᒥᒃ ᑐᐱᕐᖅᖃᒃᓂᐊᔪᒃᑐᖅ. ᓇᐸᓇᐅᐱᕐᓂᐊᒃᒐᓯᖅᑐᓂᒃ ᓇᖅᖅᓂᕐᔭᖅᖅᓂᕐᖕᒐᒃᑐᒃᓐᒃ. ᓴᓂᕋᔭᐅᑕ ᖃᓂᕐᔭᓇ ᐱᓕᕆᓂᓇᔪᒃᑎᓐᖓᓐᒃ, ᓇᖅᖅᓂᓐᓂᐊᖅᑕᖅᔭᖅᖅᓂᕐᖕᒐᕐᓂᑕᐊᖅᑐᖅ, ᓀᖕᒃᑕᖅᑕᐊᖅᑕᖅᔭᖅᖅᓂᕐᖕᒐᑐᖅ ᑖᐃᓂ ᓄᓇᕐᖅᖕᐅᖅᖕᓇᐊᕿᐊᖕᑕᖅᑎᖕᖅᓂᐅᖅᑕᐊ.