Archaeology of the Western Arctic Coast

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December 1993

About the Science Institute

The Science Institute of the Northwest Territories (SINT) was created by the NWT Legislative Assembly in 1984.

The aim of the organization is to improve the quality of life for NWT residents by applying scientific, technological and indigenous knowledge, to advance social and economic goals in the Northwest Territories.

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- promoting communication between scientists and the people of the communities in which they work;
- promoting public awareness of the importance of science, technology and indigenous knowledge;
- fostering a scientific community within the NWT which recognizes and uses the traditional knowledge of northern aboriginal peoples;
- supporting or conducting research which contributes to the social, cultural and economic prosperity of the people of the NWT.

Foreword

This report is the third in the Science Institute's Scientific Report Series and the first to focus on Archaeology. The report continues the Institute's aim of providing scientific information in a style and language that can be understood by the general reader in the Northwest Territories.

The author, Dr. David Morrison, is an archaeologist with the Archaeological Survey of Canada, a division of the Canadian Museum of Civilization, based in Hull, Quebec. Since 1984, Dr. Morrison has been involved in regional archaeological studies in the Western Arctic. His interest has focused on the history of the Inuvialuit people over the past 500 years.

The Science Institute would like to thank Dr. Morrison for the considerable effort involved in preparing this report, and the Archaeological Survey of Canada and the Canadian Museum of Civilization for allowing its publication.

Copies of this report may be obtained by writing to the Science Institute of the Northwest Territories.

Gary White
Director, Scientific Services
Science Institute of the Northwest Territories

Dr. David Morrison, author.

Archaeology on the Western Arctic coast

The Canadian Museum of Civilization has been running an archaeological program in the Western Arctic since 1985. This program is funded through the Northern Oil and Gas Action Plan, administered by Indian and Northern Affairs Canada. Our goal is to understand the history and prehistory of the area -- where archaeological sites are located and what kinds of sites we expect in different areas -- so that these sites can be protected. Archaeological sites represent the cultural heritage of many people, particularly native people. One reason why they are priceless is that they cannot be replaced after they have been ripped out to make harbour facilities or torn up by bulldozers.

We must also consider natural destruction due to the rapid coastal subsidence along the Beaufort Sea. Up to 50 feet a year is lost in some areas due to coastal erosion, destroying innumerable archaeological sites. On the Yukon coast there is almost nothing left older than about a hundred years. For example, Tent Island, on the western edge of the Delta, supported a large Inuvialuit village in 1826. Today it floods completely during a storm tide.

The first stage in any long-term archaeological project is a reconnaissance or survey. Probably the most common question asked of archaeologists is "how do you know where to dig?" Well, we do not dig randomly; first we have to find the sites. We do this by asking local people, and by getting out and looking ourselves. Because of the facilities of the Polar Continental Shelf Project in Tuktoyaktuk, we've done most of our looking in the Western Arctic by helicopter. We have found, or re-visited, over 400 archaeological sites in the past six years. In the summer of 1991, we supplemented helicopter searches with a boat survey in the Eskimo Lakes, to find out what we had missed from the air.

There are many different kinds of archaeological sites. There are small flake scatters, where someone sat down and chipped out a stone knife or arrow point,

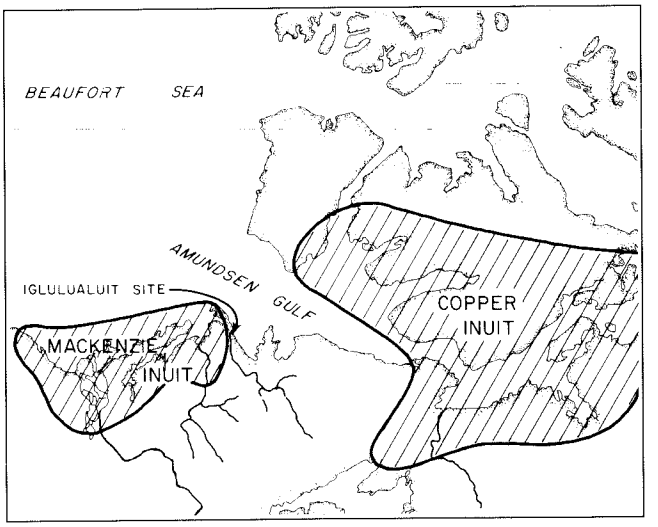
Tent Island, off the northeast Yukon coast, showing rapid shoreline erosion. During the last century, this was an important summer camping place, but now it floods completely during storm tides.

hundreds or perhaps even thousands of years ago. There are whaler's graves from the end of the last century, and there are also the collapsed ruins of Inuvialuit sod and driftwood houses.

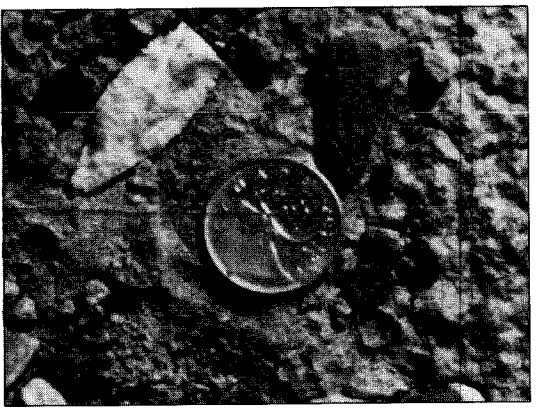
Finding the archaeological sites is only the first stage. Finding something out about them is the second stage. As much as possible, archaeologists try to combine scientific research with the goals of site protection. Archaeological sites are a resource to be managed, and a source of information to be discovered and interpreted. In some cases this means excavation.

A good example of an archaeological project is an excavation I did a few years ago near the mouth of the Horton River. The site has a traditional name, Iglulualuit, which means "many houses". It has the collapsed ruins of at least 30 houses, making it one of the largest sites in the Canadian Arctic. One thing which made the site interesting is its location, in an area which was historically unoccupied. There was no evidence that anyone lived in the area between Cape Bathurst and Dolphin and Union Straits when the British Navy arrived in the mid-19th century. The area formed a kind of buffer zone, separating the Mackenzie Inuvialuit and the much different Copper Inuit of the Central Arctic. Who lived at Iglulualuit, and when? Why was there such a big village there, and why was the area abandoned?

Remains of a late 19th or early 20th century Inuvialuit house, near MacKinley Bay, on the Tuktoyaktuk Peninsula. Inuvialuit have lived in similar houses for centuries.



Areas occupied by the Mackenzie Inuit (or Inuvialuit) and Copper Inuit during the last century. The Iglulualuit site is located just east of the traditional Mackenzie area.

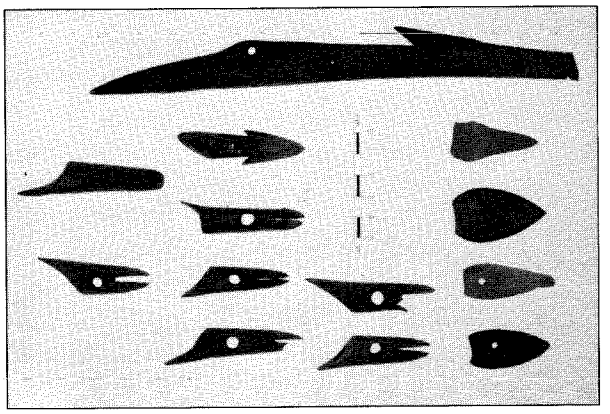


A small chipped stone knife or arrow point (white stone object next to the Canadian 25-cent piece), shown as found on the ground surface. The style suggests it was lost by early Inuit hunters about 3500 years ago.

The Iglulualuit site from the air. The dark patches of vegetation mark the location of collapsed houses. One of the houses is in the process of being excavated.

Heavy clay hampered drainage, and eventually the excavations filled with rain and melt water.

Hunting tools from Iglulualuit, made of bone, antler or ground stone. To the left is a large dart or lance head, with the tip still unfinished. Beside it are four harpoon blades and eight harpoon heads, one unfinished.



Our field party flew in from Inuvik on a Twin Otter. Archaeologists usually have very small budgets compared with other kinds of scientific parties, so four of us lived in canvas tents, without re-supply flights or fresh food.

When we arrived, the collapsed house ruins looked like low green mounds about a foot or so high and 10 metres across, supporting a lusher vegetation than the surrounding tundra. Their low profile suggested some antiquity, but it soon became apparent that the houses were, in fact, being slowly buried by material washed down the Smoking Hills, located just inland of the site.

We spent about six weeks digging at two of the houses. The sod was shovelled off, and then small trowels were used for the actual excavation. The standard technique involves laying out a 2-metre grid over each house to maintain horizontal control. Each 2-metre square is numbered, and a map is made of each square as it is excavated, showing the location of architectural features and artifacts. Animal bone is also collected in each square. The most common thing we found was animal bone and broken tools. Of course, what we were digging was someone else's garbage!

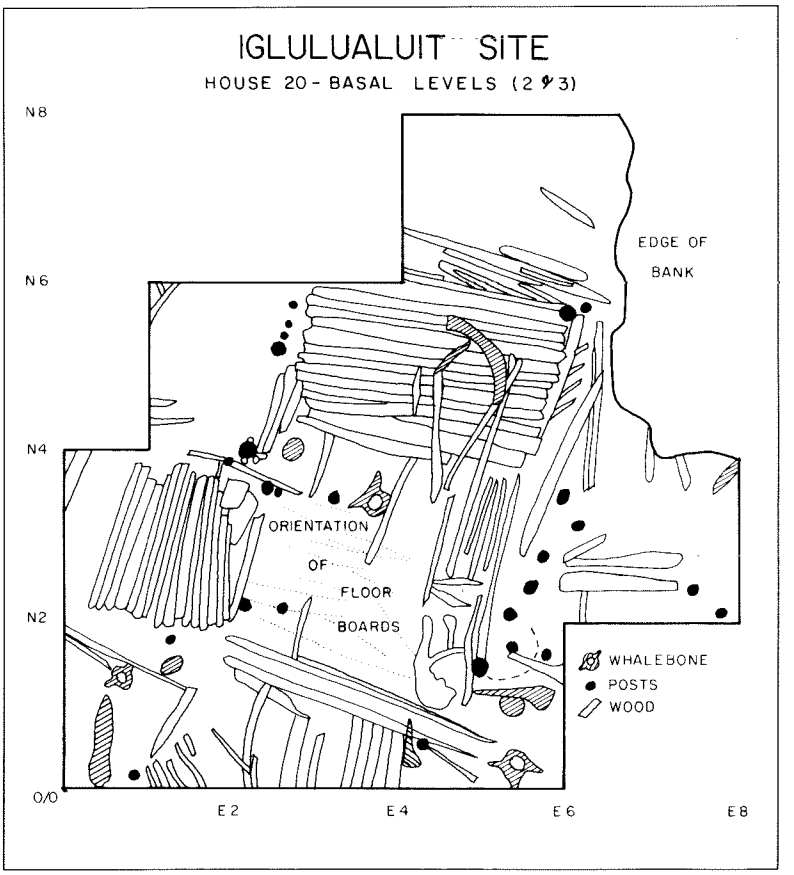
There were problems because of the soil, which was heavy clay. Permafrost is also a perpetual problem in the Arctic. The best way of digging permafrost is to expose large areas, perhaps 6 or 8 squares (about 24 to 36 square metres) and allow the sun to slowly melt the frost, scraping it down each day. Depending on the weather you can get up to 15 to 20 centimetres of melt a day. In the heavy clay at Iglulualuit, the

drainage was so poor that the excavation began to fill with water as it melted. A heavy rain storm at the end of the summer meant that we did not get either house fully excavated.

We did complete enough work to make some sense out of the site. Both houses were cross-shaped when seen from above, with an entrance passage on one side and small rooms or alcoves on the other three sides. In these alcoves were sleeping platforms consisting of poles laid on a raised platform. Roofs and walls were supported by a frame of large driftwood posts, covered with a thick layer of insulating sod. Floors were never fully exposed because of standing water, but were clearly made of logs, adzed flat on the upper surfaces. These were winter houses, unsuitable for living in during the summer. The style is identical to that used by the Inuit or Inuvialuit of the Mackenzie Delta area during the 19th century. Other Inuit used different kinds of houses; snowhouses to the east, and single-roomed sod and driftwood houses in Alaska.

The tools we found told a similar story. Most were like those found in comparatively recent sites in the Mackenzie Delta area, and quite different from those used by the Inuit of the Central Arctic. Included were narrow bone antler shanks for fish hooks, abundant crude pottery (no soapstone was found), and the particular types of harpoon head used for seal hunting. The style of the artifacts and the absence of European trade goods indicates a date between about 500 and 200 years ago. Radiocarbon dates support this. One house dated to about 1450 A.D.; the other to about 1750 A.D.

Close-up of the excavations, showing broken and collapsed wall posts. In the foreground the pole floor probably represents a sleeping platform.



Floor plan of one of the houses. Although badly damaged, the house seems to be of the typical Inuvialuit cross-shaped plan, with sleeping platforms on three sides of a central floor area. The fourth side (to the right) was occupied by the door.

Mackenzie Inuit chief (or umialik) from the Anderson River area. Drawn by the 19th century missionary, Emile Petitot.

The large number of houses at Iglulualuit does not mean that there was ever a large village there. The houses were not all occupied at the same time. Large amounts of material washed off the Smoking Hills would have buried house floors in several inches of heavy clay and mud at each spring run-off. In the fall, when people returned to the site, it would often have been easier to build a new house rather than try to muck out an old one.

Even if a few families returned every year it would have resulted in a very large collection of house ruins after a few hundred years. We'll probably never know the details, since it is impossible to know how many houses were occupied at one time, even if we could excavate all of them.

After excavating only two houses it is difficult to know when the site was first occupied. Probably, sometime before 1450 A.D. However, I did find historical information about when Iglulualuit, and the general Franklin Bay area, were last occupied.

In 1910, the explorer Vihljalmur Stefansson was the first outsider to notice the site. He was told by one of his Inuit travelling companions that an old woman, who lived at Baillie Island, had been born in Franklin Bay and told stories of the site when it was a living village. Her name was Panigyuk, and she was thought to be about 75 years old in 1910. Stefansson never talked with her, but did learn of her story from other Inuit.

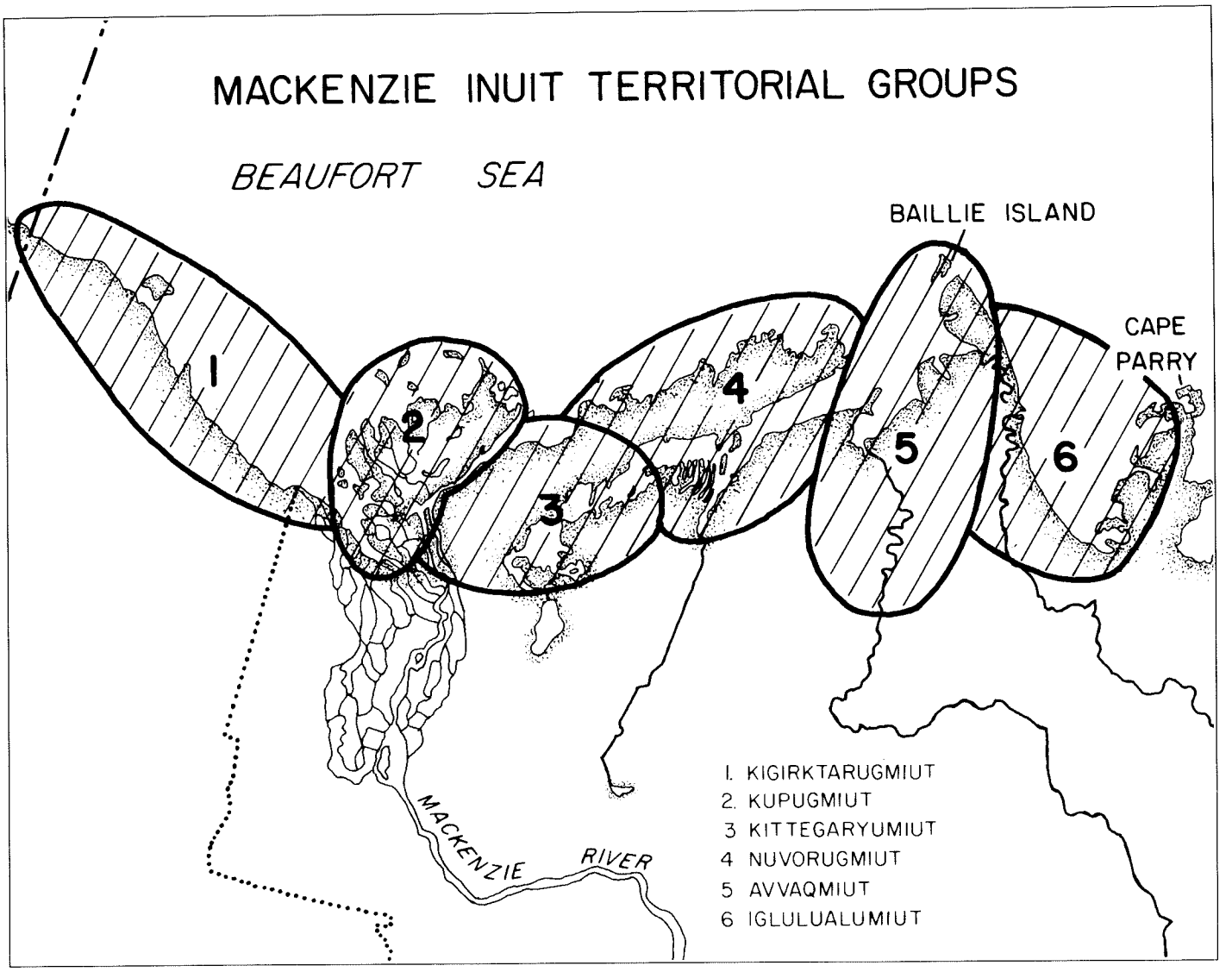
Panigyuk was born in Franklin Bay about 1835 and lived at a village called Okat, about 50 kilometres southeast of Iglulualuit. She was still a young girl when her family abandoned the area due to starvation and disease. She and the rest of the survivors moved to Baillie Island in time to see the explorer, Sir John Richardson, when he visited there in 1848.

It is Panigyuk who is the source of the name Iglulualuit. According to her, all the Inuit of Franklin Bay used to congregate there each spring to hunt seals. She also reported that trade between the Franklin Bay people and those of Baillie Island took place at Iglulualuit, but that the two peoples otherwise had little contact with each other.

Excavations at Iglulualuit confirm and amplify Panigyuk's account. We were able to demonstrate an 18th century occupation at the site, and it is possible that a few of the houses might have been occupied into the 19th century. And as could be predicted from Panigyuk's account, by far the most common kind of animal bones were seal bones. In fact, over 80 per cent of the animal bones were seal, representing at least 51 individual seals.

These people were plainly a branch of the Mackenzie Inuvialuit. They lived in Mackenzie Inuvialuit houses and used Mackenzie Inuvialuit-styled tools. Moreover, according to Stefansson they were considered by the Baillie Islanders as being "like themselves" -- that is to say, they were not foreigners but were territorially separate.

From explorers' accounts and oral histories gathered early in this century, ethnohistorians have determined that there were about five territorially distinct Inuvialuit societies during the mid-19th century. Each occupied a particular area, centred around a large central village, for which the group was named. The best



Mackenzie Inuit territorial groups. Ranges are based on 19th and early 20th century documentary sources. The Iglulualumiut are group six.

known today would be the Kittegaryumiut, named for Kittigazuit at the mouth of the East Channel, and the Avvaqmiut of Cape Bathurst and Baillie Island, where there was a village known as Avvaq, now washed into the sea.

It is clear that during the early 19th century there was a sixth group, whom we can name the Iglulualumiut. They seem to have occupied the whole area of Franklin Bay as far east as Cape Parry. They might have numbered a few hundred people.

As for what happened to them, we have Panigyuk's account of disease and starvation. The timing, around 1840 or 1845, suggests that this would be European disease, probably spread from Hudson's Bay Company posts on the Mackenzie River. We know that the Hare Indians, who were trading into Fort Good Hope, were also trading with eastern Mackenzie Inuit groups between the 1820s and the 1860s. They were decimated by disease as early as 1825 and were presumably the immediate source of contagion. The Iglulualumiut seem to have been the first Inuvialuit victims of the massive population disruptions which followed in the wake of the fur trade and the whaling industry.

Notes