

The Fish Tale That Is Never Told : A Reconsideration of the Importance of Fishing in Inuit Societies

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The Fish Tale That Is Never Told: A Reconsideration of the Importance of Fishing in Inuit Societies

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1. INTRODUCTION

Although reports of fishing activity by the Netsilik and other Inuit groups may be found in most ethnographies, few detailed data are recorded. For example, in his monumental Netsilik volume, Rasmussen [1931] allocates only three pages to fishing, as opposed to 26 pages to seal hunting and 13 pages to caribou hunting. Likewise, Mathiassen [1928], when writing about the Iglulik Inuit devotes ten pages to seal hunting, eight pages to caribou hunting, but only four to fishing. Boas [1888] is even more biased, with 28 pages devoted to sealing, nine pages to caribou hunting and only two pages to fishing. In discussing the Caribou Eskimo, Birket-Smith devotes eight pages to fishing, which he states that, after caribou hunting, is the principle means of subsistence [1929: 117]. Surprisingly, he allots the eight pages to the hunting of 'aquatic mammals', a pursuit considered much less important in the overall subsistence economy, compared to only six pages for caribou hunting.

Balikci [1989], who reports most thoroughly on fishing, devotes 14 pages to this subject, 10 pages to caribou hunting, but 34 pages to sealing. A similar observation may be made for Spencer [1959] concerning north Alaska, who devotes 22 pages to whaling, but only one to fishing. Furthermore, very few data are presented by any of these authors concerning worldview

as it relates to fish and fishing.

In this paper, and based on a critical review of the literature and personal field data, I postulate that fish made up a substantial and relatively dependable part of the Netsilik and other Inuit groups' diet, providing a baseline food source when sealing and other less dependable hunting activities were slow or failed.

2. BACKGROUND

The Netsilik Inuit (Arviligiuarmiut) of Kugaaruk (Pelly Bay) of Nunavut Territory, Canada, still practice a wide range of traditional subsistence activities, including caribou and musk ox hunting on land, polar bear hunting on sea ice and land, seal hunting on sea ice and in open water, beluga whale hunting in open water, as well as hunting ptarmigan and several varieties of migratory and other fowl¹). In addition to these hunting activities, there has been much written concerning weir fishing by the Netsilik Inuit [BALIKCI 1964: 19–21; 1989: 25–37; BRICE-BENNETT 1976: 67–71; RASMUSSEN 1931: 63–67; STEWART 1992a; 1992b: 226, 1992c, 1993a]. However, little mention is made in the literature of winter lake ice fishing, spring (June) lake and river ice fishing, as well as fall (October—November) river ice fishing. Furthermore, there is little information about taboos or other customs associated with fishing activities.

2.1. Prominent Fish Species around Kugaaruk

Probably the most abundant and important fish species in and around Kugaaruk is the Arctic charr²) (*Salvelinus alpinus*), referred to as salmon trout by Balikci, trout by Rasmussen and sea-trout by Birket-Smith. Diadromous Arctic charr are similar to Atlantic salmon in that they migrate several times over the years between inland waters and the sea [JOHNSON 1989: 202] and in this way differ from anadromous Pacific salmon that die after spawning. As I discuss below, Inuit name Arctic charr according to the stage of their migration cycle and nutritional state. According to informants³), in year one, poorly fed mature charr (*hitujuq*⁴) or “thin ones”) and smolts (*igalugaq*) journey downriver to the sea and after feeding in the sea, return in July—August of the same year to a lake or deep portions of the river upstream where they spawn and pass the winter. These well fed charr are called *majuqtuk* (“fat ones”). After spending one or more years there, they migrate back to the sea to repeat the cycle.

Other species in and around Kugaaruk include whitefish (*Coregonus* spp., *Prosopium* spp.) and lake trout (*Salvelinus namaycush*), although Inuit appear to possess much less knowledge concerning these species. This is possibly because they constitute a less important portion of the diet, although informants mention that whitefish sometimes provide a welcome change in an otherwise monotonous winter diet.

Informant data agrees quite well with biological research by Glova and McCart [1978], Grainger [1953], Gyselman [1984], Hunter [1970], Johnson [1976, 1989], Johnson and Campbell [1975], McCart [1980], Scott and Crossman [1998], and Scott and Scott [1988] although there is some disagreement in several aspects.

The first point of disagreement concerns the migration of gravid females from the sea. According to Jose Angutinguniq, it is only when they return from the sea in June that mature female charr are gravid. I was not able to find corroborating data in the above biological studies,

but Jose's information concerning this point is detailed. Specifically, he states that gravid females (*puvalajuq*) migrate upstream only in June, sometimes going up shallow streams as opposed to the autumn migration that is limited to deep rivers or rivers flowing from deep lakes. He stated that well-fed charr (*majuktuq*) migrating in August do not have eggs. Charr roe in June is eaten either raw or boiled. This information is not corroborated in the literature and I cannot determine whether or not this is a phenomenon known only for charr in Pelly Bay.

Also, according to Jose Angutinguniq, the female ingests the fertilised roe, incubating them in her stomach until they hatch, at which time she egests the fry. Incubating roe from the stomach of such female charr, called *amaaqtuq*, is particularly favoured by women, but may be eaten only before the eyes of the roe are formed. If the eyes have already developed, the roe is disposed of.

Most of the scientific literature report that in September and October, female charr prepare a redd (a 'nest') in the gravel and deposit 3000 to 5000 eggs which the male fertilises. The eggs develop during the winter and hatch in April to July [HUNTER 1976: 1; SCOTT and CROSSMAN 1998: 204; SCOTT and SCOTT 1988: 137; WHEELER 1975: 317]. However, Hunter [1970: 114–115] notes that 'mature fish with "running" gonads....containedeggs in their stomachs'. Also, Grainger [1953: 359] notes that 'In the fish which spawn once a year, a number of eggs within the ovaries begin to enlarge previous to the spawning time. They acquire a quantity of yolk and become distinctly set apart from the remaining eggs, which remain small and immature'.

These observations may be the scientific explanation for the phenomenon related by Jose Angutinguniq.

3. FISHING ACTIVITIES BY SEASON

Fishing is pursued most actively in June, July—August, and October—November. Fishing on lake ice in early June is for charr that over-wintered in that lake on their journey from the sea to the spawning lake and for fish bound downstream. Charr returning from the sea often over-winter in a lake downstream before continuing to spawning areas in the following year. In early July, relatively small-scale weir fishing is done for downstream-bound charr. In mid-July to August fishing centres on ethnographically well-known larger weirs. In October—November fishing is done on river ice several kilometres upstream from the sea for fish, primarily charr, moving upstream under the ice. Fishing is not as actively pursued in the winter months, although as I argue below, fishing at this time may provide emergency food and a change in diet.

3.1. Winter Lake-ice and Spring River Fishing

Although I have observed inshore sea ice fishing by the Netsilik of Taloyoak (Spence Bay), the Netsilik of Kugaaruk historically and presently ice-fish only on freshwater ice. Sometime in December, holes about 20 cm. in diameter are made in the lake ice, from which they jig (*aujakhaktup*) for whitefish and lake trout, and sometimes wintering charr. Five or six jigging holes are usually opened at about 10 metre intervals. Traditionally, women spent much free time jigging, as much as seven or eight hours at a time when weather conditions were favourable. Men would fish here while not seal hunting, often regardless of weather conditions. Both

traditionally and recently, fish taken during the winter have been ordinarily eaten fresh and not cached [STEWART 1993b].

As the sun begins to warm the land, lake-ice fishing increases as does the catch. Then in June, as the snow on the land begins to melt, on a certain warm day a unique, short-lived phenomenon occurs. On this day only, melt-water runs over the lake ice to a depth of twenty or so centimetres. As this water pours through the jigging holes into the lake, fish (*higjahiuqtuq*) that over-wintered in a lake downstream from spawning areas swim “upstream” through these vortices and while swimming above the lake ice are taken with a fish leister (*kakivak*). According to Levi Illiuktuq, if five or six people are present with leisters, quite a number of fish readily visible in the shallow water may be taken during this short-lived phenomenon.

Within a few hours, melt-water pouring into the lake causes the ice to rise about one metre, thus forming a band of open water around the shore (*qaattaq*). According to Simon Inarksaq and Jose Angutinguniq, “the smell of the land”, that is, areas of land runoff water (*mugjuktuq*) at stream outlets, triggers a movement of charr to swim upstream to spawn. These fish (*nariaqtuq*: “those lured by a smell”, or *qaannighiuqtuq*: “waiting in the *qaattaq*”) gather in the open water near stream outlets and here also may be taken in substantial numbers.

Rasmussen [1931: 56] and Balikci [1989: 25, 28] refer to large cracks formed some way out from the shore where enormous shoals of trout [charr] gather. Although both refer to “big cracks”, it is possible that it is the same or similar phenomenon to that which I observed. In any case, large amounts of charr are taken at this time, not by jigging, but with leisters.

One or two days later, as river ice melts, charr that spawned and wintered in upstream lakes and smolts (*iqalugaq*) that hatch in the spring begin a downstream migration⁵). Because there is often little food in the lake where fish winter-over, these fish are undernourished (*hitujuq*, “thin ones”). They are taken at weirs upstream from the sea. On June 28th, 1992, we (the author and Keiichi Omura) counted more than one hundred charr, called *pikiarujaujuq*, gathered just above a weir about ten river kilometres upstream. In less than an hour we caught with our hands thirty large (40–60cm.) charr. That afternoon Levi Illiuktuq and Mark Kittuitikku caught another forty charr, all by hand (we had no leisters). Fish migrating downstream appear to pass any one given point in only a few hours and thus may be caught only on one day at one given point. Incidentally, land-locked charr (*ikalukpik*) are known to sometimes migrate downstream with other charr, a portent of good fishing in that year.

In the spring also, charr starting upstream in small streams are taken in stone tidal weirs built at the mouth of the stream flowing into the sea. This type of weir is also called an intertidal stonewalled fish trap or tide trap. I do not know of such weirs other than the two I recorded on the west shore of Pelly Bay [STEWART 1993a], and one reported at Repulse Bay by Simon Inarksaq. If tidal weirs are not used for several years, the stone walls will be carried away by repeated spring ice thaws and thus destroyed. This may be the reason that so few are known now, although I was not able to learn why tidal weirs fell into disuse.

These intentionally constructed tidal weirs differ from the tidal estuaries where salmon trout (charr) trapped in natural tidal pools by chance are ‘secured with the fishing harpoons’ [BALIKCI 1989: 30]. Tidal weirs are similar to, but differ in construction from the inland weirs discussed above and the large weirs used in the autumn. The difference is that tidal weirs do not have a “door” (*kataq*, Figure 1) as in the autumn weirs, to be closed when fish enter the

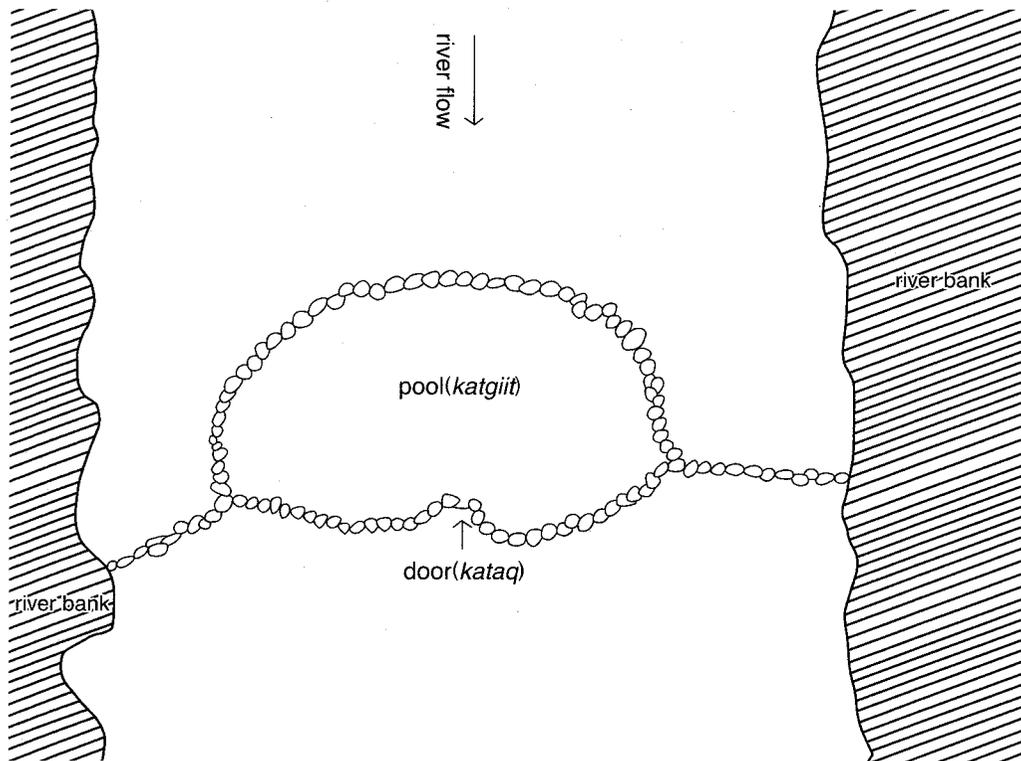


Figure 1 Tidal weir

weir. When the high tide covers a tidal weir built at the mouth of a small stream flowing into the sea, charr are trapped in the weir as the tide ebbs. Fish are trapped until the next high tide; therefore it is necessary to check the weir only twice a day at the ebb tide.

Informants state that fish were taken with leisters in numbers approaching the take at autumn weirs. However, these weirs had fallen into disuse by at least the time of sedentarisation began at Kugaaruk in the late 1950s for reasons that remain unexplained.

Charr taken at tidal weirs that are not soon eaten are filleted, being attached only at the tail. After the entrails and fatty meat below the ribs between the pectoral and anal fins ('underbelly', *aqiumuk*), which spoils easily, are removed, the fish are hung from a cord or thong stretched along a row of three to ten upturned rocks forty to eighty centimetres in height. Fish are dried on these racks (*napariaq*), first skin out for one or two days, and then turned over with the meat side out for four or five days. Fish dried in this way are called *piffi* and stored in stone caches (*piphitlivik*).

3.2. Summer Lake Fishing

Another fishing method mentioned by Balikci [1989: 28] and other researchers is that conducted from lake shores with a fish harpoon (*naulingniut*). Simon Inarksaq and Jose Angutinguniq say that not many fish were taken this way, but when caught, such fish, eaten

fresh, provided a welcome change to the summer caribou meat diet, and in addition constituted an important food source when caribou hunting was unsuccessful.

3.3. Late Summer and Autumn Fishing

Weir fishing for young charr returning from the sea for the first time (*matsughatiit*) and well-fed mature charr (*majuqtuq*) in July and August has been well documented [BALIKCI 1964: 19–21, 1989: 25–37; BRICE-BENNETT 1976: 67–71; RASMUSSEN 1931: 63–67; STEWART 1992b: 226, 1992c, 1993a, 1993b] and needs little supplemental discussion here. Suffice it to say that here, as opposed to spring weir fishing lasting only a few days, late summer and autumn fishing activities may continue for a week or more, when charr can be taken in amounts of up to a tonne at a single weir.

3.4. Preparation of Spring and Autumn Fish

The fatty meat below the ribs (*aqiumuk*) is eaten immediately, or strung on a cord and dried separately for later consumption. The “cheek meat” (*ulujaq*) is treated in the same way. If there is no drying rack (*napariaq*), fish prepared in the same way are dried on gravel beds (*tuapaq*), but drying racks are preferred in order to lessen the danger of sand sticking to the fish.

Bones without the head (*haunirkluk*) are dried separately and stored in a different cache (*kulukvik*). These bones are eaten as snacks or to relieve hunger pangs when on hunting forays.

3.5. River Ice Fishing in October

One aspect of Inuit fishing that I have yet to find mentioned in the literature is that conducted on river ice in October. As the temperature drops and holds at about -10°C , river ice forms to a thickness of ten or more centimetres.

In the first week of October of 1994, we moved to a spot on the Kellett (Kuuk) River about 20 kilometres south of Kugaaruk, where the ice had frozen to a thickness of about fifteen centimetres. Over deep spots (*kamanirk*) in the river where the river water flows at a depth of about 4 metres, a hole 20 by 30 centimetres is made in the ice and the *iliuraik* (known as ice-jiggers or jiggers in the literature; (Photo 1)) is put into the water and propelled about thirty metres under the ice. (Figure 2) At that point another hole is made in the ice and the ice-jigger is drawn up onto the ice. (Photo 2) A nylon rope (seven millimetres in diameter) attached to the ice-jigger is pulled under the ice. Then the net, one metre high and thirty metres long, is stretched between the two holes. This procedure is repeated at one or more points, where nets are set in the same manner.

The nets, thus set, are left for four to twelve hours to catch fish moving upstream under the ice. In 1994, we set nets at two, sometimes four points. The nets were pulled from the water usually twice a day at about 9 am and 3 pm, but sometimes three times a day, the third time being around noon, or some days, only once in the morning.

During the time that the nets were not being lifted, charr were speared with a leister from a hole in the ice. A hole about twenty centimetres in diameter is made in the river ice and the fisher peers into the hole, his parka hood forming a shade to block reflection of the sky. When



Photo 1 Ice-jigger (*Illiuraik*)

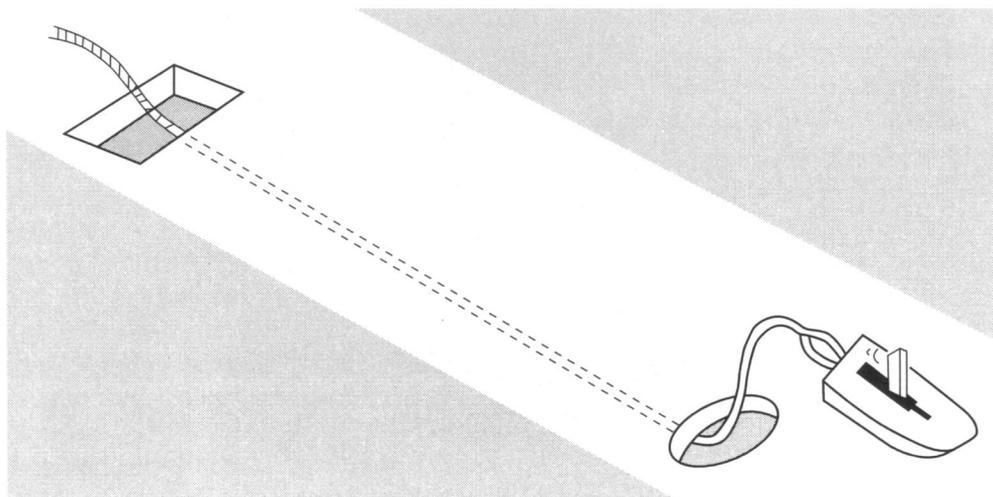


Figure 2 Ice-jigger propelled under river ice



Photo 2 Pulling ice-jigger onto ice



Photo 3 Spear fishing on river ice

a fish swims under the hole, it is speared. (Photo 3) Sometimes a lure is used to attract the fish. This is undoubtedly a variation of the method reported by Birket-Smith, where 'the Inland Eskimos pitched tents on the ice of the lakes and fished from them' [1929: 124]. He describes this as 'a very peculiar method', but it was probably an effective way to block out reflection of the sky.

Jose Angutinguniq describes another interesting fishing method employed when charr spawn. Charr arrange small pebbles on the lake or river bottom into a spawning "nest" (redd, *igliq*) where roe are laid and fertilised. During the spawning season, a fisher would catch a gravid female, kill her and pass a cord through the base of the dorsal fin and sink the body into the water. Males attracted to the female would be speared.

In 1994, we spent twelve days at the fish camp, of which time we tended the nets nine days. A total of 1533 fish (1413 charr, 119 whitefish and 1 lake trout) were taken. If an average of two kilograms per fish is assumed, a total of three metric tonnes was taken during the twelve days. Those fish not given to people visiting the camp nor taken back to the village were put into two plywood and two ice boxes, all about 1.5×1.5×1.5 metre cubes. During the winter, fish were taken as needed by those who participated in the camp.

Table 1 Fish count at Kellett River

Date	Daily Total	Charr	Whitefish	Lake Trout
941001	60	60		
941014	123	118	5	
941015	313	255	58	
941016	320	301	19	
941017	191	176	15	
941018	158	150	8	
941019	72	66	5	1
941020	146	139	7	
941021	82	81	1	
941022	68	67	1	
Total	1533	1413	119	1

Fish caught in the nets are not gutted, but are put into a box before becoming solidly frozen. Ice boxes (*igaluuhivik*) are made from ten centimetre-thick ice slabs of ice. Four slabs are arranged upright in a square and after being filled with fish, covered with an ice slab cover. (Photo 4) A similarly sized box of plywood is also used.

Fishers, running back and forth between 'two parallel rows of holes through the fjord ice', spearing fish with leisters is another fishing method briefly referred to by Balikci [1989: 173], but no further information is given and it is not possible to estimate the size of the catch.

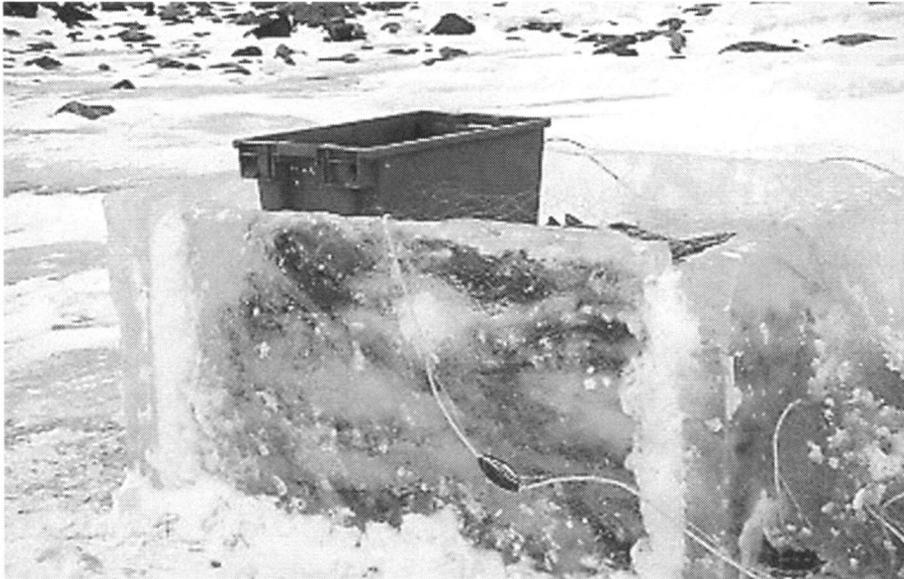


Photo 4 Ice box for storing fish

4. WORLDVIEW OF FISH AND FISHING

There are a large number of taboos and ritual observances concerning fish and fishing, particularly in regard to charr. I list below the taboos and observances of the Kugaaruk area explained to me by the four informants. Many are no longer strictly observed and those that are observed are usually only observed by elder persons.

4.1. Taboos and Prohibitions

1. One should refrain from walking near a weir except while actually fishing, as fish avoid places where human shadows fall on the water. This prohibition is particularly strict downstream from weirs.
2. One should cross the river only upstream of the weir. It is particularly bad to cross a river on weir stones (also noted by Rasmussen [1931: 65]).
3. Water must not be drawn downstream from a weir.
4. As soon as the fish in the weir have been taken, those fish must be promptly put into a cache and all persons should move away from the vicinity of the weir. (This is possibly done to prevent human shadows inadvertently falling on the water.)
5. The camp occupied during weir fishing should be located at a place from where the river is not visible. This would lessen the chance of a human shadow falling on the water. Also, fish are said to be shy and do not like to have people watching them.
6. One must not work in tents during the weir-fishing season, as fish will not come into the weir. Work or the repairing of tools should be done inside a special uncovered tent ring (*hannavik*: *savavik* in Rasmussen [1931: 67, 186], *sannavik* in Balikci [1989:

- 36]). (This admonition does not apply to hunting camps.)
7. Men and women must eat separately during the fishing season (also noted by Rasmussen [1931: 66]).
 8. One must not break fish bones during the fishing season.
 9. Dogs are not allowed to chew fish bones during the fishing season.
 10. One must not break rocks on the bank or in the river during the fishing season, as that would cause the fish to avoid the weir.
 11. The riverbed must not be dug into during the fishing season, even to deepen a weir.
 12. While fish are not assigned a definitive place in the summer/winter—land/sea dichotomy, they seem to be most closely associated with winter/sea. Rasmussen's [1931: 67] note that Nuliajuk [Sedna] 'is believed to keep a very strict watch upon man's doings at a salmon river,' which supports this interpretation.
 13. Menstruating and pregnant women must never enter the weir (noted also by Rasmussen [1931: 186]).
 14. Although urinating in a fish river is not generally prohibited, menstruating women should never urinate in a fish river. Women not menstruating are not so prohibited.
 15. A "tabooed person" [*tiringnaqtaq*: STEWART 2002] should never enter a weir nor touch the water of the river on which a weir is being used.
 16. When eating fish during the fishing season, one should try to avoid eating male and female fish together. If eaten together, it is particularly important not to damage or break the bones of those fish.
 17. According to Birket-Smith [1929: 119], the 'Caribou Eskimos must not eat trout [charr] in the open air in the winter, and boiled water must not be poured on the floor'. I did not hear of such admonitions in the Netsilik society.

4.2. Ritual Practices

1. Lamp soot is smeared on eyes of the "first fish": this is done so that the fish to come would not be frightened by human shadows on the water and thus avoid the weir.
2. Jose Angutinguniq's mother smeared soot on the "cheek" of the "first fish", speaking the words 'Go upstream'. After that, the fish was eaten. Jose did not interpret this ritual, but I had the impression that it was done to encourage a larger run.
3. During times of a poor catch, a miniature fish carved from wood is placed in a lemming nest, and the nest is then floated on the river. Also, to ensure that many fish would migrate upstream, empty bird nests were floated on the water during the autumn fishing season.

I have not been able to learn the significance of lemmings in hunting/fishing rituals, but informants make repeated reference to the power of lemming skins, particularly baby lemming skins with no hair. Rasmussen [1931: 169] notes that miniature harpoons or seal carvings were put into a bag made from a lemming skin and floated in sea ice cracks paralleling the shoreline in late spring. This was one of the ritual activities conducted when moving from the winter/sea sphere to the summer/land sphere and suggests that lemmings also somehow functioned in the sea/land dichotomy ritual scheme. Although informants did not give the reason why the lemming figured in weir

fishing, if the lemming is assumed to function as a “bridge” between the land and the sea, it may be possible that it was employed in the transition when sea charr went up the rivers.

4. The eating of fish and caribou meat at the same meal should be avoided, although Rasmussen [1931: 186] notes that fish bound downstream to the sea may be eaten with caribou. If caribou meat is eaten, one should wipe one’s tongue with lamp soot before eating fish. Rasmussen [1931: 186] notes that a pot in which seal meat had been cooked must be washed and soot rubbed on the inside before cooking “trout” (charr). Fish moving downstream to the sea may be eaten with seal meat [1931: 186], but never land-locked charr (*ikalukpik*). This admonition probably is also associated with the summer/winter—land/sea dichotomy.

I was not able to elicit similar observations concerning the eating of fish and caribou from informants, but the yet undetermined significance of soot as it concerns fishing is noted in 1. and 2. above.

5. Caribou bone marrow and brain, particularly favoured delicacies, should not be eaten while fishing at the weirs. The breaking of caribou marrow bones is also strictly prohibited (noted as well by Rasmussen [1931: 67]). On the other hand, frozen raw fish entrails, a delicacy, were not to be eaten when sealing at breathing holes [RASMUSSEN 1931: 37].
6. When a dying person admonishes the surviving family not to break certain bones in order to assure their good health, that family must put such “tabooed” bones (*haunniqingituq*) into a special cache (*haunniqkuhivik*), differentiated from caches of edible bones (*kulukvik*).
7. After a day of fishing, leisters should be placed on the riverbank with the head pointed upstream. This is said to prompt the fish to move upstream.
8. When a young girl catches her first fish, she slips that fish into her combination suit (*ataktak*)⁶ through the neck. The fish then slides down and out through the elimination aperture. The fish is then released into the river. This ritual may symbolise easy birth for the girl and be symbolic of regeneration.
9. Women must not sew during the fishing season. All clothing, particularly footwear (*kamik*), is to be sewn or repaired before going to the weirs (noted also by Rasmussen [1931: 67]).

5. DISCUSSION AND PROBLEMS FOR FUTURE CONSIDERATION

This short review of fishing activities in the Netsilik Inuit society indicates that fish constituted a significant, if not an essential, part of the diet. Charr and other fish were probably not just a secondary or “reserve” resource, but an integral part of the total subsistence system. Based upon this supposition, I further suggest that fish constituted a relatively dependable subsistence base supporting the less certain caribou and sea mammal hunting activities.

Our experience in the area of Kugaaruk shows that prodigious amounts of fish, primarily charr, can be taken at spring downstream weirs and tidal weirs, and again at the autumn upstream weirs. I have tallied only one lake ice episode, one spring downstream weir, one autumn weir

and one river ice net catch. Each yielded, respectively, about twenty charr (one day, two persons: 10 fish/day/person), eighty charr (one day, four persons: 20 fish/day/person), one hundred fifty charr (one day, five persons: 30 fish/day/person) and 1550 charr and whitefish (nine days, five persons: 36 fish/day/person).

Extrapolating from this data, it is quite probable that several tonnes of fish each year could be taken from around Pelly Bay alone, with a minimum expenditure of time and energy (Balikci estimates that one family could cache up to five hundred pounds of fish at the autumn weir [1989: 37]). Jose Angutinguniq tells of yearly fluctuations in charr runs, but says that there was never a year when no fish ran, or that ran in such small numbers as to cause a serious deficiency. I have no statistical data for other areas, but I hypothesise that the situation was basically similar in other areas where there are rivers with fish runs.

To my knowledge, very few catch data are available for fish in the Eastern Canadian Arctic [USHER and WENZEL 1987: 157], a phenomenon most certainly due to the disproportionate emphasis on hunting by Western researchers [HULAN 2002: 38–42, PÁLSSON 1988: 189], a point that I shall pursue further in a future paper.

5.1. Problems for Future Consideration

Field and informant data gathered during the period from 1975 to 1997, as well as supplementary informant data gathered in 1998, 1999 and 2003, support my hypothesis that fishing constituted the subsistence base-line for many Eastern Canadian Inuit groups, and the Netsilik in particular. Needless to say, this was a period of great technological change from the “traditional” period. Weir fishing today still employs only leisters, but netting has become an important, possibly the most important, means of catching fish migrating from the sea in July—September, as well as on the river ice in October and November.

I have not been able to accurately establish when nets were introduced into this area, but according to informant memory, it was probably not until the early twentieth-century that manufactured nets became available, although hand-made twine nets were probably used at an earlier time⁷). Hearne [in BIRKET-SMITH 1929: 118] notes that in the late eighteenth-century spearing and ‘angling’ were still the only means of catching fish. Although net floats, sinkers, shuttles and mesh gauges are reported from archaeological sites in other areas, [i.e. GIDDINGS 1964: 51; MORRISON 1988: 108, 2000: 22–23] and nineteenth century ethnographical accounts record the use of baleen, twisted sinew, babiche and fine rawhide nets [i.e. BOAS 1888: 108; MORRISON 2000: 6; MURDOCH 1988: 250–251, 284; NELSON 1983: 185–192], there is no evidence that nets were used in the Netsilik area prior to the introduction of hand-made twine nets or manufactured nets.

The ice-jigger (*iliuraik*) is a recent innovation to fishing methods in the Arctic, introduced from southern Canada (Milton Freeman and Fikret Berkes, personal communication⁸) into the Netsilik society probably in the 1950’s, according to Jose Angutinguniq’s recollection. Before the introduction of the ice-jigger, nets were pulled under the ice with a fish spear (*kakivak*) passed from holes opened at intervals corresponding to the length of the fish spear shaft.

Recent innovations such as nets and ice-jiggers have undoubtedly increased efficiency and the amount of fish harvested. However, even before the advent of these innovations, it was possible to harvest impressive amounts of fish at tidal weirs and river weirs, as well as on the

late spring lake ice. Moreover, neither informants nor the scientific literature report years of no charr runs, nor of severely depleted runs. This all supports my supposition that fish, particularly charr, constituted a relatively plentiful and dependable segment of the diets of many Inuit groups.

6. CONCLUSIONS

Based on fieldwork at Kugaaruk and data gleaned from literature concerning other Canadian Inuit societies, I have emphasised the importance of fishing in the subsistence economy. This partly results in the fact that during fieldwork I never perceived a hierarchical arrangement of hunting over fishing. I acknowledge that my research at Kugaaruk, an area noted for rich charr resources, may not be applicable to some areas where there are no fish rivers. However, I am convinced that fishing at Kugaaruk and many other Canadian Inuit societies constituted an indispensable part of the subsistence base of equal importance to the more thoroughly documented caribou and other mammal hunting. I base this suggestion upon the following observations:

1. Fish are available in many areas throughout the year and are a dependable source of food. There may be fluctuations over the years in the fish stock, but according to informant data, fish, and charr in particular, migrate in sizable numbers every year.
2. Fish, relatively easy to catch, allow women and children to contribute to the food supply even when adult male hunters are away on long, and sometimes unprofitable hunting forays. Although I have no data to substantiate this claim, I feel that fish may have also been an essential element of the subsistence base of hunting cultures when ice conditions or other circumstances contributed to hunting failure.
3. Fish are easier than seal or caribou meat to store for long periods by drying. Drying methods vary according to the season and condition of the fish, as witnessed by the many terms for dried fish, such as *piffi*, *kinngivik*, *mikigaqhiaq*, *nallaqtaq*, *nigitinnaq*, *atujuqtaq*, to list just a few. The importance of fish is also confirmed by the many terms, of which I recorded only a few in this paper, describing growth stage, condition and other circumstances.

Although fish may not always have constituted the major portion of Inuit caloric intake, I postulate that fish provided vital nourishment, often to tide over periods of poor hunting. As such, fishing, although not reported in detail in the literature and often not emphasised in Inuit narratives, constituted an essential segment of the Inuit subsistence regimen.

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NOTES

- 1) I will not discuss the trapping of fox, wolf and other fur-bearers herein.
- 2) *Salvelinus alpinus* is cited in the literature both as 'char' and 'charr'. In this paper, except in citation of the literature, I follow the scientific precedence of 'charr' [MCPHAIL 1961].
- 3) Simon Inarksaq (deceased), Jose Angutinguniq, Martha Tunnuq (Kittuitikku, deceased), Levi Illuiktuq.
- 4) Transliteration of Kugaaruk Netsilik Inuktitut terms as proposed by Keiichi Omura is tentative and subject to revision.
- 5) Except in cases where there is a discrepancy, I have not quoted the scientific literature, as it is basically in accord with informant data.
- 6) A child's combination suit has an aperture at the crotch that opens when the child squats to eliminate.
- 7) I have not included near-shore net fishing, as the Netsilik Inuit did not use *qayaqs* in the sea. Sea-net fishing by the Kugaaruk Netsilik Inuit probably began only after the introduction of wooden or metal boats in the mid-twentieth century.
- 8) The 1950 news release 'Eskimo Fishing Experiment at Port Burwell' by the Department of Northern Affairs and National Resources mentions the use of 'one torn trout net, two jiggers...' by the 'Eskimos' of Killinek at the northern tip of Arctic Quebec. I thank Dr. Milton Freeman for providing this rare reference to the use of ice-jiggers in the Arctic.

REFERENCES

BALIKCI, Asen

1964 *Development of Basic Socio-Economic Units in Two Eskimo Communities*, Bulletin 202, Ottawa: National Museums of Canada.

1989 [1970] *The Netsilik Eskimo*, Prospect Heights: Waveland Press [New York: Natural History Press].

BIRKET-SMITH, Kaj

1929 The Caribou Eskimos: Material and Social Life and Their Cultural Position: Descriptive Part, *Report of the Fifth Thule Expedition 1921-24*, Vol. 5, Copenhagen: Nordisk Forlag.

BOAS, Franz

1888 The Central Eskimo. *Sixth Annual Report of the Bureau of American Ethnology for 1884-1885*, Washington D.C.: Smithsonian Institution, pp. 399-699.

BRICE-BENNETT, Carol

1976 Inuit Land Use in the East-Central Canadian Arctic, In M. M. R. Freeman, (ed.) *Inuit Land Use and Occupancy Project* Vol. 1, pp. 63-82. Ottawa: Department of Indian and Northern Affairs.

GIDDINGS, James

1964 *The Archaeology of Cape Denbigh*. Brown University Press.

GLOVA, G. J. and P. J. MCCART

1978 *Studies of Arctic Char Populations in Nachvak Fiord, Labrador*. Calgary: Aquatic Environments Limited.

GRAINGER, E. H.

1953 On the Age, Growth, Migration, Reproductive Potential and Feeding Habits of the Arctic

- Char (*Salvelinus alpinus*) of Frobisher Bay, Baffin Island. *Journal of the Fisheries Research Board of Canada* 10-6: 326-370.
- GYSELMAN, Eric
 1984 The Seasonal Movements of Anadromous Arctic Charr at Nauyuk Lake, Northwest Territories, Canada. In Lionel Johnson and Bonnie Burns (eds.) *Biology of the Arctic Charr: Proceedings of the International Symposium on Arctic Charr*, pp. 575-578. Winnipeg: University of Manitoba Press.
- HULAN, Renee
 2002 *Northern Experience and the Myths of Canadian Culture*. Montreal: McGill-Queen's University Press.
- HUNTER, J. G.
 1970 Production of Arctic Char (*Salvelinus Alpinus Linnaeus*). *Technical Report* 231, Ste. Anne de Bellevue: Fisheries Research Board of Canada.
- JOHNSON, Lionel
 1976 Ecology of Arctic Populations of Lake Trout, *Salvelinus namaycush*, Lake Whitefish, *Coregonus clupeaformis*, Arctic Char, *S. Alpinus*, and Associated Species in Unexploited Lakes of the Canadian Northwest Territories. *Journal of the Fisheries Research Board of Canada* 33(10): 2459-2488, Ste.
 1989 The Anadromous Arctic Charr, *Salvelinus alpinus*, of Nauyuk Lake, N.W.T., Canada. *Physiol. Ecol. Japan, Special* 1: 201-227.
- JOHNSON, Lionel and Scott CAMPBELL
 1975 The Seaward Migration of Arctic Char (*Salvelinus Alpinus*) out of Nauyuk Lake, Kent Peninsula, Northwest Territories. Paper presented at the 28th Annual Meeting of the Canadian Conference on Freshwater Fisheries Research, January 1975, Vancouver.
- MATHIASSEN, Therkel
 1928 Material Culture of the Igululik Eskimos. *Report of the Fifth Thule Expedition 1921-24*, Vol. 6-1, Copenhagen: Nordisk Forlag.
- MCCART, P. J.
 1980 Review of the Systematics and Ecology of Arctic Char, *Salvelinus alpinus*, in the Western Arctic. *Canadian Technical Report of Fisheries & Aquatic Sciences* 935, Ottawa: Department of Fisheries and Oceans.
- MCPHAIL, J. D.
 1961 A Systematic Study of the *Salvelinus alpinus* Complex in North America. *Journal of the Fisheries Research Board of Canada* 18(5): 793-370.
- MORRISON, David
 1988 *The Kugaluk Site and the Nuvorugmiut: The Archaeology and History of a 19th Century Mackenzie Inuit Society*. Mercury Series, Archaeological Survey of Canada Paper 137, Hull: National Museums of Canada.
 2000 Inuvialuit Fishing and the Gutchiak Site. *Arctic Anthropology* 37(1): 1-42.
- MURDOCH, John
 1988 [1892] *Ethnological Results of the Point Barrow Expedition*. Washington D.C.: Smithsonian Institution Press.
- NELSON, Edward
 1983 [1898] *The Eskimo About the Bering Strait*. Washington D.C.: Smithsonian Institution Press.
- PÁLSSON, Gisli
 1988 Hunters and Gatherers of the Sea. In Tim Ingold, David Riches, James Woodburn (eds.), pp.

- 189–204. Oxford: Berg Publishers.
- RASMUSSEN, Knut
1931 The Netsilik Eskimos: Social Life and Spiritual Culture. *Report of the Fifth Thule Expedition*, Vol. 8, Copenhagen: Gyldendal.
- SCOTT, W. B. and E. J. CROSSMAN
1998 Arctic Char *Salvelinus alpinus* (Linnaeus), *Freshwater Fishes of Canada*. In W. B. Scott and E. J. Crossman (eds.), pp. 201–207. Oakville: Galt House Publications.
- SCOTT, W. B. and M. G. SCOTT
1988 *Salvelinus alpinus* (Arctic Char), *Atlantic Fishes of Canada*. In W. B. Scott and M. G. Scott (eds.), pp. 137–141. Toronto: University of Toronto Press.
- SPENCER, Robert
1959 The North Alaskan Eskimo: A Study in Ecology and Society (*Bureau of American Ethnology Bulletin* 171). Washington D.C.: Smithsonian Institution.
- STEWART, Henry
1992a Sedentarism and Subsistence Activities: Continuity and Change of Traditional Netsilik Inuit Subsistence and Foodways. In *Sedentary and/or Migratory Life in the North*, 6th International Abashiri Symposium, Association for Northern Cultural Promotion, pp. 41–47. (in Japanese)
1992b From Migratory to Sedentary Life: Transition in Netsilik Inuit Foodways. *Hunters of the Ocean and Rivers*, pp. 221–236. Tokyo: Nihon Broadcasting Association. (in Japanese)
1992c Netsilik Fishing Methods: The Weir. *Bulletin of the Hokkaido Museum of Northern Peoples* 1: 31–52. (in Japanese)
1993a Tidal Weirs in the Arctic: An Ethnological and Archaeological Study. *Shikan (The Historical Review)* 128: 80–95. (in Japanese)
1993b Foodways of Arctic Peoples. *Vesta* 15: 14–26 Tokyo: Ajinomoto Shoku no Bunka Sentaa. (in Japanese)
2002 The *Kipijuituq* in Netsilik Society: Changing Patterns of Gender and Patterns of Changing Gender. In Lisa Frink, Gregory A. Reinhardt, Rita S. Shepard (eds.) *Many Faces of Gender: Roles and Relationships through Time in Indigenous Northern Communities*, pp. 13–25. Boulder: University of Colorado Press.
- USHER, Peter, and George WENZEL
1987 Native Harvest Surveys and Statistics: A Critique of the Construction and Use. *Arctic* 40(2): 145–160.
- WHEELER, Alwyne
1975 *Salvelinus alpinus* (ARCTIC CHARR). *The World Encyclopedia of Fishes*, pp. 317–318, London: Macdonald.

