'We ate lots of fish back then': the forgotten importance of fishing in Gwich'in country

Robert P. Wishart

Department of Anthropology, University of Aberdeen, King's College, AB24 3QY (r.p.wishart@abdn.ac.uk)

Received August 2013; first published online 11 November 2013

ABSTRACT. This article attempts to reconcile the fact that fishing has been and continues to be a large part of the Gwich'in local economy with the fact that fishing has been neglected in both popular and scientific accounts of Gwich'in practice. The article puts forth an explanation for why fishing has been neglected while at the same time documenting the corpus of fishing activities included in the yearly round. It also situates fishing as an important, but largely underestimated, part of the Canadian fur trade and explains how fish came to be used by traders and Gwich'in in a system of advances that benefited both parties. As a so-called secondary activity, fishing is entangled in Gwich'in history and their current way of life, and this article challenges the idea that it can be easily separated from other land based activities.

Introduction

Victor Joseph: You gotta look mean or people won't respect you. White people will run all over you if you don't look mean. You gotta look like a warrior! You gotta look like you just came back from killing a buffalo!

Thomas Builds-the-Fire: But our tribe never hunted buffalo - we were fishermen.

Victor Joseph: What! You want to look like you just came back from catching a fish? This ain't 'Dances with salmon' you know!

In the preceding quote from the film *Smoke signals* (1998) the native American film makers and artists Chris Eyre and Sherman Alexie are using their two protagonists from the film to play upon a set of stereotypes. In this case it is a conversation which blends personality and economics into an argument of why Thomas Builds-The-Fire should not smile but instead look cold faced when outside his home community. In this clever juxtaposition of stereotypes of the native American as the stoic hunter, the film makers make the point that to deviate from the economic stereotype is as problematic for the Euro-American public as is to deviate from stereotypical personality.

While not as stark, a similar stereotypical preoccupation with hunting exists in the Mackenzie River delta of Canada's Northwest Territories, despite the fact that fishing and spending time at fish camps constitutes an important aspect of Teetl'it Gwich'in (meaning people of the headwayers) life. During my fieldwork with the Teetl'it Gwich'in, many elders highlighted the importance of fish and fishing for the Gwich'in, noting how it was a part of who they were. Fish also represented an important element in their stories about the supply and provision chains during the fur trade and other important economic developments in Gwich'in history. Despite this importance, fishing has received comparatively little attention as a sub-Arctic subsistence activity in general (Berkes 1990: 35) and as part of the complex of Mackenzie Valley Gwich'in human-animal relationships in particular (Gwich'in Renewable Resource Board 2007: 4). The reasons for this lack of attention are multiple and entangled, as noted by *Smoke signals*, with a wider general understanding of first nations as being primarily hunters. This article is thus an attempt at correction as much as it is a starting point for an investigation into why the Gwich'in continue to place a high value on fishing as a traditional activity.

In order to accomplish this goal, the article will present how fish and fishing are situated by the Teetl'it Gwich'in and their close neighbours while contrasting this with the lack of attention that fishing has historically received in academic and governmental documentations. It will then present the fishing activities as I found them while including the history of fishing as part of the fur trade that I was told about while in the field and subsequently uncovered in the literature. Bringing fishing back into the conversation of the Gwich'in participation in the fur trade will assist in understanding economic activities and motivations amongst both the traders and the Gwich'in and begin a conversation on why the social sciences should pay more attention to those 'secondary' subsistence practices which have been forgotten but continue in their local importance.

It begins with fish

The Gwich'in of the Northwest Territories are members of the Dene Nation which is a nation composed of Athabaskan speaking communities who share a traditional livelihood that depended upon hunting, fishing, gathering and trapping. From the summer of 1998 to the autumn of 2001, I spent four summers living in Gwich'in fish camps which were occupied at various times by all age groups; but my primary informants were elders and their younger adult kin. The reason for choosing fish camps was one of local suggestion: that a researcher interested in Teetl'it Gwich'in life on the land should start by spending time learning about how things work in a fish camp.

While staying in one of these camps, an elder told me the following brief story about living on the land:

One summer, not too long ago, there was a guy staying with me out on Mackenzie, he was looking around at something, I don't know. We started to run out of grub and he started worrying, you know, I guess he thinks he won't eat again [laughter]. So I go down with a small net and set it right by the creek. Then I watch, pretty soon swoosh, swoosh that net starts to move so I go and check. Big coney. So I take it back and say, 'look coney here.' I cut the fish and hang to smoke for a bit. Then I go back to check net again, before I get there I hear big splash in the creek, oh boy, beaver in there. I aim, 30-30, and toohh I shoot beaver. I go back 'look beaver here.' Then I go back to check net again and I hear who-who, ahhh dazraii [tundra swan] coming. No shotgun so I aim carefully with 30-30 as it goes away from me — toohh and I knock it down. I go back and say 'look swan here.' Now, we have lots to eat and haven't really checked the net.

In this story the first move to secure food is a move to get fish. I heard many such formulations of this sense of what to do if food was in short supply. In everyday practice, an important part of travel gear within the delta during the months when fishing is possible is a length of fish net or other seasonally appropriate fishing gear. In fact, one of the first things a Gwich'in elder told me upon arrival in the field was that 'in my country you don't starve, lots of fish to eat; caribou, moose, rabbits too.' The importance of fish and fishing in discussions of Gwich'in life on the land can be found in some of the early anthropological writings on the Gwich'in. For example, Cornelius Osgood (1970, originally 1936) organises his ethnographic survey of the Gwich'in in a similar manner. He begins his discussion of each regional group by describing their fishing techniques and the species on which they rely. In explaining his choice of starting his survey with fishing he notes that each 'tribe' that constitutes the Gwich'in nation corresponds to a geographically derived autonym, with waterways playing a key role:

...it should be noticed that each tribe is attached to a section of country for which some river is the principal artery. Whatever else may be said of these people, their attachment to a stream proves these waterways to be at least the symbol of facile movement and as an assured source of food (Osgood 1970: 13).

The Teetl'it Gwich'in translate their autonym into English as 'The people of the headwaters' and also present fishing as a crucial activity in their community publications, for example noting that fish are regularly caught and eaten at almost every time of the year, and that this is accomplished by using various seasonal technologies and the knowledge of the sorts of places in the rivers and the lakes where different species can be caught and where these dependable aquatic features can be found while out on the land (Benyk 1987: 44–47).

Despite the clue in some of the autonyms for the various Gwich'in local groups, most commentators found relatively little to say about the use of fish and technologies of fishing amongst the Gwich'in. For example, Mason (1924: 42-44) notes that the 'natural food of the Indian is flesh' and goes to some lengths to inform the reader on the various ways that the Gwich'in prepare the meat of mammals; yet he simply notes as an afterthought that the 'Indians eat a lot of fresh fish, generally boiled, sometimes roasted over the fire.' In her environmental history of fishing in the sub-Arctic, Piper (2009: 167) notes that 'European observers did not value fishing as highly as hunting and were not as concerned to record the indigenous practices'. In my own work, I have also neglected to discuss the importance of fish despite the fact that I spent so much of my time in fish camps, and an overview of my notes which list which bush foods I ate on a daily basis includes more mentions of fish than any other type of animal. My own reasons for neglecting the importance of fish relate to a wider concentrated effort to understand sub-Arctic indigenous human-animal relations with an emphasis on the relations with large mammals, aquatic rodents and migratory waterfowl. Hunting and trapping simply trumped fishing. For example, in one entry I note: 'we are going downriver tomorrow to hunt for moose and black ducks, had roast whitefish and blueberries for supper.' I did collect a great deal of information on how to catch and prepare fish and what life was like at the fish camps, but became focused on Gwich'in ethologies of caribou, moose and muskox. It was not the case that fish were less deserving of respect in Gwich'in understandings and practices. It was stressed to me that fish must be respected, that they should not be mistreated, discussed in a negative way, or wasted at least as often as it was about the other animals on which the Gwich'in rely.

I was also told many times about the importance of fish in the past. For example, two elders on two different occasions told me: 'We ate lots of fish back then, it was like our store' and 'Growing up we were real fish eaters, it was what we had. Fish was like going to the bank'. These quotes were part of conversations on what had changed over these elders' lives. They both explained that in the past there had been long stretches when the people would eat fish every day because other sources of food were scarce. Part of the conversation concerned the idea that fish could be relied upon in ways that other animals could not. In the same spirit, Chief Kodakin of Fort Franklin told the Mackenzie Valley Pipeline Inquiry that 'the whole lake is like a deep freeze for Fort Franklin. Our ancestors have used it as a deep freeze and we will use it as a deep freeze for the future children' (Berger 1977: 103).

This aspect of dependability arises in many of the stories that people tell of their lives on the land; it also figured in reverse when stories were told with a degree of incredulity of outsiders perishing despite being surrounded by good fish lakes. In one particular story an

elder reflected at the end on the desperate condition of a group of starving travellers and how they had searched through a temporarily empty cabin at a fish camp and its above-ground cache, found both devoid of food, and then moved on without ever checking for a subterranean fish-pit, the method of fish storage common in Gwich'in country. He concluded with a pertinent question: 'there were hundreds of fish right there, they were standing right on it, how is it they never looked?'.

To him it would be an obvious first place to look, but to travellers in that country with no knowledge of the importance of stored fish to the Gwich'in, they looked in the meat cache and then left in what must have been total despair. However, the question remains, why they were so ignorant of the way of life in an area where such knowledge would be life-saving. This type of question has a myriad of possible answers but what I would like to focus upon here is the intersection between governmental knowledge of the area and that of anthropological attention.

Part of the problem of an overemphasis on terrestrial sources of food was driven by government attention to these matters. It was considered strategic by the Canadian government in the late 19th and early 20th centuries to increase the production of meat and wool through domestication of caribou and muskox (Wishart 2004). Fish were understood in these models to be possible replacements for meat for the indigenous consumer in the north, but not as valuable, transportable assets in their own right. As late as 1969, the Canadian government was still producing surveys on the local economy of various Mackenzie Valley Dene communities that focused solely on the production of meat from bush resources such as caribou and moose. For example, Asch (1988: 22-23) notes that in the Department of Indian Affairs and Northern Development statistics for the Deh Cho, they make a calculation based on a sampling of the number of moose and caribou killed by community members in 1968-1969 to calculate the total amount of bush food circulating in the economy. Based upon his observation that fish and rabbits actually made up the primary sources of meat in the Deh Cho diet, Asch argues that the figures produced by the government calculations must be at least doubled.

In recent years, there has been more governmental interest in fishing amongst the Gwich'in and this is primarily due to the signing of the Gwich'in Comprehensive Land Claim Agreement from 1992. This agreement meant that the Gwich'in gained representation on land, water and wildlife co-management boards within the Gwich'in settlement area so that their concerns can be taken seriously. An outcome of this Gwich'in voice has been the publication of community concerns and various fishery studies (for example Greenland and Walker-Larsen 2001; Simon 1998; Winbourne 2004), as well as the fact that fish were well represented in the Gwich'in harvest study final report (McDonald 2009) and the in the results of a traditional ecological knowledge

study (Gwich'in Renewable Resource Board 1997). The community concerns and observations about changes in fish abundance and behaviour are also helping to instigate new studies of fish biology and the impacts of industry and climate change; however, it is the case that in the Canadian north: 'general knowledge of the biology of aquatic biota is low, particularly with respect to understanding potential connections with climate drivers and ecosystem structural and functional responses' (Prowse and others 2009: 283). Even when governments are focused on fishing at local levels, Berkes and others (2001:10) point to the fact that subsistence and other small-scale fisheries are largely ignored by the higher governmental agencies who are busy setting policies for large scale, mostly oceanic, fisheries of just a few commercially important species, despite the fact that the smaller fisheries are far more diverse and are the way of life for many more people worldwide than the large scale

Anthropology certainly took some of this governmental attention as a cue for its own focus, but it has also been myopic in regards to mammalian bush resources, first through the determinist relationship between hunting and social structure among the interior sub-Arctic Athabaskans found within the models of cultural ecology and the debates which were to follow, and second, in a connected way, through the attention on the trapping of fur bearers in analysing the social effects of the fur trade. In more general terms, Pálsson (1988) has argued that fishing in coastal areas represents a problem for equations between the environment and social structure in hunter-gatherer studies because it allows for different avenues of intensification that align more closely with social causality rather than ecological determinism.

It should be noted that there is considerable attention in governmental literature and that of anthropology on the capture and social importance of salmon, but the fish the Teetl'it Gwich'in catch have not spurred much discussion until quite recently. The reasons for this are many, and most are beyond the scope of this paper, but there is a disposition to treat salmon as being worthy of mention. The clearest case of this attention can be found on the northwest coast where the development of complex hunter-gatherer societies is attributed to the abundance of salmon (Suttles 1990). However, similarly to the lack of attention on the Gwich'in fisheries, the case of northwest coast salmon fishing is also coloured by this ecologically determinist relationship which similarly has lead to misinterpretation of many aspects of social life (Pálsson 1988; Thornton 2001; Losey 2010).

This combination of over-attentions within materialist perspectives lead to many misrepresentations of life in the Mackenzie Valley (Helm 1965, 1968, 1969; Wishart and Asch 2009) which in the case of the Gwich'in was in part anticipated by Richard Slobodin (1962: 83–85). Anthropological categorisation of primary and secondary

subsistence types (for example Driver and Massey 1957: 177) has no doubt had its effect in creating academic separations between hunting and fishing as distinct entities. However, the Gwich'in and other Mackenzie Dene who are categorised as fishers only in a secondary sense would seem to be at variance with this sort of division.

While it is tempting to explain the shift in scope away from fish in the anthropology of the Mackenzie Valley using divisions between genders and thus aligning it with arguments about how women's subsistence activities and labour were ignored in other hunter-gatherer studies (Linton 1971) and how the status associated with these activities was understood from a western, male bias (Sachs 1976; Leacock 1978), fishing among the Gwich'in is as much a male activity as it is a female activity. The problems associated with applying a gender association to fishing have also been noted by Shannon (2006) in relation to the Inuit of Coral Harbour. In fact, fishing like hunting (Bodenhorn 1990) requires a remarkable interdependence of activities and labour between men and women to be successful. For example, when questioned at the Mackenzie Valley Pipeline Inquiry about life during the fur trade era, Liza Blondin (speaking through an interpreter with original ellipses) from Fort Franklin notes:

[She] and her husband used to travel by boat with paddles... When they get to the area where they want to go trapping, her husband gets their fishing net in the lake... and then he goes hunting (Berger 1977: 102).

In this quote we can see a similar pattern to that of the Gwich'in elder at the beginning of this paper who described getting food from the land as beginning with the move to secure fish. Blondin continues her account by noting that only once the fishery is productive and her husband has returned with meat from hunting could he go trapping. In the process of hunting or trapping, a husband may be away from camp for days at a time and severe weather can extend this considerably. The anxiety of knowing that you have a family waiting for you to return is lessened by the fact that a hunter knows that there is a supply of food for them to eat; and this is also true in the reverse as. Both men and women would tell me how they were grateful for fish because they did not have to worry about the family starving while the men were on the trap line or were away hunting. In this sense, fishing is an integral part of Gwich'in trapping and hunting practices, but has often lacked attention in previous accounts of these terrestrial activities which tended to examine the types of securing bush resources in a compartmentalised manner dedicated to the specific activity of hunting or trapping or fishing etc.

The eclipse is perhaps furthered by the very fact that the Gwich'in regard fishing as integral to the other activities. For when Gwich'in speak of being 'on the land' or of 'the bush' they do not specify that much of their time during certain times of the year may be spent 'on the water' or 'the river.' Similarly when told that we were going hunting up or down the Peel River, I

did not pay much attention to the fact that we brought a net and that setting it was the first thing we did upon arrival at the camp. 'Land' and 'bush' may be figurative tropes that the Gwich'in live by (Lakoff and Johnson 1980), but as such they are presenting relationships of meaning between things (Sapir 1977: 4) that might not be obvious to those outside the speech community, or, in the broader case of Dene-state negotiations, it may be that those with the power to ignore the meaning of local idioms simply choose to do so (Asch 1989: 216). While being on 'the land' may encompass many activities that occur in riverine or lake environments, the Gwich'in know that these activities are part of a whole corpus of possibilities that 'the bush' affords; moreover, they speak about it in this way and it behoves us to know that they assume an understanding that fishing is integral to what they mean by 'the land.'

Building on the local insistence that it is difficult to separate out activities from each other, there has been a shift within the anthropology of North American Arctic indigenous communities to situate 'subsistence' activities within the complex economic realities of contemporary life. Common to these studies (for example Fienup-Riordan 2000; Stern 2000; Wenzel 2000) is an argument that classically defined hunting and gathering activities are complementary to and sustained by today's wage and cash economies in a similar way to which they are part of each other. Using this understanding, working for a wage or receiving a guaranteed cash income is important in a mixed economy for the continuation of hunting or fishing practices (Feit 1991; Scott 1979; 1984; Scott and Feit 1992). This arrangement is also true for Gwich'in who may rely on the cash generated from their own or another community member's wage employment in order to provide the equipment or supplies that are necessary to hunt and fish today (Nuttal and others 2005: 682; Toshiaki 2004: 189).

At the same time that many Gwich'in argue that their fishing practices are robust, there are concerns that children need more opportunities to learn about traditional economic practices. While it would be erroneous to say that youth are not taking up fishing as a rule, there was a recognisable age disparity with the majority of fishers being middle-aged and elders amongst those who were fishing while I was doing my research. Whether this trend is continuing is a matter of investigation and is being currently researched in the Gwich'in communities. What is important to note is that the Gwich'in, like many first nations, are actively working on the problem of providing more opportunities for their youth to learn about life on the land. Given the place of fishing as a good point of entry for outside researchers to learn, it is not surprising that many of these opportunities are being organised around learning more about life in fish camps today and also the oral history of what fish camps were like in the

The following section, therefore, documents the fish that are caught, the seasonal round of fishing as I found it during my fieldwork, the historical differences and continuities in practice that were noted by the Gwich'in, and a noted difference in the numbers of fish caught and processed into stored fish. This brief introduction into the actual fishing practices is at one level documentary, but it is also necessary for understanding the historical situations that inform current concerns with recognising fishing as being vital to Gwich'in life.

Fishing among the Teetl'it Gwich'in

The Teetl'it Gwich'in catch several types of fish, and I will list them here starting with their Gwich'in name, then the common local English name with notes about variance, and then the scientific name. The fish include łuk zheii (whitefish or broad whitefish, Coregonus nasus); shruh (coney which is the diminutive of 'inconnu,' the term French explorers gave to this unknown fish, Stenodus leucicthys); dalts'an (crooked back referred to as lake whitefish in other areas of Canada but 'lake whitefish' in Gwich'in country refers to the highly valued łuk zheii that live in the lakes, Coregonus clupeaformis); dhik'ii (trout or dolly varden char in other areas, Salvelinus malma); chehluk (loche or ling cod or burbot in other areas, Lota lota); treeluk (herring which refers to two species of fish, Arctic cisco and least cisco, Coregonus autumnailis, Coregonus sardinella); and eltin (jackfish or northern pike, Esox lucius). Other fish are occasionally caught including grayling and suckers. Occasionally walleye and pacific chum salmon are caught in the summer fishing nets, and the frequency of these catches has been increasing in recent years.

A brief summary of the Teetl'it Gwich'in seasonal round of fishing beginning in the spring, as I found it in the early twenty-first century and supplemented with Gwich'in oral history, is as follows. In May and June the Gwich'in are primarily focused on the hunting of migratory waterfowl (geese, ducks and swans) and aquatic rodents like muskrat and beaver. The sudden appearance of these animals brings to a close what can be the most difficult season for getting fresh food, that of late winter and early spring. Fresh meat is suddenly abundant and it is eaten with great relish. Yet, even in the midst of this abundance, people start to look forward to another abundance, that of fish. At times, small nets are set in the mouths of streams when they are free from ice, even before the main river ice has broken up. These efforts are largely experimental but they do result in the capture of a couple of fish that are welcomed as variety in diet and as an indication of richer catches to come. When I questioned whether this activity was bound to catch anything of significance, I was told by a middle-aged Gwich'in hunter, 'well we might get a couple of jackfish and maybe a skinny loche but I have had a greasy chin [a Gwich'in euphemism for eating geese and ducks]too long now and I'm just hungry for fish.'

After the river ice breakup the Teetl'it Gwich'in will begin to set up their summer fishing camps. These camps

are located close to large eddies in the Peel River. Being able to read eddies is important for the successful setting of nets. There are a few well established eddies where several Gwich'in families have set up fish camps over the years and these have become small villages. Other eddies, however, disappear or become unproductive over time due to changes in the flow of the river itself, and people will move to new places. The fish caught in summer primarily consist of whitefish, coney and crooked back. Fishing continues through the short summer with catch sizes from just a few fish a day to times when the species are migrating through the eddies. At these times, the nets will have to be checked several times a day and may even be shortened, twisted to decrease their efficiency, or pulled out entirely because there are more fish than can be worked with at a given time. Some Gwich'in will also travel to places where they know they can catch trout that is regarded as a delicacy and a welcome change from eating whitefish. There used to also be a move in the summer and early autumn to places where herring can be caught. This was a particularly important fishery for dog food.

As freeze up approaches, the nets are removed until the ice on the rivers and lakes is safe to travel upon. At this time the Gwich'in will set nets beneath the ice on the rivers and lakes for the autumn runs of whitefish and coney. This is a labour intensive but highly productive way of fishing. It is at this time that the Gwich'in also cut holes in the ice at places where creeks enter the rivers. They will fish at night through these holes with hand lines and baited hooks for loche. These large fish are caught primarily for their oil rich livers and eggs which are highly prized foods during the winter. When fresh, the flesh of loche is also highly regarded but it deteriorates very quickly so much of it is used for dog food.

Fishing can continue for as long as the ice stays reasonably thin, although it is recognised that in times of desperation fish can be caught in some places throughout the winter. For example, there is a lake called 'Khaii luk ('winter fish,' that is, a place where fish can be caught even in winter)' (Gwich'in Social and Cultural Institute 1997: 5). While fishing declines as an activity in the early winter, people still consume fish that has been stored and processed for winter consumption.

I was told that in the past people used to store many more fish than they do today and that fishing was much more important for making a living from the bush. Part of the reason for this change is, as already indicated, that fish was understood to be a dependable source of food. As noted, 'it was like our store'; and this observation is undoubtedly true, that the reliance on fish has to some extent been replaced with the reliance on the community store and cash incomes for a dependable supply of food (Kuhnlein and others 2009).

In the past, as today, there are two general ways of preserving and storing fish, freezing and smoking/drying. In the past, whole whitefish and coney would be put

into fish pits, to which the elder was referring to earlier. These were subterranean store rooms which would be dug out in the summer, a roof would be made of logs with a trap door, and the roof would then be insulated with dirt and sphagnum moss. During the autumn runs of fish, the catch would be put into these pits frozen and used over the coming winter months as food for people, dogs, and as bait for traps. The making and stocking of fish pits has largely been replaced by the use of electric freezers and above ground store houses in town. The second method of preservation is drying. This is more labour intensive but results in a light-weight, less bulky, and therefore more easily transportable form of food. Dry fish continues to be made at the summer fish camps out of whitefish and coney, but in the past it was made in larger quantities, and herring was also important for making dry-fish. The division of labour in making dry fish usually follows along the lines of men being responsible for catching the fish (maintaining boats; setting, checking, and cleaning nets; bringing the fish to the fish camp) and building and supplying the fuel for a smoke house, while women are responsible for actually making the dry fish. This requires a careful filleting of the fish on both sides, keeping the attachment to the tail intact, then scoring the flesh down to the skin in thin strips perpendicular to the lateral line, hanging the fish in a smoke house and carefully maintaining and monitoring the flow of fresh air and a smoky fire which is of the correct size and intensity during the smoking/drying process. The fish will be moved around and flipped during the drying which may last several days until they are adequately desiccated for storage.

While a shift in the Gwich'in diet to more store bought foods has had an effect on the intensity of the fishery, catching and preserving fish continues to be an important aspect of Gwich'in life. According to my informants, the shift in diet to store bought foods only in part explains the change in fishing intensity. Many told me how they used to stay in fish camps all summer and into the autumn and during that time people would be working 'all the time' or 'just steady' on making dry fish and working with herring. The question that the next section will address is: what were all these fish for?

Fish and economic history

No, the fish was not all for them. Maybe they used some of it but they knew we needed it too. In fall time the traders would take some of the bundles of dry fish we had worked on all summer and give us stuff for the bush. Then later in winter, maybe we needed more fish, we could use the furs to get it back from them. That is one good thing they did for us.

The above quote from an elder from Fort McPherson was in response to a question I asked her about the trade in dry fish. I had heard that it was common for the fur traders to purchase dried fish in the early autumn, and I assumed that this fish was being bought to provision the

trading post. I was partially correct in this assumption, but she pointed out to me that I had missed a big part of the story, namely how fish came to be part of a system of advances in the local fur trade economy.

Fish was crucial to the opening of the Mackenzie for the fur trade; it was equally important for the gold rush of the late 1890's which saw many Gwich'in shift their efforts away from the fur trade in favour of provisioning the mouths of Dawson City with meat and fish from wild sources (Slobodin 1963), for missionary activities, and governmental adventures. In the early fur trade, one of the problems encountered by traders working for the North West Company, which was the first company to trade directly in the Mackenzie District starting in about 1795, was that they were not able to provision themselves sufficiently so as to make trade profitable over the long term. An attempt to alleviate the conditions of this problem was to locate trading posts in places where the traders could feed themselves with fish (Keith 2001: 42). When fishing did not provide an adequate supply of provisions for the traders, the posts would have to be moved and trade restarted in a new location. For example, the trader James Porter noted in his journal that a post at Ring Lake required the traders to travel a long distance to find sufficient amounts of fish to both provision themselves and to supply the post. This expenditure of labour and time eventually forced the move of the entire post to the richer fisheries of Moose Island (Keith 2001: 19). The problem of reliable provisions to feed the traders was endemic to the fur trade in the Mackenzie District due to supply problems and faunal cycles (Yerbury 1986: 126). This situation resulted in times when traders would be forced to expend their trade goods in order to purchase provisions from the Dene. Forts on the shores of Great Slave Lake brought in hired fishers whose sole occupation was to capture and store fish to last through the winter months with the possibility of selling the surplus to missionaries (Piper 2009: 171).

Further north, most of the early trade from the aboriginal side in the Mackenzie District was in bush resources such as meat and fish that were meant to sustain and provision the traders; fur was of secondary importance. The Hudson's Bay Company understood this to be strategic and would trade at a loss with the view to creating a future trade network that was profitable (Asch with Wishart 2004). While opening these new trade routes was of primary importance to the company and initial shortfalls in furs were expected as the company could not fully provision the forts themselves, they hoped that this would be a temporary situation until provision routes could be established and the Gwich'in would be forced to trade in furs alone (Wishart 2004: 68). The provision problem was finally solved with the advent of steam ship travel on the major rivers of the sub-Arctic in the late 19th century, which provided access to goods from the south to feed and clothe the traders, subsequently freeing them to focus on the more profitable trade in furs (Tough 1996:

At the same time, there were two other problems. The first was providing unsecured credit in the way of materials and supplies to the aboriginal trappers so that they could trap in ways that maximised yields. It was feared that there was nothing stopping any trapper from receiving an advance from multiple trading posts and only delivering the furs to just one of them (Keith 2001: 42). The second problem was that economic success in the fur trade, as well as other economic adventures such as the gold rush, required another form of labour, that of dogs. All the other Euro-Canadian institutions which were being imported into the north also required dogs and a source of food for them. Missionaries, the police and schools would have to provide fish for themselves, import dog food at great cost, or purchase the fish from the trading companies. Andersen (1992: i) notes that in Alaska '[t]hroughout this period, fish, specifically dried salmon, was the standard diet of working dogs and became a commodity of trade and currency along the Yukon River and elsewhere.' Just as today, where the infrastructure of our mechanised transportation and supply systems requires fuel in the form of petroleum, in that time similar demands were being made of dogs which also require a dependable supply of fuel; and that fuel more often than not came in the form of fish.

In some upriver communities... which had become regional freighting and trading centers, the demand for dried salmon frequently exceeded the capacity of local fishermen and bales of dried fish were shipped in from premier fishing locations along the Yukon... and were warehoused for winter use (Andersen 1992: 10).

Unlike in coastal areas such as Ungava Bay (Power 1976) and the Great Lakes (Holzkamm and others 2008; Goodier 1984) where aboriginal fisheries provided fish for the Hudson's Bay Company that could be profitably transported to the outside world where there was a demand in the markets for this food, in the Mackenzie Delta, similar to the upper Yukon River in Alaska, fish could not be transported economically to market and was thus for local consumption, but it provided an opportunity for profit none the less within that local economy.

The convergence of the problem of having to provide credit with the realisation that dried fish is a valuable commodity in the local economy as both provision for the human diet and, perhaps more importantly, as dog food, led to the situation which the Gwich'in told me about. Fish could be used as a currency to buy trapping provisions from the Hudson's Bay Company and those fish could then be either sold by the company to other Gwich'in trappers (Piper 2009: 173) who needed the fish to feed their dogs, or it could be bought back by the same family at the same price they sold it to the company in furs later in the season when their own stock of dry fish had been expended. In this way, the Gwich'in continued to fish and preserve their catch for the winter but they were now engaging the company as a broker in this process. The fact that the fish would be bought,

warehoused, and then later sold for the same price to trappers indicates that the traders understood this to be a valuable service which would increase their intake of furs. This was also valued by the Gwich'in who still refer to it, as does the elder quoted at the start of this section, as a good thing.

Later, the cash economy would result in dry fish being bought and sold for cash. Several elders remarked to me that 'dry fish is money', but this equivalence was also often made by relating the financial value of dry fish to the cost of gasoline for fuelling boat and skidoo motors. So they would tell me the amount of money that a bale of dry fish would be bought for and then inform me of how much gasoline that same amount of money could buy. It could just be a coincidence of them explaining the difference in purchasing power of the dollar in the past as compared to now, but it is curious that in the era of motor vehicles gasoline serves the same purpose that dry fish did back when they were dependent on dog power.

The dependence on fish within the fur trade economy has a further dimension. Fish was important not only to feed the dogs and the people, trader and trapper alike, but it was also used in a more direct way as part of the trapping technology. The fur trade in Canada is often thought of as being dedicated to the trapping and exchange of aquatic rodents, beaver and muskrat. The Gwich'in certainly participated in this aspect of the trade but they also traded heavily in other furs. Trapping valuable carnivore species such as martin, fox, wolf, wolverine, mink, lynx, and even weasel is made much more productive through the use of baited sets. I was told and shown how trappers experimented with all sorts of bait cocktails but they almost all had a base of fish, either dried or frozen. A long trap line would use a considerable number of stored fish over the winter for this purpose.

The fur trade increased the intensity of the Gwich'in fishery, and all my informants agreed that in the past people fished much more. Usher (2002) has estimated that in the neighbouring Inuvialuit communities in the Mackenzie Delta, approximately 75% of the fish being caught prior to the use of snowmobiles was to feed dogs, and in a Gwich'in Renewable Resource Board report (Greenland and Walker-Larsen 2001: 3) on the use of whitefish, elders reported that people had to fish far more intensively in the past to feed the dogs. The success of the fur trade depended on the ability of traders to adapt to Gwich'in practices of catching fish. Gwich'in still keep dogs and they still catch fish for them, but the time of having to feed large dog teams has gone. However, in a twist to the historical narrative of a vanishing tradition, the Gwich'in may actually be fishing today in an intensity that approximates that of pre-fur trade times. Unless speaking of the 'long ago days' or pre-contact times, Gwich'in usually refer to the past as meaning that of the time of the fur trade (Heine and others 2008: 3; Slobodin 1962: 26). Prior to this time there were no large dog teams as the sled also came with the fur trade and transportation

relied much more on human labour and that of a small number of dogs which would carry packs on their backs.

The persistence of the fish camp

Even now today we are still living the way our old people used to live. Right now my brother has put his camp on the shore of the lake here and he is getting a lot of fish and he is putting up dry fish for the winter. That's the way that we have always been making our living (Codzi in Berger 1977: 105).

Despite the decline of dry-fish as a trade good, Codzi notes in the above quote how fish and fishing continues to be an important aspect of Dene life in general. Thirty years after Berger, among the Teetl'it Gwich'in, things are similar. Fish camps continue to be set up along the Peel River and people will go to great lengths to catch and dry fish. The making of dry fish is no longer a necessity but there is far more to it than mere economics. Slobodin (1962: 86) notes that the 'fish camp has been the characteristic Peel River summer grouping throughout the band's known history', and this characteristic has been the most stable social formation throughout the various shifts in the Gwich'in way of life over the last two centuries. He further notes that the economic conditions during the height of the fur trade did not result in the erasure of this summer grouping, but did result in stronger social integration when several families would combine their labour at productive spots to fish for the winter. Families who did not join in this activity were regarded with suspicion as being anti-social (Slobodin 1962: 80). Today it is far easier to travel between fish camps than in the past, and people do this for various reasons, many of which are the same as those noted in the 1950s by Slobodin, that is playing games, socialising in general, sharing information etc. Those with jobs in the cash economy or who for various reasons of commitments in the administrative centres of Gwich'in communities cannot spend the time setting up fish camps of their own, will come to visit their kin's camps. They may stay for a few hours or a few days, and I was told by many visitors to the camp at which I did my research that they come to feel connected to 'the land', to eat 'traditional food', and to get dry fish to take back to town. On a couple of occasions I was told that this visiting was 'like medicine' and 'just makes us feel good'.

The dry fish itself is still held in high regard. About 75% of the whitefish caught at summer camps is made into dry fish (Gwich'in Renewable Resource Board 2001: 4). The making of dry fish certainly maintains Gwich'in divisions of labour, but it is also considered an aesthetically pleasing activity in its own right. People will note how a fish hanging in a smoke house is just a nice thing to see, and pride is taken not only in the finished product but in every step of the manufacture. It is pointed out to younger Gwich'in that the fish must be treated with respect, and that includes making sure that the fish is cut properly, that it is kept clean, that the cuts made into

the flesh to expedite the drying process must be straight and uniform. When asked if this is just for getting the fish to dry properly, I was told that this was certainly a good reason, but dry fish could be made in a sloppy way; however, making good dry fish is a matter of pride for all involved.

Wishart and Loovers (2013), noted how the ties between the activities of the fur trade era and their present day equivalents are regarded by the Gwich'in as both a valued tradition and as a way of maintaining a visible presence on the land which provides evidence of continuities against a grain of presumed culture loss. Fishing could be understood as an equally important part of this corpus of activities. The Gwich'in are keenly aware of the politics of presence and how they have been subjected to forms of removal and policy which assumes lost tradition and disuse or misuse of their lands and waters. There is no doubt that the Dene cited in this paper from the Mackenzie Valley Pipeline Inquiry also recognised the value in talking about fishing, and the fact that Berger selected these quotes for his report would seem to confirm this understanding. The arguments put forward by the Gwich'in and their Dene neighbours that fish and lakes are like stores, or banks, or deep freezes are akin to the observations of other anthropologists on the adoption of metaphorical terms in articulations about their life ways. Feit (1993) has described how the James Bay Cree have come to use the term 'garden' as a discursive strategy for stressing to outside audiences that their lands are ordered and are being used in rational ways according to their own perspectives on the proper relationships between people and the landscape. Kwon (1993: 19) notes in his discussion of Siberian reindeer herder landscapes that the ideas and discourse that add to a colonised landscape are open to appropriation by the colonised to reflect the argument back on the colonisers and become metaphors of resistance. Scott (1985: 205) argues that in circumstances where such power discrepancies occur, the few tools that the disempowered can employ are those that have already been assigned legitimacy by the powerful.

Certainly in the discussions taking place in the context of the Mackenzie Valley pipeline hearings, the use of such terms as those noted should be expected, but they also occur when Gwich'in elders are explaining their life histories and their engagement with the fur trade. Given the historical activity of drying and then storing the fish with the fur traders, it is entirely possible that the elders are referring to something quite literal. That fish were a bank, they were a store or savings in that understanding of the term. Whether literal or metaphorical, fish were and continue to be a dependable resource for the Teetl'it Gwich'in, and they continue to call themselves after the after the waters in which so much of their food and their current traditional practices are stored.

For these reasons a visit to a fish camp may be like medicine at an individual level, but as Slobodin makes us aware, it is also about being social, being Gwich'in for the entire community. As a way of healing bad policy, perhaps it is best to start by going fishing.

Conclusion

There is much more to be said of fishing amongst the Gwich'in and the reasons that the fish they catch have only recently become of interest. Beyond the scope of this paper but currently under research by myself and others are the reasons why wildlife management historically focused its efforts on the mammalian and avian species of the sub-Arctic, and the degree to which fishing and the keeping of dogs is currently being practiced by different generations of Gwich'in. However, as a way of concluding I would like to return to the question posed by the elder about why a starving traveller would not look for a fish-pit. From this seemingly simple question a further two general questions could be derived which will assist in organising important points of summary. First, is it possible that the fish were missed because of assumptions regarding Gwich'in livelihood? The answer to this question we will never know; however, it is possible to point to confusion about Gwich'in and other Dene livelihood that arose from anthropological insistence that hunting and fishing are separate realities which lead to radical variance in social structure etc. We can also point to the fact that fishing in this area was neglected by government policy for a variety of reasons including a desire to create an image of a rapidly disappearing land based economy; by leaving fish out of the tally, the numbers might tell a story that aligns with this view. The second question is why would an elder index the tragedy of this story with the idea that the travellers should have known there were fish under their feet? On one level it could be said that this is simply a statement of the obvious, that a hungry, knowledgeable person upon finding a fish camp would look for a fish-pit. But on another level I think it says more.

The statement speaks to the fact that fish have always been there for the Gwich'in, and it relates to the idea that when food is short or when one is setting out to hunt or trap, fish are reliable and, thus, fishing is a logical first step. It also speaks to a Gwich'in understanding of their history, that others should have known that the Gwich'in at that time were catching and processing large quantities of fish for both the trading post in the form of dry-fish but also storing fresh fish in pits for their own use. I do not want to make an argument that fishing is entirely unique, as the same could be said of caribou hunting, or rabbit snaring, or any other activity, and it would only serve to further create an artificial separation between activities that are parts of a whole; but there are some important observations about what fishing affords in the way of Gwich'in life and a Gwich'in understanding of tradition. On both of these points, fishing brings people together at predicable places and times to fish, to prepare, to reflect on the aesthetics of fish-camp life, to tell stories of the past, to teach younger generations, and to

demonstrate their continued presence on the land. The idea that people were starving in their country negates all of these important parts of being within the social fold. Pointing out that the fish that were caught, processed, and stored during one of these periods of heightened social life, stored to be used in exactly such times of need, leaves the elder wondering why others would pass them by.

Acknowledgements

Thanks are due to the Teetl'it Gwich'in who taught me about fishing and so much more. Parts of the research were made possible by the American Philosophical Society, The Social Sciences and Humanities Research Council of Canada, the Carnegie Trust for the Universities of Scotland, and the Advanced Research Grant 'Arctic Domus' from the European Research Council (295458). Thanks are due to David Anderson, Jan Peter Loovers and Gro Ween for their invaluable suggestions about northern circumpolar fishing. The article has benefited from the comments and suggestions of Franz Krause, Maria Nakhshina, and the two anonymous reviewers.

References

Andersen, D. 1992. The use of dog teams and the use of subsistence caught fish for feeding sled dogs in the Yukon River drainage, Alaska. Juneau: Alaska Department of Fish and Game.

Asch, M. 1988. Kinship and the drum dance in a northern Dene Community. Edmonton: The Boreal Institute for Northern Studies.

Asch, M. 1989. Wildlife: defining the animals the Dene hunt and the settlement of Aboriginal rights claims. *Canadian Public Policy – Analyse de Politiques* 15(2): 205–219.

Asch, M. with R. Wishart. 2004. The Slavey indians: the relevance of ethnohistory to development. In: Morrison, R.B. and C.R. Wilson (editors). *Native peoples: the Canadian experience*. Oxford: Oxford University Press: 178–197.

Benyk, P. 1987. Fort McPherson a community study. Ottawa: Department of Education.

Berger, T. 1977. Northern frontier, northern homeland: the Mackenzie valley pipeline inquiry. Vol. 1. Ottawa: Minister of Supply and Services.

Berkes, F. 1990. Native subsistence fisheries: a synthesis of harvest studies in Canada. *Arctic*. 43 (1): 35–42.

Berkes, F., R. Mahon, C. McConney, R. Pollnac and R. Pomeroy. 2001. *Managing small–scale fisheries: alternative directions and methods*. Ottawa: International Development Research Centre.

Bodenhorn, B. 1990. I am not the great hunter: my wife is: Inupiat and anthropological models of gender. *Études /Inuit /Studies* 14(1–2): 55–74.

Driver, H. and W. C. Massey. 1957. Comparative studies of North American Indians. *Transactions of the American Philosophical Society*. New Series 47(2): 165–456.

Feit, H. 1991. Gifts of the land: hunting territories, guaranteed incomes, and the construction of social relations in James Bay Cree society. In: Pearson, N. and T. Matsuyama (editors). Cash, commoditisation and changing foragers. Osaka: National Museum of Ethnology (Senri Ethnological Studies 30): 223–268.

- Feit, H. 1993. Dying hunters or God's gardeners? Euro– Canadian and James Bay Cree Indian metaphors of hunting. In: Ellanna, L.J. (editor). Hunters and gatherers in the modern context: book of presented papers. Vol. 1. Moscow: Russian Academy of Sciences (7th International Conference on Hunting and Gathering Societies): 164–181.
- Goodier, J.L. 1984. The nineteenth–century fisheries of the Hudson's Bay Company trading posts on Lake Superior: a biographical study. *The Canadian Geographer* 28 (4): 341– 357.
- Greenland, B.J. and J. Walker–Larsen. 2001. Community concerns and knowledge about Broad Whitefish (*Coregonus nasus*) in the Gwich'in settlement area. Inuvik: Gwich'in Renewable Resource Board (Report 01–08).
- Gwich'in Renewable Resource Board. 1997. Nành' kak geenjit Gwich'in ginjik: Gwich'in words about the land. Inuvik: Gwich'in Renewable Resource Board.
- Gwich'in Renewable Resource Board. 2007. Traditional knowledge of fish migration and spawning patterns in Tsiigehnjik (Arctic Red River) and Nagwichoonjik (Mackenzie River), Northwest Territories. Inuvik: Gwich'in Renewable Resource Board.
- Gwich'in Social and Cultural Institute. 1997. That river, it's like a highway for us: the Mackenzie River through Gwichya Gwich'in history and culture. Tsiigehtchic and Yellowknife: Gwich'in Social and Cultural Institute.
- Hein, M., A. Andre, I. Kritsch and A. Cardinal. 2007. *Gwichya Gwich'in googwandak, the history and stories of the Gwichya Gwich'in*. Tsiigehtshick and Yellowknife: Gwich'in Social and Cultural Institute.
- Helm, J. 1965. Bilaterality in the socio-territorial organization of the Arctic drainage Dene. *Ethnology* 4(3): 361–385.
- Helm, J. 1968. The nature of Dogrib socio-territorial groups. In: Lee, R. and I. DeVore (editors). Man the hunter. Chicago: Aldine: 118–125.
- Helm, J. 1969. Remarks on the methodology of band composition analysis. *Bulletin of the National Museums of Canada* 228 (Anthropological series 84): 212–217.
- Holzkamm, T.E., V.P. Lytwyn and L.G. Waisberg. 1988. Rainy River sturgeon: an Ojibway resource in the fur trade economy. The Canadian Geographer 32 (3): 194–205.
- Keith, L. 2001. North of Athabasca: Slave Lake and Mackenzie River documents of the North West Company, 1800–1821. Montreal: McGill Queen's University Press.
- Kuhnlein, H.V., M. McDonald, D. Spigelski, E. Vittrekwa and B. Erasmus. 2009. Gwich'in traditional food for health: Phase 1. In: Kuhnlein, H.V., B. Erasmus and D. Spigelski (editors). Indigenous peoples' food systems: the many dimensions of culture, diversity and environment for nutrition and health. Rome: United Nations Food and Agriculture Organization: 45–58.
- Inoue, T. 2004. The Gwich'in gathering: the subsistence tradition in their modern life and the gathering against oil development by the Gwich'in Athabascan. In: T. Irimoto and T. Yamada (editors). Circumpolar ethnicity and identity. Osaka: National Museum of Ethnology (Senri Ethnological Studies 66): 183– 204.
- Kwon, H. 1993. Maps and actions: nomadic and sedentary space in a Siberian reindeer farm. Unpublished Ph.D. Dissertation. Cambridge: University of Cambridge, Scott Polar Research legitude.
- Lakoff, G. and M. Johnson. 1980. *Metaphors we live by*. Chicago: University of Chicago Press.
- Leacock, E. 1978. Women's status in egalitarian society: implications for social evolution. *Current Anthropology* 19: 247–275.

- Linton, S. 1971. Woman the gatherer: male bias in anthropology. In: Jacobs, S.E. (editor). *Women in cross–cultural perspective*. Champagne: University of Illinois Press: 36–50.
- Losey, R. 2010. Animism as a means of exploring archaeological fishing structures on Willapa Bay, Washington, USA. Cambridge Archaeological Journal 20: 17–32.
- Mason, M. H. 1924. *The Arctic forests*. London: Hodder and Stoughton.
- McDonald, I. 2009. *Gwich'in harvest study final report*. Inuvik: Gwich'in Renewable Resources Board.
- Nuttall, M., F. Berkes, B.C. Forbes, G. Kofinas, T. Vlassova and G. Wenzel. 2005. Hunting, herding, fishing and gathering. In: C. Symon C., L. Arris and B. Heal (editors). Arctic climate impact assessment. Cambridge: Cambridge University Press: 649–690.
- Osgood, C. 1970 . Contributions to the ethnography of the Kutchin. New Haven: Human Relations Area Files Press.
- Pálsson, G. 1988. Hunters and gatherers of the sea. In: Ingold, T.,
 D. Riches and J. Woodburn (editors). Hunters and gatherers
 1: history, evolution and social change. Oxford: Berg: 189–204
- Piper, L. 2009. *The industrial transformation of subArctic Canada*. Vancouver: University of British Columbia Press.
- Power, G. 1976. History of the Hudson's Bay Company salmon fisheries in the Ungava Bay region. *Polar Record* 18: 151–161
- Prowse, T.D., C. Furgal, F.J. Wrona and J.D. Reist. 2009. Implications of climate change for Northern Canada: freshwater, marine, and terrestrial ecosystems. *AMBIO: A Journal of the Human Environment* 38 (5): 282–289.
- Sacks, K. 1976. State bias and women's status. *American Anthropologist* 78: 565–569.
- Sapir, J.D. 1977. The anatomy of metaphor. In: Sapir, J.D. and J.C. Crocker (editors). The social use of metaphor. Philadelphia: The University of Pennsylvania Press: 3–32.
- Scott, C. 1979. Modes of production and guaranteed annual income in James Bay Cree society. Montreal: McGill University, Programme in the Anthropology of Development (Monograph 13).
- Scott, C. 1984. Between 'original affluence' and consumer affluence: domestic production and guaranteed income for James Bay Cree Hunters. In: Salisbury, R. (editor). Affluence and cultural survival. Washington, DC: The American Ethnological Society: 74–86.
- Scott, C. and H. Feit 1992. *Income security for Cree hunters: ecological, social and economic effects.* Montréal: Conseil Québécois de la Recherche Sociale.
- Scott, J. 1985. Weapons for the weak: everyday forms of peasant resistance. New Haven: Yale University Press.
- Shannon, K.A. 2006. Everyone goes fishing: understanding procurement for men, women and children in an arctic community. Études /Inuit /Studies 30(1): 9–29.
- Simon, P. 1998. Community concerns on coney (inconnu) in the Gwich'in Settlement Area DRAFT Report. Inuvik: Gwich'in Renewable Resources Board.
- Slobodin, R. 1962. Band organization of the Peel River Kutchin. Ottawa: National Museum of Canada Bulletin 179.
- Slobodin, R. 1963. The Dawson boys: Peel River Indians and the Klondike gold rush. *Polar Notes* 5: 24–36.
- Suttles, W. (editor). 1990. *Handbook of North American indians*. Vol. 7: *Northwest coast*. Washington DC: Smithsonian Institution
- Thorton, T. 2001. Subsistence in northern communities: lessons from Alaska. *The Northern Review* 23: 82–102.
- Tough, F. 1996. As their natural resources fail: native peoples and the economic history of northern Manitoba,

- 1870–1930. Vancouver: University of British Colombia Press.
- Usher, P. J. 2002. Inuvialuit use of the Beaufort Sea and its resources, 1960–2000. *Arctic* 55: 18–28.
- Winbourne, J. 2004. Local knowledge of fish movements and habitat use in the Travaillant Lake system. Inuvik: Gwich'in Renewable Resources Board (Report 04–06).
- Wishart, R. 2004. Living 'on the land': Teetl'it Gwich'in perspectives on continuities. Unpublished PhD dissertation. Edmonton: University of Alberta, Department of Anthropology.
- Wishart, R. and M. Asch. 2009. Writing against the grain of materialist orthodoxy: Richard Slobodin and the
- Teetl'it Gwich'in. In: Preston, R. (editor). *A kindly scrutiny of human nature: essays in honour of Richard Slobodin.* Waterloo: Wilfred Laurier University Press: 33–45.
- Wishart, R. and J. P. Loovers. 2013. Building log cabins in Teetlit Gwich'in country: vernacular architecture and articulations of presence. In: Anderson, D., R. Wishart and V. Vaté (editors). About the hearth: perspectives on the home, hearth and household in the circumpolar north. New York: Berghahn: 54–68.
- Yerbury, C. 1986. SubArctic Indians and the fur trade, 1680–1860. Vancouver: University of British Columbia Press.