

The Northern Climate ExChange Gap Analysis Project

An Assessment of Documented Yukon First Nations Traditional and Local Knowledge and Perspectives on the Impacts of Climate Change within the Yukon Territory and Northern British Columbia

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1 Introduction

Yukon First Nations people have survived in the Subarctic Yukon Territory and Northern British Columbia for millennia. They have built a society and manner of living that has enabled them to survive through an often-harsh climate, vast and varied geological changes, and sometimes uncertain sources of subsistence. The necessity of survival on the land meant that First Nations people had to develop and practice cultural ways which enabled them to travel lightly and to respond quickly to changes in weather, seasons, and the migrations of animals, birds, and fish. The land-based systems of knowledge and the Yukon First Nation world view that developed were products of an intimate relationship with the land. Yukon First Nations people's history is embedded in the oral history, in the land, and in the stories and songs of the elders.

Much of the wisdom and knowledge of the elders has been captured in written ethnographies, life histories, story collections, school texts, and other directed research projects. However, since traditional knowledge is open-ended as are other bodies of scientific knowledge, it is ever-evolving and for the most part is still being held in the minds and memories of the Yukon First Nation elders and storytellers. It is this knowledge that is now being increasingly looked to by scientists from many fields to provide answers to questions of ecology, environmental management, land and natural resource management, and so on.

2 The Project

Background

The Northern Climate ExChange Project of Yukon College, as part of their report on "The Assessment of the State of Knowledge of the Impacts of Climate Change on Canada's North", recognized that it would be very important to include a Yukon First Nation component. A review of existing publications and documents was proposed as a starting point for this part of the project. The First Nations firm of LegendSeekers was contracted to conduct the review, to produce an annotated bibliography, and to enter found information to the main NCE database. The work proceeded during the months of September to November, 2000.

Findings

The research consisted mainly of a review of written publications which were based on Yukon First Nations oral history in formats as detailed above. This included reviews of the Yukon First Nations sections of libraries at LegendSeekers, the Yukon Indian Cultural Education Society, and Yukon College, as well as at the Whitehorse Public Library and Yukon Archives. This fairly broad search revealed that there is little in the way of research based on or driven exclusively by enquiry into the topics of environmental change or climate and weather changes. Much of the information of this nature is incidental to the array of other themes being investigated in the publications.

Written Materials

Written materials go back to early days in the Yukon and reflect much information regarding climate, although most of this is incidental to the main focus of these writings. In other books which contain ethnographic¹ materials such as Cornelius Osgood's, *The Han Indians: A Compilation of Ethnographic and Historical Data on the Alaska-Yukon Boundary Area*, the climate and environment are discussed and provide mean temperature records from Dawson City (pp. 29-30). The lowest temperature recorded in the book was $-73^{\circ}f$ ($-58.3c$) in February, 1947. The Mythology section contains fifteen Han legends, all of which refer to climate in the setting / background.

Another ethnography, Catharine McClellan's *A History of the Yukon Indians: Part of the Land, Part of the Water*, is a narrative description which includes references to climate up to 11,000 years ago. It is based on oral knowledge and artifacts, historical documents, and stories. It also includes scientific interpretations. There are specific references to Spirit Powers, the weather, and traditional methods to forecast the weather.

Many Yukon First Nation legends refer to time periods when the environment was unlike it is today. The great flooding, which so many legends refer to, correlates to glacial melting in the Yukon. The people survived through extreme floods. Many elders allude to a time when the animals were much larger than they are now, like the giant beaver, for example. They also tell stories of animals that have gone extinct since the last ice age.

¹ Ethnography refers to systematic description of a culture based on first hand observation.

In modern times, the elders who participated in the Elders Documentation Project², remark that the temperatures have changed drastically during their lifetimes, they generally agree that temperatures were much colder at the time of their childhood winters. They also note changes in the environment and with the animals.

3 Discussion

It is evident that there is a fairly immediate need to conduct oral history research aimed at traditional knowledge of changing climate and weather systems. Many Yukon First Nations elders residing in the Yukon today are of the generation who reached adulthood in the 1940s when the effects of fossil-fuel burning were first being experienced in the north.

As well, these older elders tend to have detailed knowledge of weather or climate conditions experienced by the preceding generations. They are also more likely to know a greater number of the mythological stories (which frequently make reference to weather conditions) than do a younger generation of elders, and also are able to link these stories to their own present-day experiences. Such stories may clearly portray a "mythological" time but they are often set in climate conditions that coincide with "scientific" understandings of glacial

² The Elders Documentation Project, 1993-1994, was initiated from the Council of Yukon Indians Curriculum Development Department to record cultural information of Yukon elders. There are 56 written transcripts containing material from interviewed elders. Also available is a Guide book which references topics to the transcripts.

melt and other phenomena. Younger elders (aged 55-70) often refer to weather and climate changes they have experienced in their time as well.

4 Conclusions

It is clear that much information on climate and weather change exists in publications and documents, although very little of this information is aimed at the specific topic. Much information still exists in the minds and memories of Yukon First Nations elders and storytellers. As a next step, conducting oral history research aimed exclusively at climatic and environmental change is likely to produce rich results.

Annotated Bibliography

*Documented Yukon First Nations
Traditional and Local Knowledge and
Perspectives on the Impacts of Climate
Change within The Yukon Territory and
Northern British Columbia*

Asp, Vera; Dennis, Angela; Bob, Dempsey.
Listen - Tahltan People Are Talking.
Telegraph Creek, B.C., Association of
United Tahltans. 1977. A collection of
Tahltan legends, including The Flood.
Available at Yukon Indian Cultural
Education Society.

Charlie, Dawn and Clark, D.W. Lutthi Man
& Tachan Man Hudehudan - Frenchman
and Tatchun Lakes: Long Ago People.
Little Salmon and Carmacks First Nation.
Provides a thumbnail sketch of the
archaeology of Frenchman and Tatchun
Lakes, including the glaciation,
microblades, White River Ash Fall, all
important climate events. Provides a
concise description of traditional life,
reflective of climate. Three stories: Big
Animal, The Bear That Walked Around
In Winter, and Seeing The First White
Man, round out this valuable booklet.

Council of Yukon First Nations. History of
Yukon Land Claims, Part 1: Strangers In
Our Own Land. Whitehorse, Yukon,
Northern Native Broadcasting Yukon,
1998. VHS 55:50 minutes. Part 1 of 4,
History of Yukon Land Claims. A
background of political, economic and
social conditions at the time that the
Yukon Indian Land Claim was accepted
by the Government of Canada for
negotiation. Includes photos, archival
video of people on the land from 1900 to
1990, and Angela Sidney's oration of

Dakl'aweidi History (migration from
Telegraph Creek to Wrangell to Tagish).

Council for Yukon Indians. Our Land, Our
Culture, Our Future. Clearly links human
activity to the seasons, therefore changes
in human activity may indicate a change
in climate.

Cruikshank, Julie. Athapaskan Women:
Lives and Legends. Ottawa, Canada,
National Museums of Canada. 1979.
Individual booklets of personal and
family history and legends for seven
Athapaskan Indian women living in the
Yukon Territory. Legends contain
references to the great flood, glaciers,
long winters or long cold periods, slides.

Cruikshank, Julie. Dan Dha Ts'edeninth'e,
Reading Voices: Oral and Written
Interpretations of the Yukon's Past.
Vancouver, B.C., Douglas & McIntyre
Ltd. 1991. Investigates the nature and
meaning of history in a world where
Native and European points of view
routinely intersect and collide. Contains
narrative descriptions, written oral
knowledge and transcribed stories, maps
and photographs.

Cruikshank, Julie. Early Yukon Cultures,
Revised Edition. Whitehorse, Yukon,
Government of Yukon. 1982. The
discussion on climate is brief, written for
elementary school children. Photos show
landscape and people. References are
available at Yukon Archives.

Cruikshank, Julie. Life Lived Like A Story:
Life Stories of Three Yukon Native
Elders. Vancouver, BC., University of
British Columbia Press. 1990. Angela

Sidney, Kitty Smith, and Annie Ned are three women of Athapaskan and Tlingit descent born in the southern Yukon around the turn of the century. The book is a written transcript of their life stories. Life stories refer to climate in setting including glaciers, a time when there was no summer, the slide at Moosehide, the big flood.

Cruikshank, Julie. *The Social Life of Stories: Narrative and Knowledge in the Yukon Territory*. Vancouver, B.C., UBC Press, 1998. Explores how Native peoples use stories and find them still meaningful in the 20th century, why storytelling continues to thrive and how stories are valuable to anthropologists. Includes descriptions of geology and landscape features, the place names of Tagish Lake, stories that refer to glaciers, the story of Kaax'achgook (traditional methods of determining dates of solstices), of caribou around Aishihik Lake. The list of references is extensive and valuable as a resource list.

Cruikshank, Julie. *The Stolen Women: Female Journeys in Tagish and Tutchone*. Ottawa, Canada, National Museums of Canada. 1983. Oral narratives told by Athapaskan women living in the southern Yukon Territory. There are many references to climate and since the stories are old, reflect climate change. For example: *How Animals Broke Through The Sky* by Mrs. Angela Sidney.

Cruikshank, Julie. *Their Own Yukon*. Whitehorse, Yukon, Yukon Indian Cultural Education Society, and Yukon Native Brotherhood. 1975. A collection of about 250 photographs accompanying written history of southern Yukon. The description of physical condition includes

maps, waterways, communities, and climate.

Dawson, George. M.D.S., F.G.S. *Report on an Exploration in the Yukon District, N.W.T. and Adjacent Northern Portion of British Columbia 1887*. Whitehorse, Yukon. George Dawson writes about his travels through the Yukon and Northern B.C. The report is of a geographical nature but also contains climatic information from 1887.

Easterson, Mary, M.Ed. *Potlatch: The Southern Tutchone Way, A Text On Southern Tutchone Potlatch Systems*. Burwash Landing, Yukon, Kluane First Nation, 1992. Historical and contemporary information about potlatches: significance, meaning, practices and ceremonies. Section 1 contains an entry referring to how weather and other omens are significant to potlatch. Section IV has a story, *Grandpa's Potlatch*, that mentions weather and climate.

Gordon-Cooper, H. *Yukoners: True Tales of the Yukon*. Surrey, B.C., Hancock House Publishers Ltd. 1990. Collection of eight short stories set in Yukon Territory around or about the 1950s, many of which contain lively and attentive descriptions of climate.

Gotthardt, Ruth. *Ta'an Kwach'an: People of the Lake*. Whitehorse, Yukon, Ta'an Kwach'an Council, 2000. A small part of the history, the traditional way of life, and use of resources of the Ta'an Kwach'an, centred around Lake Laberge, lower Takhini River and Fox Lake areas. Links archaeological recoveries and geographical history (including glaciation) to the seasonal and nomadic lifestyle of Ta'an Kwach'an.

Gudon, Marie-Francoise. *People of Tetlin, Why Are You Singing?* Ottawa, ON, National Museums of Canada. 1974. Study of the social life of the Upper Tanana Indians. Includes common knowledge that "some lakes are known to be smaller than they were before" (page 27). A section called *The Seasons and Annual Cycle* includes temperature tables from the 1960s.

Legros, Dominique. *Tommy McGinty's Northern Tutchone Story of Crow: A First Nation Elder Recounts the Creation of the World*. Ottawa, ON, Canadian Museum of Civilization. 1999. The written Northern Tutchone story of Crow. The legend / story includes the first and second Big Floods, times with no sun, times with no water and fish.

McDonnell, Valerie. *Remembering Mac Bob: The Life of a Kaska Woman of the Southeast Yukon*. Calgary, AB, Rovere Consultants International Inc. 1997. Stories from people who knew or knew of Mac Bob; includes a description of the landscape and climate (about 1910) of Pelly Banks, Frances Lake, Finlayson Lake, and Wolverine Lake.

McClellan, Catharine. *A History of the Yukon Indians: Part of the Land, Part of the Water*. Vancouver, B.C., Douglas & McIntyre Ltd. 1987. Narrative description includes references to climate up to 11,000 years ago. Based on oral knowledge and artifacts, historical documents, stories. Includes scientific interpretations. Specific reference to Spirit Powers and the weather, traditional methods to forecast the weather. Links oral history of climate change to found artifacts. Acknowledgements include

names of contributors, their community and a list of published sources.

McClellan, Catharine. *My Old People Say: An Ethnographic Survey of Southern Yukon Territory, Part 1*. Ottawa, Canada, National Museums of Canada. 1975. An ethnographic description of three groups of Indians living in southern Yukon Territory: Southern Tutchone, Tagish, and Inland Tlingit. Chapter 2 provides skeletons of legends about climate including the great flood, celestial beings, weather prediction. Photos / plates show people, houses, set in the environment, indicating snowfall levels and the natural world during the 1950s.

Miller, Anne-Marie, and Jackson, Moose. *Southern Yukon Beadwork Research*. MacBride Museum, Whitehorse, Yukon, February 12, 1993. Reference is made to a hunting event during which a three-foot deep hole had to be chopped through winter ice so that fishing nets could be set.

Morrison, R. Bruce and Wilson, C. Roderick, Editors. *Native Peoples: The Canadian Experience*, Second Edition. Don Mills, Ontario, Oxford University Press. 1995. Written for the general reader, contains information about Beringia migration. Chapter 12, written by Julie Cruikshank, provides information specific to Yukon Territory. This chapter compares oral and written records, provides ethnographic information in a way that laces the effects of climate to land use, material culture, social life. The Recommended Reading list is valuable.

Morrow, Phyllis, and Schneider, William, Editors. *When Our Words Return: Writing, Hearing, and Remembering Oral*

- Traditions of Alaska and the Yukon. Utah State University Press. 1995. A collection of essays about the importance and use of oral traditions in the Yukon Territory and Alaska. Includes Angela Sidney's 1974 telling of Kaax'achgook, which contains a section that informs traditional methods to determine solstice dates.
- Neatby, L.H., Translator. *Frozen Ships: The Arctic Diary of Johann Miertsching, 1850-1854*. Toronto, Macmillan Company of Canada Limited. 1967. Translated journal of Johann August Miertsching, an interpreter on the Investigator, the British expedition to search for Sir John Franklin by way of Bering Strait. Climate is described and temperature is recorded in Fahrenheit degrees, latitude and longitude is given.
- Norman, Howard, Editor. *Northern Tales: Traditional Stories of Eskimo and Indian Peoples*. New York, Pantheon Books, 1990. A collection of stories of the native people of the arctic and subarctic. All stories refer to climate and landscape in the setting / background. Some stories are Athapaskan, Tagish, Gwich'in, Tlingit. Sources and bibliography are valuable references.
- Osgood, Cornelius. *The Han Indians: A Compilation of Ethnographic and Historical Data on the Alaska-Yukon Boundary Area*. New Haven, Yale University. 1971. Introduction has a section, *A Comment on the Country*, that discusses climate briefly, provides mean temperature records from Dawson City (pp. 29-30). The *Mythology* section contains fifteen Han legends, all of which refer to climate in the setting / background.
- Schmitter, Ferdinand. *Upper Yukon Native Customs and Folk-Lore*. State of Alaska, Alaska Historical Commission. The folklore section includes legends of the great flood, geological cataclysm, famine, and a time when there was no sun.
- Shape, William. *Faith of Fools: A Journal of the Klondike Gold Rush*. Pullman, Washington; Washington State University Press, 1998. A travel diary, including photographs, of William Shape, on his journey to the Klondike gold fields in 1897-98. Includes daily rich narrative descriptions of the weather and the landscape.
- Sherry, Erin, and Vuntut Gwitchin First Nation. *The Land Still Speaks: Gwitchin Words About Life In Dempster Country*. Old Crow, Yukon, Vuntut Gwitchin First Nation. 1999. Specifically names and locates Beringian Plants and refers to Wisconsin glaciation. Contains a chapter dedicated to reconciling differences between traditional and scientific knowledge systems.
- Sidney, Mrs. Angela. *Place Names of the Tagish Region, Southern Yukon*. Whitehorse, Yukon, Council for Yukon Indians. 1980. A booklet to accompany the map *Place Names of the Tagish Region, Southern Yukon*. Several sites are named because of the climate. For example, Tadedeze is named because of the winds of the summit of the pass between Jake's Corner and the Teslin River.
- Smith, Kitty Mrs. *Nindal Kwadundur: "I'm Going To Tell You A Story"*. Whitehorse, Yukon, The Council for Yukon Indians and The Government of Yukon. 1982. The second series of stories narrated by Mrs. Kitty Smith for

publication. All the stories contain reference to climate and landscape in the story setting. Some stories are about glaciers, and some stories use glaciers as the carrying theme.

Wilkie, Rab. Skookum Jim: Native and Non-Native Stories and Views About His Life and Times and the Klondike Gold Rush. Whitehorse, Yukon, Skookum Jim Friendship Centre and Government of Yukon. 1992. Legend of Dakl'aweidi history specifically refers to the migration into Tagish, when the people had to pass under the glacier at Wrangell. The book contains an experiential description of the waterways from Lake Bennett to Marsh Lake, when it was a main travel route.

Yukon College. The Role of Storytelling in Yukon Native Culture. Whitehorse, Yukon. Louise Profeit-Leblanc presents a lecture about the role that storytelling has in Yukon Native culture. She informs that Ethel Lake is a glacial lake, that during her grandmother's childhood, white people were most commonly explorers. Following storytelling, discussion reveals that the languages of Yukon First Nations and the southern United States are the same. Video, 60 minutes.

Yukon First Nations Elders' Council.

Ditth'e'k Ts'a' Tr'etadal: Walking Together--Words of the Elders from the Elders' Council Assembly. Whitehorse, Yukon, October 26-28, 1993.

Expressions of the need for people to change because the environment is changing. For example: water quality at Lake Laberge, mining risks, water quality of Yukon River, the airborne transfer through rainfall and other airborne activity (acid rain, ozone depletion).
