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THE ARCHAEOLGY AND HISTORY OF AN ARCTIC MISSION, HERSCHEL ISLAND, YUKON

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ABSTRACT

The following paper is a discussion of the results of the excavation, analysis, and interpretation of material from an early twentieth-century refuse pit on Herschel Island Territorial Park. Occupations of the island, located off the north coast of the Yukon Territory, were the focus of excavations of the Qikiqtaruk Archaeology Project, directed by Max Friesen of McGill University, in the summers of 1990, 1991, and 1992. The feature which is the subject of the present paper was excavated in 1991 and is part of a large, multi-occupational settlement site at Pauline Cove, on the southeast shore of the island (NjVi-3). The site includes historic and prehistoric Inuvialuit dwelling features and non-native structures dating from the beginning of the whaling period in the early 1890s to the decline of the fur trade in the 1930s. The feature is associated with the occupation of the mission house, which dates from 1916 to the late 1920s. This paper presents the archaeological and documentary data relating to this occupation and discusses it in terms of recent developments in historical archaeological theory and the environmental, historical, and socio-cultural context of the site. It is the aim of the paper to demonstrate that the archaeological features of the site relate in a meaningful way to the dynamics of social interaction in the Greater Mackenzie Delta area following the collapse of the whaling fishery in 1906.

RÉSUMÉ

En 1991, dans le cadre du Projet archéologique Qikiqtaruk, on fouilla un dépotoire au site complexe de Pauline Cove (NjVi-3), situé dans le secteur sud-est de l'île Herschel, au Yukon. On y retrouve des structures d'habitation Inuvialuit préhistoriques et historiques ainsi que des structures d'origine non-autochtones datant du début de la période de la chasse à la baleine (années 1890) et allant jusqu'à la fin d l'ère de la trappe, vers les années 1930. La fosse à déchet est associée à la résidence du missionnaire qui occupa l'endroit entre 1916 et la fin des années 1920. On y présente des données archéologiques et archivistiques qui portent sur le contexte envrionnemental, historique et socio-culturel de l'endroit. Ces analyses démontrent que les structures archéologiques du site reflètent la dynamique de l'interaction sociale dans la région du delta du fleuve Mackenzie suivant la fin de la période de la chasse à la baleine en 1906.

ACKNOWLEDGEMENTS

At the top of my list of people to thank are my parents, Diane and Bob Saxberg, for their support and good humour throughout my academic career. No, Dad, it's not War and Peace, but, like I said, Tolstoy didn't have artifacts.

In addition, the material discussed here was obtained thanks to the generosity of Max Friesen, director of the Qikiqtaruk Archaeology Project. Max not only allowed me to analyze the material, but also lent me some of his precious field time and crew-members. Those people, Richard Tardiff, Sr., Doris Zibauer, and for a few hours, Pete Dawson, lent their knowledge and expertise to the project and were great comrades. I was especially glad to work with Doris again as I knew she would love Herschel Island, too.

The Qikiqtaruk Archaeology Project was supported by the Northern Oil and Gas Action Plan (NOGAP), Yukon Tourism Heritage Branch, the Polar Continental Shelf Project, and the Inuvik Research Centre of the Science Institute of the Northwest Territories. I was able to be a part of it thanks to funding provided by the Arctic Working Group of the University of Toronto through the Northern Scientific Training Programme. Dr. Gary Crawford of the Department of Anthropology, University of Toronto, assisted me in acquiring the funding and gave valuable advice on my work.

I am also grateful to the staffs of the General Synod Archives of the Anglican Church of Canada in Toronto, and the Royal Canadian Mounted Police Archives in Ottawa for their help in finding what I needed.

In Ottawa, I was fortunate to meet Mrs. Shiela C. Thomson, who was born in the mission house on Herschel Island. She kindly allowed me access to some of her mother's writings and gave me tea. Both Mr. and Mrs. Thomson were wonderfully accommodating.

In Toronto, I was able to use the Archaeo-Osteology Lab thanks to the continual generosity of Dr. Howard Savage. I must also acknowledge my colleagues at the University of Toronto, particularly my office- and lab-mates, who made the work more enjoyable. I especially thank Alicia Hawkins for being a friend and somebody to commiserate with in what was sometimes a difficult year.

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Chapter 1 - Introduction

OBJECTIVES OF RESEARCH

Recent developments in archaeological theory have called for the examination of a wider range of human behaviours and social relationships by archaeological means than ever before. With a new concentration on the active roles of artifacts and the comprehension of cultural meaning and a move away from normative frameworks and positivism, archaeologists believe that it is possible to do more than explain the archaeological record in terms of patterns and general trends. The establishment of context and the understanding of long-term development are important factors in decoding meaning (Hodder 1987a; 1987b). Historical archaeologists, with their access to the documentary record, can and do contribute greatly to this perspective (see Beaudry 1988; Leone and Potter 1988; Little 1992a; McGuire and Paynter 1991). In such studies, gardens have become enforcers of a hegemonic status quo and ceramics and bottles have resisted the ideologies and social realities of domination.

In this paper, I interpret results of the excavation of an early twentieth-century refuse pit in terms of social relationships and social power in a unique situation. The feature is located on Herschel Island, Yukon, and is part of a site once briefly occupied by many interest groups with various designs on the north, striving to accomplish their goals. The contents of this particular midden were deposited by Anglican missionary families and individuals between 1916 and the late 1920's. I hope to demonstrate that this site may represent a small-scale expression of a widespread historical phenomenon and explain that expression as the result of deliberate actions to advance the cause of the missions and resist the cultural domination of the local society. I do not imagine that I can prove what I conclude, since with only this archaeological feature at my disposal, my data are limited. However, I have documentary information, and I can present a direction for future research on non-native sites in the north.

The excavation of the refuse pit associated with the early twentieth-century occupation of St. Patrick's Anglican mission house on Herschel Island, took place in the summer of 1991 as part of the Qikiqtaruk Archaeology Project. The project was instigated in 1990 to examine the archaeological expression of changes in local Inuvialuit culture during the contact period and to provide interpretive material for Herschel Island Territorial Park. Over the 1990, 1991, and 1992 seasons, the crew, directed by Max Friesen of McGill University, excavated a series of prehistoric to historic Inuvialuit houses and middens at Pauline Cove and Avadlek Spit, on the southeast and southwest shores, respectively, of the island (Pauline Cove is shown in Figure 1 and the archaeological features of the site in Figure 2). The goals of the project did not include the examination of non-native remains on the island, and, when an historic non-native midden was encountered overlying an ephemeral native feature in a mound behind the 1916 mission house (Figure 3),

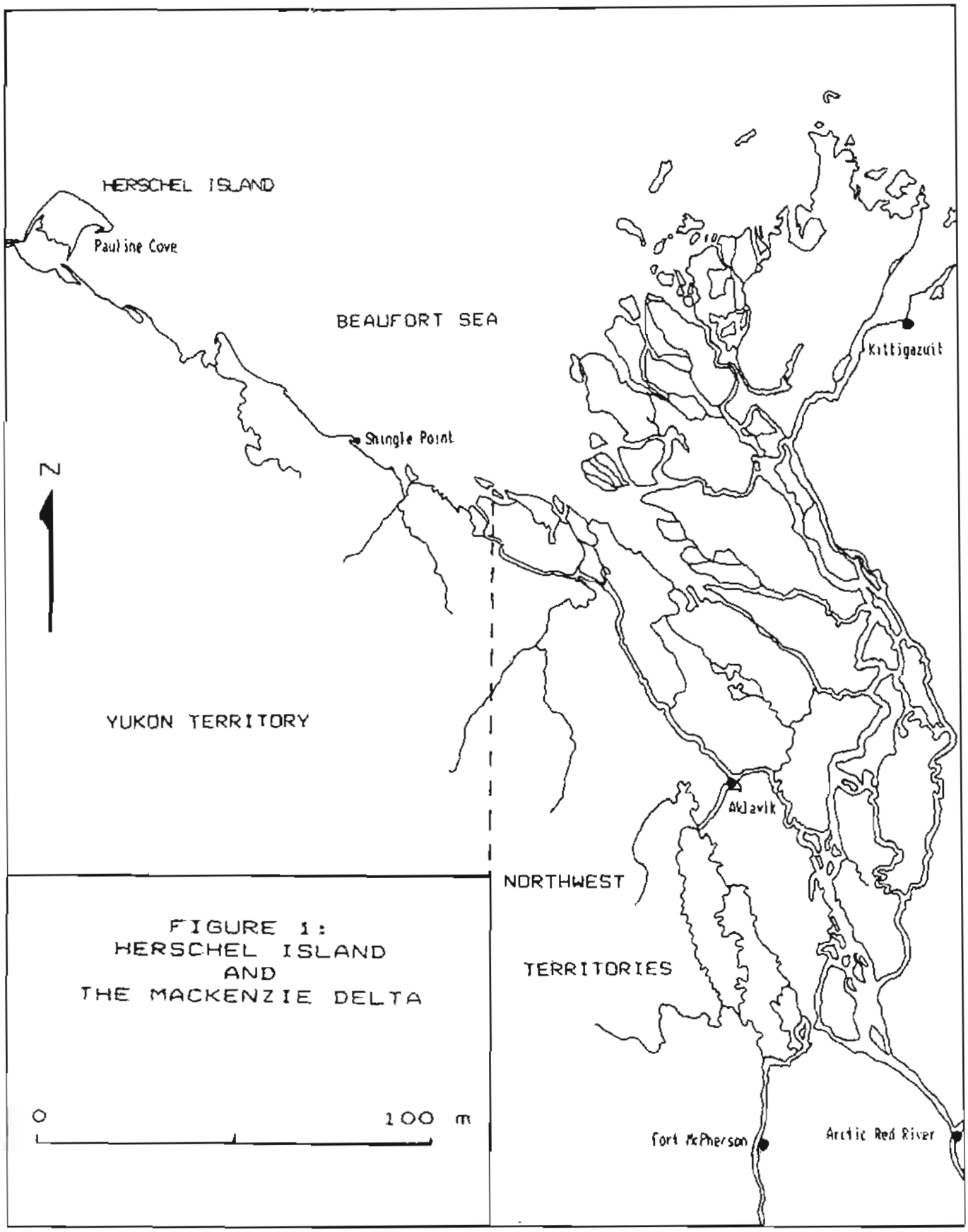


FIGURE 1:
HERSCHEL ISLAND
AND
THE MACKENZIE DELTA

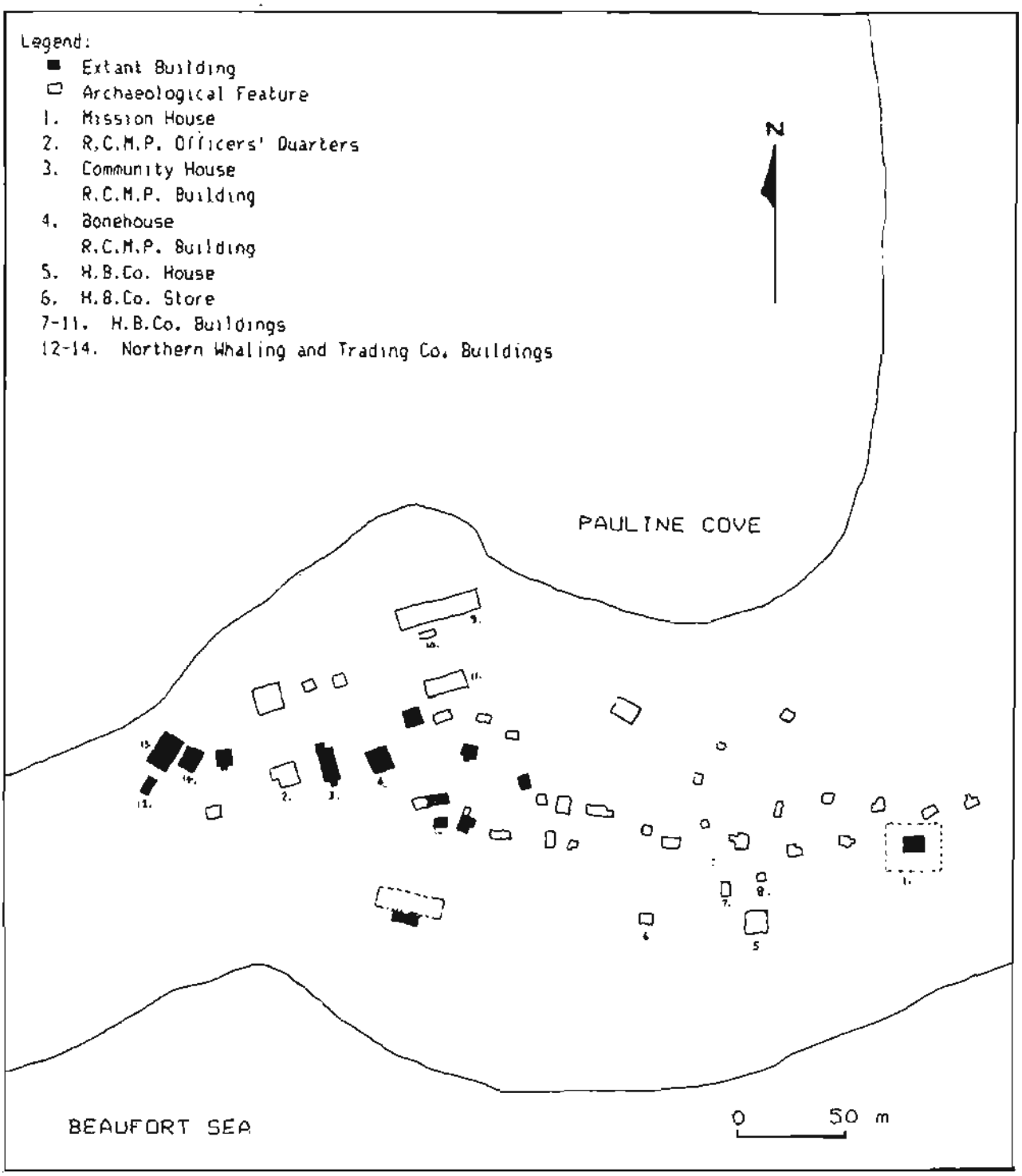


FIGURE 2: HERSCHEL ISLAND SETTLEMENT AREA (AFTER RILEY 1989)

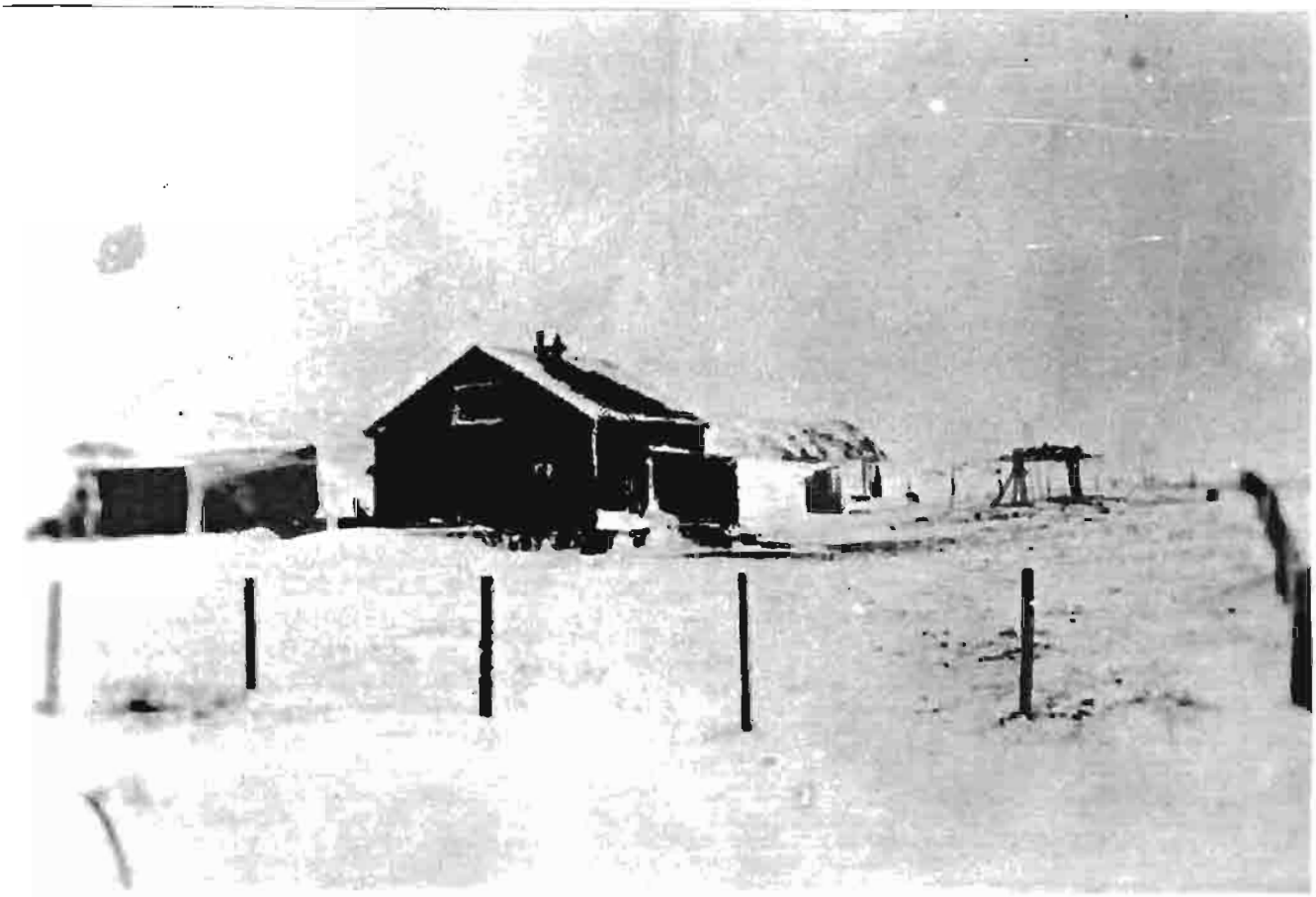


Figure 3: The mission house on Herschel Island, as seen from the west, date unknown.
Photograph courtesy of the General Synod Archives, Anglican Church of Canada.

the responsibility of excavation of that feature was turned over to myself and a crew which usually consisted of 2 skilled excavators. The goals of the excavation were then redefined to examine aspects of the missionaries' lives in the Arctic as evidenced by the contents of that particular midden and its context.

During the course of the excavation, it became apparent to us how little the garbage of the mission resembled the native sites we had excavated to that time. The material appeared to suggest that the missionaries made few concessions to living in the north. Consequently, I examined the remains of this midden and documents associated with the period of occupation of the mission house in the Western Canadian Arctic as evidence of a colonial process in the north documented by historians and sociologists (ie. Zaslow 1971, Clark 1962). Zaslow suggests that the archetype of northern development is the result of the wholesale transplantation of southern Canadian institutions into a new environment (1971: 283). Stone (1981) argues that even southern social structures were reconstructed on Herschel Island, resulting in the stratification of social associations on the basis of socio-economic background and thus the exclusion of some individuals from certain types of encounters. If this is the case, can this configuration be recognized on a more local level, even down to the level of the household? I hypothesized that this would manifest itself in an arrangement where goods which are not readily available locally would dominate specific non-native assemblages and that these assemblages would be more similar to comparable southern collections than contemporaneous northern native ones or even other non-native ones. I expect that there would be some variation due to the type of non-native individuals who inhabited a given site and their reasons for being in the north. It is likely that the feature analyzed here is an ideal example to begin with in that it was the result of missionary activities. Missionaries came to the north with the specific mandate of assimilation and recruitment of native peoples for their particular religion. A trader or trapper would have no such ambitions and therefore it would be unlikely that they would go to such an effort not to change their traditional approaches to their surroundings.

Thus the assemblage to be discussed here is valuable in that it is a unique example of a specific non-native occupation in the far north and, even on a small scale, can contribute to our understanding of processes relating to culture contact and ethnic identity. This study would be more useful if there were a regional archaeological context in which to place it, in that it could be compared to different types of sites of the general age in the same region and further to the south, but, due to the late age, few such sites have been investigated. However, this study can be considered the beginning of academic archaeological investigation of recent sites in the greater Mackenzie Delta culture area which will contribute an historical framework to ethnological work done there in the post-war period.

In the remainder of this chapter, I will establish the environmental, historical, social, and cultural context of the site

with brief discussions of each aspect; elaborate on the framework of archaeological theory which led to this paper; and describe the methods of excavation and analysis which were employed over the course of the project.

SITE BACKGROUND

ENVIRONMENT

Herschel Island is located in the Beaufort Sea off the north coast of the Yukon Territory (Figure 1). The Beaufort Sea is very shallow, averaging only 70 feet deep. The island was formed during the last ice age when it was pushed up from the bottom of the Beaufort Sea near the Mackenzie Delta by glacial ice and moved in that way to its present location. Currents in the sea constantly erode the island in some places and build it up in others, forming sand spits. Most of the spits on Herschel are found on the south side of the island and point roughly south. One, however, Simpson Point, is oriented east/west. It is this point which encloses the natural harbour known as Pauline Cove and upon which people from the later Thule to the American whalers built settlements (Figure 2).

On Simpson Point, the soil is sandy with some clay pockets and the elevation is very low. It is therefore prone to the formation of lagoons and swampy areas. It is also a dynamic environment; as the sea erodes the banks and builds up the spits. The present form of Simpson Point is not the same as it was when the Thule settled it, nor as it was at the closing of the R.C.M.P. detachment in the 1964.

The warm season is short on Herschel, as in most arctic locations. It begins in late June and ends in mid-August. These months are notable for the amount of sunlight, if not for the weather. The temperature averages 10-15 degrees Celsius, although the Sea is not always free of ice floes during this time, and it is not unusual to have the occasional snowfall. The climate all along the Yukon coast, including Herschel Island, gets more precipitation than many other parts of the Arctic and the weather changes frequently.

Herschel Island is famous for the variety of wildflowers which bloom in the short summer. It is also the summer home to a great number of migratory waterfowl. Common bird species include common eiders, tundra swans, brants, three species of geese, many species of ducks, and all four species of loons. The most common raptors are sharp-shinned hawks, snowy owls, and short-eared owls. Other birds include sandhill cranes, ptarmigans, snow buntings, glaucous gulls, jaegers, and various shorebirds.

The most common mammals on the island are small, including mice and lemmings. These are food for the large population of red and arctic foxes. Ringed seals are the most common aquatic mammal, although bearded seals do occur. Beluga are frequently sighted and bowhead, who mainly stay near the permanent pack ice, are not far away. Polar bears and grizzlies have both been seen on the island.

The Grizzlies usually come onto the island in the spring, via the ice and live primarily on small mammals while on the island.

The mainland of the Yukon North Slope is less than a kilometre from the island at its closest (the south end of Avadlek Spit). A wide variety of mammals are found on the mainland, some of which occasionally cross to the island. These include musk-oxen, caribou, moose, and lynx.

Fish species include salt-water and anadromous species, as the island is located near to the mouths of the Firth and Malcolm Rivers. These include arctic char, herring, and whitefish. Inconnu and burbot will enter brackish water near the mouths of rivers.

One of the most important aspects of the natural environment of Herschel Island, and the Western Arctic in general, is the abundance of driftwood. The currents from Alaska and the Mackenzie Delta dump large amounts of wood along the coastlines of the Western Arctic. The wood can often be in the form of huge logs and was essential to local inhabitants throughout the history of habitation.

Another important factor is the availability of fresh water. There are a few small ponds on the island and some intermittent streams. The highest volume of fresh water occurs in the spring and early summer when the ice is melting. In the fall and winter, chunks of ice from the interior lakes were cut by the whalers for their water needs.

HISTORY

From archaeological data recovered during a series of surveys and excavations on Herschel Island from the early 1970's to the 1990's (Yorga 1980; Friesen 1991, 1992), it is known that the earliest occupants of the island were part of the archaeological cultural construct known as the Western Thule. The Thule are probably direct ancestors of the Inuvialuit who resided in the area in historic times and whose descendants live in the Delta region today (see McGhee 1988 for a discussion of early historic Inuvialuit culture). This section, however, will discuss the history of non-native exploration and occupation as it is more relevant to the heritage of the site in question (see Appendix I for a chronology of events). For a more complete historical profile of the island, see Ingram and Dobrowolsky (1989b).

Herschel Island was encountered and named in 1826 by Sir John Franklin. The Inuvialuit living on the island throughout the nineteenth century probably participated in trade networks with neighbouring groups for European trade goods, both British from the south and Russian from the West. Sustained contact between these groups did not develop until the arrival of the American whalers in 1889.

In the late nineteenth century, the market for "whalebone" (actually the baleen) was at its peak due to the increasing use of the material in corsets and bodices of women's fashions. The whale fishery became such a lucrative business, in fact, that whalers

based out of San Francisco and New England pushed further and further north in search of the bowhead whale which was prized for its baleen. By the time the whalers reached Herschel Island, it was no longer practical, due to distance, to return to the south in the same ice-free season and they were forced to winter over on the island, with the ships frozen in Pauline Cove. Pauline Cove is one of few deep natural harbours along the coast of the Beaufort Sea from Point Barrow to the Mackenzie Delta. The cove was thus an ideal place for these whaleships to winter.

Much has been written of the history and events of the whaling period on Herschel and in the Western Arctic in general (Allen 1978; Brower 1942; Bockstoce 1977; 1986; Stone 1981; 1983; Ingram and Dobrowolsky 1989b). The whaling boom did not last long after the first winter on Herschel in 1889/90. Although the island in the winter of 1893/94 may have been home to over two thousand people, by 1896, only three ships were wintering over and in 1906, the price of whalebone fell dramatically and the whaling period was over.

The short, intense initial contact between the local Inuvialuit and the non-native whalers had significant effects on the social and cultural life of the natives. There is no doubt that the events of this period were important in setting the stage for Western Arctic social life in later years, both that of the natives and the non-natives.

It is interesting that the majority of information that we have on the early effects of contact on the native population of the Western Arctic comes from reports of Anglican missionaries. These reports are arguably exaggerated (Bockstoce 1986: 276); Ingram and Dobrowolsky 1989b: 65) on the basis of comparison to Royal Northwest Mounted Police (later Royal Canadian Mounted Police, also referred to as R.N.W.M.P. and R.C.M.P.) reports. While this may be true, as the missionaries certainly had their own agenda for the native people, the comparison to the police reports is not entirely valid due to the fact that the police did not arrive on the scene until after 1903, when the fishery was in decline. The Rev. I.O. Stringer was on the island for the first time in the winter of 1893 and a mission was established on the island by the Reverend and Mrs. Stringer in 1896.

Their first year on the island, the Stringers lived in an Inuvialuit-style sod house and conducted services and classes in the Pacific Whaling Company's community house (Peake 1966: 55). Later, the Stringers moved into the community house (Ibid.: 62). Although the missionaries would seem to be at cross-purposes with the whalers who were basically left to amuse themselves as they pleased over the winter, there does not seem to have been any ill feeling between the non-native groups on the island (Stone 1981). The whaling captains encouraged, or at least did not attempt to curtail, the liquor trade to the natives and the "prostitution" of native women. Stringer and his replacement, the Rev. C.E. Whittaker, were vocal in their criticism of the whalers' activities with the local women.

The Reverend and Mrs. Whittaker took over the mission while

the Stringers were on furlough in 1897 and again after the Stringers left in 1901. When the Whittakers left in 1906, St. Patrick's mission was abandoned by the Anglican Church until Stringer, as Bishop of the Yukon, pushed for the re-establishment of a permanent mission. He succeeded, and the mission was established in 1916, when the economy of the Western Arctic was improving with the intensification of the fur trade (M. Freeman 1981: 264) and Herschel Island seemed as though it would become an important port once again (Figures 4 and 5 show views of the settlement in 1916). The Royal Northwest Mounted Police, later the Royal Canadian Mounted Police, had established a detachment, the Hudson's Bay Company had opened a store, the Canadian Arctic Expedition had been partly based there, and many ships still passed by.

The next missionaries to be stationed on the island were Christina and William Henry Fry. W.H. Fry had previously been stationed at Kittigazuit at the mouth of the Mackenzie, and thus was not new to arctic work.

The Frys arrived on Herschel in the summer of 1916. They found no church and no wood for the construction of a church. The lumber was supposed to have arrived on the island before them, yet the Church gave them no instructions as to where to live. Whittaker, who was then living at Fort McPherson, and some Dene workmen also from Fort McPherson, took over the construction of a mission house for the Frys (see Figure 2 for location, also Figure 3). W.H. Fry left the island to continue his work of preaching to the local natives while Christina "remained at Herschel Island to cook for the men working on the house" (C.Fry, 5 January 1917). In August of 1916, the Frys were eating and sleeping in the house and cooking in the tents outside (W.H. Fry, 28 August 1916). The lower floor consisted of a large room "devoted to missionary purposes", a kitchen, dining room, study, and hall. Upstairs, although it was unfinished by August of 1916, was to contain a bedroom, a storeroom, and a workshop. It ended up having only two rooms (Hoare 1964: 141). Whittaker suggested that the Frys build a church of some kind on the upper floor of the house but Fry refused, writing that they did "not want Natives upstairs" (W.H. Fry, 28 August 1916).

Lumber was finally sent for the construction of the church, although it was used to finish the house. That lumber was likely being used before Fry, in his letter to Stringer, asked for permission. It had certainly been used before Stringer could reply. Fry suggested that the bonehouse might be purchased from the R.C.M.P. for use as a church. This was never to happen, as the police believed they needed the building.

The Frys heated the mission house with wood, which was exclusively driftwood. After the whaling period, when the population of Herschel Island had been quite high, there was little driftwood left on the shores of the island. The later occupants of the island had to travel along the coast of the mainland to search for it. In the 1920's the house was heated with a variety of fuels, including coal, wood, and crude oil (Hoare 1964: 139).

Figure 4: The settlement at Pauline Cove, Herschel Island, in 1916, as seen from the northwest, in the cove. The mission house is the most distant visible frame structure, the large one in the foreground is the Hudson's Bay Company warehouse.
Photograph courtesy of the Royal Canadian Mounted Police Photo Archives.

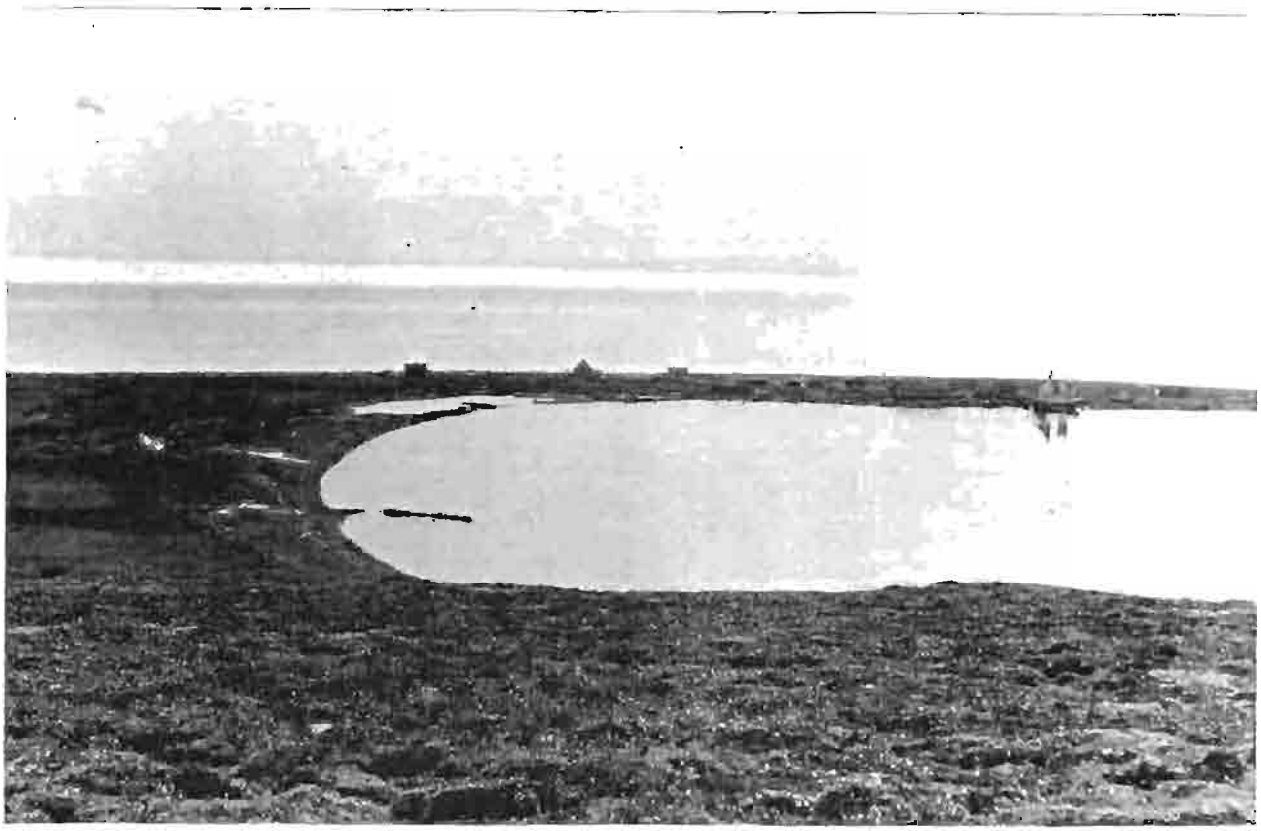


Figure 5: The settlement at Pauline Cove, Herschel Island, in 1916, as seen from the north, across the cove. The mission house is the frame structure on the far left, the Hudson's Bay Company house is the next one to the right.
Photograph courtesy of the Royal Canadian Mounted Police Photo Archives.

Other mission structures consisted of a storehouse which was used as a hospital during an epidemic in 1918, a woodshed, and a fence. A map of 1924 shows two buildings immediately to the east of the mission, within the fenced enclosure (Figure 6).

A year before the construction of the mission house, the Hudson's Bay Company (also referred to as H.B.C.) had constructed a house, store, and warehouse (Figures 2, 4, 5) on Herschel in order to be closer to the Inuvialuit trappers. Trapping of furbearers, especially white or arctic fox, and lynx, became the primary source of income for the local Inuvialuit and relocated Alaskans after the decline of whaling in the Western Arctic (M. Freeman 1981: 264).

The H.B.C. store was supplied annually by company ships which left from Vancouver and did the long trip around Alaska every summer. This system was faster and less expensive than shipping over land and down the Mackenzie River (Ingram and Dobrowolsky 1989: 154).

A trader in the employ of the San Francisco-based H.Liebes Company, C.T. Pedersen, who originally came to the Arctic as a whaler, also did the trip around Alaska every summer in the Herman. Pedersen was usually accompanied by his family and his arrival was always eagerly awaited by the inhabitants of Herschel and the immediate area. He sold some goods which the H.B.C. did not generally stock in the Arctic, such as fresh fruit. In the winter of 1922/23, Pedersen left Liebes and formed his own company, in competition with his former employer. His company was called the Northern Whaling and Trading Company and his first ship was the Nanuk. Pedersen was the last person to take a whale commercially in the Western Arctic in 1922. In 1926, he applied for land from the Yukon Government to build a warehouse on Herschel (Figure 2). He was continually hampered by problems with customs, although it is unlikely that these significantly affected his business. The warehouse on Herschel was a way to establish his company's presence on Canadian soil. He did receive a parcel of land and built the warehouse in the summer of 1926 and it still stands today, although it is in danger of being swept out to sea due to erosion.

The R.N.W.M.P. established a detachment on Herschel Island in 1906. Sergeant Fitzgerald, later of the Lost Patrol, was one of the first to inhabit this station. He also lived in an Inuvialuit-style sod house in the early years. Later, the police bought the community house and the bone house from the Pacific Whaling Company and used them as barracks and a warehouse respectively from 1916.

Inspector Stuart Wood and his family were stationed on Herschel from the early 1920's. The most important event associated with the police on Herschel was the hanging in February of 1924 of the Copper Inuit prisoners Tetamagama and Alikomiak. These men were convicted for the shootings of Corporal Doak of the R.C.M.P. and a trader named Otto Binder. The trial took place in the community house on Herschel.

After the departure of the Frys from the mission house in the summer of 1919, the mission was assigned to the Rev. W.A. Geddes. Geddes was also in charge of establishing a mission at Shingle

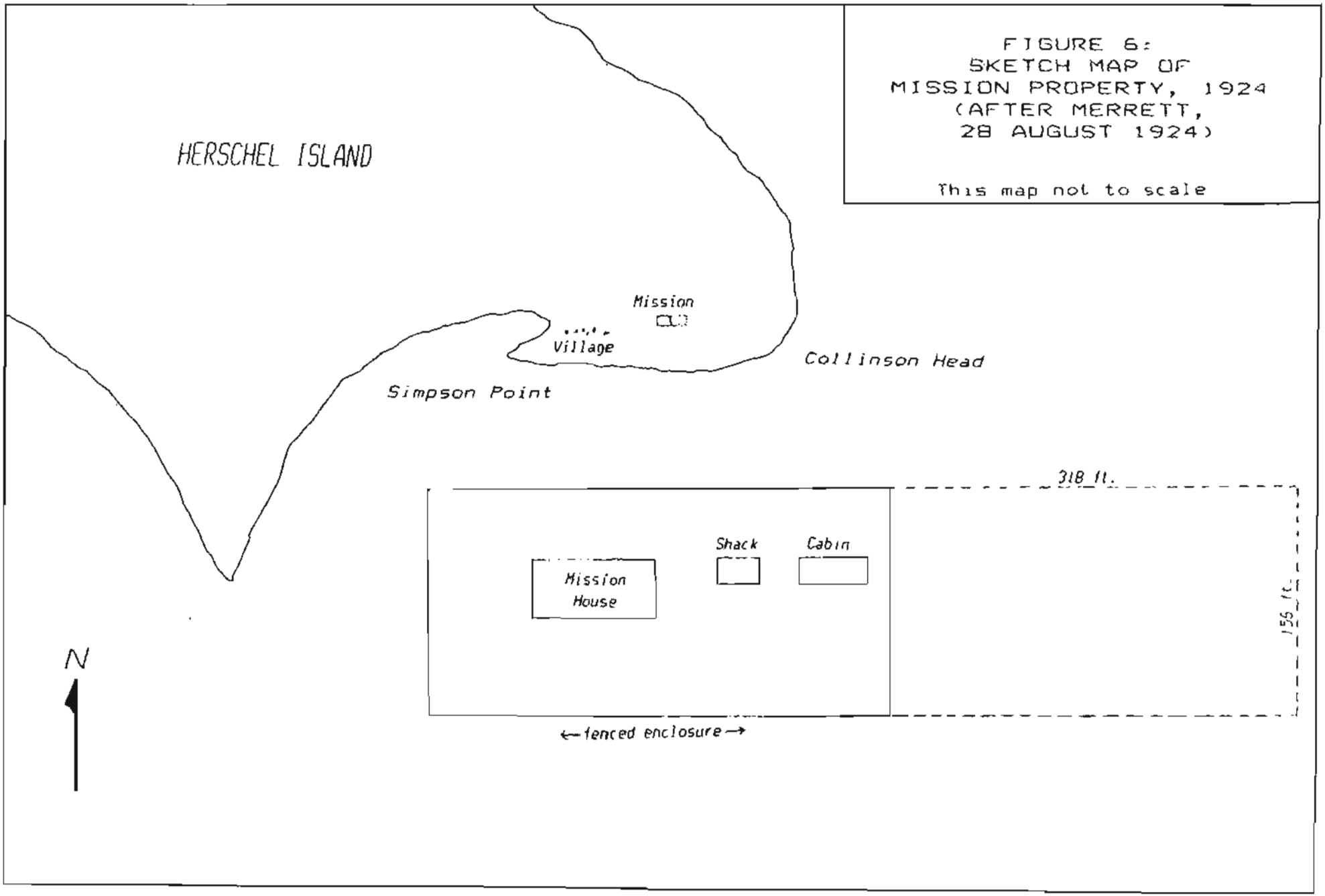


FIGURE 6:
SKETCH MAP OF
MISSION PROPERTY, 1924
(AFTER MERRETT,
28 AUGUST 1924)

This map not to scale

Point (Figure 1) on the mainland. It appears that he spent most of his time at Shingle and when he was on the island, he stayed with the R.C.M.P.. This may be because he was a bachelor until the late 1920's and did not wish to keep house by himself. Catherine Hoare notes that he and lay missionary, William Young were "not used to babies" and had piled all of their belongings on the floor of their house at Shingle Point instead of building shelves and cupboards (1964: 131).

The mission house was most likely to have been used as a sort of community house and chapel in the 1920's. Finnie (1940: 23) relates the story of a wedding which took place on Herschel in the summer of 1921. He lists the clergyman present to be J.H. Webster, who was in charge of Bernard Harbour in 1927 and Coppermine from 1928 onwards (Webster 1987). It is probable that the man at Herschel at this time was Geddes. However, Finnie's example illustrates what is probably the most common use of the mission house in the 1920's.

In the fall of 1922, Catherine and W.H.B. Hoare, who were lay missionaries at Aklavik and had in fact established the mission there, arrived on Herschel for what was to be a extended and unintended stay. Catherine Hoare was expecting a child that winter and the Hoares had travelled to the coast to meet a ship. They stayed a short time at Shingle Point with Geddes and Young and then decided to go to Herschel separately. They missed the ship twice because one was in the wrong place when it came in. In her diary, Catherine Hoare reveals her anxiety at the thought of spending a winter in delta with no supplies or place to live (1922/23: 76).

When they arrived on the island, the Hoares lived briefly with the R.C.M.P., but upon realizing that they would be there all winter, decided to move into the empty mission house. They left the island in May of 1923 and were the last missionary family ever to use the mission house as a domestic home. W.H.B. Hoare probably returned later, in the summer of 1923, to retrieve some of their things, at which time he was visited by the then Bishop of Mackenzie, the Right Reverend J.A. Lucas (Ingram and Dobrowolsky 1989b: 208).

In 1924, the Anglican Church applied to the Yukon Government to buy land in order to build a church, a school, and outbuildings (Merrett, 28 August 1924) although nothing ever came of this. The parcel of land which they were interested in was immediately east of the mission (Figure 6).

By 1928, the mission house was considered "empty" (Kemp 1958) and was then used as a hospital during an influenza epidemic (Robertson 1984: 41; Fleming 1956: 292). By the mid-thirties, Shingle Point had replaced Herschel as the "outpost of the mission of the Anglican Church in Canada" (Hutchinson 1934: 190). However, the settlement on the island was still a "hive of activity" in the summer (Ibid.: 188). In an article of 1942, trader Philip Godsell calls the settlement a ghost town (1942: 392).

In the late 'teens and early twenties, the north was still a frontier. The Canadian government had not taken a great interest in the north except for the establishment of the some R.C.M.P.

detachments. While Zaslow (1971) argues that real progress in terms of the government's interest in the north was made before 1914, there was little done to ease the transition of the local inhabitants (Jenness 1964; Zaslow 1981: 78).

SOCIAL AND CULTURAL CONTEXT

Social interaction on Herschel Island in late 'teens and early twenties was probably structured by associations in southern, mainstream society. According to Stone (1981), this structure had developed in the whaling period. Honigmann and Honigmann (1965) argue that the mid-twentieth-century expression of the delta community is more the result of the disparate traditions of the non-native newcomers than those of the native inhabitants. This is in accordance with Stone's (1981) hypothesis that social segregation has followed lines which are established by coherence to socio-economic divisions in the south. Thus, three social groups can be recognized on the basis of socio-economic status and ethnicity, although group adherence did shift occasionally. These groups can be defined as the "official" class (the police, store managers, missionaries, and earlier, whaling captains), the unofficial non-natives (independent traders, store employees, trappers, miners, and whalers), and the Inuvialuit.

Stone (1981) argues that the missionaries and the whaling captains in the 1890's should have disagreed over the morality of the whalers under the latter's command and over the specific question of the supply of liquor to the natives. He points out, however, that while this was the case in the South Pacific, it was not the case on Herschel where the non-natives had successfully recreated the social structure of southern society. This is illustrated in the fact that the whaling captains and the missionaries, who were generally from a middle or upper-middle class background appeared to socialize most with each other rather than with the natives or the whalers, the latter being mostly of working-class descent. This divided the society on southern socio-economic position, not just on hierarchical position on the ships and especially not on exclusively ethnic grounds.

Zaslow (1971: 283) agrees that frontier communities in Northern Canada were mostly structured on "Ontario-derived educational, social, religious, cultural, and Indian programs". He argues that nowhere is this more apparent than in the Gold Rush mining communities of the Yukon. This is echoed by Clark (1962: 81-98), who discusses the disorganization and reorganization of Gold Rush society along southern lines.

Evidence for an attempted reconstruction of southern lifeways on Herschel Island in the early twentieth century is found throughout the documentary record of the island inhabitants at this time. Indeed, the very appearance and structure of the Herschel buildings illustrates this fact. All of the buildings to be used by southerners for any prolonged period were built of frame construction. The H.B.C. store manager's house and the mission house were built with 1 and 1/2 stories. This was not an

environmentally adaptive thing to do as it was difficult enough to heat a single story frame house. Rev. Fry, in his letters, refers many times to how cold it was in the mission house. An Episcopalian missionary from Fort Yukon, Hudson Stuck, travelling along the Alaskan coast in the winter of 1917/1918, criticizes the practice of building frame houses in the Arctic, yet his descriptions illustrate the pervasiveness of this practice by non-native inhabitants of the arctic coast (1920b).

Many other aspects of southern material culture were transported to the north by non-natives. These included typewriters, mimeographs, clothing, and gramophones (Finnie 1940: 17; C. Fry, 5 January 1917; Godsell 1932: 253; Gould 1917: 235).

The background of most of the non-natives on Herschel by the period of occupation of the mission house was British-Canadian, as was the case of most people in positions of authority in Canada at the turn of the century. The majority of non-natives, too, were of middle or upper middle class socio-economic backgrounds and many, perhaps excluding the traders, were from Ontario.

During the period from 1916 to 1925, there were anywhere from one to five Royal Canadian Mounted policemen stationed on the island. As the police had to patrol a large area, the complete compliment was often not in residence at Herschel. The police in the north were not expected to interfere in the lifestyles of the Inuit unless their conduct was contrary to Canadian law. In fact, the real reason for the presence of the police in the Western Arctic was not to rule over the Inuit, but to maintain Canadian sovereignty in the light of American whaling and trading operations. There was surprisingly little conflict, however, between the whaling captains and the police during the whaling period over the payment of duty and the enforcement of Canadian Customs laws (Ingram and Dobrowolsky 1989b; Morrison 1985).

The police were mainly bachelors, although Inspector Woods, who took over the charge of the detachment in 1921, brought his wife, and children to live with him on the island as did Vernon Kemp in 1927.

Relations between the missionaries and the Police were generally good, although there was some friction over the destruction of the Church's launch in 1903 (Ingram and Dobrowolsky 1989b: 111). During the second period of mission occupation, after 1916, there seems to have been no difficulties. In fact, W.H. Fry writes that Constable Chartrand often brought cases to Christina Fry to solve (W.H. Fry, 10 December 1916).

Another non-native interest group on the island in the late teens and early twenties was made up of traders, both independent and those associated with the Hudson's Bay Company. The Company established a post on Herschel because its competition was successfully exploiting the increasing trade in the Western Arctic, although the Herschel Post was never very successful.

The first post manager was Mr. Christy Harding who lived in the H.B.C. dwelling house with his family and two male assistants. Harding was one of the few isolated northern post managers who followed closely the rules of social conduct laid down by the

Company for their post managers. This stated that managers do not socialize with their employees or customers. There were few on the island who were not employees or customers of the H.B.C. so this limited Harding to social relations with the police (Ingram and Dobrowolsky 1989b: 156). Harding is also known for his perpetuation of the H.B.C. practice of bagging products in paper bags like an "outside" store which was not a practical convention in the Western Arctic (Stuck 1920b: 322).

Another custom of the H.B.C. was to not heat the small store building. This was supposed to save money, but must have made shopping in the winter very uncomfortable for both buyers and sellers.

Harding was succeeded by a Mr. Christie, who was a bachelor. Christie maintained the H.B.C. "outside" image by dressing every day in a business suit. Catherine Hoare writes that Christie was the only man she ever knew in the Arctic who wore a business suit (Hoare 1964: 149).

The most significant independent trading company frequenting Herschel Island in the teens was H. Liebes and Company. The Pedersens enjoyed social activities with their customers along the north coast and invited Mrs. Hoare to dinner aboard the Herman in September, 1923 and gave her gifts of grapefruits, nuts, and wafers (1964: 136).

The largest group of people to frequent Herschel Island in the late teens and early twenties was the native people. These people, mostly of Inuvialuit and Nunatagmiut descent (being from the Mackenzie Delta to Herschel and Interior Alaska, respectively), were predominantly nomadic hunters who had been attracted to the settlement at Herschel during the whaling period to acquire trade goods, hunt for the whalers, and generally partake of the apparent wealth of the whaling community.

The native people (also referred to here as Inuvialuit as this is the preferred term of the dwellers of the Western Canadian Arctic today) were indirectly the reason why the H.B.C. established a post on Herschel and directly the reason for the presence of the church. Although by 1916, the numbers of Inuvialuit inhabitants of Herschel had dropped considerably in comparison to the whaling period, they still outnumbered the non-natives, who, in the summer of 1916 numbered 9 to the natives' 40 (W.H. Fry, 10 December 1916).

Much has been written of Inuvialuit culture at the turn of the century by an extremely diverse group of non-natives (for example Jenness 1964; Stefansson 1913; 1921; Whittaker 1937). Fortunately, however, an autobiographical text by Kittigazuit native, Nuligak, was translated in the 1960's into French by Maurice Metayer and subsequently into English (Nuligak 1966). This is a rare and valuable insight into the life a Siglit Inuvialuk growing up in the early twentieth century. Nuligak does not record many personal feelings about the lives of his people and the non-natives in the Western Arctic, but this is not to be expected as it has been documented that the Inuit in general are not prone to sharing information of a personal nature (Lange 1977: 120; Briggs 1970). It does, however, reveal a lot about Nuligak himself, what was

important to him and how he perceived his peoples' changing culture. He is not critical of non-natives for the part they played in the culture change his people experienced. In fact, many writers have noted that many Inuit thought of non-natives as "children" (Lange 1977: 118; Wyatt 1958: 39), especially in the lack of knowledge about the arctic environment, and considered themselves to be generally superior (Cameron 1986: 217; Stefansson 1913). This is ironic in that it would appear that the non-natives had exactly the same paternalistic attitude towards the Inuvialuit especially in the early years (Wyatt 1958: 44; Vyvyan 1961: 71). Fleming describes them as weak (1928: 82) and Whittaker calls them "imitative" (1937: 68). Fry describes them as "lacking the depth, and strength, and the firmness of character that is most desirable" (28 November 1918). Later, after there had been a number of crimes committed by Inuvialuit and other northerners, the police discontinued a paternalistic attitude to some extent (Morrison 1985). The missionaries, including the Frys, tended to refer to the Inuvialuit as "our Eskimos" and the Catherine Hoare generally refers in her writings to Inuvialuit people by their first names and non-natives as Mr. or Mrs. Whomever (Hoare 1964).

I do not intend to give a complete ethnography of the Inuvialuit at this point. It is important to note, however, that the lifeways of the Inuvialuit had changed considerably from the nomadic hunters that the whalers first encountered on the Western arctic coast. By 1916 and certainly by the mid-twenties, the Inuvialuit had fully joined the capitalistic economy of the non-natives. Although they had been abandoned by the whalers and even the missionaries due to the collapse of the whalebone market and had become accustomed to non-native goods and foodstuffs, they became adept traders and many soon owned their own schooners, rifles, typewriters, gramophones, southern-style clothing, and sewing machines. They were avid consumers of flour, sugar, tea, jam, and tobacco. Both Christina Fry (5 January 1917) and Philip Godsell (1932: 253) believed that the native peoples' interest in some of these non-native goods was inspired by a desire to emulate or imitate the non-natives.

The Inuvialuit had their own rich cultural traditions when they were contacted by missionaries in particular who were the most zealous in their desire to change them. For the most part, the missionaries who visited Herschel had an interest in the native culture (Whittaker 1937; Stuck 1920b; W.H. Fry, 28 November 1918), but mostly because they wanted to understand how to make Christianity more appealing to them. Even missionaries understood that, by the early twentieth century, Inuvialuit culture was changing and that some customs were disappearing (Stuck 1920b), although some believed that it was for the best. Mission schools were widely criticised for the apparent irrelevance of some subjects to the arctic way of life (de Carraffe 1983; French 1976; 1991; Stuck 1920b). However, the governments of both Canada and the United States made no effort to attend to the well-being of their northern native citizens until after the Second World War (Zaslow 1981). The last mission school in Canada closed in 1960 (de

Carraffe 1983).

The education of native people was controversial even early in this century (Jenness 1964). There were those who argued strenuously for non-interference, although they also seemed to want to exploit the resources of the north and/or change the religious beliefs of its inhabitants (Stefansson 1922; Stuck 1920b).

In the end, the missionaries, traders, and government officials did change the native way of life, but it was not always a smooth transition. The northern missionaries were criticized for their insistence that the Inuvialuit wash before meals in that the latter group did not fully understand the significance of this practice and tended to use the same water and towels resulting in the faster spread of disease (Wyatt 1958: 41). Mission schools were also criticized for facilitating the spread of disease (Stefansson 1922: 56). The spread and treatment of disease among the Inuvialuit involved some of the greatest acts of negligence on the part of the official class. It was not until the influenza epidemic of 1928 that an astute police inspector issued quarantine orders and halted the spread of one episode of sickness to the east (Kemp 1958).

In general, Herschel Island holds an important place in the history of development of the mid-twentieth-century expression of the Mackenzie Delta community. The whaling period was the first time that a non-native settlement was established on the coast of the Western Canadian Arctic containing the two social groups of non-natives which were to become the forces to structure later communities. Honigmann and Honigmann (1965) argue that it was not the official class of police, teachers, and store managers who were to shape the community, but the group of "frontiersmen" who came to the north to escape the structure of southern society. The former group is characterised by individuals who stay for only short-terms and a lack of commitment to the northern way of life (Paine 1977c), while the latter tended to marry Inuvialuit and Dene women, live more closely with the natives, and stay in the north for longer periods of time. Thus the north, up until the mid-twentieth century, at least, had maintained a "northern" culture (Honigmann and Honigmann 1965: 50). The official class, therefore, set itself apart and, because of its goals and traditions, remained that way (Paine 1977a; 1977b; Riches 1977). Socializing between the non-natives and natives was not encouraged by the official class, even in later years (Koster 1977: 161) and the frontiersmen tended to flaunt their rebellion against the ethics of western society, making them not acceptable social companions either. This resulted in a hegemonic relationship in which all the political and economic power was held by one group and most of the social and cultural power in communities was held by another.

THEORETICAL PERSPECTIVE

If the archaeological record of the St. Patrick's Mission represents a "blueprint" of southern life, transplanted to the north, then the question which must be asked is why this occurred.

This explanation is discussed in the final chapter while the present section establishes a theoretical framework for that explanation in the context of historical archaeological thought.

In historical archaeology, cultural explanation was not a common goal until the late 1970's. As a discipline, historical archaeology has often been considered more historical than anthropological and relatively antiquarian. Theoretical discourse was originally centred around the question of whether the disciplines of history or anthropology could benefit more from historical archaeology (see Schuyler 1978). Even as early as the late 1960's, Cleland and Fitting recognized the benefits of archaeology for the understanding of cultural processes in the historic period (1978). Pattern analysis became the norm in historical archaeological interpretation towards the end of the 1970's with the application of some of the tenets of the New Archaeology to historical sites (South 1977a,; Miller 1980). This pattern analysis approach, in the true spirit of positivism, attempts to delineate statistical regularities and maintains that these regularities are meaningful in cultural terms. South's work began a tradition of normative, categorical analyses (South 1977b; Dickens 1982) which perpetuates the disregard of data which do not readily fit the patterns.

In recent years, a thematic focus of historical archaeologists has been to discover how artifacts can help us to determine the socio-economic class of site occupants and how people manipulated artifacts in the class struggle. It has been suggested that capitalism should be the emphasis of historical archaeology and that this would solve the lack of a unifying theory in the discipline (Orser 1988). Some adopt an historical materialist framework to understand classes, and use consumer choice theory to explain the associations of certain goods with certain classes (Spencer-Wood 1987). However, other studies, while still accepting the Marxist-derived concepts of the origins of social stratification in capitalist societies, attempt to determine the meanings of artifacts within the contexts of past class struggles, or how the artifacts acted to create and maintain class distinctions. This approach is part of the recent emphasis on cultural meaning, claiming that the fringe element in archaeological data, or that which does not fit the patterns, can be studied if its original social, cultural, historical, and environmental context, including the long-term development of that context is taken into account (Hodder 1987a, 1987b).

These concepts, which grew in reaction to the positivism of the New Archaeology, are collectively known as post-processualism, yet do not exclude the study of cultural processes nor the recognition of archaeological patterns. Post-processualism differs from processualism in its contention that, because material culture is an active element in social relations, archaeologists are not constrained to be entirely materialist in their approach to data. Factors such as ideology and meaning do not have to be relegated to the unknowable.

In light of this new understanding of archaeology and material

culture, historical archaeologists have the greatest potential for decoding the symbolism of archaeological data because they have the greatest potential for establishing a more complete context. Historical documentation gives them this advantage.

While there is still debate whether or not capitalism should be the only focus of historical archaeology and about how documentation should properly be used (see Beaudry 1988; Beaudry et al. 1991; Leone and Potter 1988; Little 1992a), historical archaeologists are continually producing informative insights into how material culture of the past acted to disguise and reflect social relations. An often cited example of this is the interpretation of the seventeenth-century William Paca garden in Annapolis, Maryland (Leone 1984, 1988a, 1988b) which Leone claims contained elements of a dominant ideology which reaffirmed and legitimized Paca's position in society. However, in the dynamic tradition of discourse on archaeological theory, Leone has been challenged for his use of the dominant ideology thesis (Althusser 1971) in his understanding of seventeenth-century New England society (McGuire and Paynter 1991). In fact, the dominant ideology thesis is, in some respects, a normative framework which disregards diversity and the social power of all individuals in a given society. It has been suggested that all social groups have their own individual ideologies (Abercrombie et al. 1980) and that their existence and action in the domination/resistance dialectic can be understood in terms of material culture (McGuire and Paynter 1991).

What is most significant about the development of an archaeology of domination and resistance is how it can generate a greater understanding of culture change in that social power is accorded to all groups, and, in the discipline of historical archaeology, how we can learn something about all groups, even those who rarely produced documents. Often, historical archaeologists have chosen to excavate the homes of the wealthy, the military forts, and the fur trading forts to the exclusion of sites occupied by the working class, the ethnic minorities (or often, majorities), and the native people in historic times. Yet, in some contexts, employing a model of "cultural hegemony" (Beaudry et al. 1991) in which hegemony is defined as "a sense of reality for most people in the society" (Williams 1977: 110), the archaeology of the dominant can be as interesting and relevant as that of the dispossessed. In these cases, the domination/resistance relationship can be understood as a dynamic one in which a group can be dominant and dominated simultaneously as those who control the economic and political spheres may not have much influence on the prevailing consciousness (Beaudry et al. 1991: 165).

I believe that this is especially true in colonial situations and is demonstrated in the Western Canadian Arctic the ethnographic research of Honigmann and Honigmann (1965) conducted in the middle of this century. The full extent of how material culture figures in this process has not been realized. It is my belief, that, if there is large-scale cultural hegemony, then there must be small-scale cultural hegemony, and artifacts should document this. The

social role of material culture is outlined in the following passage (Little 1992b: 219):

> Much of the communication involved in material culture is about interpersonal relationships; relationships that are real, but not necessarily visual, can be represented, imagined, taught, and learned, through messages of the created environment.

Therefore, the political and economic domination of the official class, and the cultural domination of the Inuvialuit and the unofficial non-natives in the Western Arctic should appear in the archaeological record, providing that all available information is taken into account. The small example that is the subject of this paper cannot demonstrate this entirely, but can define a future research goal and indicate how material culture might be involved in the negotiation of hegemonic power in a colonial situation.

METHODS OF EXCAVATION AND ANALYSIS

The following is a discussion of the methods employed in the excavation and analysis of the artifacts from St. Patrick's Mission. It is divided into three sections, being discussions of the excavation, and techniques of artifact and documentary analysis.

EXCAVATION

The mission house midden was first encountered in late July, 1991, when work began on F3-91 (designated as such because it was the third feature excavated by the crew in the 1991 season). A trench, made up of seven one by one metre units, was run down the middle of an amorphous mound about 7 m north-northeast of the mission house and one test unit was opened two metres further south (Figure 7). The east/west position of these units was designated 1 metre west, thus all were numbered W1 and their north/south position were numbered according to their relation to the southernmost test unit which was arbitrarily designated as 5 metres north, thus N5W1.

We initially hoped that the mound would be the remains of a proto-historic Inuvialuit house. At the start of the excavation, artifacts were bagged according to the three levels of sod, fill, and floor, as in previous investigations of the Qikiqtaruk Archaeology Project (Friesen 1991). Further stratigraphic divisions were noted later when research goals for F3-91 were redefined to examine the early twentieth-century occupation of the extant mission house. The primary goals of the excavation of F3-91 were the definition of the refuse pit encountered first in the southernmost unit of the first trench (N9W1) and the complete definition and removal of the ash, clinker, and coal layer, L2A.

Throughout the project, all soil was removed from the units

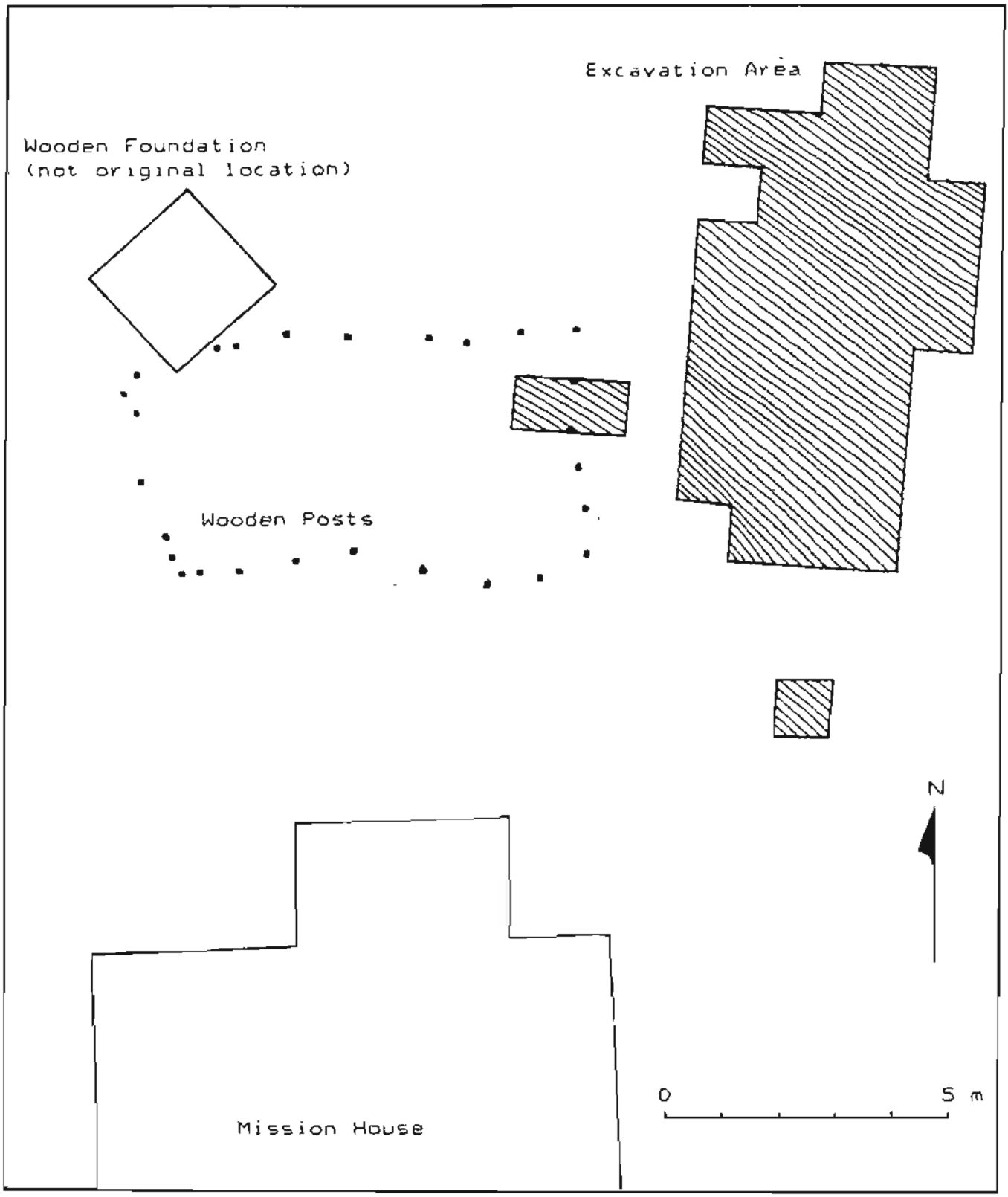


FIGURE 7: MISSION FEATURES AND EXCAVATION AREA

with trowels and screened through 1/8 inch mesh. All visible bone and botanical remains were collected. Historic non-Inuvialuit artifact provenience were not recorded beyond that of unit and level. I concluded that little information would be lost if the exact location of the artifacts was not recorded because the feature represents a short period of deposition and is the result of repeated behaviour. There were no activity areas to be defined.

By the end of the season in August, 1991, 38 units (38 square metres) had been excavated in F3-91. The stratigraphic layers under investigation were designated as follows: Level 1 - sod; Level 2A - ash, clinker, and coal; Level 2B - non-ashy historic layer; Level 2C - artifacts labelled as such were found in bottom of the main pit feature (F3-91-1), beneath the level at which the feature was mapped (Figure 9). L1 and L2A appear chronologically similar and the artifacts of L2B are the same age as those of L2C, however, I separated them upon recovery in order to maintain stratigraphic control. The deepest level in the entire excavation area was designated L3.

Sufficient information to determine the exact nature of the Inuvialuit occupation was never recovered in this feature. It was not possible to excavate further into L3 in the deepest part of the site because of the fluctuations in ground water level. At the close of excavation, the water was beginning to seep in the bottom of the pit.

When the excavation of the feature began, a test unit (N5W1) was opened south of the original trench in the hope that it might reveal a midden associated with the presumed house mound. Towards the end of the season, two other test units were opened in order to intersect a rectangular feature of posts north of the mission house and immediately west of the excavation area (Figure 7).

ARTIFACT ANALYSIS

Upon receipt of the artifacts, they were sorted into the material categories of glass, ceramic, metal, miscellaneous artifacts, and ecofacts. The miscellaneous artifacts category contains other materials, much less common than the above, such as leather, textiles, rubber, plastic, paper, wax, and anything else.

A few large artifacts were described and measured in the field and reburied. These included bricks and barrel hoops. All visible ecofacts were collected except eggshells, which were highly fragmentary and tended to break up in the screen.

After they had been sorted by material, the artifacts were cleaned and labelled and the ceramics and glass mended as completely as possible. The labelling system requires a little explanation as provenience was coded in order to take up less space on the artifact. Most artifacts which are big enough were labelled with the Borden designation of the site (NjVi-3), the feature designation (F3-91), and the encoded unit and level provenience. This code was developed by numbering the excavated units consecutively on a plan of the excavation area, beginning with 1 as the northwesternmost unit and running in east to west rows north to

south to number 38 which is the test unit N5W1. The levels were designated A for L1, B for L2A, C for L2B, and D for L2C. For example, therefore, an artifact from N9W1, L2B would be labelled 33C. Some ceramic sherds and glass shards were too small for all of the site and feature information so they are labelled only with the unit provenience. Most of these small pieces were refitted to larger ones.

The glass artifacts were categorized and described in terms of attributes listed in the Parks Canada Glass Glossary (Jones and Sullivan 1985). The basic sub-categories are containers, lighting devices, window glass, silvered glass, closures, tableware, and miscellaneous glassware. The containers were reduced to a minimum number of vessels on the basis of colour, decoration, size, shape, and commercial marks and described in terms of 21 attributes, including the above. See Appendix II for an example of the glass vessel form devised for the recording and description of them. They were analyzed primarily in terms of their method of manufacture, function, and markings. Some of the bottle maker's marks were found in Toulouse (1972).

The ceramics were also refitted and a minimum number of vessels was calculated on the basis of ware type, decoration, and functional type. These are the attributes used to describe the vessels, also. Only three of fifteen vessels had maker's marks and these were located in published collections of pottery marks (ie. Godden 1964; Penkala 1980). Little historical information on the exact dishes was found. This was due to their young age and, in the end, it would have been unnecessary, because of the good documentation of the site, to date the ceramics in any but the most general way or to determine their exact historical market value. This latter information has been used to measure the socio-economic position of the household under investigation (Miller 1980; 1991), but would not be a useful research direction in this case because of lack of comparative material.

The metal in the sample was initially divided into eight categories. These are containers, hardware, cartridge casings, household items, nails, miscellaneous, unidentified, and undiagnostic. It was also catalogued by metal type, although only in a cursory way, since the vast majority of the sample was ferrous.

The metal containers were primarily cylindrical cans of the "Sanitary" type (Keen 1979) and they were generally very fragmentary. Two methods were devised to quantify the minimum number of vessels. One involved the counting of rim fragments as fractions of total rims of three size categories, adding them, and dividing by two to take into account the dual rims of cans. This method produced what is probably a very conservative number, as it is not certain whether all rims were present. The other method the determination of total mass of all metal (including undiagnostic) which is probably from cans and dividing it by the mass of an average complete can (there were three in the sample). This is also a problematic method due to the variation in can size. However, while the two numbers are different, the proportions of

cans by levels is identical.

Hardware was described on the basis of type of item and size. None of these was much different than anything found in a hardware store today. Similarly, household items and cartridge casings were noted for attributes which might be mentioned in the marketing of those items. Miscellaneous metal artifact descriptions mostly depended on the artifact. Nails were counted and measured to some degree, although most were highly corroded and very regular in size. Unidentified objects were reclassified if they were identified and described separately if they were not. Undiagnostic fragments were counted although this was of little use considering their fragmentary nature, so they were also weighed, as were the container fragments since the majority of undiagnostic metal was probably container fragments. Units and levels with high container counts generally also had high undiagnostic counts.

Miscellaneous artifacts were categorized according to material and/or known specialized function. The categories are: Textiles and leather; rubber and plastic; paper; structural; beads; buttons; dental equipment and supplies; Inuvialuit artifacts; and unidentified objects.

Once all of the artifacts were sorted, catalogued, and described, the information was re-organized into functional categories following generally the divisions of South (1977a). This made the artifact sample simpler to interpret. Sometimes, the artifacts in this collection were not easily categorized into the six groups of architectural artifacts, dining and dietary refuse, furniture, arms and ammunition, personal items, artifacts relating to other activities. The categories of multiple use artifacts, artifacts of unknown function, and traditional Inuvialuit artifacts were added to this scheme. Even so, many artifacts must have had multiple uses and some certainly did. The material is described in Chapter 2 following this structure.

The botanical remains from the site were few and all were large seeds or husks. They were simply counted by individual piece.

The faunal remains from the six central units of the midden were identified to species if possible. The attributes noted of each specimen were the species, the element, the age, the condition, the portion, and any modifications were noted including cut marks or gnaw marks. This is only a sample of the total faunal remains from the site, but it appears to be representative of the total number from visual examination of the rest of the collection.

The abundance of each faunal species is represented by number of identified specimens (NISP) and minimum number of individuals (MNI). While I recognize that there are problems with both of these measures (see Grayson 1984), both indicate the proportional domination of a few species in this sample.

DOCUMENTARY ANALYSIS

Documents related to the mission occupation on Herschel Island were discovered in a variety of locations. At the General Synod

Archives of the Anglican Church of Canada, numerous letters of the Frys were located. These were examined for references to daily activities, material culture, work, and attitudes toward the Arctic in general. Work was the most frequently discussed topic, but this is not surprising since most of these letters were to the then Bishops of Mackenzie and Yukon. In order to understand the significance of the letters, I had already become familiar with the general history of Herschel Island. The letters themselves, then became important documents in the establishment of historical context. Even the methods of producing the documents was important in that they were most frequently typed and mimeographed or carbon-copied.

The Stringer Collection at the General Synod Archives was especially useful for the photographs it contains. Figure 3 is from this collection. Figures 4 and 5 are from the Photo Archives of the Royal Canadian Mounted Police.

In the National Archives of Canada, the most useful documents proved to be microfilm copies of the Yukon Archives documents. This group of texts contained letters and maps from the Anglican Church and other groups with an interest in Herschel. Unfortunately, many other documents relating to Church activities on the island were not included in the National Archives Record Group and are only available at the Yukon Archives in Whitehorse. However, some of these are copies of those in the General Synod Archives, and others relate to later activities on Herschel. Fortunately, Ingram and Dobrowolsky wrote a well-researched history of the Island for Yukon Heritage Branch in 1989 and utilized the Yukon sources extensively. These researchers also put together a companion piece, An Annotated Bibliography of Herschel Island, (Ingram and Dobrowolsky 1989a) which was very useful in locating some of the necessary sources.

One of the most insightful texts written about the mission house occupation is the arctic diary of Catherine Hoare (1922/23) and her later family history of her and her husband's work in the Arctic (1964). These documents contained a far more personal account of life in the Arctic in the early 1920's than any other text.

It is interesting also, that the majority of Western Arctic personalities of the early twentieth century wrote and published books and articles on their northern experiences when they returned to south. These volumes, by journalists, traders, whalers, missionaries, tourists, and researchers, are invaluable for their tidbits of historical fact and more interestingly for their variety of first-hand (although often sensationalized) views of the Western Arctic community at the time (Allen 1978; Brower 1942; Cameron 1986; Finnie 1940; Godsell 1932; Hutchinson 1934; Hoare 1938a; 1938b; O'Kelly 1924; Vyvyan 1961). While the analysis of these documents included the careful screening for relevant information, it was necessary also to gain an understanding of the reason for the authors' visits to the Arctic. In comparison, even two books by people with the same agenda can be vastly different in outlook and understanding of the social and cultural processes in action in

the Western Arctic in the first two decades of the twentieth century (eg. Whittaker 1937 and Stuck 1920b).

While the reasons for the author's visits to the north were important, equally important are the purposes of the documents themselves. Catherine Hoare's diary and family history were written for a very personal audience, the Fry's letters were generally official, and many books were for general interest. The very fact that Catherine Hoare kept a diary and many others wrote books and articles about their experiences, tells us that they believed that they had visited an exotic place. Some authors had even come to the north specifically for an exotic experience (eg. Cameron 1986; Hutchinson 1934; Vyvyan 1961). Of these, it is interesting that those who published books are frequently women.

SUMMARY

The artifact sample recovered in the excavation of the St. Patrick's mission house midden is unique in a number of ways. First, the actual systemic formation of the midden occurred in an extremely limited time which is historically known and documented.

A second feature of the site is that it is the result the disposal behaviour of one group of people, missionaries. While differentiation between the activities of the two families and the few other individuals who used the house up until the late-1920's is not possible, it would be of limited utility in that these groups were all members of a larger group who probably had similar social behaviour.

A third, and extremely important aspect of this sample is context. While this is an important part of the understanding of all archaeological sites, it is especially so in this case. The artifacts listed below were excavated in a part of Canada which was still a social and economic frontier in the beginning of this century. The first airplane did not come to Herschel until the early 1930's and were non-existent in the Western Arctic until that decade. Given this, however, these are not arctic artifacts. As discussed previously, Hodder (1986; 1987a) and Beaudry et al. (1991) argue that understanding context in historical archaeology is the significant feature in understanding the meaning of artifacts as they work in a social system. Beaudry et al. (1991: 155) also maintain that the meaning of artifacts can often exist simply in their use "out of context" or in a context that is not usual. Artifacts such as these, with a very interesting and unusual context, should be more meaningful than they would be if they were found on a comparable site in the region where they were manufactured. The St. Patrick's mission, indeed the whole late nineteenth- to early twentieth-century non-native settlement on Herschel Island was "out of context" and it is the purpose of this paper to discover the meaning underlying that reality.

Chapter 2 - Results of Excavation and Analysis

OVERVIEW

The analysis of information gathered in the field began in the fall of 1991. The recovered material included 10 570 artifacts, 4031 fragments of faunal bone, 142 botanical specimens, and 4 human teeth. This chapter presents the results of fieldwork and analysis in three sections. These include discussions of features and stratigraphy, artifacts, and faunal and botanical remains.

FEATURES AND STRATIGRAPHY

The settlement at Pauline Cove consists of fourteen extant buildings, not including outhouses, and a large number of archaeological features which include dwellings of frame and sod construction (Figure 2). Figures 4 and 5 are views of the settlement in 1916. These buildings were mostly constructed between the 1890's and the 1930's. The Anglican mission house is known to have been built in the summer of 1916. It is a one-and-a-half storey frame structure about six by nine metres. Totally gutted, it now houses a guillemot breeding colony. Originally, it had front and back doors with cold traps, (the front faced the sea to the south) and pane glass windows (Figure 3), some of which were transported from the mission at Kittigazuit where Fry was originally stationed. At different times the house was surrounded by a fence, possibly of two different sizes, at least three outbuildings, and at least one meat cache. The remains of fence posts now enclose an area of 85.3 m by 46.9 m. A photo of unknown date, but probably pre-1920 (Figure 3), shows a structure behind the house and an elevated cache off the southeast corner. A map of the mission property dating to 1925, while not to scale, shows two outbuildings to the east of the house (Figure 6) and the north/south axis of the fenced enclosure as 156 ft. or 47.5 m. In his letter to Bishop Lucas in December of 1917, Fry relates the construction of the woodshed by Whittaker, and in January of 1918, Fry mentions a "store house". This latter building is mentioned again in the letter of 28 November 1918 when the storehouse was used as a hospital in the typhoid epidemic of that year. In neither case does he indicate a location of these structures. A rectangular pattern of small posts was noted behind the mission house (Figure 7), which appears to be the remains of the structure behind the house in Figure 3. This was probably the woodshed.

The midden was located in a low, amorphous mound which, of all mounds in the vicinity, is closest to the house. During the 1992 season, the next mound to the east was excavated by the Qikiqtaruk Archaeology Project. It contained the remains of an Inuvialuit house of as yet undetermined age with a considerable amount of later historic material in a depression caused by the slumping of the entrance tunnel. The material is similar to that found in F3-91 and is probably also related to the earliest occupations of the mission house.

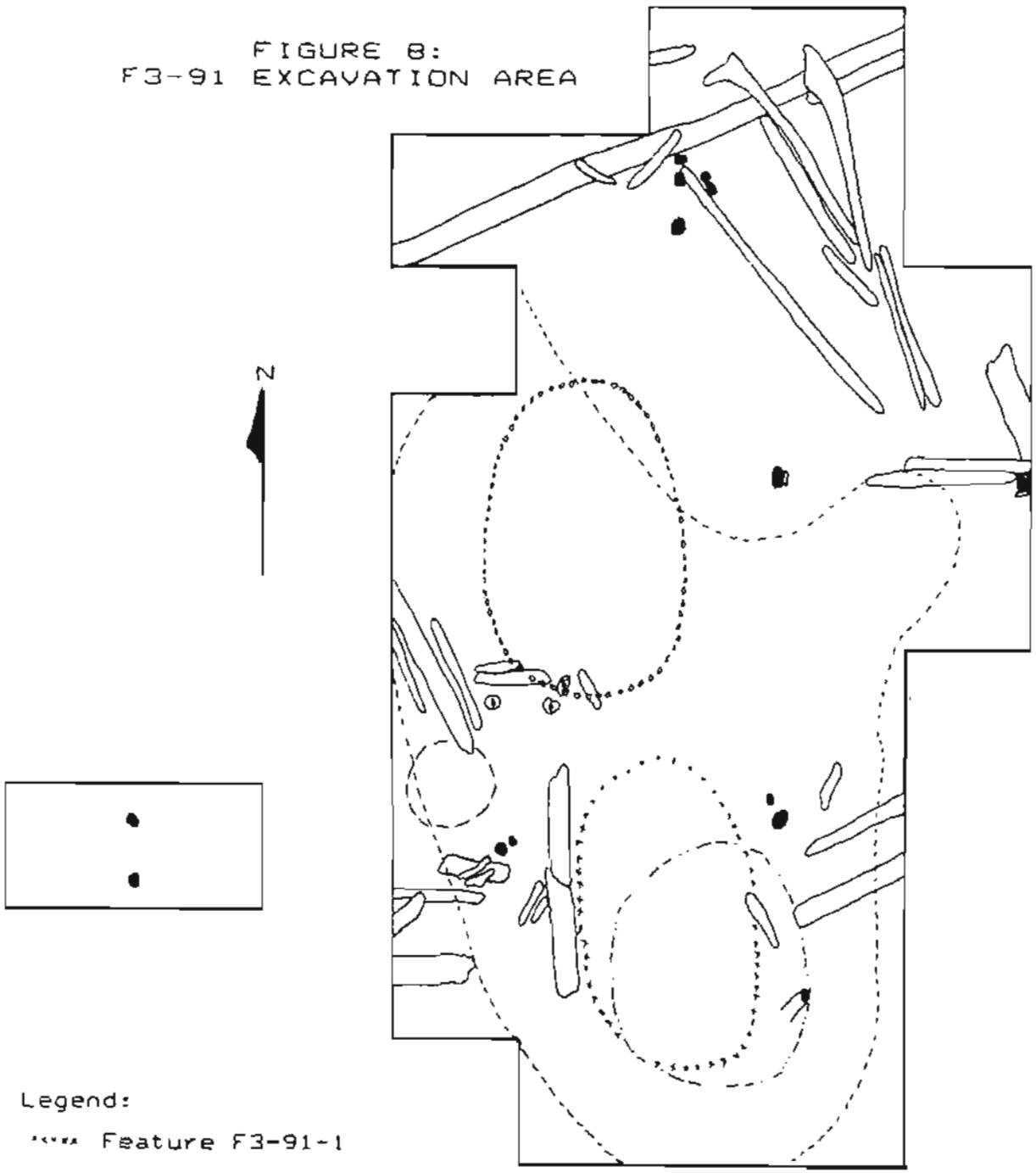
In order to concentrate on the mission-related material in F3-91), units were excavated which revealed the extent of the coal, ash, and clinker layer (designated L2A). This layer appeared immediately under the sod in many of the units. Across the excavation area, the sod layer frequently contained historic material. To the north, the subsequent layer was characteristically sandy and, to the south, it was this coarse matrix of ash and coal and clinker with exclusively historic artifacts. The horizontal extent of this matrix is indicated in Figure 8. Although widely spread across the excavation area, this layer was not very deep in many of the units, and was deepest in the six roughly central units of the pit feature, designated F3-91-1. Figure 9 shows the bottom of the pit, and Figure 10 is a profile of the west wall of the initial trench through the pit. The deepest part of the pit occurred under roughly the south-central part of the area covered by Level 2A. Under L2A, and almost exclusively in the six central units (Figure 9), was another historic layer not containing coal ash. This layer, designated L2B, was completely sealed by L2A, and was characterized by sandy organic soil with many decaying wood chips. The pit reached a maximum depth of 67 cm from the surface and covered an area of approximately six square metres with the deepest part covering about 2.5 square metres.

Interestingly, this pit may have been formed by the slumping of what is probably the entrance tunnel of a proto-historic Inuvialuit house. A few logs were the only architectural features left of this structure which would probably have been of log and sod construction. In fact, there was not enough of the structure to positively identify it, although enough traditional material was present in lower levels and below the sod to the north to indicate some kind of previous Inuvialuit occupation of the site.

Two stratigraphic problems were encountered during the course of the excavation. The locations of these features are also shown in Figure 8. The first was an area of burned orange soil (F3-91-2) under L2A in the west-central part of the excavation. In profile, it appeared banded, but upon excavation of adjacent units, it proved to consist of lenses of orange and dark soil with no particular definition. This layer was much shallower to the south and a very thin lens lay on the bottom of L2B/2C. Calcined and uncalcined bone was found in the area of burned soil, and a few Inuvialuit bone artifacts were found. As no historic artifacts except a few glass beads were found in the orange soil, this area is not considered much further in the discussion of the historic remains.

The other stratigraphic problem is more relevant, but less defined. This was the discovery of a cluster of historic artifacts (F3-91-3) near the western margin of the excavation in L2B, at a depth where they were not expected. The soil in the immediate area and that surrounding it appeared to be identical and the surrounding soil was sterile sand. Analysis of these artifacts has not shown them to be significantly earlier than those in the other historic components.

FIGURE 8:
F3-91 EXCAVATION AREA



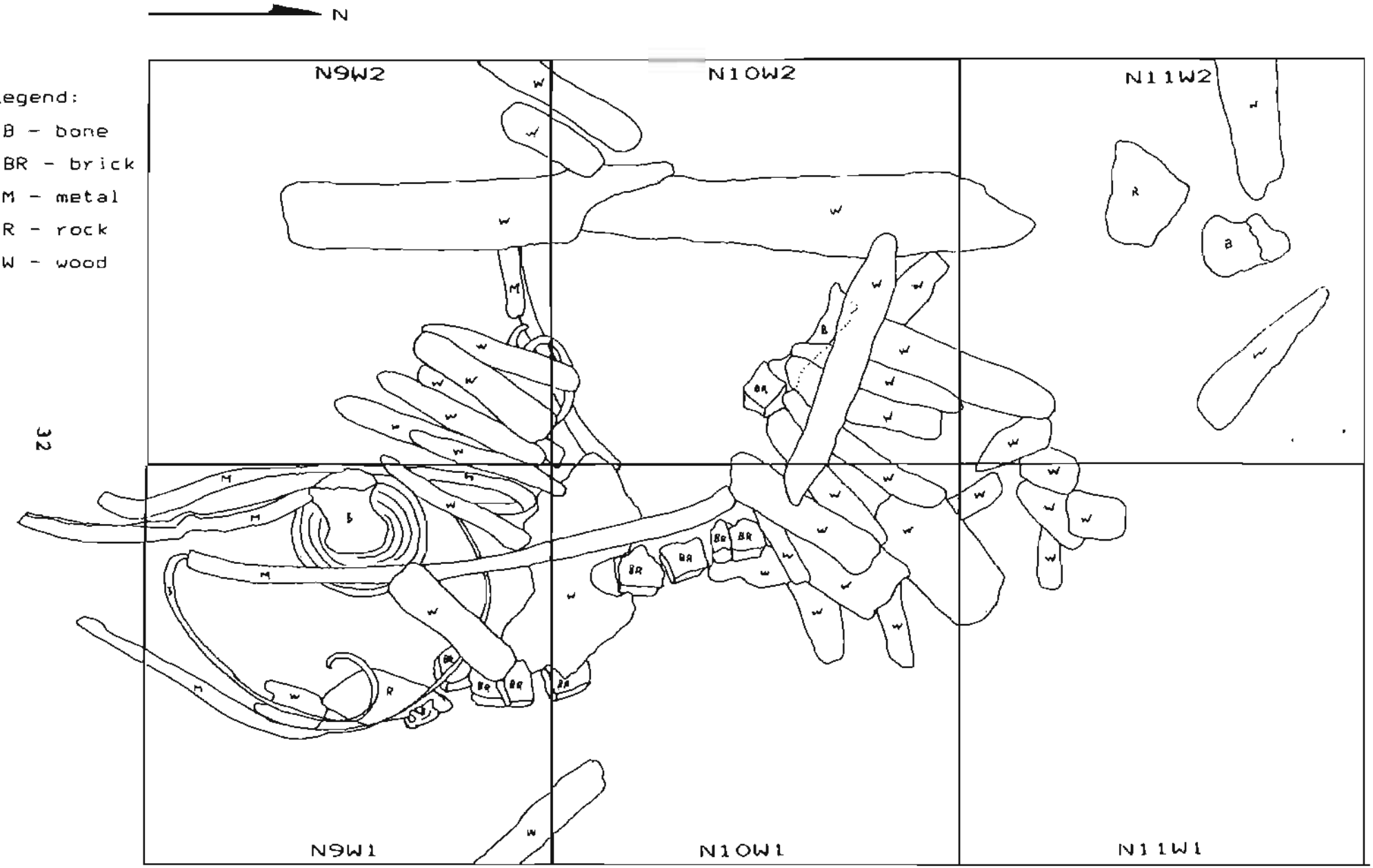


FIGURE 9: BOTTOM OF REFUSE PIT, F3-91-1

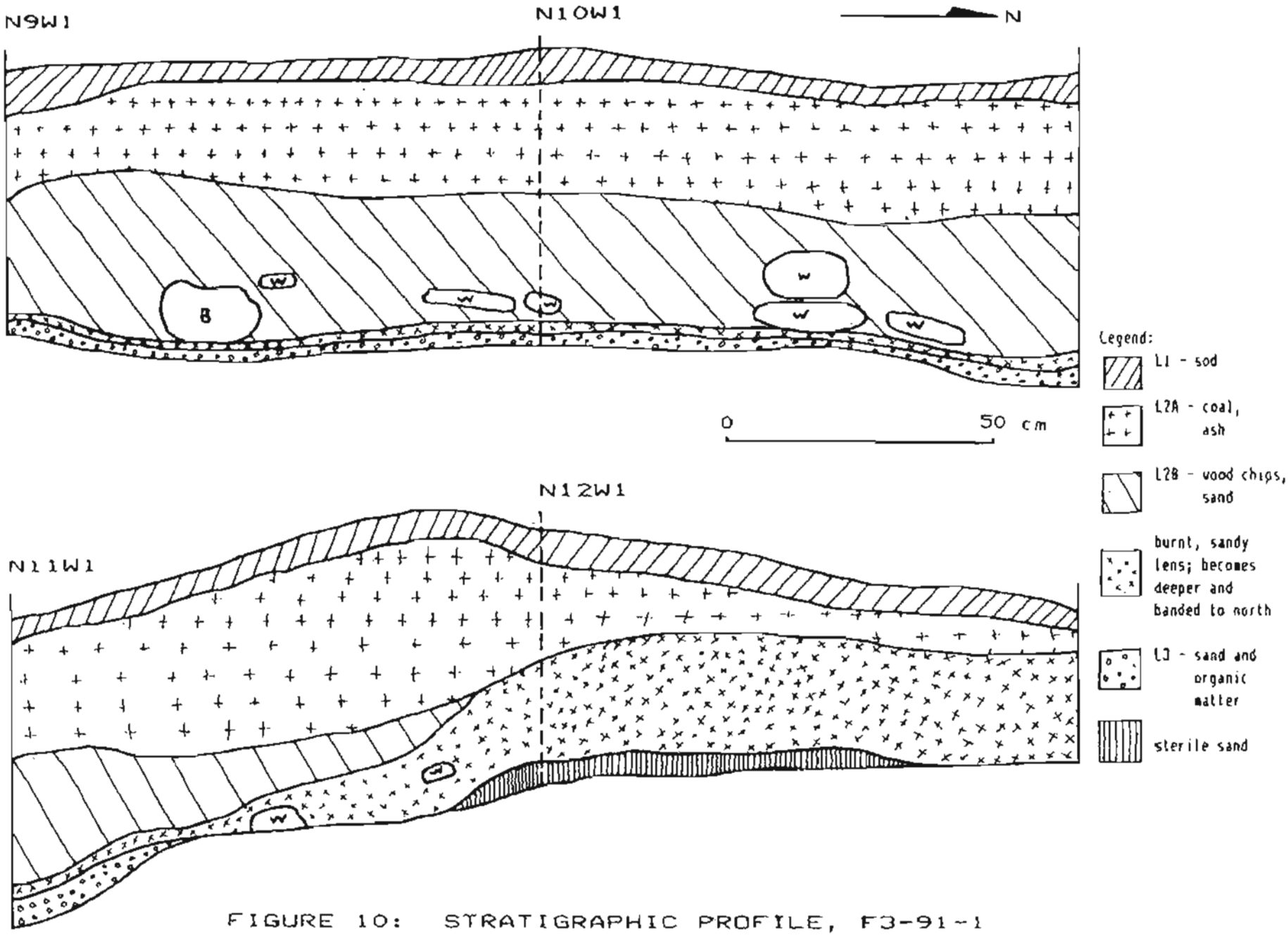


FIGURE 10: STRATIGRAPHIC PROFILE, F3-91-1

In general, the strata associated with the occupation of the mission house appear to be fairly undisturbed, while those not associated with the occupation of the mission house are quite disturbed.

ARTIFACTS

The artifacts recovered from the excavation of F3-91 which have been analyzed for the purposes of this paper consisted of 10 570 fragments of ceramic, glass, metal, and other materials (see Tables 1 and 2). They are described in this section.

Table 1:
Representation of Artifacts by Material

Material	Frequency	Percentage
Ceramics	105	1.0
Glass	1253	11.9
Metal	8989	85.0
Miscellaneous	223	2.1
Total	10570	100.0

Table 2:
Representation of Artifacts by Functional Category

Functional Category	Frequency	Percentage
Architecture	1941	18.36
Dining and Dietary Refuse	7595	71.86
Furniture	405	3.83
Arms and Ammunition	107	1.01
Clothing	45	0.43
Personal Use	78	0.74
Activities	218	2.06
Multiple Uses	77	0.73
Unknown Function	100	0.95
Traditional Inuvialuit	4	0.04
Total	10570	100.00

ARCHITECTURAL ARTIFACTS

As I defined them, architectural artifacts include all objects which would have been attached to the mission house as permanent or semi-permanent fixtures.

A single architectural artifact was made of ceramic. This is a black glazed doorknob. It is slightly scratched, but otherwise complete. This type of object is listed in the 1910/1911 Hudson's Bay Company catalogue (Hudson's Bay Company 1977: 201).

Window glass fragments number 191 shards of glass. Thirty-

five of these had been melted and 6 are frosted. The fragments, although impossible to quantify as a minimum number of windows, are all very similar, and are all over 2.0 mm in thickness. These were found in all levels, although less in Level 1. Level 2A and 2B contained 85 and 90 shards, respectively, while Level 1 contained only 16. 75.4% of the shards were retrieved from the six central units of the main pit feature (F3-91-1).

The total metal count in this category is 1713. Of these, 1642 are wire nails. While these nails were invented in the middle of the nineteenth century, they did not really replace cut ones until just before the turn-of-the-century (Fontana and Greenleaf 1962: 47-48).

Thirteen of the nails in this collection are large spikes, although the majority of the nails are about 50 mm in length. The entire collection is highly corroded. Twelve of the nails are cut nails which are older, dating to the nineteenth-century. These latter were found in all layers of the site and not in any specific earlier context.

Twenty-five bolts were found. Sixteen of these are undiagnostic, 8 are carriage bolts, and 1 is a hex bolt.

Twenty-six screws were recovered of which 4 are undiagnostic, 5 are wood screws, 1 is a Robertson screw, and 16 are slot screws.

Other architectural hardware includes 1 lock washer, 1 screw hook, 2 door hooks, 1 hinge pin, 12 hinge tube fragments, 1 fancy hinge (Plate 1: e), 1 fragment of a doorknob mechanism, and 1 large door key (Plate 1: d). All the architectural metal is ferrous and highly corroded.

Thirty-six miscellaneous artifacts are architectural in origin. These include 10 brick fragments found in the bottom of the main historic pit feature. Five of these are red brick and 5 are buff. Four of the five buff pieces have an anchor insignia stamped on them with the letters "HSB" and another row of undecipherable writing or designs underneath. The origin of this marking was not discovered although Gurcke (1987: 127) writes that a standard size of buff brick was used commonly by the British as ballast in their ships. As the bricks in this sample are all broken, it is impossible to extrapolate the total length in order to compare. It is a conceivable origin for the bricks, however. They may also have been used in the construction of tryworks (for rendering whale blubber) on whale ships (Bockstoce 1986: 90).

Three pieces of sandy chinking were found in Level 2A of the northwest corner of the main historic pit feature and nowhere else.

Twenty-one pieces of linoleum flooring were found in Levels 1 and 2A in a number of units. This flooring arrived on the island in 1918 was likely quite helpful in keeping out the cold (Ingram and Dobrowolsky 1989b: 193). Two tar shingle pieces were also recovered.

DINING AND DIETARY REFUSE

The remains of dining and food preparation activities accounted for the majority of artifacts in this collection. This

is mainly because of the inflated count of metal, due to its fragmentary nature, and is demonstrated in the proportions of artifacts by material which are listed in Table 3. There is also a wide variety of types of artifacts, and as dining and dietary refuse is frequently a major focus in historical archaeology, there is a fair amount of information about it. Thus, to be more organized, the artifacts are described below by material.

Table 3:
Representation of Artifacts in Dining and Dietary Category by Material

Material	Frequency	Percentage
Ceramics	104	1.4
Glass	576	7.6
Metal	6891	90.7
Miscellaneous	24	0.3
Total	7595	100.0

Ceramics

The ceramic tableware assemblage from this feature is small; only 104 sherds representing a minimum of 15 vessels. Seven different patterns are evident. The ceramics were categorized by ware fabric/manufacture, type of vessel, and decorative technique. The types of ware fabric and manufacture represented are vitrified white earthenware, porcelain, stoneware, and possibly bone china with vitrified white earthenware the most commonly occurring. The decorative techniques are quite varied for such a small assemblage and some vessels show more than one decorative technique.

Of the 15 vessels, 5 are cups, 5 are saucers, 4 are plates of which 1 is a dinner plate, two are dessert plates, and 1 is indeterminate, and one is a wide, flat bowl. Three of the five teacups are only represented by handles. These objects were numbered in the same system as the glass vessels and are listed below by decorative technique.

Blue transferware: Vessel 31 is a complete (when refitted) vitrified white earthenware plate with a slightly flowing blue transferware pattern. It is one of three pieces with a maker's mark. The pattern is called "Laurier" and it was made at Staffordshire, England between 1906 and 1926 (Godden 1964: 24). It is made up of 33 sherds, the majority of which are potlid fracture fragments (Plate 3).

Vessel 36 is a dessert plate is of the same pattern and ware fabric as Vessel 31 with an identical makers mark. It is made up of 16 sherds and is also heavily fractured. Approximately 20% of the plate is represented.

Vessel 55 is represented by a single sherd which is a teacup handle which is most probably of the same pattern as Vessels 31 and 36. It is the same ware fabric and has a blue transferred design of the same colour and similar motif as the aforementioned vessels.

It also shows moulded decoration (Plate 4: e).

Decalcomania: Vessel 41 is a saucer. About 50% of the complete vessel is represented by 5 sherds. It is of vitrified white earthenware and shows moulded and decalcomania decoration and an underglazed edge. The edging is brown and the decals are of pink roses with green leaves and white lilies of the valley. Its maker's mark is partial, but shows it have been made by Petrus Regout and Company is Maastricht, Holland. It is listed in Penkala (1980: 322) as a twentieth century mark. It is also stamped with a number 20 and another unknown mark and printed with number 4115 which is probably the importer's mark. None of these marks is in line with any other and they all occur on the base of the saucer.

Also a saucer, Vessel 53 is of the same set as Vessel 41 (Plate 4: f).

Another vessel, 40, is from the same set as Vessels 41 and 53. It is a teacup is made up of 8 sherds. About 60% of the vessel is represented.

Vessel 32 is a dessert plate, which may also be a purely decorative plate. It is made of vitrified white earthenware with gold edging and a central decal pattern. The gold edging is a single thin line and the decal is a romanticized motif of a young girl in country dress with brown curly hair (Plate 5). She appears to be gesturing towards something or someone to her left. The plate is only about 40% complete and she is probably not alone. There are no maker's marks on this plate and it has few distinguishing characteristics.

The last decalcomania-decorated vessel is a saucer, Vessel 38, represented by a single small sherd. It is a very white ware fabric, probably bone china, but as the decoration is on a black background, it is hard to judge translucency. The decoration is muted and shaded green, yellow, and white in some kind of pattern on a black background. There is also gold edging (Plate 4: c).

Underglaze: Vessel 39 is represented by 3 small sherds. It is probably a mug or cup or a steep-sided bowl. It is made of a greyish-white stoneware with an impressionistic underglaze design of pink, bright green, and dark green, probably representing flowers and leaves (Plate 4: b).

Vessel 37 is one of two porcelain saucers in the collection. About 20% of this vessel is made up of 3 sherds. The underglaze design is in blue, showing lined and stylized flowers and is located on both the inside and the outside of the piece (Plate 4: g).

Gilt-edged whiteware: A vitrified white earthenware teacup handle, Vessel 56, is moulded and glazed and a single gilt line is found down one side of the handle only (Plate 4: d). I thought, as it is of similar ware fabric to Vessel 40, that it might be the handle for that cup, however, no other example of that pattern which I have seen has any gilt on it, so this is unlikely.

A plate rim fragment, Vessel 34, is one of the more interesting pieces in the sample in terms of contextual information associated with it. The size of the plate is indeterminate, but it is made of vitrified white earthenware and it shows a simple

pattern of two gold lines around the edge. The outermost line is thicker than the innermost one (Plate 4: a). It is likely that this sherd is a piece of a plate in the set of Johnson Bros. ceramics given to Catherine Hoare at the time of her marriage in 1919. One complete piece of this set survives in the collection of Hoare's daughter, Sheila C. Thomson. The aforementioned piece is a serving platter of the same pattern. It is known that the Hoares had their wedding china with them when they moved to Aklavik in 1920, and it is probable that it also got to Herschel Island when they were stranded there from September of 1922 to May of 1923, since they had been transferred by the church to Bernard Harbour and they shipped all of their belongings also, all of which ended up with them on Herschel during the fall and winter of 1922/23. The surviving platter has a maker's mark from Johnson Brothers of England which dates after 1913 (Godden 1964: 356). Thomson relates a story of the moving of this set of china to the Arctic in which her father coated the individual plates with a thick covering of molasses and stuck them together in a large block. Family history has it that none of them broke. It is unfortunate, therefore, that one did a few years later while the Hoares made an unexpected long-term stopover on Herschel Island.

Painted/overglazed: Vessel 35 is a saucer which is about 40% complete and only made up of one sherd. It is made of porcelain and its decoration is curious. It is glazed, but over the glaze is painted designs in various colours. It is edged with a gold-coloured (not gilt) line and a wide band of light greyish-blue. A scalloped line again in a gold colour then follows and some kind of floral motif in peach and green is located on the inside curve of the bowl. All of this decoration and particularly the floral motif, is poorly preserved and has been scratched off extensively (Plate 4: h). It is unknown if this vessel is it was manufactured, or if it has been handpainted by a consumer following purchase, or if both of these processes are evident. There are no distinguishing marks on the sherd.

Whiteware: Vessel 33 is a vitrified white earthenware vessel which is a wide, flat, thick bowl with no foot, no decoration, and no marks. It is about 20% complete and made up of 10 sherds, many of which are the result of pot-lid fractures.

Vessel 54 is a single sherd from a teacup handle. It is plain white porcelain and has probably been exposed to heat on one side. It shows moulded decoration.

Glass

There were 1253 pieces of glass recovered from this feature. Of these, 576 fragments are the result of dining and dietary refuse.

214 shards are container glass but not diagnostic. 344 shards, making up 52 of the vessels are, or probably are, food-related containers. None is certainly an alcoholic beverage container. Most of the vessels are commercial containers. Ten fragments form two vessels which can be described as tableware. The food containers, containers of unknown function, tableware, and glass closures are described in this section.

One of the most distinguishing characteristics of glass, which was an important factor in the calculation of minimum number of vessels was colour. The vessels are listed and described below by product and/or functional sub-category (ie. food, tableware, unknown) and colour. Known products are listed together even if colour varies.

Glass Food Containers: Aqua-coloured glass: The single most commonly occurring product in the entire sample is Rose's Lime Cordial, made by L. Rose and Company, Ltd. in London, England (Plate 6). The start date of manufacture of this product is unknown, although it was advertised in Dawson City, Yukon as early as 1898 (Archibald 1981) and it is still made today by Cadbury Beverages, Ltd.. Eight bottles (Vessels 1-6, 30 and 50), six complete or nearly so and two partial, were containers of this product.

The bottles in this sample are of two different sizes. Of the complete ones, three (Vessels 1, 5, 6) are between 352 and 354 cm and three (Vessels 2, 3, 4) between 280 and 286 cm. The two incomplete bottles (Vessels 30, 50) are of the smaller variety.

These bottles are distinctive in the collection. They are all embossed with an all-over leaf and flower motif with a flat space on the front surface for a paper label, the remains of which was preserved only in the case of vessel 30. Above this space are the embossed words "L. ROSE & CO.". All of the bottles are cylindrical in body with tapered necks, champagne shoulders, and a shallow concave base. They are all mould-blown by hand and the finish is completed with a finishing tool. One of the larger bottles (Vessel 5) has a neater finish and overall appearance than the others, although it is still not a machine-made item. Another (Vessel 6) of the larger is different from the others in that it has a stopper finish which is a step on the interior of the bore in order to accommodate a stopper. The cork-wrapped glass stopper was found in place.

Four of the five smaller bottles have bottle maker's marks on the bases. The base of one was not recovered. The larger bottles have no maker's marks. The marks are the same on 3 of the 4 bottles. They read "J K & S" and have a mould number of 4137. The fourth, Vessel 3, reads "J K & S LTD" with a mould number of 2556. Toulouse (1972: 280-281) lists the former mark as that of the British company of John Kilner and Sons which was in operation from 1844 into the twentieth century. Toulouse states that this particular mark was in use until 1857, but that the company was listed in a commercial directory under the same name until 1928. In this sample, it is unlikely that these bottles date as early as 1857 and it seems the logical mark for a glass company of that name. Toulouse does not indicate what mark the company was using until 1928, but it is probable that it was the same or a slight variation. Although the mark and the mould are different in the case of Vessel 3, the method of manufacture and the finish are the same, so it is unlikely that there is any major chronological difference between the four.

The larger bottles, on the other hand, are all different.

Each is made from a slightly different mould, although no mould numbers are evident on the bases. They differ slightly in the form of the embossed decoration, with variation in curves and shapes of the plant designs, even though the basic motifs are the same. Vessel 1 is most similar to the smaller bottles. It has a roughly manipulated finish formed with a finishing tool. Vessel 5 is different in that its finish is a separate mould part, even though it is not machine made. Vessel 6 has a stopper finish. In terms of decoration, the moulds of Vessels 5 and 6 are more similar than 1.

Sixteen small shards are certainly that of broken Rose's Lime Cordial bottles, probably parts of Vessels 30 or 50, but were not refitted.

Four vessels (8, 9, 10, 63) in the sample contained a product called "Burnett's Standard Flavoring Extract" (Plate 7). Two of these (8 and 10) are aqua in colour and the other two are colourless. All are small (complete between 138 and 140 cm), with straight, rectangular bodies, chamfered corners, down-sloping shoulders, ball necks, patent lips, and flat indented bases. Two (Vessels 8 and 10) are machine-made, and the two colourless ones are mould-blown. These latter have basal vent marks and all complete vessels have vents on opposite shoulders. One of the vessels, 63, is partial and all others are complete or nearly complete with Vessel 10 being unbroken.

The finish on the complete mould blown bottle (Vessel 9) is manipulated, the others being formed in the machine.

These flavouring bottles are embossed on the front with "BURNETT'S STANDARD FLAVORING EXTRACTS" and on the left and right sides with "BOSTON" and "BURNETT", respectively. The embossing on the bases vary. Vessel 8 reads "32", Vessel 9 ,"2", Vessel 10 ,"34" and Vessel 63, "W/5".

The Burnett company of Boston was in business in 1845 (Zumwalt 1980: 62) and still flourishing in 1909 when Zumwalt's search ended. They appear to have made flavourings and patent medicines.

Two bottles (Vessels 20 and 27) are identifiable as containers of Garton's HP Sauce. These are both machine-made, aqua in colour, have straight, square bodies with chamfered corners, club sauce finishes, cylindrical necks, down-sloping shoulders, and flat, indented basal profiles. Vessel 20 is 213 cm in height and Vessel 27 is 211 cm.

Vessel 20 is complete, unbroken, and even contains leftover HP Sauce (Plate 9). The glass stopper was found in place and the remains of a white lead foil capsule and a paper label are stuck to the bottle. The base of this vessel shows an Owen's scar which is a distinctive mark made by an Owen's machine invented in 1904 (Miller and Sullivan 1981).

Vessel 27 is different than 20 in that the words "GARTONS HP SAUCE" is embossed down the front of the bottle. However, it also displays an Owen's scar and the base is embossed with the letter "H" which could refer to a number of bottle manufacturers in the early twentieth century (Toulouse 1972).

Not much information was located concerning the Garton

company. It was probably a British company which came into production in the late nineteenth century. HP sauce is still made in England by HP Foods, Limited and in North America by E.D. Smith and Company, Limited.

Another popular sauce container found in this site is the Lea and Perrins Worcestershire Sauce bottle. Two incomplete vessels (28 and 29) were identified as such. The neck and finish is not preserved on either of these vessels. Both have rounded shoulders and cylindrical bodies and both are machine made, having Owen's Scars on the bases. Both are 53 cm in diameter and of unknown height.

A partial orange paper label with the words "LEA AND PERRINS/WORCESTERSHIRE SAUCE/ORIGINAL MANUFACTURERS" is preserved on Vessel 29 (Plate 9). The base of Vessel 28 is embossed with "A 20/18 UGB" and that of Vessel 29 reads "A 20/UGB".

Lea and Perrins first started making Worcestershire Sauce in the 1830's and there were many copies made during the nineteenth century (Zumwalt 1980: 269). This is presumably why the company printed "original manufacturers" on their labels.

The mark "UGB" is that of the United Glass Company of Britain. This mark was used from 1913 to 1968 (Toulouse 1972: 510). Lunn (1981) discusses the origins of Lea and Perrins bottles found on Canadian archaeological sites as being primarily British, except where the inhabitants of the site are in direct contact with American supply networks. United Glass is not listed in Lunn's paper as one of the frequently occurring marks on bottles found in Canadian sites in the west, northwest, and north, although it is interesting that the marks in this collection are British and not American.

Brown glass: Vessel 7 is a complete, unbroken Bovril container (Plate 10). It is machine made with a globular body, flat sides, a cylindrical neck, down-sloped shoulders, and a flat, indented base. It is embossed on the two rounded sides with "8 OZ./BOVRIL/LIMITED" and "8 OZ./ BOVRIL/LIMITED/F9" respectively. The flat sides were for paper labels as the remains of one was found on the bottle upon recovery. It was illegible.

Bovril Limited of England trademarked many goods in the United States. The earliest of these is registered in 1894 (Zumwalt 1980: 56). The product was advertised in The Klondike Official Guide in 1898 (Archibald 1981: 18), in the Hudson Bay company's mail order catalogue in 1910/1911 (Hudson's Bay Company 1977: 245), and this particular shape of bottle was used in an advertisement for the product in 1920 which showed a pyjama-clad man in water clinging to the bottle (Wills 1974: 64). A Hudson Bay company photograph from the late 1920's shows a similar bottle in use in the Arctic (Robertson 1984: 113). Bovril is still made today, although more frequently sold in dehydrated cube form rather than liquid.

Four other shards may be fragments of at least one other Bovril bottle (Vessel 85). These are brown in colour and embossed. None shows a complete word. They read "LIMITE...", "...RI...", "...RIL...", AND "LIMIT...".

Colourless glass: 4 complete or nearly complete vessels (14,

15, 16, 17) and one incomplete one (62) are of identical form and manufacture. These are sauce or ketchup bottles of some kind. They are machine made, cylindrical, twelve-sided bottles with tapered necks, very down-sloped shoulders, continuous thread finishes, and shallow concave, embossed bases. The complete vessels are 249 mm in height. Vessels 14, 15, 16, and 17 were found with the remains of a green paper label. A white letter "P" is legible on the right side of the label on Vessel 14 (Plate 9).

A number "3" is located on all four complete and nearly complete vessels near the basal seam on the back of the bottle and the bases of all are embossed with the letters "IPGCo" enclosed in a diamond shape. This mark is that of the Illinois Pacific Glass Co. which was in operation between 1902 and 1925 (Toulouse 1972: 268). Although the base is was not recovered in the case of Vessel 62, it is likely of the same manufacture.

The product contained in these bottles is unknown, although they look like ketchup bottles and the one partially legible word on a paper label could be "KETCHUP". These are not Heinz ketchup bottles as Heinz made their own bottles (see below), but many other companies made similar sauces at this time (see Hudson's Bay Company 1977; Archibald 1981) and bottled them in similar bottles (Baugher-Perlin 1982).

Vessel 12 is a small container of Horlick's malted drink mix (Plate 10). It is a cylindrical, machine made jar with a continuous thread finish, embossed shoulder, and flat, indented, embossed base. The shoulder embossing reads "HORLICK'S" and the base reads " 1 Q/D". This mark was not found in Toulouse (1972), although the Horlick's company has an interesting history. Today, this product is mostly associated with Britain, although it was originally an American company (Zumwalt 1980: 249). It began production in Racine, Wisconsin in 1883 and Horlick's is still made today and packaged in similar jars. Horlick's was used in soda fountains, in survival and ration kits of the British and American armies in the Spanish-American War, and World wars I and II, and was supplied to British and American exploratory expeditions to the north and south poles and even was involved in the development of space food in the 1960's.

This particular jar is very small, only 85 mm in height, and did not hold very much (brim volume 69 mL). It is likely that it was a sample size.

Vessel 24 is a large, incomplete flavouring bottle. It is mould blown in a two part mould with a separate base part and manipulated finish. It is rectangular in cross-section with chamfered corners and has a patent lip, ball neck, down sloped shoulder, and a shallow concave basal profile. It has vent marks on opposite shoulder corners, one in the centres of both the front and the back surfaces, and 3 down each side. It has an embossed base and paper label. The base reads "6661/666" and the paper label reads (with ?s for illegible words): "? FOR FLAVORING/? JELLIES/CUSTARDS, PASTRY/? ?/ETC.". The origins of the bottle and the product are unknown, but probably American due to the spelling of the word "flavoring".

Vessel 52 is an incomplete machine-made bottle with the neck, shoulder, and finish intact. It is cylindrical and eight-sided with a continuous thread finish, a tapered neck, very down-sloped shoulder, and a flat indented, embossed base. The letters visible on the base are "J.H..." around the margin. The form of the bottle and the partial embossing lead one to conclude that this is probably the remains of a Heinz ketchup or sauce bottle. A similar bottle was patented by J.H. Heinz and Company in 1890 (Zumwalt 1980: 212). Heinz tomato ketchup is still sold in a similar bottle.

Vessel 57 is represented by many shards making up about 60% of a large jar. It is cylindrical with a short, cylindrical neck, rounded shoulder, and cap seat finish. This finish is one with a ledge on the outside of the lip for a cap to rest upon. This jar is machine made with no commercial marks. The base was not recovered. The complete jar would have been more than 167 mm high with a diameter of about 93 mm.

Manganese glass: Two vessels (25 and 26) in this subcategory are manufactured of solarized manganese glass. These are of identical form, size, and construction, but are slightly different shades of purple. They are cylindrical in body with short cylindrical necks and rounded shoulders. They are mould-blown in a two part mould with separate base part. The base of Vessel 26, but not 25 was recovered and this is embossed with the number 2384 which is probably a mould number and is flat indented in profile. Both jars are about 122 mm in height and 67 mm in diameter.

Milk glass: One nearly complete milk glass jar (Vessel 21) was reconstructed (Plate 8). This jar was manufactured using the turn/paste method (Jones and Sullivan 1985). It is slightly flaring with a cap seat finish and a flat indented, embossed base. It is 108 mm in height and 79 mm in diameter.

The embossing shows a crossed cattle prod motif surrounded along the perimeter of the base by the words "MACLAREN'S IMPERIAL CHEESE RGSD". This company was established in 1891 and purchased by J.L. Kraft and Bros. Co. in 1921 (Zumwalt 1980: 294). A corresponding container is pictured in an advertisement from 1905 in the Canadian Grocer (Archibald 1981: 90).

Glass Tableware: Colourless glass: Vessel 23 is a small, unmarked tumbler (Plate 8). It is the only vessel in the collection which is blown rather than moulded. It has a pontil mark on the base. It is slightly tapered down and has a polished rim. It is 93 mm in height and 60 mm in diameter at the base.

Vessel 60 is a footed glass of some kind. It is represented only by a base. It is circular in horizontal dimension with a diameter of 47 mm. Its method of manufacture is unknown and little can be said about it.

Containers of Unknown Function: Amber-coloured glass: Four shards make up Vessel 74 which is a container of unknown function. It is distinguished by its embossed all-over lattice design.

Aqua-coloured glass: Four aqua coloured vessels of unknown function are incomplete. Vessel 44 is represented by two shards which form a complete base of a mould-blown, square vessel with

rounded corners and a shallow concave separate base part basal vent marks.

Vessel 67 is represented by the base of a large, circular container with a diameter of 95 mm. It is mould-blown with a shallow concave embossed separate base part. The embossing is faint and illegible. Another aqua shard embossed with the letters "...RI..." may be part of this vessel or the following, Vessel 77.

Vessel 77 is represented by one basal fragment of a mould-blown cylindrical container with separate base part.

Vessel 78 is represented by three shards. It is unknown manufacture, although is probably moulded. The curve of the pieces is slight and the vessel is probably not cylindrical.

Brown glass: Vessel 66 is represented by a single shard which consists of a finish and upper neck. The vessel is machine made with a crown finish and a tapered neck. It may be a beer bottle or some other kind of beverage. A machine-made base with an Owen's scar and marked with an embossed "B" may be part of the same vessel. This may be the mark used between 1909 and 1961 by the Buck Glass Co. of Baltimore (Toulouse 1972: 57).

Colourless glass: A complete, unbroken bottle, Vessel 13 is machine made with rectangular cross-section, chamfered corners, patent lip, cylindrical neck, down-sloped shoulder, and flat indented embossed base. It has an Owen's scar and a rubber stopper in situ. The base is embossed with the letter "I" in a diamond shape and the number 9 or 6 on the edge of the base. The rubber stopper is also embossed and reads "C (or G) R Co/5". The mark on the base is one used by the Illinois Glass Company of Alton, Illinois between 1916 and 1929. This is either a medicine or a flavouring bottle as it is a standard shape for either of these (Baugher-Perlin 1982: 273; Fike 1987).

Vessel 19 is a complete, unbroken bottle. It is a flat, octagonal shape in cross-section with a straight body, flat-sided lip and cylindrical neck, rounded shoulder, and flat indented embossed base. The base reads "A11/C 11/U.G.B./C". It is 169 mm in height and the horizontal dimension is 67 x 35 mm. The mark was used by the United Glass Company's Charlton Plant from 1921 to 1966 (Toulouse 1972: 513).

Vessel 42 is a partial cylindrical, machine made bottle. Only the base and part of the sides are preserved. The shallow concave base is unmarked, although a number "3" is embossed near the basal seam. This may be an alcoholic beverage container, but there is not enough of it preserved to be sure.

Vessel 43 is made up of only a base. It is circular in cross-section, and machine made with a shallow concave base. An incomplete number "5" is embossed on the base.

Vessel 49 is represented by embossed piece of glass from the front of a squarish, rounded container. It is of unknown moulded manufacture. The embossing reads "Nujol". This name is of unknown origin.

Another embossed vessel of unknown origin is Vessel 51. It is a cylindrical, multi-sided vessel of moulded manufacture. The only legible letters in the embossed mark are "Bu..." in script and a

bordered "CHI...". Both are set in a flat, oval space. 6 other shards may be parts of this vessel as they are similarly sided.

Vessel 58 is represented by a base only. It is a cylindrical machine-made container, 69 mm in diameter at the base. The basal profile is shallow concave and it is embossed with the numbers "701" on one margin and "4" opposite.

A finish of a machine-made bottle of unknown function is all that remains of Vessel 59. A cork was found in the bore. It is a vessel with a short, cylindrical neck and unknown body shape.

Vessel 75 is a moulded, embossed container of unknown shape and function. It is made of thick glass which is a whitish, cloudy colour and may have been burnt. The fragmentary embossing reads "...WYN/...L" and has a curved, embossed border.

Vessel 86 appears to be complete, although it is melted beyond recognition. It has a patent lip and is of moulded manufacture. It has a straight, cylindrical neck and is very small. It may be a medicine or flavouring bottle (Plate 13: f).

Dark green glass: Only two partial vessels are made of dark green glass common is wine bottles. Vessel 69 is represented by the base of a machine made circular container with a shallow concave base with an Owen's scar. A "1" or "I" is embossed in the centre of the base. This piece is a more yellowish colour and quite distinct from the other dark green vessel, 70, which is made up of 3 very dark green shards. This latter vessel is of unknown form and manufacture. Either of these may be a wine bottle, but this is impossible to demonstrate.

Manganese glass: Two single shards of solarized manganese glass represent two separate vessels (47 and 48). Vessel 47 is a cylindrical, moulded, patinated container. Vessel 48 is a moulded, rectangular bottle with chamfered corners.

Milk glass: Two isolated shards of milk glass represent Vessel 76, which is probably a wide-mouthed jar. The manufacture method is unknown and the finish is for a stopper of some kind. It is opposite in shape to the cap seat of Vessel 21, but the two do not fit together as Vessel 76 has a slightly larger bore than 21. Vessel 76 may also be a cheese or dairy product jar.

Glass Closures: Seven glass closures were recovered from this site (Plate 13: a-e). Of these, 4 are glass stoppers of the "Club Sauce" type (Jones and Sullivan 1985: 152-153). They are of the same size. Three have cork rings around the upper third of the shank in order to complete the seal. This is a common type on late nineteenth and early twentieth century sites (Ibid.: 152). Two closures are embossed on the flat finial with the word "GARTON". One was recovered in the bore of an HP sauce bottle (Vessel 20) with contents and covered with the remains of a lead foil capsule.

Two closures are unmarked, although one was found in place in the bore of one of the large Rose's Lime Cordial bottles (Vessel 6). This was the only one of this type of bottle closed with a stopper rather than a cork.

One is an Eno's type stopper, commonly used in Eno's fruit salts containers (Jones and Sullivan 1985: 153). It is similar to the Club Sauce stopper although much wider and flatter. This

example is embossed with the words "ENO/PREPARED BY PATENT". It is also deformed from exposure to heat.

The remaining two glass closures are lid liners. One of these is a milk glass liner with embossed commercial mark. This mark consists of the letters C, F, J, and C printed on top of one another in stylized lettering in the centre and the words "CONSOLIDATED FRUIT JAR COMPANY NEW YORK" around the margin. The other side shows the number "27". According to Toulouse (1972: 123), this company was making jars between 1871 and 1882 and lids after that until the closing of the company in 1908.

The other liner is aqua in colour and shows the words "HAMILTON GLASS CO." embossed around the margin. It is the only closure not recovered complete. Only about 60% of the object remains. Its marking indicates that it was made in the nineteenth-century, before the Hamilton Glass Company was bought out in 1898 (King 1987).

Undiagnostic Glass: Shards of undiagnostic container glass amounted to 214 of the total sample. Of these, 18 were aqua in colour, 22 brown, 172 colourless, and 2 milk glass. Of these, 4 colourless shards were embossed. The embossing on two of these is illegible, while the other two showed too few letters to be of any use.

Metal

1048 pieces of metal were certainly the result of kitchen refuse. It is likely that most of the undiagnostic pieces of metal were also of kitchen refuse, as most of them are probably fragments of corroded tin cans.

Metal Containers: Rims, seams, ends, keys, and handles of metal containers accounted for 932 of the total kitchen refuse metal. 593 of these fragments were round rims which could be from either the top or the bottom of "Sanitary Cans" (Keen 1979). I calculated that these represent a minimum of 63 cans of three different size groups. These are 2 to 3 inches in diameter, of which there are 8; 3 to 4 inches, of which there are 30; and 4 to 5 inches, of which there are 20. Of all sizes of cans, 48 were found in Levels 1 and 2A, 14 in Level 2B, and one in Feature F3-91-3. I present the results of the second method of calculating minimum number of vessels for metal containers in the section on undiagnostic metal below.

Sixty-seven fragments of metal cans were rims of containers which were not round. These were probably square, rectangular, and trapezoidal cans which were and are commonly used for meats. There are too many variations in size and shape to quantify these beyond simply counting the fragments.

Fifty-seven of the pieces were complete keys for opening cans. Of these, 7 were a longer type with the connection to the can at the very end.

Three cans were recovered complete. These are a powder tin of some kind with a perforated lid, a round can, and round, non-ferrous can with engraved commercial information: "PAT USA 3-14-16/2-26-18/9-30-24/CAN PAT 1924/S/Glastonbury, Conn., USA/The J B Williams Co.".

Three handles from pots or cups were recovered, one being of the enamelled type known as graniteware. A large basin of this ware was also found. The collection also contains 3 wire handles from pots or kettles.

Metal Closures: Ninety-nine fragments of metal are pieces of metal closures. These include bottle caps, foil capsules, screw lids, caps for jars and cans, and metal lids from other containers. There are 9 bottle caps with cork liners. The 15 screw lids include and 1 Mason-type lid, 4 ketchup or sauce bottle lids, one which may be from a water-proof match container which is engraved with the word "Kwik-lite", a tiny lid embossed with the words "Forhan's/TRADE MARK", and another of unknown origin which has the insignia "C & Co" engraved on it in a stylized motif. Of the 21 foil capsules made of lead and aluminum foil, only three are marked. One shows the crest of the Hudson's Bay Company, another reads "L. Rose & Co.", and the last has the word "GARTON'S" embossed on it. 2 non-screw lids are painted with the crossed cattle prod motif of the MacLaren's Cheese Co., another is plain gold-painted, and another is from a can of preserved butter made in Halifax, Nova Scotia. There is one piece of solder from the seal of what was probably a meat can (Keen 1979).

Kitchen Utensils: Seventeen fragments of metal represent a minimum of 6 kitchen utensils. Four fragments of silver-plated copper form one set of sugar tongs (Plate 2: i). These are quite decorative and have an engraved name or word along the handle which is quite illegible. Nine perforated fragments probably belong to a strainer of some kind. There is not enough of it to determine its form. 1 large circular piece of metal with asbestos lining is probably a hot plate. One complete rotary mixer or egg beater was recovered. It has a wooden handle. The last two utensils are a three-tyned dinner fork with a wooden handle and a highly corroded table spoon.

Undiagnostic Metal: 5843 pieces of undiagnostic metal are likely parts of metal containers. The tin cans and the metal dishes were very fragmentary and sheet metal was generally found in better condition while metal dishes or parts thereof all had remnants of enamelled or painted coating. The thickness and the fragmentation of the undiagnostic metal indicate its probable origin as that of metal containers. No rims of a particularly large size were found so it is unlikely that a considerable portion of the sample resulted from the decay of buckets which could not necessarily be classified as kitchen refuse. The handles of buckets discussed below could have occurred separately from complete buckets. The number of fragments of undiagnostic metal is highly inflated because of the fragility of the material.

In an attempt to quantify the undiagnostic metal in more real terms, it and the total metal container sample were weighed and the weight divided by the weight of an average complete can. The minimum number of vessels was 80 for the complete collection.

Miscellaneous Materials

Twenty-four pieces of other materials such as cork, rubber, wood, and paper represent artifacts of dining and dietary origin. Seventeen cork fragments were recovered of which 5 complete corks

are from Rose's Lime Cordial. They are printed with the words "ROSE & Co./LONDON".

Seven fragments of rubber jar sealers and two rubber baby feeding nipples (Plate 11: a) are also included in this category.

Two match box remains were recovered. One is printed with the word "DOMINO" in white on a dark blue background above a jester's face and the other is unmarked, although most, if not all, of the wooden matches were found inside.

FURNITURE

Fragments of lighting devices accounted for 367 glass shards. A minimum of 4 lamp chimneys and 2 lantern chimneys are represented. Two of the chimneys are identified by the finished upper edges of a cylindrical, non-flaring opening, much as Russell (1968: 282) describes as being a common kerosene lamp chimney of the nineteenth century and later. Flaring and decorated upper rims became popular in the mid-1880's (Russell 1968: 283; Woodhead et al. 1984: 58). The other two lamp chimneys in this collection are of the latter type, with a beaded design (Plate 1: c). The majority of chimneys in Canadian glass-maker's catalogues in the early twentieth century had plain upper rims (Woodhead et al. 1984: 62). The decreasing popularity of decorated chimneys is probably related to the increasing popularity of decorative shades and globes (Ibid.: 62). Glass chimneys may also have been used with candles.

Lanterns which are usually used for outdoor lighting tend to have chimneys made of thicker glass than those of indoor lamps and they often have mould seams and ground, unpolished lower rims with a short foot (Woodhead et al. 1984: 64). Lantern chimneys frequently have a ridge at the upper rim in order to suspend the chimney. The two in this collection have threaded upper rims which were originally confused with jars. Both are embossed with the words "MADE IN CANADA" and have black staining on the interior surface.

One other lamp part is represented by a single fragment of opaque white glass. I identified it as lamp glass due to the unpolished foot, and, although it may be a chimney fragment, this cannot be determined with any certainty.

Only 21 pieces of identifiable metal are parts of furniture. Two of these are tacks for upholstered furniture and 7 are hardware from folding furniture such as cots, chairs, or tables. Three pieces are decorative brackets or plates for corners or edges of furniture. Three pieces of curved cast iron are probably fragments of a cast iron stove and one piece of galvanized sheet metal is a cut piece of a flattened stove pipe. One artifact is a heavy wire pot or lamp hook and three others are small hooks, likely for cabinets of some kind. One brass artifact is a gas valve and feeder from a gas stove or lamp (Plate 1: a).

Seventeen miscellaneous artifacts can be classified as furniture. These include 14 white wax candle bases. The average diameter of these is 15 mm, although one is 25 mm in diameter. One

candle is more complete as 73 mm of its length remains and it has two transverse incisions around its diameter.

The last three artifacts relating to furniture are three pieces of worked wood. Two of these, one consisting of two pieces in a T-shape and another single piece, show tongue-in-groove construction. The T-shape is held together by wooden pegs instead of nails. It is likely that this kind of careful construction is for furniture rather than anything architectural.

ARMS AND AMMUNITION

The vast majority of artifacts in this category are cartridge casings. If fact, only one object is not part of a cartridge. This is a screw with attached fibres to form a mop for cleaning gun barrels. It would screw onto a handle. Such a device is pictured in the 1887 Bridgeport Gun Implement Catalogue (Gooding 1966: 24-25).

Nine calibres of rifle ammunition and two types of shotgun ammunition are represented in this collection. Of 106 cartridge casings, 73 are .22 rimfire casings. These show headstamps from at least 5 different manufacturers. One shell of this calibre is a high power centre fire.

Five .303 British cartridges were recovered from the site. These have been the official military rifle cartridge of the British Empire since 1888 (Barnes 1989: 66). These examples are impressed with the manufacturers' marks, which are all Canadian and the date. Four of these were made in Lindsay, Ontario by Defence Industries Limited in 1917, and the fifth by Dominion Arsenals, also in Lindsay, in 1918. There was an intensification of military industries in Canada during the First World War. The .303 British became popular in Canada during peace time for hunting big game (Heintzmann 1978: 184).

Thirty cartridge casings in this collection were certainly made by Canadian manufacturers, mostly by the Dominion Cartridge Company, and 30 by American manufacturers, particularly the Remington-Union Metallic Company and the Winchester Repeating Arms Company. The most single most frequently represented shell is a .22 rimfire with a simple headstamp depicting a diamond shape. There are 40 of these and they are as yet unidentified.

Seven shotgun shells are 16-gauge and 12-gauge and 4 have the remains of the paper casing. A popular early twentieth century shell, Dominion's "CANUCK" was first manufactured in 1913 (Gooding 1967: 45).

Two cartridge casings, a .30 calibre and a .44 calibre Winchester were stuck together to form a container of sorts. This was filled with sand (Plate 14: f). Another, also filled with sand, was flattened at the open end (Plate 14: e). These may have been some kind of expedient weights.

The cartridge casings were found most frequently in Level 2A. 75% of them were recovered from the two uppermost levels.

CLOTHING

Forty-five artifacts are from pieces of clothing. Of these, 24 are buttons, 8 are other kinds of fasteners, and 13 are textiles and leather.

The majority of the buttons are sew-through white shell buttons which are common throughout the nineteenth and early twentieth centuries and earlier (Luscomb 1967: 177). These are all very plain with 2 or 4 holes. Only one shows any decoration and this is in the form of a shaped concavity around the holes of one of the two-holed specimens. Two of the shell buttons are dark grey in colour, probably having been made from the shell of a mollusc living in the South Pacific (Luscomb 1967: 178).

Five buttons are of metal. Three are only backs, only one of which is a sew-through. The three ferrous buttons and backs are highly corroded. The two made of brass are in better condition. One of the brass buttons has a ferrous back. It is also the only one with embossed printing which reads, in a circle, "BROTHERHOOD-*-". The origin of this lettering is unknown, although it is probably Masonic. Zaslow (1971: 126) briefly mentions activities of the Freemasons and another organization which he calls the "Arctic Brotherhood" in the Yukon in the late nineteenth century, although no more information was given about the latter group and none was located.

Two buttons are made of bone. One of these is a four-holed sew through with a centre concavity which looks like a fifth hole but does not perforate the button and a carved rim. The smaller bone button has four holes in a recessed centre. Like the shell buttons, these bone ones are common over a long period of time (Luscomb 1967: 25).

One button in the collection is made of plastic and one of green crocheted fibres. The plastic one is a white sew-through with an opalized, pearl-like finish and 4 holes. The green crocheted button is a ball with threads hanging from it with which it would have been sewn onto a piece of clothing.

Other fasteners include a suspender hook plated with a white metal, a large brass hook, a brass clasp, probably from a coat and the rectangular eye to match, and what is probably half of a snap. The latter is incised with the words "OK/PAT". Part of a ferrous belt buckle and two pieces of a steel stay with eyes from a corset were also recovered.

Two disintegrating pieces of fabric were recovered. One is a knitted blue material and the other is a gold-coloured woven wool. It is unknown what piece of clothing these may have been part of, if any. Also, one faded pink satin ribbon, tied in a bow was found.

The leather remains consisted of 7 belt fragments, one collar, one scarf ring, and a strip of hide with stitching holes which is probably part of a moccasin or kamik.

PERSONAL USE ARTIFACTS

Seventy-six artifacts can be categorized as those used by individuals for personal activities or as heirlooms.

The glass artifacts in this category are 17 beads and 44 shards of silvered glass. Of the beads, 9 are seed beads, 4 of which are blue, 3 are pink, and 2 are red. Two wound red beads with white centres are slightly larger, at an average of 3.3 mm in diameter rather than the 2.2 mm average of the seed beads. Three turquoise beads are, again, slightly bigger, with an average diameter of 4.8 mm. The two largest beads are a cobalt blue bead at 7.0 mm and a transparent amber-coloured bead at 9.1 mm.

Five metal artifacts which were used by individuals are a bobby pin, the interior mechanism of a pocket watch (Plate 2: c), two coins, and a fancy silver-plated handle of unknown origin (Plate 2: b). The coins are a 1918 Canadian one cent piece (Plate 2: d) and an antique Oriental coin (Plate 2: e). The latter object was identified as a Japanese copper coin minted between AD 1616 and the early eighteenth century (Jacobs and Vermeule 1972: 25). It was minted soon after the Tokugawa Shoguns rose to power in Japan (Cribb et al. 1990: 206). It is inscribed with the words "Kanei-Tsuho" which means "current money of the Kanei period". The coin was successful and it was issued after the end of the Kanei period in 1643 until the middle of the nineteenth century (Ibid.). The later coins, however, were made in iron and brass (Jacobs and Vermeule 1972: 25).

A fragment of a leather suitcase or handbag handle and 7 fragments of a plastic business card/calendar were found in Levels 1 and 2A. The card is that of Captain C.T. Pedersen's Northern Whaling and Trading Company which was established in the summer of 1923. The calendar shows the dates of 1924 on one side and 1925 on the other (Plate 2: f-h).

Two bone artifacts, both calcined, were initially thought to be impossible to identify. One of these is incised with the words "WARRANTED/HIGH GRADE" and the other "WARRANTED/PERFECT" which are very difficult to read. During the 1992 season of the Qikiqtaruk Archaeology Project, an historic Inuvialuit house was excavated which produced a similar object, more complete and not calcined. It is because of this that these two artifacts were identified as fragments of bone toothbrush handles.

Two decaying newspapers were also recovered. One, found at the very bottom of the pit, was the Saturday, July 31, 1915 issue of The Montreal Herald and Daily Commercial Gazette. The other, found in L2A, was the Thursday, June 7, 1923 issue of the Catholic Register.

ARTIFACTS RELATED TO OTHER ACTIVITIES

218 artifacts were recovered which document the occurrence of a variety of activities which are not related to diet. They include general household activities, the practices of medicine and dentistry, recreation, school-teaching, storage and transportation,

fishing and trapping, metal-working, and building. These activities and the proportions of artifacts associated with them are listed in Table 4.

Table 4:
Representation of Artifacts by Activity

Activity	Frequency	Percentage
Household Activities	16	7.3
Medicine and Dentistry	104	47.7
Recreation	5	2.3
School	14	6.4
Storage and Transportation	19	8.7
Fishing and Trapping	5	2.3
Metal-Working	52	23.9
Building	3	1.4
Total	218	100.0

Household Activities

One glass vessel (18) fits into this category. It is a bottle made from a two part mould with separate base part with the words "THREE IN ONE" and "THREE IN ONE OIL CO." embossed on the sides. The vessel has a rectangular cross-section with chamfered corners, a manipulated finish with a patent lip, a cylindrical neck, down sloping shoulder, and a flat indented, embossed base. The base reads "821", probably a mould number and the bottle is 130 mm high and 48 x 27 mm in horizontal dimension. The product which this bottle contained is a light oil frequently used for small machines such as sewing machines or typewriters.

Other sewing-related artifacts include 5 thimbles, three of which are made of pewter and are corroded so that they are fused together in a stack. The other two are made of a white metal, one is topless and the other is a promotional product and is embossed with the words "USE NUGGET BOOT POLISHES" (Plate 2: j). Two wooden thread spools were also recovered.

Medicine and Dentistry

Seven glass vessels are medicine bottles were constructed from 27 fragments and all of the 22 fragments of miscellaneous glass are medically related.

Vessel 22 is a small, cylindrical bottle made of brown glass with a prescription lip, cylindrical neck, and rounded shoulder. It is machine-made and has a Owen's scar on the flat indented, embossed base. It was recovered with a red rubber stopper in place. The base reads "I" or "1" and the origin of this mark is unknown.

At least six medicine vessels of a comparable type were recovered in varying states of repair. These are vessels 11, 61, 65, 71, 72, and 73. Vessel 11 is complete and was recovered unbroken (Plate 10). It is a 60 cc prescription medicine bottle with embossed graduations down both sides, in American fluid ounces

on one and cubic centimetres on the other. It is mould-blown in a two part mould with a separate base part. It has straight sides and is "Philadelphia oval" in cross-section with a manipulated finish, prescription lip, cylindrical neck, and down-sloped, fluted shoulder. It has vent marks on the corners of the base and on the back of the bottle. The vessel is 110 mm high and 41 x 25 mm in its horizontal dimension.

Vessel 61 is of corresponding manufacture and form to the previous vessel, although it is larger, holding 3 oz. of fluid. A cork was found in place in the bore of this bottle. This vessel is incomplete, although it measures about 133 mm in height and about 45 x 29 mm in horizontal dimension.

Vessels 65, 71, 72, and 73 are more incomplete, represented by a few shards each. They are probably made the same way as 11 and 61, but this is impossible to determine for certain by the amount of evidence, so they are considered moulded only. 65 is a large medicine bottle with graduations of at least 160 cc. This bottle has been burnt and is deformed from the heat. It is represented by 3 shards.

Vessel 71 holds 8 fluid ounces and is therefore quite a large medicine bottle. It is represented by 4 shards.

Three pieces form Vessel 72. It is another large medicine bottle with graduations up to at least 180 cc.

Vessel 73 is made up of 4 shards. The highest graduation is 160 cc.

The miscellaneous glass objects consist of a small pipette of about 73 mm in length, a minimum of 3 test tubes (Plate 11: c), two brown and one colourless, a small dropper with a rubber bulb (Plate 11: d), two syringe vials (Plate 11: b), and a pointed glass rod. The syringe vials are of the "Carpule" type syringe which was developed in 1920 by Cook Laboratories Incorporated (Miller 1934: 170). The distinctive "cartridge" vials are glass tubes with rubber stoppers at both ends. Three small brass mechanism pieces may also be syringe parts.

A number of artifacts recovered in the midden at St. Patrick's Anglican mission house are specialized dental paraphernalia. Two of these are metal trays used to take impressions of teeth for research or for the construction of prosthetic devices (Plate 12: b-c). One is a maxillary tray and one is mandibular. Both are engraved with the size (3) and the manufacturers mark, one being "C D" and the other "SSW". The latter is the insignia of the S.S. White Dental Manufacturing Company which formed in 1844 (The S.S. White Dental Mfg. Co. 1944). In this collection, the S.S. White logo can also be found on a small screw lid. The impression trays are interesting also because they each have an "M" hand-engraved on the back.

Two plastic trays in the collection may also have been employed in the construction of false teeth (Plate 12: a). Certainly the 15 pieces of pink wax were used in the process of impression-making (The S.S. White Dental Mfg. Co. 1944: 81). Pink wax was also found in a small metal crucible, perhaps the container in which the wax was melted. Another material for taking

impressions of the teeth is known as compound or composition (Mauk 1928: 97). This material was developed in the early twentieth century (The S.S. White Dental Mfg. Co. 1944: 82) and most companies which made it had a slightly different formula. It is usually died a pink colour and softens at just above body temperature and can be returned to a hard state by dipping it in cold water. Most of the 17 pieces found on this site were in the original condition, as a trapezoidal shape about 5.5 mm thick. A minimum of 4 of the original shapes are represented. One was almost completely reconstructed and the word "KERR" is impressed on its surface. Although this company name was not found in Davis and Dreyfuss (1986), this exact compound is pictured in a number of dental texts from the first half of this century, including Cambell (1924), Turner and Anthony (1928), and Fripp (1930).

Evidence of other dental equipment includes a plastic card which holds dental needles (Plate 12: e). The commercial information printed on the card reads "Imperial Dental Needles/The Randall Faichney Co. Inc. Boston USA/Razor Edged/Polished Points". The Randall Faichney Company was established in Boston in 1888 and made a number of dental instruments (Davis and Dreyfuss 1986: 267).

Actual instrument parts from this site include 4 grinding wheels and 3 discs, 5 brushes, and one mandrel (Plate 12: f-i). These are attachments to the handpiece which is the basic apparatus of the dental surgeon. This is a pen-like object connected to a power source which causes it to rotate. Grinding wheels, which are made of an abrasive material, and discs, which are covered with an abrasive material, are used to prepared surfaces for work and to polish and finish after (Carter and Yaman 1981: 48-49). Brushes are used for cleaning and can be in a cup or wheel shape of different sizes (Ibid.: 132). In this collection, one brush is wheel shaped, and the rest are cup-shaped with the bristles pointing down from a hub. All of these can be connected to the handpiece by a mandrel which is a metal rod with attachments at either end. These attachments can be screws, or latches, or snaps (Ibid.: 50).

In addition to the artifacts, 3 human molars and one premolar were recovered which are severely worn and/or affected by caries (Plate 12: j-m). A cavity on premolar had been filled at one time with a dull grey metal.

Recreation

Five artifacts indicate recreational activities going on at the site. These are a red rubber balloon ring, a harmonica (Plate 2: a), a clay marble, a bookmark, and a flat bone disc which may be a gaming piece. This latter object is very thin an is probably not handmade, while the marble is not perfectly spherical and may be handmade. The harmonica is missing the metal casing and consists only of the interior metal plates and the wooden reeds. It is unmarked. The bookmark is plastic. It is the upper fragment and shows a romanticized picture of a woman's face.

School

All of the 14 artifacts relating to school activities are pencils. Eight of these are slate pencils, the others are various

parts of wooden graphite pencils, including one metal casing for an eraser. These latter, especially, may have been used for activities other than school as well. The wooden pencil fragments are mostly of the sided yellow painted type with one round red painted one. There are a minimum of 3 wooden pencils in the collection.

Storage and Transportation

The few artifacts in this category include 17 barrel hoop fragments, a burlap tarpaulin with brass grommets, and a dog chain. It is likely that many of the barrels, parts of which occur all over the settlement area, date to the time when the whalers were on the island, as many products were shipped to and from the island in barrels. There are no historical references to the missionaries using barrels although they were probably a useful and relatively abundant object. The tarpaulin could have been used for many things also, although many of the bales of food and clothes sent to the Arctic were wrapped in burlap such as this. This object was in severe disrepair upon excavation and the only pieces of it which survive are a few fragments of burlap and 8 brass grommets.

Before the 1930's, the only non-human modes of transportation in the Western Arctic were dogsleds and boats. There is evidence, both historical and archaeological, for the keeping of dogs by the missionaries. The dog chain was first identified by one of the excavators on the site who has lived in the area all his life and later confirmed by the Hudson's Bay catalogue of 1910-1911 (Hudson's Bay Company 1977: 210). It is 1.7 m long and complete.

Fishing and Trapping

Two artifacts, one of which is broken into 4 pieces, are evidence of hunting and trapping by the inhabitants of the site. Historically, there is much more evidence of these activities. One of these artifacts is a chain from a small animal trap, the other a fairly large handmade lead weight, probably used in netting fish (Plate 14: g). Although there is no archaeological evidence of this beyond the faunal bone sample, it is known that there was considerable seal-netting done also by the missionaries on Herschel Island.

Metal Working

Metal working is indicated by the large numbers of scrap sheet metal on the site. It is unknown what exactly the aim of all of this cutting of sheet metal was, although the material is probably quite useful in a frontier situation. Some of the most curious artifacts are evidence of this activity. Of the 50 pieces of ferrous sheet metal which have been cut, 33 are cut in a curve and 17 are cut straight in strips, squares, rectangles, and various polyhedrons. Two pieces of cut sheet metal are copper. Three of the curved pieces of ferrous sheet metal are particularly interesting because they seem to be the positive, rather than the usual negative shape (Plate 14: a-d). Two are identical, indicating purposeful repetition of the shape. They are leaf-shaped forms with slightly folded edges, both about 74 mm long. They other is similar, an oval shape with folded edges, 48 mm long. The function of these shapes is unknown.

Building

Three tools were recovered. These are a large axe-head, a flat wrench, and the pointed end of a small flat bastard file.

ARTIFACTS WITH MULTIPLE USES

Seventy-seven artifacts of different materials were identified as objects with multiple uses. These include wire, batteries, buckets, and rope, among other things.

Forty-four are pieces of wire, mostly ferrous, of which 36 are undiagnostic fragments. Two, a coil and a mass of covered wire, are copper. Five are objects of unknown use made of wire. These are masses of twisted wire which may be from coat hangers, with one or two hook-like projections on one end (Plate 14: h-k). They may be expedient stove handles or some other tool. They do indicate a repetitive pattern. One piece of wire is twisted onto a piece of cable and a small eye screw. This is probably some sort of fence or door closure.

Buckets are represented by 3 handle tabs and 3 wire handle fragments. These are all ferrous.

Four chain pieces are all ferrous with butterfly-type links. They are similar to the dog chain discussed earlier. One has a heavy metal hook attached to it.

Other artifacts with multiple uses are a hose clamp, a gas can cap, 2 pieces of jute rope, 2 metal mend plates, and 13 red, black, and white rubber band fragments. Four artifacts are parts of batteries. Two of these are graphite electrodes, one of which has a copper cap, and two others are thin strips of metal, one of which has a connector on one end.

ARTIFACTS OF UNKNOWN FUNCTION

The 100 artifacts in this category are of various materials but were either so poorly preserved that they were not identifiable or they were simply not identified.

Most of the metal artifacts in this category are fragments of various types of hardware, some simply corroded and some modified (by means of perforation with nails and cutting) so that their original or secondary function is unknown. One is a metallic mineral of some kind with holes drilled in it. Another is a round metal object with a key-like extension, possibly some kind of lock mechanism (Plate 1: b). Unidentified metal objects account for 88% of the total.

The remaining 12 artifacts are again relatively fragmentary. They are mostly pieces of plastic and wood. Two of these are carved roughly cylindrical artifacts with transverse notches around the centre.

TRADITIONAL INUVIALUIT ARTIFACTS

Four bone artifacts were identified as traditional Inuvialuit artifacts. These include a large whalebone mattock which is a hoe-

like implement for digging sod; a sealskin float nozzle, used for inflating sealskins to make floats for harpoon lines; a calcined tang of a spurred projectile point; and an artifact of unknown function.

SUMMARY

The artifacts described above are primarily of non-local manufacture. The collection is dominated by dining and dietary refuse, but this is due to the skewed metal count. If the metal containers and undiagnostic metal are expressed as a minimum number of vessels (I chose the weight method because it took the undiagnostic metal into account), the proportional representation of the functional categories is much different (see Table 5). In this case, the architectural category dominates due to the large number of nails.

Table 5:

Representation of Artifacts by Functional Category, with Minimum Number of Metal Containers

Category	Frequency	Percentage
Architectural Artifacts	1941	55.3
Dining and Dietary Refuse	535	15.2
Furniture	405	11.5
Arms and Ammunition	107	3.0
Clothing	45	1.3
Personal Use	78	2.2
Activities	218	6.2
Multiple Uses	77	2.2
Unknown Function	100	2.8
Traditional Inuvialuit	4	0.1
Total	3510	99.8

These results may be more representative of the actual proportions, but the four categories with the greatest abundance of artifacts are still over-represented because of the inclusion of all pieces of fragmentary materials (glass, wax, rubber, other ferrous metal, and dental composition).

FAUNAL AND BOTANICAL EVIDENCE

FAUNAL REMAINS

The faunal bone collection recovered from Feature 3-91 at Pauline Cove is large and well-preserved. A sample of 1080 bones, which represents 26.8 % of the total sample of 4031, was analyzed for the purposes of this report. This sample consists of all the bone from all levels of the six central units of the refuse pit,

N11W1, N11W2, N10W1, N10W2, N9W1, and N9W2 (Figure 9). A total of 602 specimens or 55.7 % of the total sample were identifiable to Zoological Family or smaller taxon. Four human teeth were also recovered, but have been discussed previously as they are evidence of dentistry on the site, rather than faunal exploitation. As with the artifact collection, the faunal sample was analyzed as an single unit, rather than separating it by level.

A brief discussion of the common faunal species resident on Herschel Island and vicinity can be found in Chapter 1 in the section on the environment of the area.

Representation and Abundance

Four zoological classes and 25 species, including one extinct species, are represented in this faunal sample. The majority of the remains are mammalian and the majority of the unidentifiable fragments of bone and those as yet unidentified, appeared to be mammalian also. A brief discussion of each identified species is listed below in phylogenetic order.

Shellfish (Class Mollusca): Three specimens were identified as oyster (family Ostreidae) valves. These are small in size and two are paired while the other is obviously not. The single valve is quite disintegrated.

Fish (Class Osteichthyes): A total of 25 specimens were identified as fish. These represent 5 species and/or families (see Table 6). The most commonly represented species are lake whitefish and herring.

Table 6:
Representation of Fish Species

Species	NISP	%NISP	MNI	%MNI
Char	2	0.3	1	2.0
Herring	9	1.5	2	4.0
Whitefish	12	2.0	4	8.0
Inconnu	1	0.2	1	2.0
Gadidae	1	0.2	1	2.0
Total	25	4.2	9	18.0

Two specimens represent 1 individual of arctic char (*Salvelinus alpinus* (Linnaeus)). It is common all over the Arctic and is anadromous near the coast. Economically, it is the most important fish in Arctic Canada and is commonly netted today by local populations and is widely appreciated for its flavour (Scott and Crossman 1973: 201-207).

Nine elements, representing all parts of the body, were identified as the remains of at least 2 least cisco or herring (*Coregonus sardinella* Valenciennes). This fish inhabits coastal arctic waters and inland lakes and rivers in the Western and Central Canadian Arctic. The least cisco, locally known as herring, spawns in autumn and is migratory in coastal populations. It eats planktonic crustaceans (Scott and Crossman 1973: 262-265).

Twelve specimens represent a minimum of 4 lake whitefish (*Coregonus clupeaformis* (Mitchell)). The elements are primarily cranial. This fish usually occurs in fresh water lakes and rivers, but also enters brackish water at the mouths of rivers (Scott and Crossman 1973: 269-277). These fish may have been caught near the mouth of the Firth or Malcolm Rivers, not far from Herschel Island.

Inconnu (*Stenodus leucichthys* (Guldenstadt)), a large salmonid, was represented by one specimen, a dentary. It is an abundant fish in Western Arctic river drainages and is anadromous near the coast but can be landlocked in lakes. It spawns in late summer or early fall. It is eaten by people and used for dog food (Scott and Crossman 1973: 295-299).

A single large cleithrum was identified as belonging to the cod family (Gadidae), but a more precise identification was impossible due to its fragmentary nature. The element must have been from a very large fish and it is therefore unlikely that it belongs to the burbot or loche (*Lota lota* (Linnaeus)) which is a freshwater cod abundant in the Mackenzie River mouth. It also may be that of the arctic cod (*Boreogadus saida* (Lepechin)), which occurs in arctic salt water all over the world, but is rarely over 9 inches in length (Leim and Scott 1966: 189-191). The specimen may also represent an imported species.

Birds (Class Aves): The following list of bird species follows the taxonomy and phylogeny of the American Ornithological Union (A.O.U. 1983). Eighty-four specimens were identified as avian, representing six species (see Table 7). All of these are water birds, except for the ptarmigan.

In addition to the bone specimens, a number of eggshells were found during excavation. These were very fragmentary and impossible to quantify. They were all white shells from of unknown species.

Table 7:
Representation of Bird Species

Species	NISP	%NISP	MNI	%MNI
Red-throated Loon	1	0.2	1	2.0
Brant	20	3.3	2	4.0
Anatidae	12	2.0		
Common Eider	23	3.8	3	6.0
White-winged Scoter	18	3.0	2	4.0
Ptarmigan	9	1.5	3	6.0
Glaucous Gull	1	0.2	1	2.0
Total	84	14.0	12	24.0

All four species of loons frequent the waters surrounding Herschel Island in the summer. One element, an ulna, was identified as being the remains of the red-throated loon (*Gavia stellata* (Pontoppidan)). It winters in the Mediterranean, Mexico, and China and can be found on tundra lakes in the summer and in

bays, estuaries, and on the open ocean (Godfrey 1986: 19-20).

Twenty elements were identified as being of a minimum of 2 brants (*Branta bernicla* (Linnaeus)). All body parts except the head were represented by these elements. The brant travels in large flocks along coasts. It summers in the Arctic and winters in the area of the Lower St. Lawrence River (Godfrey 1986: 79).

Twelve elements were identified as duck (family Anatidae) remains. These were primarily elements which could not be identified more specifically such as tracheal rings, vertebrae, phalanges, and ribs. They probably belong to the duck species listed below.

At least three common eider (*Somateria mollisima* (Linnaeus)) individuals are represented by 23 elements from all parts of the body. One of these is a female about to nest, indicated by the presence of medullary bone in a femur. Eiders actually nest on Herschel Island and all along the western arctic coast in the summer. The females do not move from the nests unless severely frightened throughout the gestation period and are therefore easy to catch. The nests are prized for their down linings (Godfrey 1986: 107-108).

The white-winged scoter (*Melanitta fusca* (Linnaeus)) is very common in the vicinity of Herschel Island, flying in large flocks. It summers in the Arctic, frequenting bays and open ocean. 18 elements in this sample represent a minimum of 2 individuals. The body parts represented are mostly legs and wings (Godfrey 1986: 114).

Nine elements, primarily originating from the legs and wings, represent the remains of a least three individuals of the ptarmigan (*Lagopus* sp.) genus. Both the willow ptarmigan (*L. lagopus* (Linnaeus)) and the rock ptarmigan (*L. mutus* (Montin)) live in the Arctic all year, frequenting willow scrub and tundra in the summer and protected valleys in the winter. The ptarmigan is well-camouflaged. In winter, their plumage is white and in summer, mottled brown and grey. They rarely fly and are easily caught when seen. The ranges of the two overlap in some places, especially in migration (Godfrey 1986: 158-160).

One element represents one glaucous gull (*Larus hyperboreus* Gunnerus) individual, common in coastal circumpolar regions. These gulls are omnivorous hunters and scavengers which also nest on Herschel Island in the summer and winter in Britain, the United States, and Northern China (Godfrey 1986: 268).

Mammals (Class Mammalia): Eleven mammalian species are represented by 490 identified specimens (see Table 8). These are all local wild species, except for the dog which was the only local domestic species before the arrival of reindeer in the late 1920's. Only the snowshoe hare is significantly out of its range. The sample is dominated by ringed seal remains but arctic foxes are also well-represented.

Table 8:
Representation of Mammalian Species

Species	NISP	%NISP	MNI	%MNI
Snowshoe Hare	1	0.2	1	2.0
Lemming	2	0.3	1	2.0
Beluga	3	0.5	1	2.0
Bowhead	4	0.7	1	2.0
Oog	5	0.8	1	2.0
Arctic Fox	82	13.6	5	10.0
Ursidae	2	0.3		
Polar Bear	7	1.2	2	4.0
Lynx	2	0.3	1	2.0
Ringed Seal	319	53.0	9	18.0
Bearded Seal	2	0.3	1	2.0
Caribou	61	10.1	4	8.0
Total	490	81.3	27	54.0

A single element is the remains of the foot of one snowshoe hare (*Lepus americanus* Erxleben). No member of the rabbit and hare family occurs on Herschel Island, and this species tends to remain in forested areas. Snowshoe hares are common in the Mackenzie Delta, however, and are frequently snared for their meat and skins (Banfield 1974: 80-85).

Two elements represent one brown lemming (*Lemmus sibiricus* Kerr). Lemmings are burrowers and these bones are probably intrusive. They important to the northern economy in that they are food for important furbearers such as foxes. This species tends to inhabit the wet tundra and eats grasses, sedges, and lichens (Banfield 1974: 185-187).

Three specimens, all vertebrae, indicate the presence of at least one beluga (*Delphinapterus leucas* (Pallas)) on this site. All of the bones were found below Level 2A. Beluga whales occur in cold, shallow water and enter river mouths and estuarine waters. They travel in pods and bear their young from March to August. The bowhead are common in the Western Canadian Arctic and are still hunted by local populations in specific locations (Banfield 1974: 249-251).

At least one bowhead whale (*Baleana mysticetus* Linnaeus) is represented by 4 specimens in this sample. All of these were recovered from the lower levels of the midden. Two of the specimens are vertebral epiphyses and one of these is cut. Not much is known about the habits of this large whale, except for the fact that it tends to stay close to the permanent pack ice in the summer and consumes vast quantities of crustacean krill. The hunting of this whale was an important social and economic activity in the native culture of the area for centuries. The arrival of non-natives to the area was prompted by an increase in worldwide demand for products from this species (Banfield 1974: 283-285).

A single individual is represented by 5 identified specimens

of dog (*Canis familiaris* Linnaeus) remains. Dogs are documented to have been very important to the inhabitants of this site for transportation. It is unlikely that this dog was eaten by its owners, although carnivore gnaw marks on some of the bones show that it may have been eaten by its fellow dogs.

Five individuals and all body parts are represented by 82 specimens identified as arctic fox (*Alopex lagopus* (Linnaeus)). It is interesting that these are all of this species rather than red fox (*Vulpes vulpes* (Linnaeus)) since the latter species is particularly common on the island. The fur of the arctic fox was more highly prized, however. An omnivorous animal, it feeds upon carrion, lemmings, berries, and anything else it can find. Young are born between April and June (Banfield 1974: 295-298). Only immature and adult individuals occur in this sample.

Two elements, both fragmentary, were identified only to the bear family (Ursidae). Polar bears (*Ursus maritimus* Phipps) are in the vicinity in all seasons when the pack ice is close to the island and grizzly bears (*Ursus horribilis* (Linnaeus)) can inhabit the island in the summer and are common on the Yukon North Slope. These two specimens probably represent the latter species, but this is uncertain.

Seven elements were identified as that of the polar bear (*Ursus maritimus* Phipps). These represent at least two individuals, one of which is a juvenile. Polar bear young are born in winter and remain with their mothers until the next winter. They tend to remain near or on the permanent pack ice in the Western Arctic to feed on seals. Polar bears are adept swimmers and will take to the water when startled. They also eat stranded whales, berries, birds and birds' eggs, and will even stalk humans. Although their livers are poisonous, polar bear meat is edible and their hides are thick and warm (Banfield 1974: 311-313).

Another important furbearer of the Canadian Northwest, the lynx (*Lynx canadensis* (Linnaeus)) is represented in this sample by two distal phalanges. Lynx do not occur on Herschel Island, but have been common on the north Yukon coast. They generally prefer forested areas. Snowshoe hares are a common prey of the lynx, although they will eat whatever they can (Banfield 1974: 349-351). They were common at Shingle Point in the summer of 1916 and Nuligak shows his admiration for this animal when he relates a story of finding one guarding its cache of six white foxes (1966: 115).

A minimum of 9 ringed seals (*Phoca hispida* Schreber) are represented by 319 bones. This is the most common animal whose remains were recovered, both in terms of number of identified specimens and minimum number of individuals. Two of the individuals are adult, 1 is immature, 3 are either immature or adult, and 3 are juvenile. Ringed seals bear their young on the pack ice in late spring or early summer. They are not gregarious, but tend to stay close to shore or the permanent pack ice and feed mostly on marine invertebrates (Banfield 1974: 372-375). All parts of the seal body is represented in this sample with a significant number of hind limb elements. Many of the seal elements have been gnawed and eaten by carnivores and more of these gnawed elements

were found in Levels 1 and 2A than in Level 2B/2C. Ringed seals have been a very source of meat and skins to the inhabitants of the Western Arctic for centuries.

Two elements, both of the upper limb, were identified as that of at least one bearded seal (*Erignathus barbatus* (Erxleben)). These large seals prefer shallow waters, including mouths of creeks and small bays as it is a bottom feeder. It tends to be solitary except during breeding season. Its hide is thick and used for boots and lines (Banfield 1974: 365-367).

A minimum of 4 caribou (*Rangifer tarandus* (Linnaeus)) are represented in this sample by 61 identified specimens. 1 of these individuals is adult, 1 immature, and 2 juvenile. Caribou occur on Herschel Island occasionally in the summer, but are common on the mainland in that season. They feed on lichens and other plants. Young caribou are born between May and June. The importance of the caribou in the northern economy cannot be overestimated as their meat is commonly eaten and their hides and other body products are very useful (Banfield 1974: 383-388).

Bone Modifications

The most frequently occurring modification of bone identified in this sample is carnivore gnawing. 32% of the mammal bone and 15% of the bird bone had evidence of gnaw marks. 14% of the entire sample, both identifiable and unidentifiable, showed evidence of having been burned, both charring and calcination. Of the identifiable bone, 5% had definite cutmarks. These were slightly more common among the mammals than the birds. Many mammal bones, particularly those of the ringed seal and caribou had both cutmarks and carnivore gnawmarks and many seal phalanges and other small bones were pitted and etched by stomach acid. Many bones, seal fibulae and tibiae, for example showed repetitive patterns of carnivore gnawing in which the ends of the bones were gnawed off. Seal radii tended to be represented only by proximal ends.

In general, this sample appears to be not only the product of human consumption, but also carnivore consumption. Only 9% of the identified sample shows any evidence of human alteration, including burning and cutting, whereas at least 28% shows evidence of carnivore activity.

One bone, not discussed above, is fossilized. It is a piece of tusk ivory from an extinct mammoth (*Mammuthus primagenious*). These fragments are still found occasionally on the beach and eroding out of the banks of the island.

BOTANICAL REMAINS

A total of 142 seeds were recovered, mostly in the screen, from the entire excavation of Feature 3-91 at Pauline Cove. These are all of imported domestic species.

Representation and Abundance

The botanical macro-remains from this site are listed below according to the taxonomy and phylogeny listed in The Evolution and Classification of Flowering Plants, Second edition (Cronquist 1988).

The vast majority of the sample is pips of plums or prunes (*Prunus domestica* Linnaeus). They are the most common all layers of the site.

Two cherry seeds (*Prunus cerasus* Linnaeus) were recovered from the fill of Level 2A.

Seven peanut shells (*Arachis hypogaea* Linnaeus) were recovered, all from the upper layers.

Pecans (*Carya illinoensis* (Wang)) are represented by two complete shells. Both were found in Level 2B.

A cluster of rolled oats (*Avena sativa* Linnaeus) was located in Level 2B.

SUMMARY

The faunal and botanical remains are probably the result of the discarded remains of the diet of the inhabitants of the Anglican mission house from 1916. None of the animals represented are of southern origin. This is significant in that the mission was occupied by southerners and some documents indicate that domestic meat was consumed (Hoare 1922/23:81). The snowshoe hare is out of its range, but it is only represented by a single foot bone which may have been attached to a skin, and therefore does not represent the presence of an entire carcass.

Of the significant avian species, the brant bones are from all body parts, the white-winged scoter and the ptarmigan bones are almost all from the wings and legs. All parts of the fox and ringed seal are represented while the caribou bones are from all parts except the head, and the whales are both represented by vertebrae and ribs.

All of the botanical remains are those of imported domestic species of fruits, nuts, and grains. While the fruits may have been dried or canned, Pedersen apparently imported fresh fruits (Hoare 1964: 136). The Christmas dinner menu in 1922 included fruits and nuts.

Interpretations of the faunal and botanical remains in terms of other artifacts and information are discussed in the following chapter.

Chapter 3 - Interpretations and Conclusions

INTRODUCTION

By the late nineteenth and early twentieth century, western political and economic systems had infiltrated many diverse parts of the world. The Arctic was one of the last regions to be influenced because of its harsh environment. Although exploratory expeditions had been visiting the Arctic Islands since the beginning of the nineteenth century, the area was not considered a place to live and do business until its resources were revealed and the technology and information was developed to deal with the climate. In the early years of exploration, few attempts were made to change traditional approaches to this type of venture. By the early twentieth century, however, a number of travellers had adopted some of the ways of the Inuit (Berton 1988; Parmenter and Burnip 1980) and entrepreneurs of all kinds chose to live as northerners and conduct their business in the Arctic. There were others, though, whose reasons for being in the north did not include accepting arctic ways. These were the true colonizers; government workers, missionaries, and people with a vision of a "civilized" north. Usually these were people who, as part of an established southern organization or institution, came to the north as emissaries of the south.

By the date of the permanent establishment of the mission on Herschel Island, the economy of the Western Arctic was beginning to flourish as fur trading replaced whaling as the main source of income. Many Inuit were able to purchase their own schooners and many other goods of European, American, and Canadian manufacture. Yet, as many northerners were quickly accepting the material of the south and working it into their way of life, some southerners remained materially conservative. Even in the years before the arrival and universal acceptance of the airplane as a real mode of transportation in northern Canada, when the transport of goods was difficult and expensive, this conservatism is evident.

This chapter discusses the social, cultural, and material traditions of the official class of non-natives on Herschel Island in the early twentieth century in the light of data gathered over the course of this project. This includes both documentary and archaeological data.

In three sections, this chapter presents my interpretations of the excavated feature. These include explanations based on the physical nature of the site itself and the known history of Herschel Island; a discourse on the role of these artifacts in the negotiation of social power on the island in the early twentieth century; and a discussion of the evidence for behavioural adjustment due to conditions imposed by the environment. The final section will outline my conclusions and directions for future research which this study introduces.

FEATURES, STRATIGRAPHY, AND THE HISTORY OF HERSCHEL ISLAND

The excavated midden behind the Anglican mission house can be definitely associated with the occupations of the house in the first half of this century. Although South (1977a) has defined the "Brunswick Pattern" as one in which middens are located near the back doors of houses, this seems a simple principle. Even the prehistoric Inuit disposed of their refuse immediately outside the entrances to their dwellings. It would also be logical to assume that people tend to dispose of refuse in extant depressions, over fences, or on slopes. In this case, the material may have been thrown into a depression created by the construction and decay of some kind of Inuvialuit structure such as a semi-subterranean house which may have existed many years prior to the occupation of the mission.

The datable artifacts on the site also support the interpretation of mission association. The house is known to have been the home of two families in the first half of the twentieth century. From 1916 to 1919, the Frys lived in the house, and from September of 1922 to May of 1923, the Hoares moved into the house while stranded on the island for the winter. Other individual missionaries stayed in the house sporadically and, although evidence is minimal for other uses, it is known to have been used as a hospital in the influenza epidemic of 1928 and probably functioned as a community house and chapel throughout the twenties after the permanent mission was moved to Shingle Point.

Many artifacts recovered from the refuse pit appear to have been made during the first two decades of the century. No object of known date of manufacture was made later than the mid-twenties. At least one item dates to the late nineteenth century and another to the very early part of the twentieth century. These are both glass lid liners for jars and are almost always reused.

The soil matrix of the pit is significant in that there are distinct layers. Immediately under the sod layer, the matrix was commonly ashy, containing coal and clinker, and indicating that the inhabitants of the house used coal at one time as a fuel. The underlying layer consisted of lenses of ash and wood chips and darker brown soil and was generally sandy. This indicates that wood probably was used as a fuel prior to the use of coal.

Almost all of the letters written by W.H. Fry to the 'outside' in the winter mention the scarcity of firewood on the island and the difficulty in heating the mission house. Not once does he indicate that coal was ever used as a fuel while he and his family lived in the house. It is probable, then, that material in the coal layer (L2A) was not deposited by the Frys. This is not to say that all of the material in the lower layer (L2B) was deposited exclusively by the Frys or while the Frys were in residence. The Hoares, while they did use coal to heat the house on occasion, did not use it exclusively and also employed wood. Also, Catherine Hoare describes in her journal how her husband constructed a furnace that burned crude oil (1964: 139).

It is likely that there has been a certain amount of mixing of

artifacts between Levels 2A and 2B, due to freezing and thawing of the ground. My overall impression, however, is that the two layers represent little but a difference in the disposal of heating fuel refuse, not necessarily separate events, which are slightly different chronologically but not different culturally. All artifacts known to associate with historical events in the mid 1920's, after the Hoares left and any domestic use of the house ceased, were found in Levels 1 and 2A. The bottom layer (L3) is not associated with any occupations of the mission house and may represent an earlier Inuvialuit use of the site.

The depth of artifacts in F3-91-3 cannot be explained, although F3-91-2, the area of burned soil and calcined bone (Figure 8), appeared in profile to continue under L2B in the central pit feature (Figure 10) in a thin lens of orange sand. It may represent a period of burning in the bottom of the central pit (perhaps the burning of a dismantled Inuvialuit house?) and the subsequent removal of that soil to a backdirt pile immediately north of it.

As mentioned above, the rectangular feature of posts behind the mission house appeared to be located in a position similar to the structure shown behind the house in Figure 3. While two test units were opened which intersected this feature (Figure 7), no evidence to confirm or deny the presence of a building on this spot was found.

In the summer of 1992, the next mound feature to the east was excavated as part of the Qikiqtaruk Archaeology Project. This mound, approximately 25 m east of the mission house, was located immediately north of the location of the buildings shown in Figure 6. A cluster of historic refuse was found on the south side of the mound and its similarity to the refuse of F3-91 would suggest that it, too, was associated with the mission occupation. A identical hinge to one found in F3-91 (Plate 1: e) was recovered in F9-92 as was a small concentration of syringe vials. Few food containers were found in comparison to F3-91, although a large amount of cut sheet metal and a paint can were recovered. This would suggest that this smaller midden is not directly associated activities occurring in the house, but instead, with some kind of workshop. This may be close to the location of the storehouse mentioned in Fry's letters that was used as a hospital in the epidemic of 1918. This interpretation may explain the presence of a number of syringe vials in F9-92.

ARCTIC MISSIONS AND ARTIFACT MEANINGS

In Chapter 1, I discussed the social context of the early twentieth-century settlement on Herschel Island as the result of the application of southern values and practices. As also mentioned, these values were not shared by all members of the Western Arctic community. Honigmann and Honigmann (1965) maintain that the unofficial non-natives had more effect on the prevailing consciousness of Mackenzie Delta dwellers in later years than did the official class with all their attempts to transplant middle

class ideology. Honigmann (1970) argues that a "frontier culture" emerged during the fur-trade period which was characterized by the prevalence of outdoor types of activities and breaks with the conventions of mainstream society. This "contraculture" was mostly due to the efforts of men who flaunted their eccentricities and resistance of middle class respectability and those who endorsed this frontier culture were symbolically cutting themselves off from mainstream society (Ibid.: 5-9).

In the light of this, missionaries, who believed they had been somewhat successful in the late 'teens (Gould 1917; Stuck 1920a), were faced with an onslaught of secular influences as the fur trade intensified and the numbers of unofficial non-natives in the north grew. With this growing number of non-natives, came a growing number of manufactured goods which were readily accepted by local natives (Kitto 1930; Godsell 1932; Finnie 1940; 1942). Missionaries generally applauded this acceptance (providing it did not include liquor and tobacco), believing that the local Inuvialuit were able to "make progress" because of the availability of southern foods as they were no longer hampered by a incessant search for food (Whittaker 1937). Similarly, the adoption of frame houses over sod ("burrows" according to Whittaker 1937: 73) and the "gift of doors and windows" (Stuck 1920b), were seen as helping the Inuvialuit to "emerge from darkness" (Whittaker 1937: 73).

Taking this into account, artifacts of southern manufacture dating to the years of fluorescing missionary activity on Herschel Island must be significant. The artifacts here are imparted with meaning relating to the contact of cultures simply by their presence. In a southern context, this collection would not be so interesting.

By the early twentieth century, many southerners were beginning to appreciate that the local inhabitants did know their own environment better and a some did adapt their own way of life in accordance. Explorations in the north after the turn-of-the-century regularly employed Inuit know-how to achieve their goals particularly in terms of food, shelter, clothing and tools (Parmenter and Burnip 1980: 10). Anthropologist Vilhjalmur Stefansson's (1921) work in the "Friendly Arctic" is a good example of this. Others may have decided to live more closely with native people for non-conformist reasons. It is interesting, however, that the Anglican missionaries, the Canadian Government, and the Hudson's Bay Company in particular did not adopt this practice.

The typical southern ideal of permanent or at least stationary residence included the construction of buildings. Stationary residence was not a viable adaptive strategy in the north, yet it was the practice of southerners with long-term mandates for the north. Episcopalian Archdeacon Hudson Stuck, who soundly criticised the foolishness of constructing frame structures in the north, never even considered the foolishness of staying in one place for long periods of time (1920b). His observations express the ubiquity of this practice in the Western Arctic.

The presence or absence of non-native women and children appears to have been closely associated with the dichotomy between

permanent and temporary residence. They were more symbolic of their culture than anyone or anything else. The missionaries' wives were vital to northern work, not only for their ministering and teaching but also because only they could recreate an ideal Christian home so far away. As mentioned above, the Mackenzie Delta "frontier culture" was mainly the result of men (Honigmann 1970: 5).

Discussing the theology of the Anglican mission tradition, Holmes (1982: 78) states "No one can become another culture; but neither do we make our own social context the condition for being in Christ" yet, in the same volume, he gives examples which negate this declaration. These include his own account of a dinner with an African bishop in the most formal of English tradition (Ibid.: 86) and a description of the Anglican cathedral in Nairobi as comparable to those in Salisbury or York (Ibid.: 78). While the Gospel of Jesus Christ may have "proven marvellously adaptable" (W.H. Fry, 28 November 1918), the Anglican Church had not. The Anglican Church has had an "establishment" image for over a hundred years. From the writings of Stuck (1920b), French (1976; 1991), de Carraffe (1983), Jenness (1964), M.A. Freeman (1981), and Whittaker (1937), one can certainly get the impression that the missionary experience was often one of assimilation and acculturation for most people in the Western Arctic, particularly the young. Cox (1991) argues that cultural replacement was the aim of northern missions in the early twentieth century, that Christian word was identified with western, and specifically American, civilization (Ibid.: 211). Thus the illusion of "southernness" and of "Christian home and country" (Webster 1987: 21) must have been an important part of the process. Gualtieri observes that the adoption of Christianity by native people in the Western Arctic did not include a significant amount of indigenization or syncretism (1980).

Archaeologically, trends in the artifact collection are evident. Except for four traditional Inuvialuit artifacts of which only one (the mattock) may have been employed historically, all artifacts are manufactured of non-local materials. The vast majority were not made in the north, although there is some evidence of small-scale local fashioning of implements. The faunal bone material is all local, however, and all wild except for dogs. The botanical remains are exclusively from imported plants.

As an artifact, the house itself can be interpreted as a symbol of cultural identity and evidence of the mapping of social relations in space (Hillier and Hanson 1984). The building was constructed rather quickly in the summer of 1916 and yet was one of the larger single residences on the island and one of only two buildings with more than one storey. For a hastily built home, it must have stood out in relation to those around it. The fenced enclosure is a feature unique to the mission. No other building on the island is known to have a fence around it. At the mission, this is an interesting factor in what it says about the missionaries who built the house. Hillier and Hanson (1984) discuss the division and connectivity of space as the material

expression of social relations in among groups of people. The more the physical separation of inhabitants and outsiders, the more the social separation. Thus, the Fry's negative reaction to the suggestion of building a chapel on the upper floor of the house becomes clear. As the deepest (in terms of spaces one must pass through to get there) space in the house, the upstairs would be conceived of as the domain of inhabitants (Ibid.). The most accessible room in the house would have been the large room on the main floor and this was the one used as a schoolroom and chapel for the general public. Nevertheless, the flock still had to pass through one division of space in the form of the fenced enclosure, indicating to them that they were not in their own spatial domain.

While the Hoares had nothing to do with the initial construction of the house, when they moved into it, they moved into the realm of the inhabitants. Their social encounters were recreated within established parameters. Thus, the mission features, as artifacts and symbols, acted upon them.

While the artifact collection is the result of disposal behaviour, it is relatively well preserved, and it has been demonstrated that artifacts that have been disposed of can still be representative of social behaviour (Rathje and McCarthy 1977). Some artifacts, such as coins, were probably lost rather than disposed of. The Frys and especially the Hoares had no intention of permanently settling on Herschel Island so the majority of their belongings must have been curated and is not represented. Still, the collection is informative. It demonstrates that a regard for durability was not a factor in the consumer choices made by the missionaries and their suppliers. It shows us that the occupants of the house discarded many food tins, much container glass, and few ceramics and other tableware, and that there was little reuse, recycling, or manufacturing.

Architectural artifacts such as window glass, nails, and linoleum in all levels indicate the construction, modification, and ongoing maintenance of the house throughout the period of occupation.

It is somewhat curious that so many different ceramic patterns are represented by so few sherds in a collection which was deposited over a short time. This may be due to the variety of original consumers of some of these objects. Most of the missionaries' belongings on the island were bought in bulk prior to their voyage to Herschel (W.H. Fry, March 1917), while some of it may have been shipped up in bales by charitable organizations such as the Women's Auxiliary of the Church Missionary Society (W.H. Fry, March 1917 and Toronto Diocesan Board 1936), by relatives in the south (Hoare 1964: 145), or even by other congregations all over the world. Thus, some aspects of the archaeological collection represent the consumer choices of a wide variety of individuals and households and organizations.

Of the 15 ceramic vessels, 10 are the remains of teaware and one is probably purely decorative. The teacup handles with no matching body sherds may have broken off, leaving the rest of the cup intact so it could still be used. Spencer-Wood suggests that

teawares and the tea ceremony have functioned in the past as status display items (1987b). I would argue that they also have a role in creating and recreating status.

Many of the bottles sauce and flavouring bottles were recovered. Perhaps this was a way of dealing more comfortably with exotic local foods and thus symbolically imposing familiarity on the unfamiliar on a mundane level. Identifiable metal containers held meat and dairy products.

The Hoares, especially, appear to have been quite creative with the food they had. W.H.B. had a special recipe for ice cream made of evaporated milk (Hoare 1964: 144) and Catherine made marmalade (using reusable jars and glass lid liners) and lemon cheese before her lemons went bad (1922/23: 79) and baked bread in bulk and froze it before the arrival of the baby (1964: 147).

The material associated with the frontier contraculture of the Mackenzie Delta included objects which, although of southern origin, reaffirmed the "outdoors" image (Honigmann and Honigmann 1965: 49). Portable gas stoves, lanterns, tin dishes, and rustic furniture are example of this type of artifact. In this collection, while two lantern globes are represented, the majority of lighting devices would appear to have been lamps with delicate glass chimneys, some even with decorative finishes. These would have helped create the appearance of a middle class home.

Within the functional artifact category of arms and ammunition, there are no real surprises. The artifacts represent hunting of various animals and this practice is to be expected. The .303 British military cartridges were probably surplus from the First World War and therefore would have been deposited after it ended in 1918. In the Arctic, they would have been used for big game hunting. Also, the immediate area of F3-91 is littered with hunting blinds as Herschel Island was used as a hunting base for many years after its busiest period was over.

Textiles and buttons also tell us little about missionary life in the Arctic. The buttons are generally plain. A pink satin bow indicates the presence of women on the site.

The seventeenth-century Japanese coin is hard to account for in this collection. It may have been someone's keepsake, or it may have found its way to Herschel Island prior to the arrival of the non-natives as many Chinese coins found their way to North America historically (see Wolf 1982: 187).

The business card/calendar of C.T. Pedersen's Northern Whaling and Trading Company is indicative of the continuation of conventional business practices in the north as are the practices of the Hudson's Bay Company described above. Other archaeological examples of this are the promotional thimble for Nugget Boot Polishes, and the sample jar of Horlick's.

The variety of activities which are represented by the archaeological collection is interesting. The practices of medicine and dentistry are not surprising activities to occur at a mission. Fleming (1932) notes that "Medical work helped a great deal in building up an influence which afterwards became a dominant factor in turning people to Christ". The actual evidence for

dentistry, on the other hand, was not expected. If this evidence had consisted only of tools for the filling of teeth and some actual pulled teeth, I would have imagined that the missionaries practised some dentistry or they had employed a dentist to see to members of the community. However, the evidence also includes specialized apparatus for the construction of prostheses. This was not emergency or expedient dental work. When I read in the writings of Catherine Hoare of the presence of a dentist hired by the Hudson's Bay Company to work on the teeth of the non-native employees (1964: 130), the presence of these artifacts made more sense. Again, the official class was reaffirming its roots, providing a service to itself which was not available in the north.

The story of these artifacts does not end there, however. This dentist, a Dr. Millar, employed Mike, an Inuvialuk, as an assistant while in the north (Godsell 1932: 254). As Millar prepared to leave, Mike offered to buy all of his outfit for five hundred dollars, believing that he could continue to practice dentistry on his family and friends. Millar agreed to this and Mike took his new business to the Coppermine region. There, he gave people gold teeth in exchange for furs, thus creating a new status symbol for himself and other people and redefining a set of artifacts and a practice in his own cultural terms. The "M" hand-engraved on the backs of the trays may stand for "Millar" or "Mike". I would guess "Mike" because it is apparent that the artifacts meant more to him than to Millar.

Another activity represented by artifacts in this collection is school-teaching, particularly the teaching of reading and writing. In addition to teaching in the mission house, the missionaries mimeographed instructional letters and sent them to families all over the Delta (Whittaker 1937: 252). Whittaker compares the perceived desolation of the natives' traditional life with the enlightenment of the mission influence (Ibid.: 63-73). Many missionaries honestly believed that native culture (specifically their lack of Christian beliefs) actually prevented them from being truly happy and that removing children from this influence would only be beneficial, hence the justification for mission schools. According to Whittaker, if an Inuit child were taken at a young age and "schooled from infancy as a Canadian child, his mentality would sense little or no handicap from Eskimo parentage" (Ibid.: 256).

Other artifacts in the collection are relatively mundane. These are practical tools and multi-purpose artifacts, an axe-head, a wrench, a file, barrels, buckets and various bits of chain, rope, and wire.

While the animal remains were exclusively that of local fauna, Hoare documents the use of domestic animal meat as well in the following list of foodstuffs on the menu for Christmas of 1922 (Hoare 1922/23: 81).:

> Menu: Roast Pork & (Ham) brown gravy, Fresh boiled potatoes, Brussel sprouts, Savory pudding, cran berry sauce, sweet mixed pickles, Plum pudding, Mince pies (individual), Lemon cheese tarts, Christmas cake, coffee Strawberry ice cream, Home made marshmallows, stuffed dates, chocolates, Fresh oranges & apples, assorted nuts. The "Pork" listed above is the only reference to the use of

domestic animal meat and, although it is unclear, the "(Ham)" probably corrects the use of the word "Pork" in which case it was a cured meat and likely did not contained bones. The range of other types of foods in this list is quite large and none is of local origin. Another important event in the Hoare's lives on Herschel was the birth of their daughter in January of 1923. This was "celebrated with polar bear steaks and ice cream" (Hoare 1964: 148).

Along with domestic fauna, another under-represented group of remains in the faunal bone collection is that of fish. W.H. Fry (20 December 1917) writes of netting "1000 salmon and herring and 60 seals" before winter of 1917/1918 for dog and human food. Presumably the fish were processed elsewhere. Another contributing factor may have been the fragility of the fish bones, especially if fish were frequently used as dog food. There is much evidence of dogs in the amount of carnivore gnawing and stomach acid pitting on the bones in the sample. The faunal material is representative of the diet of dogs as well as humans. It is unlikely, since the refuse pit is so close to the house and probably not fenced off, that the dogs had access to the pit while it was open. Dogs in the north were generally considered fairly vicious and almost always tied. Gladys O'Kelly, visiting the Island with her husband in the summer of 1923, describes the dogs: "They looked more like wolves than dogs and howled dismally most of the time" and were "tied at intervals to a rope pegged in the ground" (1924: 296). Not all dogs in the north were huskies and Christina Fry relates the death of a St. Bernard to whom she was quite attached (C.Fry, 2 December 1918). A dog such as this may have been able to roam freely within the mission compound. Foxes, however, would always have free access to the midden as long as nobody was around. Thus, it is difficult to determine for certain whether the faunal bone represents the remains of a human diet modified post-depositionally by dogs and foxes, or the remains of dog and human diets discarded in one location.

The number of foxes and the presence of isolated elements of lynx and snowshoe hare lead to the conclusion that some remains in this sample are the result of trapping activities. The missionaries in the Mackenzie Delta did occasionally trap furbearers for income. Vyvyan relates a particularly gruesome account of a missionary at Herschel Island in the early 1900's (no name mentioned) setting traps near a corpse frozen into the snow to protect it from foxes and presumably selling the pelts (1961: 78).

In general, I believe that the artifact collection associated with the early twentieth-century of St. Patrick's Mission is the

result of decisions on the part of the missionaries, as part of an official class in the Western Arctic, to recreate a southern way of life as closely as possible. Even their purchasing patterns (ie. buying southern goods in bulk) indicate the planning and conscious decision-making that resulted in this. As they identified Christianity with western culture, and, in keeping with their mandate to convert the Inuvialuit, they presented an image of middle class, Victorian home life. This can be explained as the material expression of their perceived cultural and moral supremacy. Artifacts of southern manufacture had entered the Arctic not long before the mission was established and the official class became engaged in the instruction (through the created environment) of their proper use. Simultaneously, they were in a competition for dominance with other non-natives who flaunted their resistance to southern ideologies. Thus, the created environment became an arena for the negotiation and renegotiation of cultural dominance (Beaudry et al. 1991: 159), and material culture became actively engaged in the struggle, on the one hand upholding the values of western society and resisting popular ideologies and, on the other, challenging those values and reinforcing the elements of frontier culture.

Nevertheless, the Arctic is not an always an easy place to live a comfortable middle-class life, and it most certainly was not in the early twentieth century. Even the official class had to make certain concessions and the archaeological and documentary records portray this. The following section will discuss the exceptions to the trends; the instances where human ingenuity or necessity transcends social and cultural conditioning.

THE EXCEPTIONS: ADAPTING TO THE NORTH

While in the process of organizing the data and preparing to write, I briefly puzzled over the appropriateness of using functional rather than material categories in describing the artifacts. I expected a large number of items which would show evidence of having been reused for something other than what they were intended, or recycled, or that were designed for multiple purposes. This is not the case. There is only one example of certain reuse, one of recycling, and while one could argue that many objects were multi-purpose, most did not transcend their functional categories. Those that did so were categorized separately.

One bottle shows certain evidence of having been reused. This was Vessel 6, a large Rose's Lime Cordial bottle. Interestingly, it is the only one of these bottles with a stopper rather than just a cork. This would certainly facilitate its reuse. It is known to have been reused because it contained something other than Rose's Lime Cordial when it was excavated; a white, oily, nasty-smelling, and very sticky substance which leaked all over the other bags in transit and which did not wash off easily. The nature of the liquid is unknown, but it was probably a food. Other bottles may have been reused also, but there is no discernible evidence of

this.

They only evidence of recycling is a cut and flattened piece of stovepipe with a hole drilled in it. Its newest use is unknown.

Small scale manufacturing on the site included extensive sewing, probably by the women. Catherine Hoare made clothes for her new baby in the winter of 1923 out of her and her husband's clothes (1964: 147). Archaeological evidence of sewing includes thimbles and spools and bits of fabric.

Evidence of small scale manufacturing by men includes the construction of furniture (C. Fry, 5 January 1917), an obviously handmade lead weight in the assemblage, probably used for fishing, and wire and sheet metal working. These last activities are intriguing. In the midden at the house, there are 50 cut pieces of ferrous sheet metal of which 30 are the negative shapes formed by cutting out curved pieces. Three are the positive shapes. Two of these are small, leaf-shaped objects of unknown function. The majority of the negative pieces, however, show curves much to large to represent the discard from the construction of recovered positive shapes. It is possible that, because the availability of some goods was difficult, that there was much repairing of existing stoves, boats, sleds, furniture, and other large items. The larger pieces may have discarded in the construction of dampers for stoves or other stove parts. W.H.B. Hoare designed and built a rather ingenious heating stove which burned old crude oil (Hoare 1964: 139).

Four wire artifacts, with twisted handle-like extensions and hook-like ends were obviously constructed quickly for some specific purpose. They may have been stove handles or parts of traps or snares.

The best example of adaptation by the non-natives in the north was their use of local fauna for meat. Not one person ever related a problem in finding game or procuring it. Perhaps it was not a problem if they did fail in that there was always tinned or otherwise preserved meat to fall back on except that the dogs had to be fed also. While the faunal bone sample would suggest that the overwhelming majority of meat consumed was of local origin, the vast amount of metal from food cans suggests that preserved meat may have been equally important.

CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

While the artifact collection excavated from Feature F3-91 in the summer of 1991 is relatively small and represents a single occupation of a single structure, together with the documentary record, it has provided insights into lives of missionaries in one of the most remote communities in Canada in the early twentieth century.

This research would be enhanced by many other interesting projects involving the comparison of collections. The data collected here should be compared to a similar collection from a more central area of mainstream Canadian culture in the early twentieth-century. It would also be useful to compare the

collection with those from sites in the north of other functions or inhabited by other groups. These studies would strengthen any interpretations discussed here and contribute more to understanding the nature of development in the Canadian north. Most specifically, sites occupied by unofficial non-natives and Inuvialuit would produce interesting comparative collections. Only then would the range of material expressions of domination and resistance in the Canadian Arctic be truly defined.

In this paper, I have attempted to show the importance of context in the understanding of meaning of an artifact or a group of artifacts. I have also explain the data, both archaeological and documentary, in terms of the struggle for social power. To the occupants of the mission house, Herschel Island was very different world, but they brought with them as much of their world as possible in order to create the illusion of something they were used to. In doing so, they reaffirmed and advertised their own ideologies. Some non-natives embraced a northern way of life and revelled in it, challenging the political and economic dominance of the official class, and eventually achieving a certain amount of cultural dominance. The officials resisted the challenges to their authority by continually maintaining their traditions. Their lack of commitment to the north, however, undermined their stance as few members ever remained in the north and fewer ever had any intentions of staying. Although it was not every non-native who opted for work in the north, few appreciated that, to others, it was home. Fry admits that the "trying climate is against the white man" (March 1917) and Hudson Stuck confides to him that he "never wants to travel that way again" (W.H. Fry, 28 November 1918). When Catherine Hoare suggests "Herschel" as a middle name for her daughter, her husband objects on the grounds that he "hates Herschel Island" (1964: 149). Richard Bonnycastle writes in his diary in August of 1928: "I swore all day I would never again come into this horrible country" as he left Herschel (Robertson 1984: 49). The Reverend J.H. Webster relates an exchange with an R.C.M.P. man: "The Sergeant turned to me and said "I do thank God I was born of Christian parents and lived in a Christian home and country." And I replied "So do I."" (1987: 21). Nuligak, however, who was born in Kittigazuit near the turn-of-the-century and who lived on the north coast all his life, knew that "Herschel Island is a land where it is good to live" (1966: 84).

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APPENDIX I:

HERSCHEL ISLAND CHRONOLOGY OF EVENTS

HERSCHEL ISLAND CHRONOLOGY OF EVENTS

1826	Franklin visits and names island
1889	First visits by whale ships
1893	Stringer first visits island
1894	First game of baseball played in the Arctic
1896	St. Patrick's Anglican Mission established
1901	Whittaker takes over mission
1903	RNWMP arrive-Fitzgerald and Sutherland
1906	market for whalebone collapses; Whittaker leaves
1911	Lost Patrol, Fitzgerald dies
1915	HBC establishes post on Herschel
1916	Mission re-established
1918	Typhoid epidemic
1920	Shingle Point mission established
1924	Execution of Alikomiak and Tetamagama for murder of corporal Doak and Otto Binder
1925	Post office opens
1926	Customs-excise outport with bonded warehouse
1928	Influenza epidemic
1930	Royal Canadian Corps of Signals substation built
1933	RCMP detachment closes; only in summer from 1934 to '37
1936	Pedersen's last trip; sells out to HBC
1937	No furs traded at Herschel
1938	Post office closes; RCCS substation closes; HBC post closes
1948	RCMP detachment reopened
1964	RCMP detachment closed

HERSCHEL ISLAND CHRONOLOGY OF EVENTS, continued

1968	RCMP buildings turned over to Crown Assets Disposal and then to Polar Continental Shelf Project
1972	Historic sites and Monuments Board recognizes national significance of Herschel and erects plaque
1977	Parks Canada assumes control of police buildings
1987	Island made Yukon's first Territorial Park

APPENDIX II:

GLASS VESSEL FORM

KEY TO CODES USED ON GLASS VESSEL FORM

SUBCATEGORY: functional category; food, medicine, tableware, etc.

NUMBER: arbitrary catalogue number

PROV: provenience

COLOUR: colour of glass

PORT: portion, estimated percentage of total vessel

HBODY: horizontal body shape

VBODY: vertical body shape

MANUFACTURE: method of manufacture

FINISH: type of finish

LIP: type of lip

NECK: shape of neck

SHOULDER: shape of shoulder

BASAL PROFILE: cross-sectional shape of base

VENTS: presence, location of vent marks

COMM. MARKS: presence, type of commercial markings

DECORATION: presence, type of overall decoration

HEIGHT: vertical dimension

BODY DIM. 1: horizontal dimension

VOLUME: brim volume measurement

BORE: width of opening

NjVi-3 F3-91
GLASS VESSEL FORM #:_____ DATE:_____

SUBCATEGORY:_____ NECK:_____

NUMBER:_____ SHOULDER:_____

PROV:_____ BASAL PROFILE:_____

COLOUR:_____ VENTS:_____

PORT:_____ COMM. MARKS:_____

HBODY:_____ DECORATION:_____

VBODY:_____ HEIGHT:_____

MANUFACTURE:_____ BODY DIM. 1:_____

FINISH:_____ VOLUME:_____

LIP:_____ BORE:_____

COMMENTS:_____

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MARKINGS:_____

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SKETCH:

APPENDIX III:

ARTIFACT PLATES

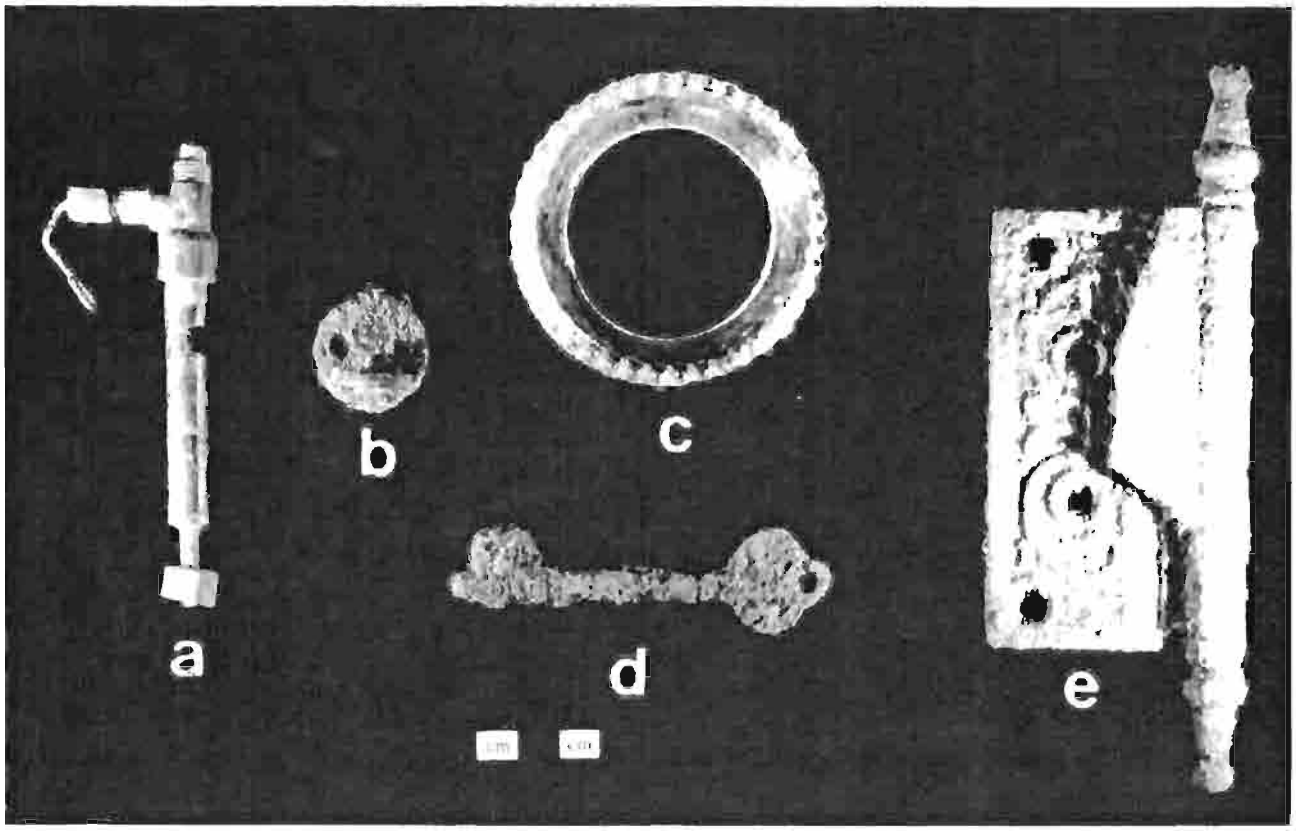

Plate 1: Architectural artifacts and furniture parts.
a. gas valve and feeder; b. unidentified metal object; c. beaded lamp chimney finish; d. key; e. hinge.

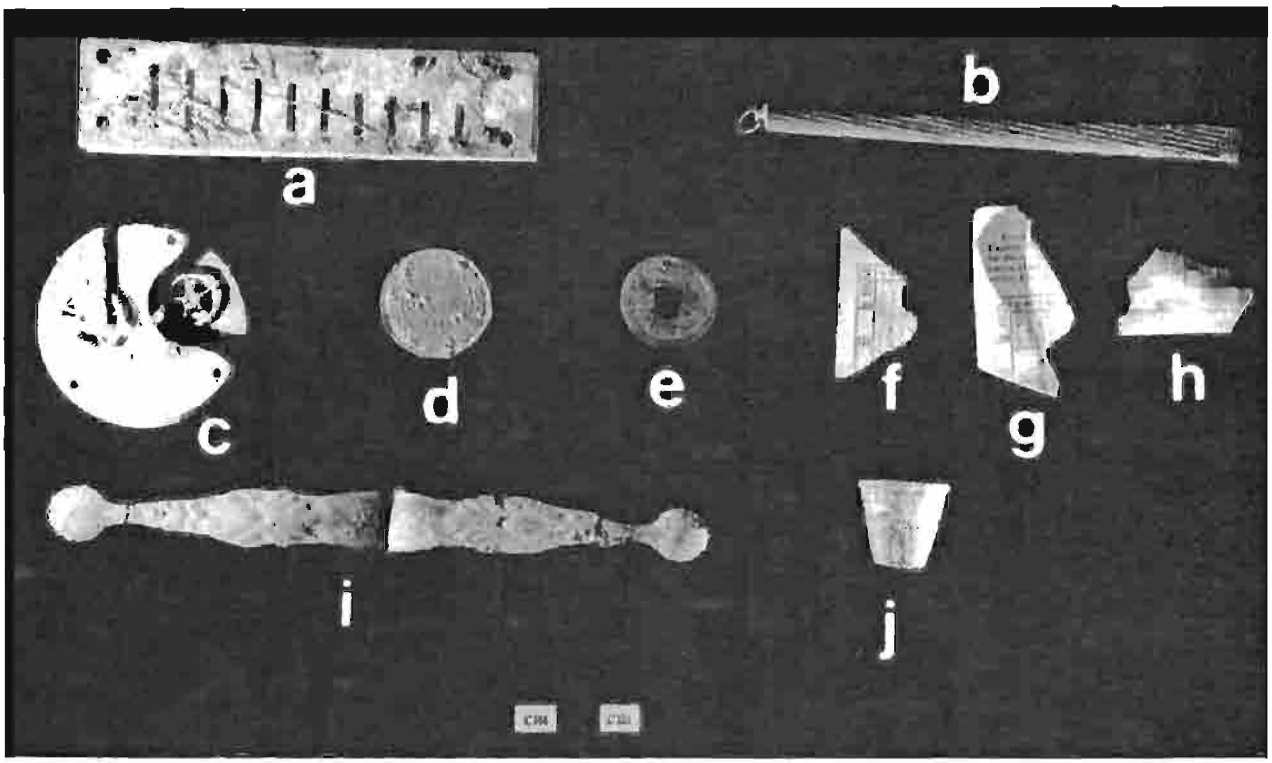

Plate 2: Miscellaneous artifacts.
a. harmonica; b. unidentified silver-plated handle; c. watch; d. 1918 Canadian penny; e. seventeenth-century Japanese coin; f-h. 1924-25 business card/calendar of C.T. Pedersen; i. sugar tongs; j. promotional thimble.

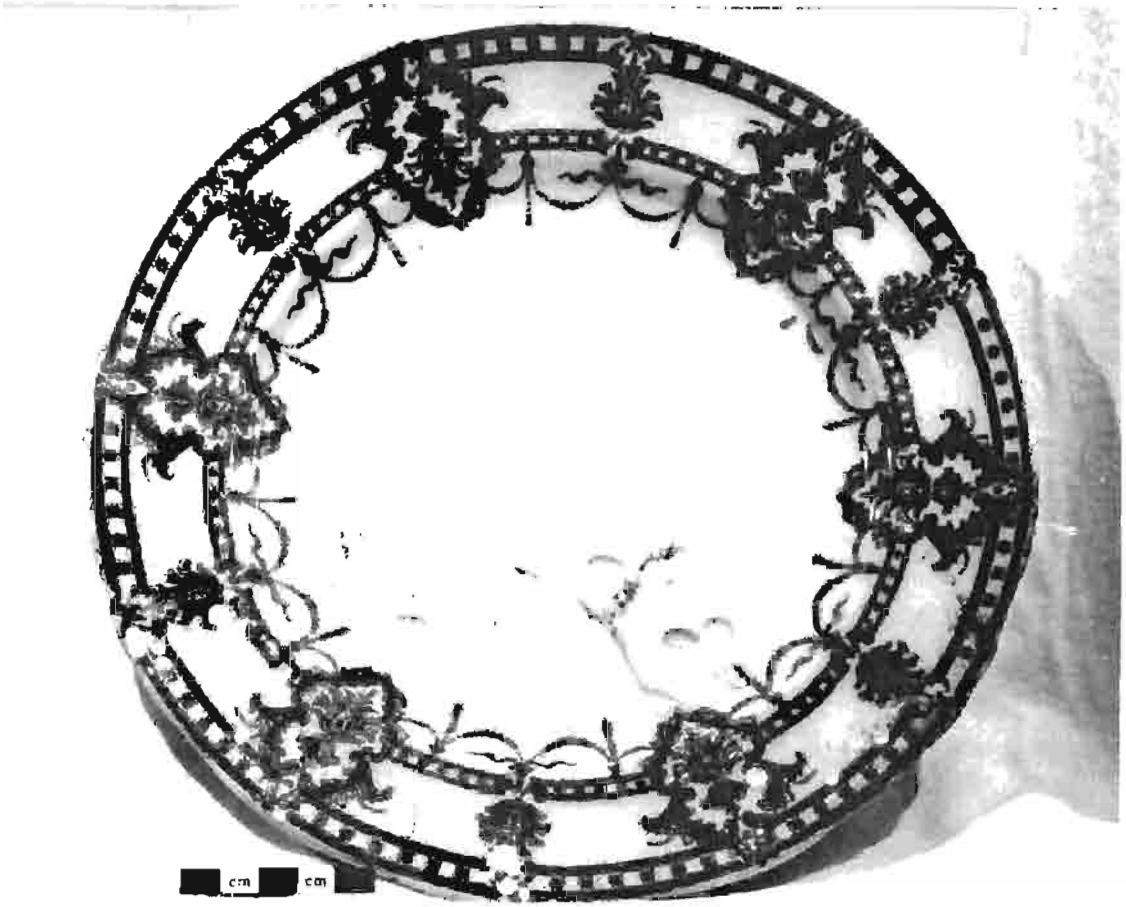

Plate 3: Ceramics
Blue transferware plate, Vessel 31

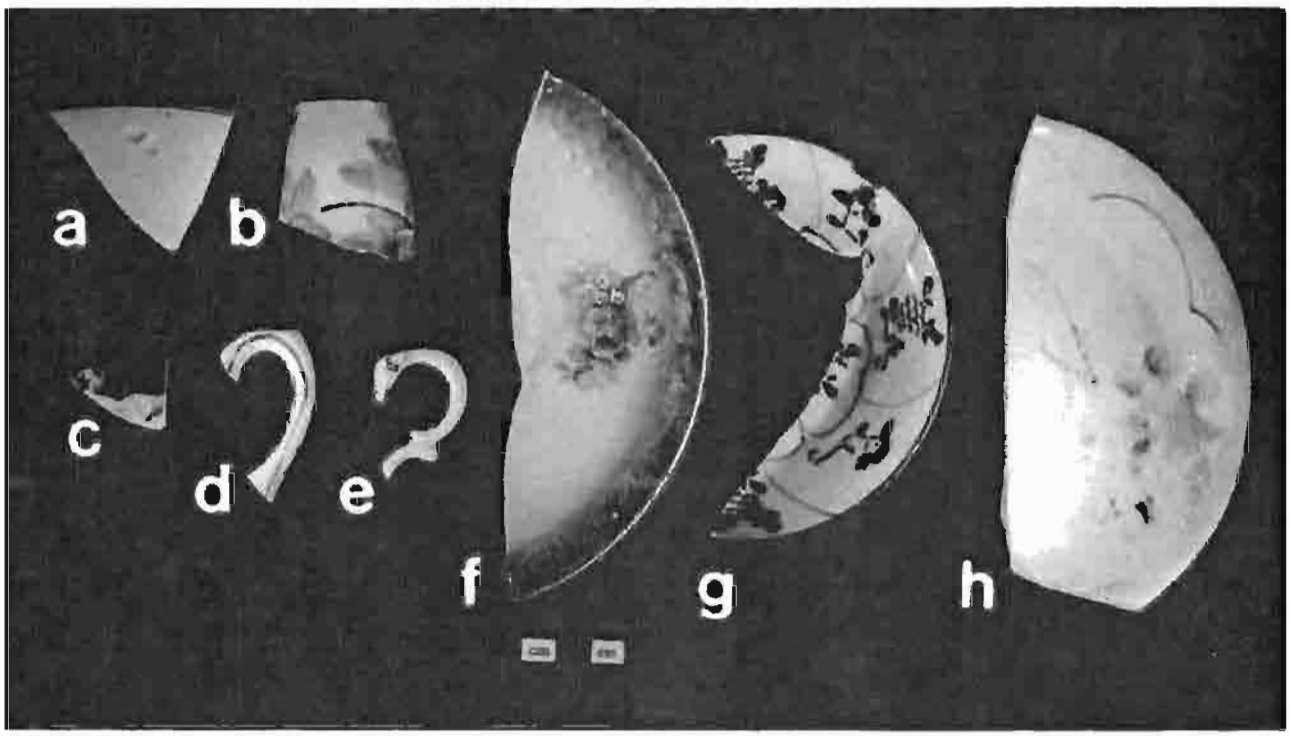

Plate 4: Ceramics
a. Vessel 34; b. Vessel 39; c. Vessel 38; d. Vessel 56; e. Vessel 55; f. Vessel 53; g. Vessel 37; h. Vessel 35.

Plate 5: Ceramics.
Plate, Vessel 32.

Plate 6: Rose's Lime Cordial bottles.
Vessels 5 (left); 3 (right).

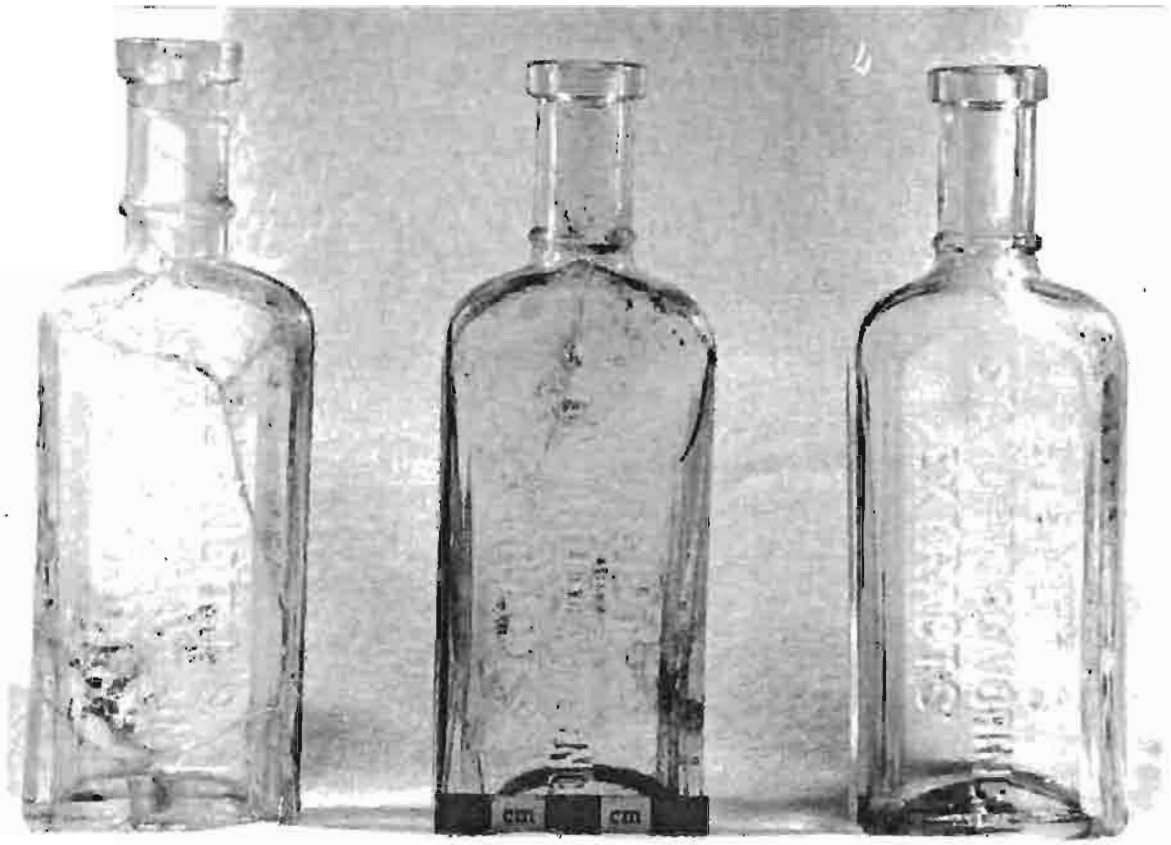

Plate 7: Burnett's Standard Flavoring Extract bottles.
Vessels 9 (left); 8 (centre); 10 (right).

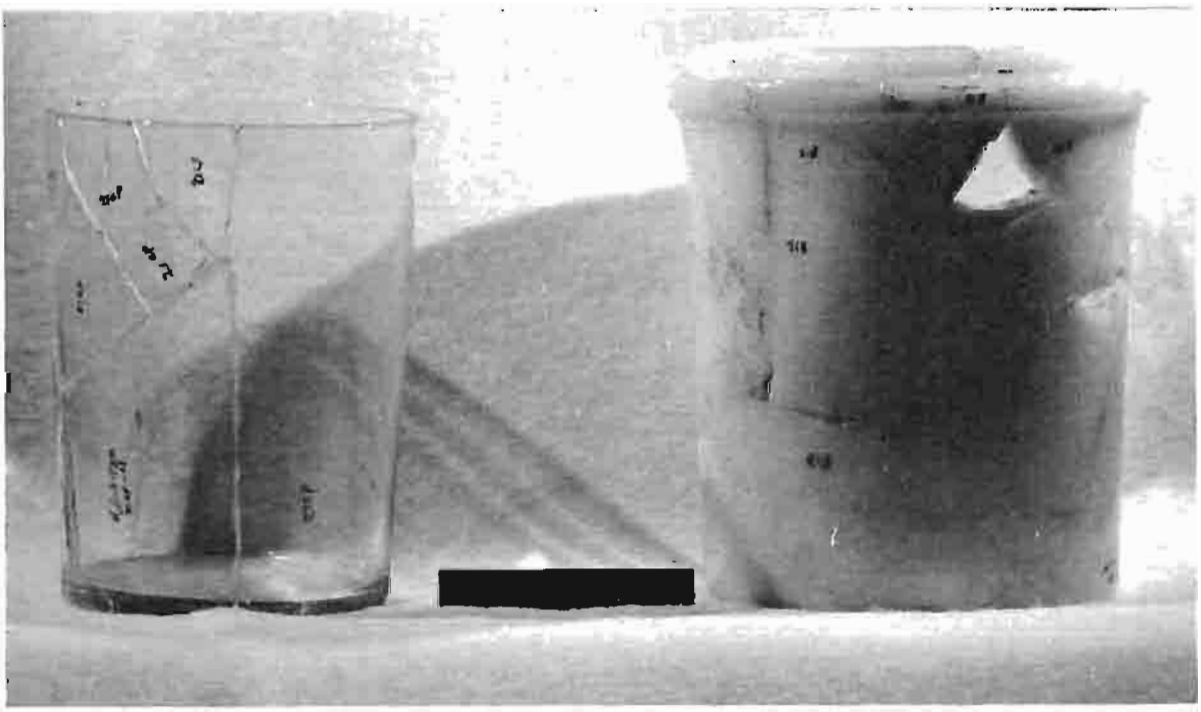

Plate 8: Glass vessels.
Tumbler, Vessel 23 (left); MacLaren's Imperial Cheese jar, Vessel 21 (right).

Plate 9: Sauce bottles. Ketchup bottle, Vessel 14 (left); HP sauce bottle, Vessel 20 (centre); Lea and Perrins bottle, Vessel 39 (right).

Plate 10: Glass containers.
Medicine bottle, Vessel 11 (left); Bovril bottle, Vessel 7 (centre); Horlick's jar, Vessel 12 (right).

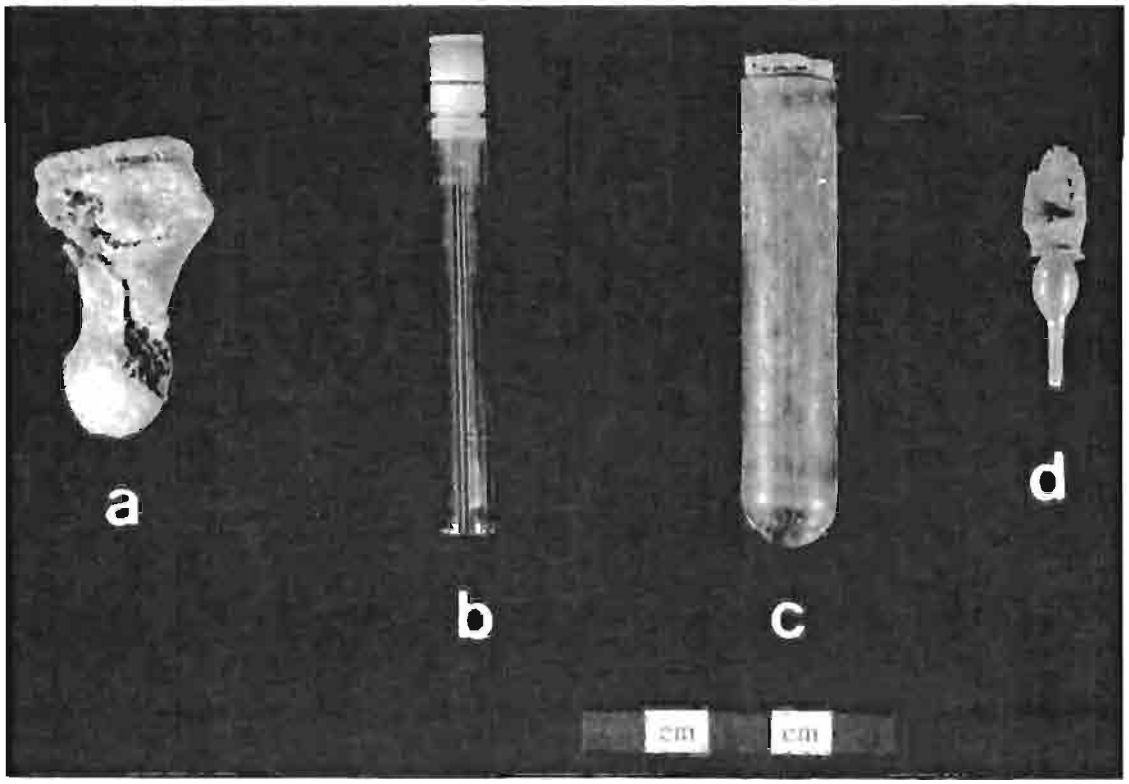

Plate 11: Miscellaneous glass and rubber artifacts.
a. baby bottle nipple; b. syringe vial; c. test tube; d. dropper.

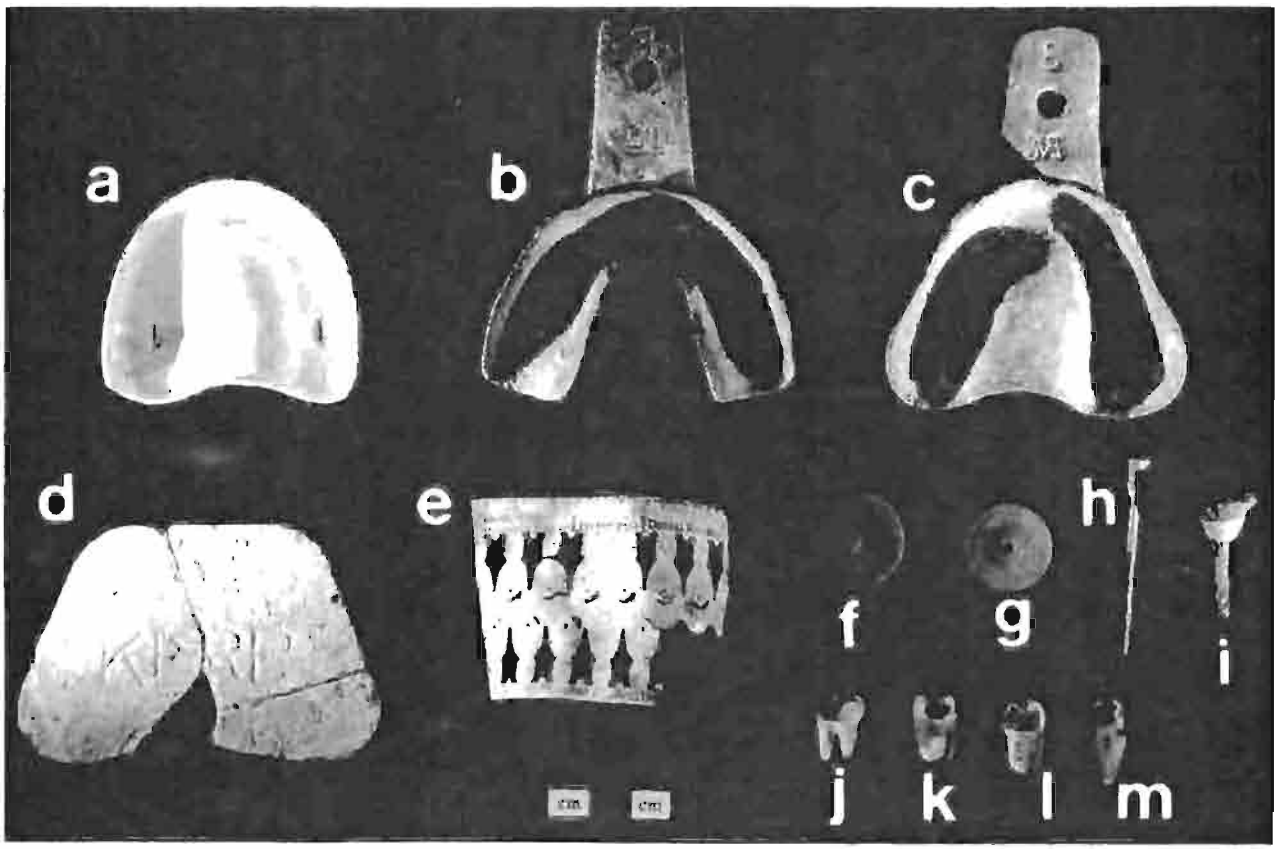

Plate 12: Dental equipment and human teeth.
a. plastic tray; b. mandibular tray; c. maxillary tray;
d. composition form; e. dental needle card; f. grinding wheel;
g. grinding disc; h. mandrel; i. brush; j-m. human teeth.

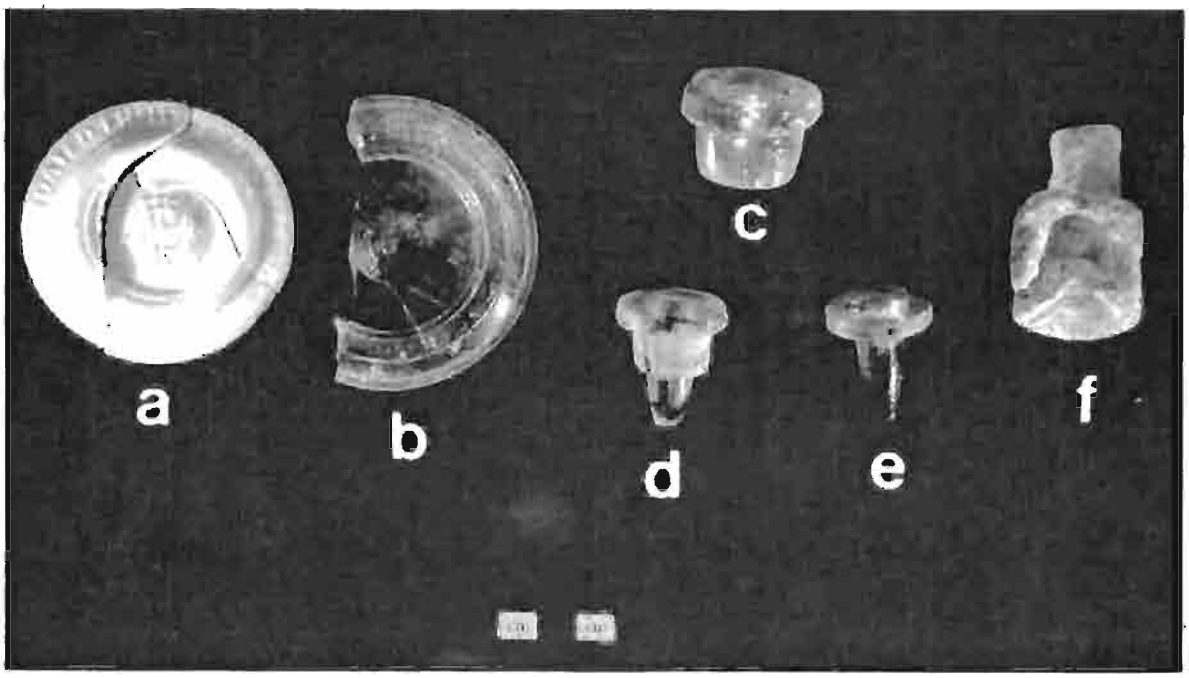

Plate 13: Glass artifacts.
a. Consolidated Fruit Jar Company liner; b. Hamilton Glass Company liner; c. Eno's stopper; d. club sauce stopper with cork; e. club sauce stopper; f. melted bottle.

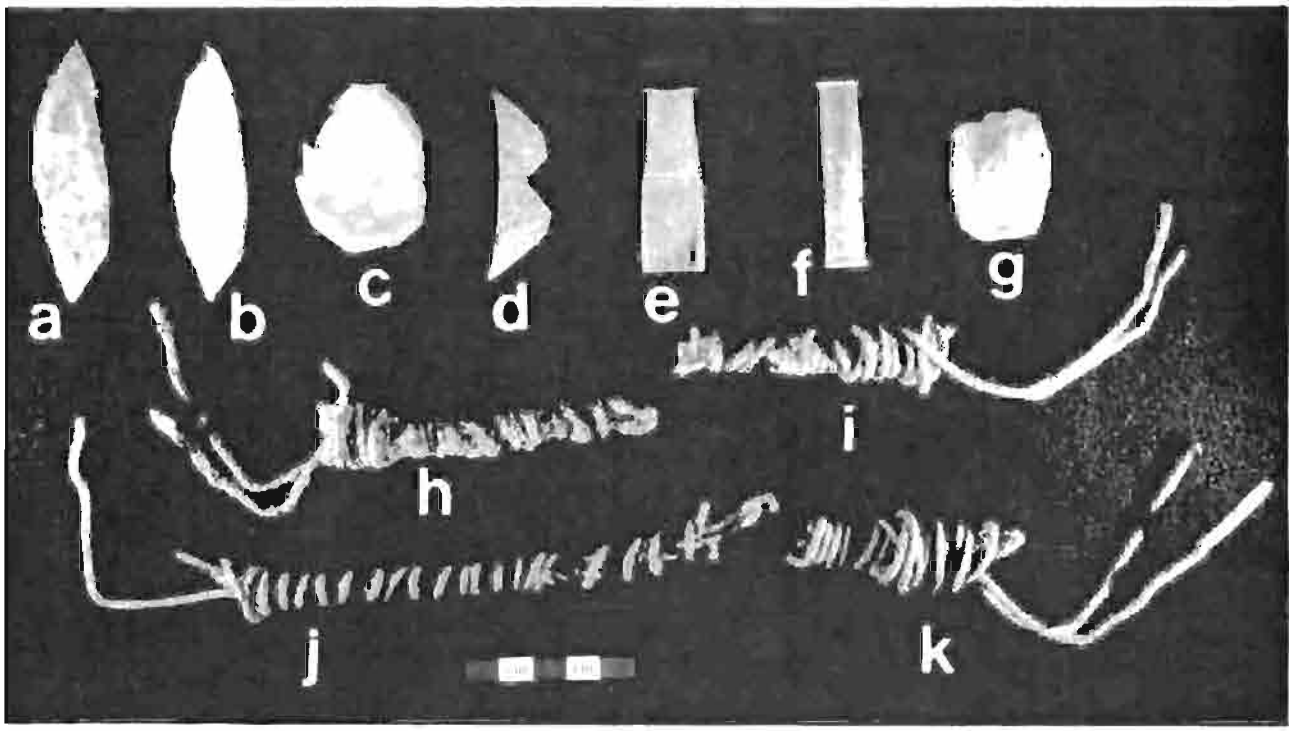

Plate 14: Metal artifacts.
a-d. unidentified cut metal shapes; e-f. modified cartridge casings; g. handmade lead weight; h-k. unidentified wire objects.