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Right whale taken at Akutan whaling station, early 1900s (courtesy of W. Lagen). See Catch Records of the Twenty North Pacific Right Whales . . . , p. 43.

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A Nineteenth-Century Mackenzie Inuit Site near Inuvik, Northwest Territories

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ABSTRACT. A small collection of artifacts obtained from an aboriginal Mackenzie Inuit grave eroded by the Mackenzie River is described. The site appears to date to within the second half of the 19th century, following European contact but before acculturative processes and population decline, which brought about the extinction of traditional Mackenzie Inuit culture.

Key words: Inuit, archaeology, Mackenzie delta, nineteenth century, artifacts, erosion

RÉSUMÉ. L'article décrit une petite collection d'artefacts recueillis d'une tombe aborigène d'Inuit du Mackenzie à la suite de l'érosion de cette dernière par le fleuve Mackenzie. Le site semble dater de la deuxième moitié du 19° siècle, après le premier contact européen mais avant le début des processus d'acculturation et du déclin de la population qui menèrent à l'extinction de la culture traditionnelle des Inuit du Mackenzie.

Mots clés: Inuit, archéologie, delta du Mackenzie, 19e siècle, artefacts, érosion

Traduit pour le journal par Maurice Guibord.

INTRODUCTION

Late in September 1982, the Prince of Wales Northern Heritage Centre was notified that human bones had been seen eroding from the bank of Oniak Channel, a branch of the Mackenzie River that flows near Inuvik, N.W.T. Due to the onset of winter, only a brief inspection of the site (hereinafter referred to as the Bombardier Channel site) was possible that year. The area was revisited early the following summer, by which time most of the site had been washed out of the river bank. By the end of the summer all traces of the site were erased. Thus, in less than one year a small but significant archaeological site was first exposed and then completely obliterated through the action of the Mackenzie River eroding its banks. The site is significant because of its location and historical context and also because artifacts obtained add to the scant knowledge we have of the material culture of 19th-century Mackenzie Inuit.

It should be stressed that the Prince of Wales Northern Heritage Centre, which is the agency of the Government of the Northwest Territories responsible for the protection of archaeological sites, does not normally encourage or undertake the excavation of burials. We did not excavate at this site, but did remove human bones for reburial. We also obtained a small collection of artifacts, and others reportedly picked up at the same location by a local trapper were sent to the author for examination. These artifacts are described in the following section.

THE BOMBARDIER CHANNEL SITE

Site Description

The Bombardier Channel site (designated NdTs-1 in the National Inventory of Prehistoric Sites) is situated at the juncture of Oniak and Bombardier channels in the Mackenzie delta, approximately 70 km south of the treeline (Fig. 1). When first visited, bones and cultural material were observed eroding from the river bank at about 4 m above a typical late-season low-water

level. These *in situ* materials were capped by logs ranging upward to 40 cm in diameter. The logs in turn were overlain by about 30 cm of alluvial silt in which an alder thicket had taken root. Initially, it seemed that human skeletal materials protruded from two discrete areas about 2.5 m apart. Without excavating it could not be determined whether two separate graves were represented, or whether bank erosion had exposed two sections of a single burial. By the following summer, however, most of the feature had slumped down the face of the bank and it was then apparent that there had been only one grave containing the remains of several individuals (Fig. 2).

These circumstances made it difficult to determine the configuration of the grave as it must have appeared in its original state. Fortunately, others that have been reported in the area provide helpful clues (cf. Osborne, 1952). It is likely that the bodies had been laid out on the ground within a rectangular frame of logs. Additional poles then were laid over the log frame, covering the bodies. The silt overburden probably accumulated as a result of natural depositional processes.

Description of Artifacts

Forty-nine artifacts were recovered by the author from the Bombardier Channel site. A few of these were found *in situ* in the erosional face of the river bank, but most either were obtained from slump blocks that had fallen from the bank or were picked up from the beach immediately below the grave. Although the assemblage is small, at least 20 categories of artifacts are represented.

Arrowheads: Seven unilaterally barbed bone and antler arrowheads were found, as well as the base of an eighth specimen of undetermined form.

The proximal ends of two of the arrowheads have been carved to form sharp tips. One of these, which has been fashioned from a caribou metapodial, has two barbs and a conical tang (Fig. 3a). The other self-tipped specimen is made from antler, has three barbs and is broken at the base.

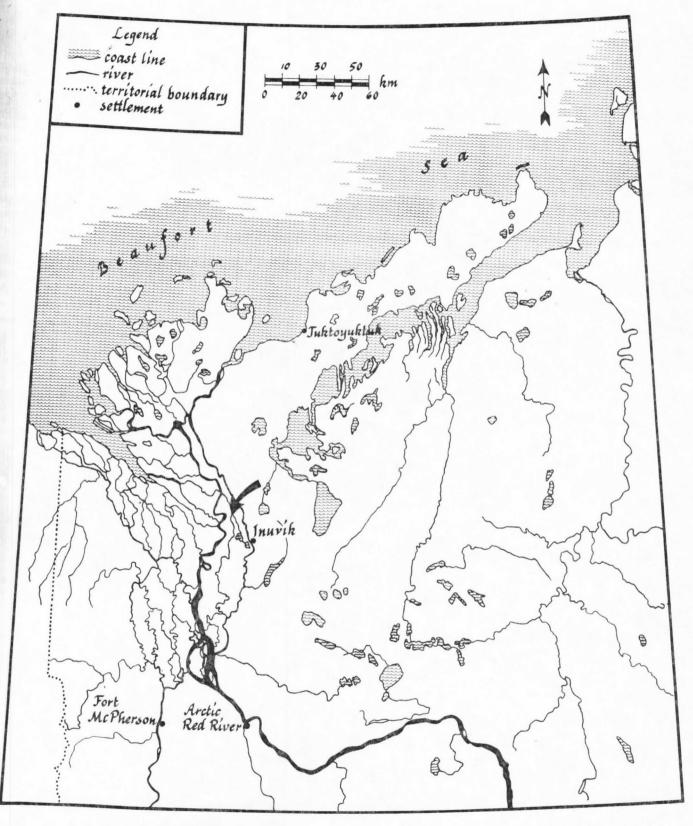


FIG. 1. Location of the Bombardier Channel site (indicated by arrow).

The remaining five more-or-less complete arrowheads had once been tipped with separate points. All are made from antler, have 3-8 barbs, and have had thin slots cut into their proximal ends. The slots on several of these arrowheads contain rust,

showing that they had been fitted with iron tips. Their proximal ends have been further modified by cutting a wide, shallow groove around the circumference to form a bed for lashing, which held the metal tip in place. Each of these five arrowheads

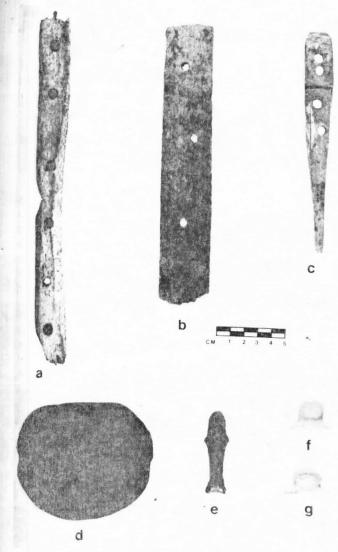


FIG. 4. Artifacts from the Bombardier Channel site (collected by the author): a — edging; b — sled shoe; c — edging; d — net sinker; e — beluga effigy; f, g — labrets.

result of use (Fig. 3h). The function of this artifact has not been determined.

Sled shoes: Two narrow (ca. 30-40 cm) slats cut from whale rib have been drilled for pegging to the bottom of sled runners (Fig. 4b).

Edging or mounting: Several bone and antler pieces have been shaped in a manner suggesting that they might have been used as edging in the construction of a boat, sled or some other large composite artifact. Figure 4a is a narrow section of whale rib with a v-shaped notch cut into one edge. It is broken at both ends, and one of these breaks occurred at the site of a second notch. Six holes have been drilled through it, and five of these still retain parts of wood dowels. The surface shown is flat and slightly polished; the opposite face is rough and has three transverse grooves cut into it. Three similar pieces, two of whale rib and the other of antler, also were found.

Shown in Figure 4c is a thin section of antler of a slightly different configuration. It, too, has been drilled and presumably was originally pegged to some other part of a composite artifact.

Other bone and antler artifacts: Other hard organic artifacts not shown include a short section of hollow bird bone that might

have served as a needle case, a battered bear canine with extensive surface polish, and a miscellaneous piece of cut bone.

Labrets: Three hat-shaped labrets were recovered (Fig. 4f, g). They vary somewhat in size and shape and appear to have been made from various grades of soft white limestone. Up until the early part of this century Inuit males of the western Arctic commonly wore labrets in incisions cut through the cheek, slightly below each corner of the mouth.

Lamp: Part of the body and rim of an oil-burning lamp carved from siltstone was found. It would have been quite large when complete — at least 50 cm long, and based on the proportions of other lamps of this type perhaps was even twice that length.

Net sinkers: Two fist-sized boulder spalls with notches chipped into two opposite edges probably were used as net weights (Fig. 4d). In addition, two split cobbles found might have been used for the same purpose. Cobbles otherwise are scarce in the river-deposited silts in the vicinity of the site.

Effigy: A small, finely chipped piece of dark green chert has been fashioned into the form of a beluga whale (Fig. 4e). The surface just forward of the tail flukes appears to be slightly polished, indicating that it may once have had a thong attached at that point. This suggests that it might have been used as a pendant.

Other stone artifacts: Two fragments of flake cores and three small flakes were found on the beach immediately below the burial area. One of each is chert and the others are slate. Also found were a tabular piece of slate and a milky quartz crystal. Neither showed evidence of having been worked, but both appeared to be out of place on the silt beach.

Miscellaneous metal: An iron strap and two scraps of copper are included in the assemblage. The copper pieces have a consistent thickness of 0.5 mm and thus are likely to be of European origin rather than native copper. The iron clearly is non-meteoric and therefore was also derived from a European source.

Bead: A sky-blue glass bead found at the site is round in cross section and flattened at both ends. It is 8 mm wide by 6 mm high and has a hole 3 mm in diameter drilled through it.

Wood box: A small wood box has been fashioned by hollowing out a rectangular block of wood and fitting it with a lid. Containers of this kind commonly are referred to as amulet boxes (McGhee, 1974:74).

Boat-shaped container: A bowl or dish had been prepared by carving a block of wood into a shape resembling a boat: pointed at either end, and with sides sloping to a flat bottom.

Mask: Figure 5 is a poorly preserved wooden mask carved to represent a human face. From the forehead the face slopes sharply to the orbits and then curves gently toward the cheeks. The area where the nose should be is missing. A mouth is indicated by an elliptical pattern of holes, one of which has a canine tooth of a small animal inserted into it. Parts of the surface, and especially the forehead, are stained a dark reddish-brown colour, and it appears that a pigment was applied to the mask.

Shaped timber: A piece of timber with a rectangular cross section may have been part of the runner of a komatik, a common form of Inuit sled that has cross pieces lashed directly to the top of the runners.

Wood stake: A willow branch sharpened at one end found on the beach below may be incidental to the burial. It is better preserved than the other wooden artifacts and possibly was carried to that location by the river.



FIG. 5. Mask carved from wood. Holes that formerly held teeth define the area around the mouth.

As already mentioned, a small collection of artifacts was loaned to the author by a trapper who reportedly had obtained them from the Bombardier Channel site. Six arrowheads are similar to those already described, while one other is distinctive as it has bilateral barbs. All are finely made, probably with the use of metal-edged tools. Other artifacts include a shank for a composite fish hook (Fig. 6a), a drill shaft (Fig. 6b), two wooden dolls (Fig. 6c,d) and a labret (Fig. 6e). The dolls are highly stylized anthropomorphic representations lacking any evidence of facial features, lower arms, hands or feet.

Interpretation of the Site

The most prominent feature at the Bombardier Channel site was the grave. Preliminary analysis of the human skeletal materials indicates that at least four bodies had been laid out in the log tomb. Partial skeletons of a child approximately 8-9 years of age, a female 15-18 years old, a 17-20-year-old male, and another male who was in his early 30s at the time of death were recovered. The cause of their deaths was not apparent. Bones of several animals, including moose, caribou, dog or wolf, muskrat and fish, were found in the slumping bank and on the beach. Cut marks on some of the animal bones show that they were butchered, evidence that a camp had been established there. Due to the erosion that ultimately destroyed the site, there

is some doubt attached to association of all these materia However, the tight areal concentration of the finds is a stroindication that all pertain to the same event.

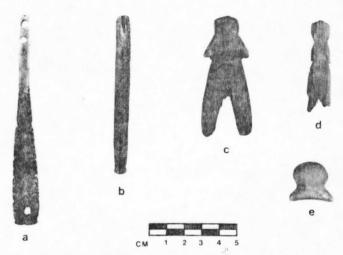


FIG. 6. Other artifacts from the Bombardier Channel site: a — fish hook shank b — drill shaft; c,d — dolls; e — labret.

The Bombardier Channel site is located in an area used both by Dene and Inuit in the recent past. However, the assemblage from the site is clearly Inuit in origin. This is demonstrated by the parts of a harpoon, the whalebone sled shoes and the fragment of an oil lamp, all of which are widespread Inuit traits The labrets and the ownership marks on arrowheads are characteristics of the western branch of Inuit, and a few other trait seem to be specific to the Mackenzie Inuit, who form part of tha branch. These include the self-pointed arrowheads, similar in a general way to specimens found in sites in the delta farther toward the coast (MacNeish, 1956: Pl. 5a; McGhee, 1974: Pl. 18d) and comparing even better to arrowheads found at Fort McPherson and Fort Good Hope (MacNeish, 1953:Pl. IV:12,13). Morrison (1984:205) has suggested that the Fort Good Hope and Fort McPherson arrowheads were made by Loucheux Indians, but those are locations to which Mackenzie Inuit travelled to trade starting in the latter half of the 19th century, and in my opinion they are more likely to be Inuit artifacts. The end-bladed arrowheads appear to be similar to specimens Petitot (1887:541) saw in use among the Inuit of the Mackenzie delta area during the late 1800s. They also compare closely with specimens found by Osborne (1952: Fig. 31:4-6) in historic period Mackenzie Inuit graves near the Blow River in northern Yukon. The log tomb grave, too, is in the style of the Mackenzie Inuit, as is the practice of leaving artifacts with the dead (Osborne, 1952; Stefansson, 1914:193). Fish hook shanks, amulet boxes and chipped stone are also found in other archaeological sites in the Mackenzie Inuit area (cf. McGhee, 1974; Osborne, 1952).

Other artifacts provide new information about the Mackenzie Inuit. Dolls are common in assemblages from Inuit archaeological sites; however, the particular style of the Bombardier Channel specimens appears to be unique. Also previously unreported as items of Mackenzie Inuit material culture are the composite lancehead with a split base, the wrist guard—although it is known from adjacent regions both to the west (Murdoch, 1892:210) and east (Jenness, 1945: Fig. 170)—the

chipped stone beluga effigy and the mask. Animal effigies, most commonly representations of bowhead whales, are found in other areas, and the specimen from the Bombardier Channel site probably is a reflection of the regional importance of the beluga. Masks are known over most of the Inuit (or "Inupiat") area of Alaska, where they are associated with a variety of ceremonies and were also used as grave markers (Nelson, 1899: 393-415; Murdoch, 1892), and the Bombardier Channel find suggests that similar practices were carried on in the Mackenzie Inuit area.

The presence of iron, copper and the glass bead indicates that the occupation at the site occurred within the historic period, which in the Mackenzie delta begins with Alexander Mackenzie's explorations in 1789. As discussed in the next section, the date for the site can probably be narrowed down to a period within the last half of the 19th century. Although the Bombardier Channel site may be considered to be fairly recent, at least in archaeological terms, it relates to a period in the history of the Mackenzie Inuit about which little is known.

Historical Context

The Mackenzie Inuit - or Siglit, as they referred to themselves - probably were the most numerous of the aboriginal peoples in the Canadian Arctic at the beginning of the historic era. Population estimates for the people included in that regional group range upward to 4000 (Stefansson, 1913:452), although 2500 may be a more realistic number (Usher, 1971a:171). Paradoxically, they are among the least known of the Canadian Inuit. This is due in part to their aggressiveness, which discouraged the first Europeans in the area from interacting closely with them, and also to massive reductions in population that occurred during the late 1800s and early 1900s due to introduced diseases. There are reports of outbreaks of scarlet fever occurring in the area in 1865, followed during the next several decades by epidemics of influenza, smallpox and measles (McGhee, 1974:5), and so hard hit were the Mackenzie Inuit that by the early years of the 20th century their numbers had been reduced to fewer than 10% of the pre-contact levels (Jenness, 1964:14). In addition, the period following 1890 witnessed a demographic restructuring throughout the Mackenzie delta as large numbers of Alaskan Inupiat moved east. Some came in search of richer lands following the over-exploitation of game in their home territories. Others were brought in to hunt caribou for the crews of American whaling ships, which by that time were over-wintering in the eastern Beaufort Sea. The combined effects of these events were devastating. Vilhjalmur Stefansson, who undertook the first anthropological investigations in the delta beginning in 1906, found even then that local narrative histories and memories of traditional ways were attenuated; in effect, Mackenzie Inuit culture no longer existed.

Despite the limitations of the scant and often distorted data gleaned from explorers', traders' and missionaries' journals, attempts have been made to reconstruct ethnographic details of the Mackenzie Inuit (Usher, 1971a; McGhee, 1974; Krech, 1979). Some aspects of these reconstructions provide a context for assessing further the significance of the Bombardier Channel find.

The aboriginal Mackenzie Inuit comprised at least five territorial groups distributed between the Alaskan-Yukon border and Cape Bathurst. The delta of the Mackenzie River appears to have been used by two of these groups, the Kittegaryumiut and

the Kopugmiut. Both had a primary dependence on beluga whales, which were obtained in sufficient quantity that the winters could be passed in large, permanent villages situated in the outer delta. Other subsistence pursuits also were important, and for much of the spring, summer and fall, apart from the whale hunting period, they dispersed into small groups to hunt and fish (McGhee, 1974:18-24).

Because of their large population, pressure on available resources in the vicinity of the winter villages probably caused some of the Kittegaryumiut and Kopugmiut to move into the inner delta area to fish and hunt. Alexander Mackenzie, while travelling through the delta by canoe in 1789, at almost every stop encountered the remains of temporary camps that his Indian informants identified as having been occupied by Inuit (cf. Mackenzie, 1970:197-199). The next recorded exploration of the delta took place in 1825 and 1826, when Captain John Franklin and Lieutenant Richardson led parties along separate branches of the Mackenzie River. They, too, noted deserted camps long before reaching the coast, and at least some of these appear to have been Inuit fishing camps (cf. Franklin, 1828:30, 31, 97, 188-189).

A desire to trade probably prompted some of these upstream forays. Even during the prehistoric period there appears to have been some exchange of goods with the Indians to the south (Mackenzie, 1970:92). Opportunities for trade increased following the establishment of the first of several fur trading posts to be known as Fort Good Hope in the lower Mackenzie valley in 1804, and with Peel's River Post (later known as Fort McPherson) even closer to the delta in 1840 (Usher, 1971b). However, those Mackenzie Inuit who maintained a pattern of seasonal dispersal from the outer delta to upstream localities probably did so primarily because of the need for the fish and game available in those areas, although quite likely they added trading to their other subsistence pursuits when the opportunity arose. Krech (1979:108) notes an occasion in 1826 when a single party consisting of several hundred Inuit males travelled by boat to the head of the delta to trade with - and perhaps raid -Loucheux (Kutchin) Indians who had set themselves up as middlemen in the local fur trade. This probably was an exceptional situation motivated by curiosity about the foreign items becoming available, and also by the need for defence due to the hostility between the two groups. It is more likely that the typical upstream camp consisted of only a few families.

This pattern probably continued through most of the 1800s, although upstream travel specifically for the purposes of trade is likely to have increased after about 1850, when the Mackenzie Inuit gained direct access to the Mackenzie valley trading posts. By 1890, however, major disruptions to the settlement pattern were taking place. American whalers had begun to frequent the eastern Beaufort Sea, and the Mackenzie Inuit found it more convenient to trade with them at coastal locations. By that time, population declines due to introduced disease may have reduced the pressure on the resources available near the coast, negating the need to travel to hunting and fishing camps at upstream locations. At any rate, fewer trips were made to the Mackenzie River trading posts, and the inner delta may have been effectively abandoned for a short period until Alaskan Inuit trappers settled into the area around the turn of the century (Krech, 1979:103).

There are a few clues that can be used to place the Bombardier Channel site within the foregoing reconstruction. The juncture of Bombardier and Oniak channels is well suited for a fishing

camp, as nets easily could be stretched across the narrow width of Bombardier Channel, and the archaeological remains at the site quite likely relate to the summer dispersed aspect of either the Kittegaryumiut or Kopugmiut settlement pattern. The European items provide a basis for assessing the age of the site. Russian trade goods apparently were available even before Mackenzie's time (MacDonald, 1966:17-19), but the relative abundance of the imported items (especially as it seems that some of the arrowheads were made using metal tools) provides reasonable grounds for believing that the occupation dates to the post-1850 period, when such goods became easier to obtain. This chronological estimate is bolstered by the presence of a multiple burial. Although tragedies leading to this kind of event must have been a common fact of traditional lifestyles, death due to any of the several diseases epidemic after 1865 is also a possibility. On the other hand, the presence of arrowheads in large numbers indicates that firearms were not easily obtained. Guns started to become common among the Inuit of the Mackenzie delta only after American whalers made them available, ca. 1890. Also, if the Bombardier Channel site dated to the post-1890 era, then more evidence suggesting an Americanized Inupiat presence would have been expected. Thus, the most reasonable chronological estimate for the events represented at the site is sometime between 1865 and 1890, although an earlier but still historic period date remains a possibility.

SUMMARY

Evidence obtained from the Bombardier Channel site before it was completely destroyed by the Mackenzie River indicates that a log tomb containing a multiple grave was built at a location also used as a fishing-hunting camp. These events appear to date within the last half of the 19th century and probably can be attributed to seasonal upstream forays by people belonging to either the Kopugmiut or Kittegaryumiut branches of the Mackenzie Inuit.

In addition to demonstrating the utility of historical and ethnographic observations for interpreting archaeological remains, the Bombardier Channel site contributes to our understanding of the anthropology of the Mackenzie Inuit in the following ways:

1. The site provides tangible evidence of summer dispersal of Mackenzie Inuit into the inner delta. Previously, this was known only through a few explorers' accounts.

2. A few artifacts are now recognized as Mackenzie Inuit traits that previously had been unreported. Perhaps most significant are the mask and the beluga effigy, which give insights to ideological components of the culture.

3. The blend of traditional traits with newly introduced items, such as the antler arrowheads with iron tips, is illustrative of the dynamic nature of Mackenzie Inuit adaptive processes.

The small artifact assemblage is significant as it pertains to a brief and poorly known transitional period that was followed by the almost complete demise of aboriginal Mackenzie Inuit culture. Since little information about this period is available in written records or is retained in the memories of people alive today, archaeological investigations are likely to be the best means of learning about traditional Mackenzie Inuit culture. Unfortunately, because the inner delta is so geomorphologically dynamic, sites like the one at Bombardier Channel are likely to be rare.

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REFERENCES

- BOAS, F. 1899. Property marks of the Alaskan Eskimo. American Anthropologist 1:601-613.
- FRANKLIN, J. 1828. Narrative of a second expedition to the shores of the Pole Sea in the years 1825, 1826, and 1827. London: John Murray. 318 p.
- JENNESS, D. 1946. Material culture of the Copper Eskimo. Ottawa: Report of the Canadian Arctic Expedition, 1913-18. Vol. XVI. 148 p.
- KRECH, S., III. 1979. Interethnic relations in the lower Mackenzie Rive region. Arctic Anthropology 16(2):102-122.
- MacFARLANE, R. 1890. On an expedition down the Begh-ula or Andersol River. Canadian Record of Science 4:28-53.
- MacKENZIE, A. 1970. The journals and letters of Sir Alexander Mackenzie W. Kaye Lamb, ed. Toronto: Macmillan of Canada. 551 p.
- MacNEISH, R.S. 1953. Archaeological reconnaissance in the Mackenzie Rive drainage. National Museums of Canada Bulletin 128:1-17.
- MacDONALD, T.H. 1966. Exploring the Northwest Territory. Sir Alexander Mackenzie's journal of a voyage by bark canoe from Lake Athabasca to the Pacific Ocean in the summer of 1789. Norman: University of Oklahoma Press. 133 p.
- McGHEE, R. 1974. Beluga hunters: An archaeological reconstruction of the history and culture of the Mackenzie Delta Kittegaryumiut. Newfoundland Social and Economic Studies 13.
- MORRISON, D. 1984. The late prehistoric period in the Mackenzie Valley. Arctic 37(3):195-209.
- MURDOCH, J. 1892. Ethnological results of the Point Barrow Expedition. Bureau of American Ethnology, Ninth Annual Report, 1887-8. 441 p.
- NELSON, E.W. 1899. The Eskimo about Bering Strait. Bureau of American Ethnology, Eighteenth Annual Report, 1896-7. 518 p.
- OSBORNE, D. 1952. Late Eskimo archaeology in the western Mackenzie Delta area. American Antiquity 18(1):30-39.
- PETITOT, FR.E. 1887. Les Grands Esquimaux. Paris: E. Plon, Nourrit et Cie. 308 p.
- STEFANSSON, V. 1913. The distribution of human and animal life in western Arctic America. Geographic Journal 41:449-60.
- ______. 1914. The Stefansson-Anderson Arctic Expedition of the American Museum of National History. American Museum of Natural History Anthropological Papers 14(1):1-395.
- USHER, P. 1971a. The western Canadian Arctic: A century of change. Anthropologies n.s. 13(1-2):169-83.