

Report to Nunavut Research Institute 2013

Principal Investigator: Gifford Miller, University of Colorado, Boulder

Project Title: Disappearing Ice Caps

Permit Number:

ANP-2013-14193

NRI Permit 02-036-13N-M

Research Team

Gifford Miller

Sarah Crump

Simon Pendleton

Kurt Refsnider

Chance Anderson

Courtney Cox

Matthew Kennedy

Darren Larsen

Person Nights

None in Auyuittuq National Park; 127 person nights total in the field

Aircraft Hours

18 hr with Long Ranger Helicopter in Auyuittuq Park, 26 hours with Long Ranger Helicopter on Cumberland Peninsula outside Park boundaries.

No fixed wing aircraft activities

Fieldwork Dates: 9-25 August

Fieldwork Location: A separate map and file showing touchdown spots. No more than 1 hour at any location

Field Activities: We located dead, rooted, tundra plants at more than 95% of the sites we stopped at with the helicopter (184 collections). We are now determining how old these plants are. The most exceptional result was that even at the highest elevations ice is now retreating exposing ancient plants. 24 collections were made above 1600 m asl. We collected samples of glacier ice (10 grams of ice) at 17 localities, and collected ~ 1 kg of rock at 43 sites.

Preliminary Results: The first series of 25 plant samples have now been dated. Five of these have been buried for more than 45,000 years.

Community Involvement: Mina Kunilusie, Allen Kooneeliusie, Leslie Nukiwuak (Leelie Enterprises) all provided exceptional support in Qikiqtarjuaq. Numerous others in Qikiqtarjuaq where we have worked since 1969 provided friendship and advice.

Matthew Nauyuk and Billy Etooanga of Auyuittuq National Park in Pangnirtung provided generous and essential assistance for the work in the southern field area. Courtney Cox of the Environment Technology Program at Nunavut Arctic College, joined our team at our base camp NE of Pangnirtung.

Challenges: Finding the time to adequately incorporate Park Training for our team (scheduling in Qikiqtarjuaq) and lack of time that our team spent in Pangnirtung Hamlet (we went immediately to our field camp outside the Park)

2014 Field Plans: We plan a second field season to take place in 4-24 August 2014. We expect to spend about 2-3 weeks with PCSP helicopter support in and around Auyuittuq National Park, based at a campsite outside the Park, then move to Hall Peninsula in late August for 5 days of fieldwork. Exact field targets will depend on the results from the samples collected this year.

2014 Field Personnel:

Gifford Miller (leader)
Sarah Crump (PhD student)
Simon Pendleton (PhD student)
Alexis Ault (PhD student)
Catherine LaFarge (Prof. Univ. Alberta)
Scott Lehman (Prof. Univ Colorado)

Appendices

We provide a list of all collections and a separate map with collection sites located.