# RATTLING BROOK 1(DgA1-1): AN EXAMINATION OF MIDDLE DORSET INNER BAY SETTLEMENTS

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# Rattling Brook 1(DgAt-1): An Examination of Middle Dorset Inner Bay Settlements

By
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**Abstract**

This thesis focuses on the investigation of a Dorset site, known as Rattling Brook 1, located in the inner region of Notre Dame Bay, Newfoundland. Recent excavations of both a structure and the surrounding features of the site, situated at the mouth of Rattling Brook, are used to examine the settlement and subsistence patterns of the Dorset Paleoeskimo in eastern Newfoundland. Specifically, this thesis will investigate the resource structure of inner bay sites in the context of the yearly subsistence settlement patterns of the Middle Dorset. The thesis will also identify the purpose and timeframe of Dorset occupation at Rattling Brook and the reasons for considering its location. To date, Dorset research in Newfoundland has not been able to identify the full seasonal round of the Dorset. Therefore, the research undertaken at Rattling Brook is capable of expanding our understanding of not only the Dorset, but also their seasonal movements.

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# Chapter 1: Introduction

This thesis concentrates on a Dorset inner bay settlement at the mouth of Rattling Brook, a significant Atlantic salmon river located at the head of Notre Dame Bay, in central Newfoundland (Figure 1). The goals of the research are, 1) to examine one of the few known prehistoric inner bay Dorset sites and to determine its implications for Dorset settlement and subsistence, 2) to examine any structural remains pertaining to settlement patterns, 3) to propose what activities were undertaken by the Dorset at this inner bay settlement site.

The site that will be examined for this analysis is Rattling Brook 1 (DgAt-1). This site is located approximately 60 km from the open sea on the south end of the Bay of Exploits, near the community of Norris Arm. The existence of a substantial Dorset site at the mouth of Rattling Brook has been known for over two decades (Schwarz 1994, Thomson 1982). Previous surveys of Rattling Brook 1 were conducted on two occasions: first by Callum Thomson as a part of the Beothuk Report (1982), and again by Fred Schwarz as a part of an Exploits Valley Archaeological Survey (Schwarz 1993). Thomson's investigations (1982) at Rattling Brook 1 consisted of 11 test pits that first identified the site as having both Dorset and Maritime Archaic components. Schwarz revisited Rattling Brook 1 in 1993 and found the remnants of Middle Dorset features.

Rattling Brook 1 belongs to a group of Dorset sites situated around the head of Exploits Bay, positioned within locations which are not typical of Middle Dorset occupations within Newfoundland. Rattling Brook 1 is the largest of these sites (Schwarz 1993). Little is known about Dorset inner bay sites elsewhere in Newfoundland or indeed the Eastern Arctic. As a result, the investigation of Rattling Brook 1 has the potential to expand our understanding of the Dorset seasonal round pertaining to settlement and subsistence activities.


**Figure 1. Location of Norris Arm.**

In the following chapters I give a brief introduction to the Middle Dorset culture pattern in Newfoundland and discuss how local geography and resource availability combine to create regional variants of Dorset culture in Newfoundland. I then examine the geographical landscape and resource availability in and around the study area of Notre Dame Bay in order to demonstrate the potential of the local environment to support the Dorset inhabitants of the region. An analysis of the newly excavated and extant archaeological remains from the Rattling Brook 1 site follows and my interpretation of the site is used to demonstrate both the importance of inner bay settlements on the Dorset seasonal round, where resource abundance is more generalized, and the role that site assemblage and archaeological features play in understanding seasonal settlement activities in the absence of faunal remains.

**Research Design**

The significance of a Middle Dorset inner bay site located within Notre Dame Bay may be addressed in any number of ways most important for this thesis is the economic and ecological perspectives. While each perspective is limited, they help to focus the research on the importance of inner bay sites and to shape my three primary research questions

1. To determine the function of Rattling Brook 1 through a detailed archaeological excavation and analysis.

2. To assess the nature and extent of the Paleoeskimo occupation in Notre Dame Bay relative to the function of Rattling Brook 1.

3. To explain the significance of Middle Dorset inner bay adaptations based on settlement patterns in Newfoundland.

To assess the degree to which the archaeological patterns at Rattling Brook match with occupational circumstances, the following methods of analysis are employed. Chapter 2 will situate middle Dorset seasonality and subsistence patterns on the island of Newfoundland using extant data. Chapter 3 will provide the geographical and biological context in which to situate Dorset adaptation in Notre Dame Bay. Chapter 4 details the excavations at Rattling Brook 1. Chapter 5 is an analysis of the artifacts recovered from the excavations. Finally Chapter 6 provides an analysis of activities, occurring at the site and Chapter 7 summarizes the results of this research.

# Chapter 2: Middle Dorset Settlement and Subsistence in Newfoundland

## Introduction

This chapter provides a brief introduction to Middle Dorset culture in Newfoundland and Labrador. I then discuss the regional distribution and variation of this culture on the island of Newfoundland and the relationship of these variants to local resource distribution. Finally, I examine the three primary ecozones that the Dorset used for their seasonal round: the outer coast, inner coast, and interior regions.

## Dorset Culture History in Newfoundland and Labrador

The Dorset culture was named after Cape Dorset on Baffin Island, where artifacts from this culture were first collected (Jenness 1920; McGhee 1996). The Dorset were a northern cultural group that developed a distinct technology around 2500 years ago, most likely in response to changing climatic conditions, and thus a changing resource base (McGhee 1996). These hunter-gatherers survived in the arctic and sub-arctic regions of the Eastern Canadian Arctic, Labrador, Newfoundland and Greenland for over 1500 years. The Middle Dorset migration through Labrador and Newfoundland occurred during a warming trend about 2000 years ago (Fitzhugh 1972). They remained in Newfoundland until 900 BP and then disappeared from the archaeological record. There are a number of hypotheses regarding the demise of Dorset groups in Newfoundland including factors such as competition with the

Recent Indian and their failure to adapt to a continued warming trend (Tuck and Pastore 1985; Renouf 1993a; 1999; Holly 2005). Most likely it was a combination of these factors.

Although Dorset groups used most of the resources available to them in the regions they inhabited, they had a much greater reliance on marine resources and would intensively hunt whatever variety of sea mammal was most abundant near their settlements (Renouf 1993a). This marine specialization is reflected in their tool kit, their structures, and their choices of settlement location. Because of this dependence on marine resources the Dorset seasonal round is often described as an outer coast-oriented system, focused on resources best procured from this location (Schwarz 1990:169). This system is defined by a costal settlement pattern and a year round adaptation to marine fauna (Fitzhugh 1972:161). This adaptation may well have reduced their annual mobility resulting in minimal residential moves throughout the year (Cox 1980).

## Dorset Regionalization Models

Given the variability in marine species distribution on and around the island of Newfoundland, one might expect that the settlement and subsistence patterns of the Dorset would vary greatly from region to region (Pastore 1986a; Robbins 1986; Jordan 1986). Unfortunately, a clear understanding of Dorset settlement and resource use has yet to be established. This is due, in part, to the lack of faunal preservation at island sites and, in part, to the small number of sites which have been intensively

investigated (Robbins 1985). Nevertheless, one would expect that the species distribution would be different in different areas of the island and that hunter-gatherer groups would have to adjust their settlement and subsistence strategies accordingly. Since there does not appear to be an island-wide settlement subsistence pattern it is likely that there are multiple Dorset variants which show adaptation to local conditions (Robbins 1986).

Dorset "variants" have already been proposed (Robbins 1985; Erwin 1995; LeBlanc 2001). Robbins (1985) and Erwin (1995) have a broad view of Dorset regionalization on the island, suggesting three large zones in which distinct Dorset populations would have completed their seasonal rounds. LeBlanc (2001) suggests that there are six of these regional Dorset variants spread throughout the island, with each group displaying constrained mobility within an interregional context.

The first model, proposed by Robbins (1985; 1986), suggests that the Newfoundland Dorset could be divided into three regional (Figure 2) variants: west coast, the northeast coast, and south coast. Robbins (1985) drew on differences in settlement patterns, artifact styles, and the raw material used by the Dorset inhabiting different parts of the island to make this suggestion. He suggests that the three regional variants developed as a result of Dorset adaptation to locally available resources.

The Dorset on the Northern Peninsula of Newfoundland (Robbins' west coast variant) had a subsistence pattern focused on the exploitation of harp seal herds which migrated north during the spring to arctic waters. These herds travelled up the

Strait of Belle Isle and along the Northern Peninsula. From the Northern Peninsula hunters could venture to the nearby pack ice and easily hunt seals during the vulnerable whelping stage. On the west coast of Newfoundland there was likely a lower degree of annual mobility because seals and other principal prey species provided for Dorset subsistence needs for many months. Even though the primary seal harvest would have taken place in the spring, the Northern Peninsula appears to have been occupied off and on throughout the year by a constantly fluctuating number of people, due to seal migrations, perhaps reflecting a constrained territorial mobility (Renouf 1999). Interestingly, the endblades produced in this region were stylistically unique to the area. They are short and broad with concave bases and convex sides and made from locally available fine-grained cherts of varying colours (Robbins 1985).

Robbins' (1985) northeastern Dorset population does not appear to have been as dependent on sea mammal hunting as the west coast Dorset were (Renouf 1999). This is largely because harp seal, the primary subsistence resource on the west coast, was not as readily available on the northeast coast. Harp seal are only available on the northeast coast when the correct winds drive the pack ice northeast into Notre Dame Bay. Therefore, it is believed that the Dorset on the northeast coast focused on other types of resources such as fish, birds and terrestrial mammals. This more generalized subsistence strategy did not require the Dorset of the northeast to spend as much time on the outer coast and did not allow for large settlement aggregations there. When harp seal were available on the northeast they tended to disperse along the shore,

requiring a more widespread and mobile hunt than was necessary on the western side of the island (Robbins 1985). Robbins (1985) suggests that this type of hunt would require temporary hunting encampments rather than large central sites. As well, in the northeast there are other specialized sites that appear to have been established for caribou hunting and salmon fishing demonstrating that various other predictable resources were needed to supplement the diet when harp seal were not available.

Finally, the endblades found here are stylistically unique to the northeast. They are larger, with a greater length to width ratio, when compared to the west coast assemblages (Robbins 1985). The endblades had a slight concave or straight base and either a straight or slightly convex edge, and the material used was usually locally available.

Robbins' (1985) third Dorset variant occupied the southern coast of Newfoundland from the Avalon Peninsula to Cape Ray. The Dorset in this area would not have had as much access to sea mammals or other to maritime resources. Due to this it is believed that the southern population adopted a more generalized subsistence relying on a wider variety of resources, both marine and terrestrial. Robbins (1985) attributes the regional variations in settlement pattern, endblade form and raw material to their more distinct economic orientations. Robbins (1985) suggests that there were smaller sites in these areas based on a subsistence geared towards food stocks that were smaller in numbers, but with greater variation in the species exploited. LeBlanc (2001) agrees with Robbins that Dorset regional variability exists, but believes that there are a larger number of local Dorset groups and proposed that there were at least

six localized populations occupying the island. She based these largely on stylistic differences in endblade form (Table 1, Figure 3) from Dorset sites within the proposed areas (LeBlanc 2001).

**Table 1. LeBlanc endblade data.**

| Region | Manufacture | Basal concavity | Size | Material location |
|---|---|---|---|---|
| **Southwest Newfoundland** | Finley chipped, Tip fluting | Present | Variety of sizes | Locally available |
| **West Coast** | Extremely fine | Present, some quite pronounced | Short and broad | Locally available |
| **White Bay** | Finley chipped, no evidence of tip fluting | Slight concave base | Short and broad | Likely locally available |
| **Notre Dame Bay** | Less carefully flaked, some evidence of tip fluting | None or limited | Long and slender | Unknown |
| **Bonavista bay** | Finley flaked, distal tip fluting | None or limited | Longer | Unknown |
| **Trinity Bay** | Finley chipped, with grinding present. Lateral serration present | None or limited | Long and slender | Likely locally available |

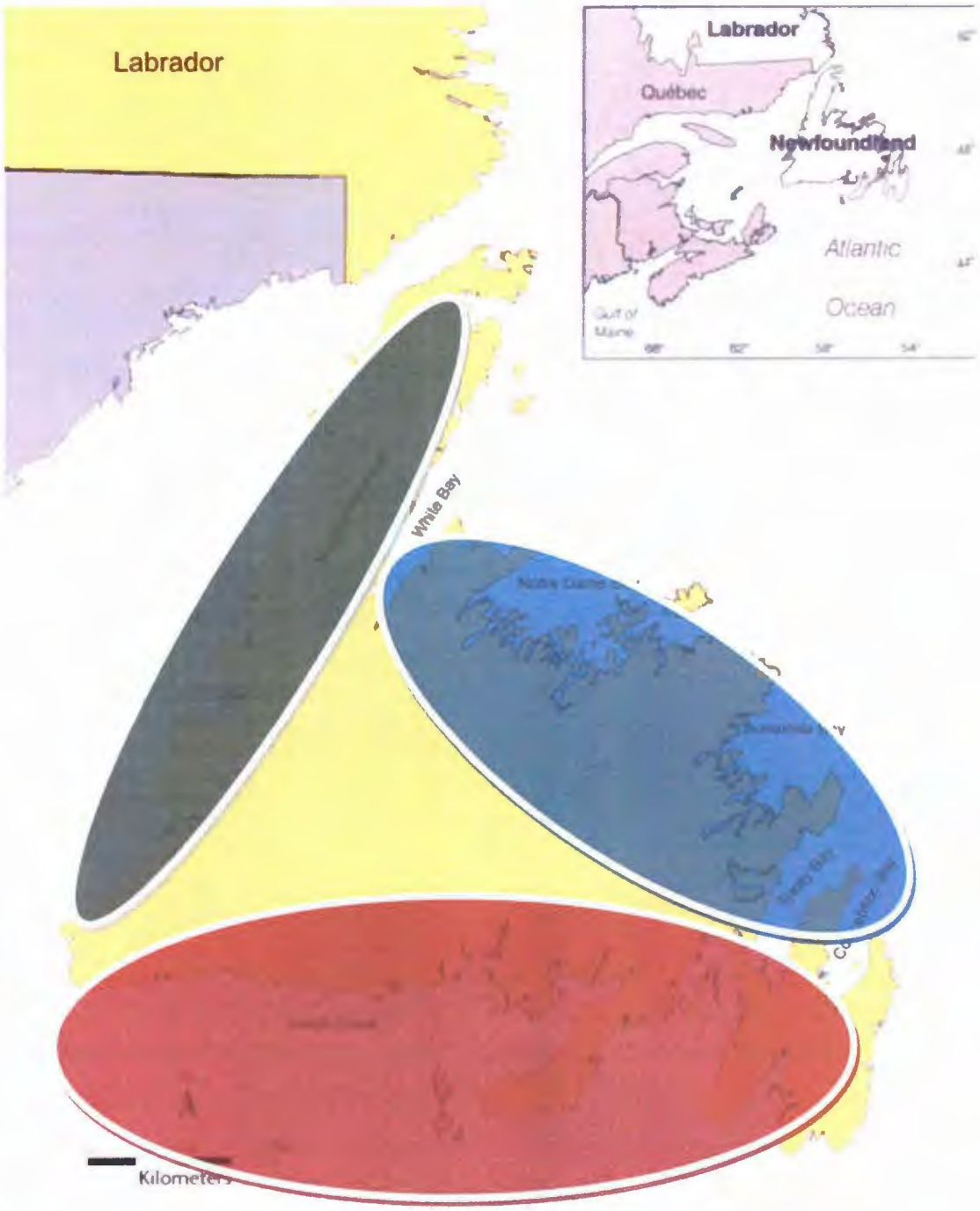


**Figure 2. Regional variants based on Robbins (1985).**

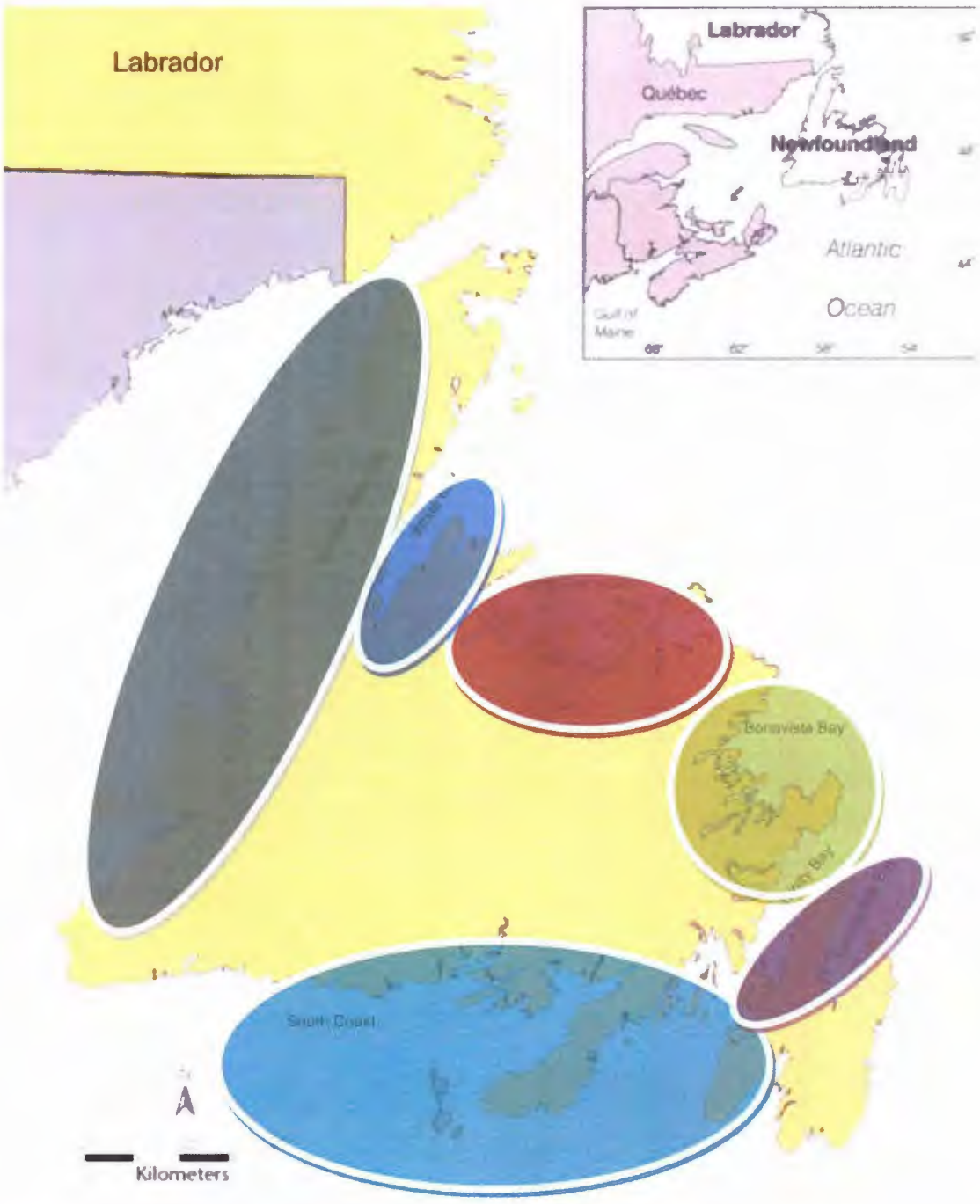


**Figure 3. Regional variants based on LeBlanc (2001).**


**Figure 4. Places mentioned within text.**

The models presented vary both in the number of Dorset variants they suggest inhabited the island and in the rigidity of the boundaries between Dorset populations. However, when examining each of the distinct regions proposed by earlier researchers it is apparent that each population had access to three distinct eco-locations in their territories: the outer coast; the inner coast, and the interior. Our understanding of how these regions were used by the Dorset remains limited.

## Subsistence Areas

There are generally three ecozones which would have been available to all local Dorset populations inhabiting Newfoundland. Each of these ecozones is geographically unique and would have provided access to different types of resources at different times of the year (Figure 5). These zones are the outer coast, the inner coast and the interior.

### Outer Coast

The majority of Middle Dorset sites and the largest sites are located on the exposed outer headlands and coastlines of the outer coast. This is most likely because it was the best place to hunt marine mammals, the primary subsistence resource for the Middle Dorset within Newfoundland (Schwarz 1994). On the west coast the Dorset would have hunted the large herds of migratory harp seals that passed by the outer coast in December and again in the early spring.

The largest sites on the island at which the Dorset procured seals are located in the Port au Choix area on the western side of the Northern Peninsula. From sites in Port

au Choix harp seals were exploited in the spring as they made their way from their whelping areas in the Gulf of St. Lawrence northward to Greenland. Although harp seal dominates the bone refuse, a relatively wide range of other seal species, as well as sea birds and small game, are represented in the Middle Dorset middens suggesting that these outer coast sites may have been used as base camps from which to hunt a wide variety of species (Renouf 1994). Nevertheless, Ralph Pastore (1986a) suggests that the primary resource for the Dorset in Newfoundland was the harp seal. This suggestion is based on the concentration of large sites (1000 metres$^2$ or greater) on seaward locations adjacent to the harp seal herds' migration routes. Pastore (1986a:127) suggests that the huge numbers of harp seal available at the Port au Port site on the southwest coast (Simpson 1986) indicate the location of summer base camps for marine mammal exploitation, and the locations from which forays into the highlands could be made. Short trips from these large sites could have been made inland to hunt caribou in the fall and down the coast in the summer to collect lithic materials. A second possibility is that these large settlements represent seasonal reoccupations and population aggregations during the harp seal hunt (Renouf 1994). Other, dispersed sites could have been utilized from summer through fall for terrestrial and marine mammal hunting in addition to fishing and raw material procurement.

On the northeast coast in Bonavista Bay, Paul Carignan (1975) suggests that the seal bone recovered at the Beaches site (DeAk-1) indicates a spring/ summer/ fall exploitation period, probably of harbour seals (although ringed, bearded and grey

seals also occur in the area, as do harp and hooded seals). However, Carignan (1975:21) feels that the accessibility of harp and hooded seals would have been determined by wind conditions which would in turn dictate whether the pack ice, needed by harp and hooded seals, was located miles out to sea or more shoreward against the coast in Bonavista Bay. The implication here is that Dorset seal hunting was limited to warm weather exploitation of shore species (harbour, grey and bearded seal) on beaches and sand bars, and pack ice hunting (harp and hooded seal) in late winter/early spring. Notre Dame Bay is probably similar to the Bonavista and Trinity Bay examples.

The extant research would suggest that the Dorset Paleoeskimo were specialists who focused on the procurement of seals that were available on the outer coast in large numbers, and that they would return seasonally to pivotal harp seal hunting sites (Renouf 1993b). However, not all Dorset populations had access to the same species or number of seals suggesting that some regional populations had to rely more heavily on resources taken in different eco-locations.

### Inner Coast

Dorset settlement and subsistence patterns within inner coastal regions of Newfoundland have been poorly documented. Our understanding of the inner coastal sites is also complicated by the fact that the Dorset seem to have used these sites for forays into the interior to acquire caribou. Therefore, some inner coastal sites are associated with the acquisition of inner coastal resources and others with interior resources. Stephen Cox (1980) suggests that the Dorset subsistence and settlement

patterns closely resembled those of the historic Labrador Inuit, who also had a maritime-adapted system, but still relied heavily upon inner bay resources.

In the summer, when the abundant seal population of the outer coast were not available the Dorset could easily have subsisted on what Tuck and Pastore (1985) considered principal prey species of the inner coast. These included, but were not limited to, salmon, harbor seals, smelt, migratory birds, shellfish, crustaceans and small mammals. Other species available in the inner coastal regions are unlikely to have served as a staple but could have added significantly to resource diversity, such as plants and small fish. Sites such as Rattling Brook may have served multiple roles depending upon the season. The resources provided by the inner coast may have been much more significant to Dorset populations that did not have access to abundant seal herds on the outer coast and therefore had to rely on other foods available in their territories.

### Interior

This spring, summer and fall seal hunting period and the inner bay resource gathering would have been supplemented by a winter caribou hunt, which would have necessitated a move into the interior, probably along one of the primary river systems. Although caribou would have been available year round it seems unlikely that, unless encountered, caribou were actively sought during the warm seasons. The lack of Dorset sites in the interior coupled with their maritime adaptations suggests that the interior was not of prime importance to the Dorset of Newfoundland.

The most important resource available in the interior is the caribou, one of the only large terrestrial mammals in Newfoundland, save the black bear. The Paleoeskimo did not appear to have used these resources as much as one would expect, although sites such as Pope's Point located in the interior demonstrate that the Dorset did hunt caribou (Devereux 1965). The limited number of Paleoeskimo interior settlements suggests that the occupation of this region was brief, occurring in the late fall and winter for the caribou hunt.

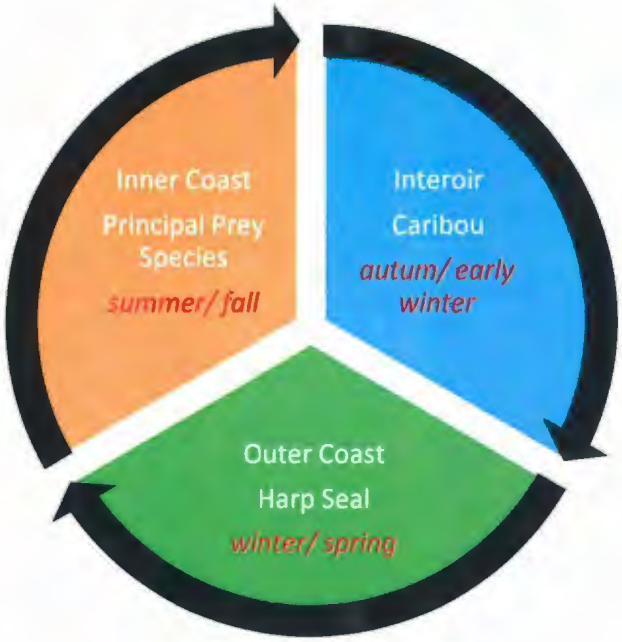


**Figure 5. General Dorset Paleoeskimo Seasonal Round.**

It is generally accepted that Middle Dorset in Newfoundland were moving within these three ecozones, but concentrating on the outer coast because of the abundance of marine mammals. Generally, the Dorset seasonal round reflects the shift from summer/ fall on the inner coast, then moving to the interior for the autumn/ early winter then back out to the outer coast for the winter and spring seal hunts (Figure 5).

## Summary

The Paleoeskimo were without question maritime-adapted. This marine specialization is reflected in all aspects of the archaeological record, including site location, tool kit, house construction, and subsistence refuse. The marine resources that were heavily exploited are supported by the coastal orientation of their sites with an emphasis on marine mammals, especially seal (Renouf 1986).

Nevertheless, on the northeast and the south coasts of Newfoundland seals were hunted in much smaller numbers than along the west coast. To subsist locally the Dorset would have had to make use of whatever species were abundant in their particular region.

Extant research demonstrates that there were likely multiple groups of Dorset occupying local territories throughout the island and that these groups did not always follow the same subsistence strategy. In fact, they could not, as no group had access to the same locally available resources. Thus, the Dorset concentrated on whatever was in the greatest abundance in their territory. On the west coast this was harp seals, but on the northeast and south coast, where harp seals were not as abundant, the Dorset followed a more generalized subsistence pattern which included fish, birds, shellfish and caribou.

It appears that on the northeast coast, where Rattling Brook 1 is located, there were no large aggregation sites centered upon a single resource. Instead there were many small seasonal camps occupied by small groups which probably consisted of only one

or a few families. Over the course of their seasonal round these small groups would have moved from area to area in a planned pattern, to exploit the resources available to them. Those choices in subsistence harvesting were likely based on both cultural preference and resource availability. Such a settlement-subsistence pattern among the Middle Dorset bears general similarities to William Fitzhugh's "Modified Maritime" settlement-subsistence system as described for the Dorset from Hamilton Inlet, Labrador. This a system was characterized by "a coastal settlement pattern and a year round adaptation to marine fauna," and included two main settlement types, 1) large, relatively permanent winter settlements, and 2) seminomadic summer occupations, with group fragmentation occurring seasonally following break-up of winter settlements (Fitzhugh 1972:161).

# Chapter 3: Geography and Resources of Notre Dame Bay

## Introduction

In the previous Chapter I discussed the regional variants for the Dorset culture in Newfoundland and how these variants may have been conditioned by differential access to local resources. In this chapter I will outline the geography and natural features of Newfoundland as these are advantageous to understand when attempting to reconstruct the life ways of hunter-gatherers. Furthermore, I review the location of Rattling Brook 1 and the resources that could have been acquired from the general area surrounding the site.

Due to the poor preservation and acidic soil in Newfoundland there are few faunal remains found on most archaeological sites. Thus, archaeologists must infer information about which resources were used by considering biological diversity, geographical availability, residues and artifact forms. Nevertheless, the few resources which do exist are often found in great numbers. Therefore, one can presume that these resource options would have been used in some capacity in the prehistoric period.

## Geography of Newfoundland

The large island of Newfoundland (Figure 1) lies off the east coast of North America between latitudes 46.5°N and 52°N. It lies on the continental shelf, separated from Labrador by only 17 km, and from Cape Breton by 113 km. Geologically, the structure of the island may be subdivided into six regions. The main plateau area in the south is named the Atlantic Upland. It consists chiefly of moss-barrens, and it is from here that the three primary rivers on the island run. The second division is the Long Range Plateau which extends to the south as the Lewis Hills. The Avalon Peninsula is the third division. It is really part of the Atlantic Upland, but is separated by Placentia and Trinity bays. A remarkably long, high, and narrow isthmus joins the two divisions.

## Climate

The climate of Newfoundland is marine influenced, and is affected by the frigid Labrador Current that moves south along the east coast of the island, and then to the west along the south coast. This current is the reason that Newfoundland has a much more sub-arctic climate than its latitude would suggest. Thus, the mean temperature on the east coast for the year is 2.2°C, ranging from 15°C in summer to -5°C in winter. In January, the average for the entire island is below the freezing point and even in summer snow persists in places on the elevated plateau. The annual average temperature for the island is 8 °C, with the warmest month being July at 20 °C and the coldest being February at -1°C . The rainfall is adequate, ranging from 762 mm on the north-west to 1524 mm on the south coast, and there is usually very heavy fog prevalent on the southeast coast.

## Notre Dame Bay

Notre Dame Bay (Figure 6), approximately 6000 $km^2$ in size, is a large inlet on the northeast coast of Newfoundland. The bay itself has an irregular shoreline and contains numerous small islands which are indented by numerous coves and smaller embayments. New World and Fogo are the largest islands in the bay, and Funk Island, 60 km east of Fogo, is one of Newfoundland's primary bird sanctuaries. Several of the inlets in the bay are fairly large bays in their own right, including Green Bay, Halls Bay, Badger Bay, Seal Bay and the Bay of Exploits.


**Figure 6. Notre Dame Bay.**

Complementing the tremendous array of bays and coves are a maze of forested islands. In addition to bays there are many secluded coves and arms. Many of these locations contain evidence of Paleoeskimo occupation.

Notre Dame Bay extends from Cape St. John in the Northwest to Cape Freels in the southeast extremity of the bay, and is approximately 60 km long and 80 km wide. One of Newfoundland's main rivers, the Exploits, flows directly into the bay. This, the longest river on the island, flows from Red Indian Lake to its mouth in Notre Dame Bay.

One of the first Europeans to visit the bay was the Portuguese explorer Corte-Real, who aptly named the bay "Baia Verde", meaning Green Bay (Mellin 2003). As well the French explorer Jacques Cartier visited Fogo while navigating the bay in 1534 (Mellin 2003). Since then the descendents of the original French, English and Irish migratory fishermen have left an indelible mark on Notre Dame Bay. This is most noticeable in the array of unique names primarily of both English and French origin. Early settlers and explorers were attracted to Newfoundland by the abundance of northern cod, numerous salmon rivers and stands of pine, fir and spruce, as well as fur bearing animals for trapping. There are numerous fishing settlements along the coast, many of which currently have fish-processing plants. The town of Botwood is the chief port.

## Available Resources in Notre Dame Bay

Past resource distributions can be estimated, which aids archaeologists in understanding how these prehistoric populations positioned themselves on the landscape at particular times of the year. The Newfoundland Dorset must have been relatively mobile, compared to other culture groups inhabiting Newfoundland over its prehistory (Schwarz 1994). Mobility allows groups such as the Paleoeskimo to maintain a superior knowledge of vast areas and the resources present at any particular time.

I now examine the subsistence resources that would have been available to the Dorset specifically in Notre Dame Bay during the summer and fall as they pertain to this research.

### Fish

**Table 2. Riverine/ Lacustrine resources listed by biomass.**

| Common name | Scientific Name | Timeframe for greatest resource availability |
|---|---|---|
| Atlantic salmon* | *Salmo salar* | Summer, Fall |
| Brook trout* | *Salvelinus fontinalis* | Summer, Fall |
| Arctic char* | *Salvelinus alpinus* | Summer, Fall |
| Lake trout* | *Salvelinus namaycush* | Summer, Fall |
| Smelt | *Osmerus mordax* | Summer |
| eel | *Anguilla rostrata* | Summer, Fall |
| Winter flounder* | *Pseudopleuronectes americanus* | Fall |
| Mummichog | *Fundulus heteroclitus* | Summer, Fall |
| Tomcod | *Microgandus tomcod* | Summer, Fall |

| | | |
|---|---|---|
| Fourspine stickleback | *Apeltes quadracus* | Summer |
| Threespine stickleback | *Gasterosteus aculeatus* | Summer, Fall |
| Twospine stickleback | *G. wheatlandi* | Summer, Fall |
| Ninespine stickleback | *Pungitius pungitius* | Summer, Fall |
| American sandlance | *Ammodytes americanus* | Summer, Fall |

** Available during winter ice fishing*

The most readily available resource in Notre Dame Bay was Atlantic salmon (Figure 7), (*Salmo salar*) but there are a number of other fish species that would have been available in the area of the site (Table 1). Atlantic salmon (Figure 7) are born in fresh water but mature in the sea, returning to their birthplace to spawn in October and November. Salmon usually return to saltwater after spawning and may return to spawn in fresh water rivers several times during their lives. Many large salmon migrate long distances at sea. At one time, the size of Atlantic salmon ranged up to 30 kg (70 lbs) but now the maximum is about 9 kg (20 lbs.) (Thorpe 1989).

Several other fish species are found within the area. These include brook trout, arctic char, lake trout and Atlantic cod. Brook trout (*Salvelinus fontinalis*), known locally as mud trout, and often as speckled trout elsewhere, is native to both Newfoundland and Labrador and is the most widely known because it thrives in all sizes of ponds and rivers. They are caught from May to September and to a lesser extent again during winter ice-fishing.

**Figure 7. Atlantic salmon.**

Arctic char *(Salvelinus alpinus)* is actually a type of trout and is related to the province's other native salmonids, the lake and brook trout, as well as Atlantic salmon. Char fall into two categories here: the anadromous type, which lives in salt water but run up rivers to spawn in fresh water, and landlocked char which remains in fresh water lakes and rivers. Landlocked char is the only type that would likely have been found within Notre Dame Bay prehistorically (Templeman 1966).

As its name implies, lake trout (*Salvelinus namaycush*) inhabit the cold, deep fresh water bodies of water that are numerous within the Notre Dame Bay area. Generally, these are the largest North American trout and are occur all across the continent. They spend their entire lives in the cold depths of large fresh water lakes.

Although probably not a large factor in inner bay settlement and subsistence practices, Atlantic cod (*Microgandus tomcod*) might have been acquired in these locations. These fish move in schools from deep to more shallow waters in predictable, seasonal cycles. Along the north east coast of Newfoundland, cod concentrations would have occurred in late May, when large numbers come closer to the surface and may approach the shore, following after the herring and capelin spawning runs. Generally, cod live in less than ten to 15 fathoms of water at this time of year, and could have been caught in either shallow traps or by using hand lines. The cod would have left the area in the fall to move offshore (Templeman 1966). As Dorset hunter-gatherers were likely opportunistic in their foraging strategies it is reasonable to assume that any prehistoric population would have exploited these resources if available.

## Terrestrial Resources

Although there is little faunal evidence of Middle Dorset exploitation of terrestrial resources, it is likely that they would have hunted some of the species, summarized in Table 3. Thirteen mammal species are native to Newfoundland and terrestrial mammals would have been available at least occasionally for exploitation by the Dorset Paleoeskimo in Notre Dame Bay. These include caribou (*Rangifer tarandus*), black bear (*Ursus americanus*), wolf (*Canis lupus*), beaver (*Castor canadensis*), and red fox (*Vulpes vulpes*). Other possible species that could have been exploited include, polar bear (*Ursus maritimus*), arctic fox (*Alopex lagopus*), marten (*Martes*

*americana*), otter (*Lontra canadensis*), lynx (*Lynx lynx*), ermine (*Mustela erminea*) and hare (*Lepus arcticus*).

**Table 3. Terrestrial resources listed by frequency.**

| Common name | Scientific Name | Time for greatest Resource availability |
|---|---|---|
| **Caribou** | *Rangifer tarandus* | Fall and winter |
| **Newfoundland Wolf (extinct)** | *Canus lupus beothucus* | All year |
| **Beaver** | *Castor Canadensis* | All year |
| **Black bear** | *Ursus americanus* | Midsummer to fall |
| **Lynx** | *Lynx lynx subsolanus* | |
| **Otter** | *Lontra canadensis degener* | Winter |
| **Marten** | *Martes americana atrata* | All year |
| **Weasel, ermine** | *Mustela erminea richardsonii* | All year |
| **Polar bear** | *U. maritimus* | Spring |
| **Red fox** | *Vulpes vulpes deletrix* | All year |
| **Arctic fox** | *Alopex lagopus ungava* | All year |
| **Muskrat** | *Ondatra zibethicus obscurus* | All year |
| **Meadow vole** | *Microtus pennsylvanicus terraenovae* | All year |
| **Beaver** | *Castor canadensis caecator* | Late summer through fall |
| **Arctic hare** | *Lepus arcticus bangsii* | All year |

The lack of identifiable Dorset sites in locations suggesting caribou hunting can be attributed to social factors. This may have influenced the fusion of the camps in the fall, allowing the communal hunting of caribou from satellite camps (Krol 1986:

156). As an example Harp considered Phillip's Garden to be a more or less sedentary Middle Dorset base from which forays could be made either inland to exploit caribou, or along the coast to fish for salmon (Harp 1976). In contrast to the migratory harp seal, fall caribou, and perhaps the Atlantic salmon, which aggregate in great numbers for very brief periods of time at specific locations in the study area, the above resources tend to be fairly evenly dispersed in the summer months, with the probable exception of choice locales existing in certain areas.

Generally, caribou would have been available from mid-April to mid-November. During their fall migration in particular, caribou herds come together in large numbers and are in prime condition, possessing newly formed back fat as well as new winter fur (Jochim 1977). Near to Rattling Brook 1 a probable Middle Dorset caribou hunting camp, the Pope's Point site, has been located at the junction of the Exploits River and Badger Brook in central interior Newfoundland (Linnamae 1975).

## Avian Resources

Newfoundland boasts some of the largest quantities of sea birds in the Northern hemisphere. Although we cannot estimate population prehistorically, modern numbers suggest that close to 50 million birds inhabit this province in the summer (Snow 1996). The majority of these can be found in the areas off the Northern Peninsula at Cape St. Mary's and in the area around Notre Dame Bay. More than half of the 518 taxa recorded for Canada have been recorded in Newfoundland (Mednis 1981:241). Within the immediate area of Rattling Brook there is currently no large

bird population, but there would have been access to such a resource in the vicinity. At low tide there are sand spits which expose shellfish at the northern extent of the site. This would have drawn an avian population, which would have supplemented the resources immediately available (Figure 8). Table 4 lists some of the more common birds within the area. A variety of sea birds will follow the fish inshore on feeding migrations, would have provided a valuable source of food especially during periods of nesting and molting in the warm seasons when the birds were aggregated and more vulnerable (Steele 1983).

**Figure 8. Sand Spit North of Rattling Brook 1.**

**Table 4. Avian resources listed by frequency.**

| Common name | Scientific Name | Seasonal Availability |
|---|---|---|
| King elder | *Somateria spectabilis* | Spring and Fall |
| Common eider | *Somateria mollisima* | Spring and Fall |
| Common merganser | *Mergus merganser* | Spring, summer and fall |
| Scoter | *Melanitta sp* | Spring, summer and fall |
| Murre | *Uria aagle* | Spring, and summer |
| Thick billed mure | *Uria Lomvia* | Spring, and summer |
| Black guillemot | *Cepphus grille* | Spring summer and fall |
| Razorbill | *Alca torda* | Spring, and summer |
| Dovekie | *Alle alle* | Fall |
| Large gulls | *Larus sp.* | All year |
| Willow patarmigan | *Lagopus lagopus* | All year |
| Great auk | *Pinguinus impennis* | Spring and early summer |

## Shellfish

**Table 5. Shellfish resources listed by frequency.**

| Common Name | Scientific name |
|---|---|
| **Mussels** | *Mytilus edulis* |
| ***Clams*** | *Mya arenaria* |
| **Scallops** | *Placopecten magellanicus* |
| **Sea Urchins** | *Strongylocentrotus droebachiensis* |

Blue mussel and clams are the shellfish most likely to have been harvested prehistorically in Notre Dame Bay. *Blue mussels are* found in most polar and temperate waters, in habitats ranging from slightly shallow estuaries to highly deep offshore environments, but tend to occur in areas that have elevated levels of nutrients from land runoff (Hilbish 1996). Generally, mussels are found in the rocky shores along the coastlines, bays, and river mouths, where they attach themselves to submerged surfaces.

The second shellfish likely consumed is clams. Current inhabitants of Notre Dame Bay harvest soft-shell clams (*Mya arenaria*) for personal consumption so it seems

likely that the Dorset would have do so also. Clams are bivalve mollusks that have a regular oval shape. They are filter feeders, usually marine, and often burrow themselves in the sediment with the aid of their foot. Their greatest availability is during the summer and fall.

## Marine mammals

**Table 6. Seals found within area.**

| Common name | Scientific Name | Greatest Availability |
|---|---|---|
| **Harp Seal** | *Phoca groenlandica* | Spring and Fall |
| Harbour Seal | *Phoca vitulina concolor* | Year Round |

### Harp Seal

The harp seal (*Phoca groenlandica*) is probably the most important resource available to the Dorset, or for just about any populations that inhabited the province prehistorically. There are three populations of harps seals: Greenland, the Barents Sea and the northwest Atlantic population. Currently there are an estimated 3.2-4.8 million seals in the northwest Atlantic harp seal population. It is difficult to estimate the population prehistorically, but based on today's numbers there would have been enough to make this a significant resource for the Paleoeskimo.

These seals migrate annually from their breeding grounds on pack ice in the Gulf of St. Lawrence and the coast of Newfoundland and Labrador north into the arctic. They spend the summer and autumn months feeding in the arctic waters. In late September, most of the population begins its journey back to their winter breeding grounds. Pups are born from February to March. The majority of the seals would have

been accessible on the west coast of Newfoundland where the pack ice forms and where the majority of whelping occurs (LeBlanc 1996).

In Notre Dame Bay harp seals are less frequent. Harp seals would have passed by in December and again in the early spring on their migration, but would not always enter the bay. The availability of these seals in Notre Dame Bay is dependent upon the locations and the movement of the pack ice which is dependent on numerous facets. Wind conditions could create a situation where the ice is inaccessible, and the amount of ice that forms within the area can greatly affect a seal hunt.

The majority of these resources are exploited from outer coastal locations and this is where the greatest concentration of sites occurs. The seals in these locations are a resource of unlimited quantity. For a small scale hunter gatherer population this would have been an impressive sight and a tempting draw.

### Harbour Seal

Although not found in the same quantity as harp seals, the harbour seal (*Phoca vitulina concolor*) would certainly have been a wanted commodity. They are found throughout most of the bays and inlets, in small isolated populations, around the coast of Newfoundland, especially in areas where fresh water rivers run into the sea. They prefer the quiet waters of bays and inlets to the open ocean (Boulva and McLaren 1979). Whelping occurs onshore during the late spring (Boulva and McLaren 1979). The seal haul out onto sandbanks and mudflats in river estuaries and give birth to a single pup (Mansfield 1967). In the summer and autumn harbour seals often haul out to sun and sleep in small herds on beaches or on inshore rocks (Boulva and McLaren

1979; Beck 1983). They will also haul out if the onshore winds are causing high surf. Where there are no beaches, hauling out is related to low tides, when reefs, rocks and sandbars become exposed.

Although harbour seals appear to leave the coast in the winter, it may simply be that they are unable to haul out in winter as some can always be seen in the water along the beaches. They will occasionally haul out on warm days in the late winter and early spring (Boulva and McLaren 1979). In addition, harbour seal do not maintain breathing holes, even in the Arctic, and must remain off the edge of the ice packs if land fast ice forms. The harbour seal is the smallest seal in the Atlantic Provinces, with a maximum weight of 100.0 kg, and were likely to have been a common sight around Notre Dame Bay.

## Berries

Within Notre Dame Bay there are a wide variety of edible plants and berries (Scott 1975). The majority of the berries are seasonal, ripening from midsummer through to early autumn. It is not clear what role plant foods played in prehistoric subsistence patterns, although it could be assumed that berries would have at least added a supplement to their diet. Obviously due to climate these foods cannot be collected other than in the summer months.

**Table 7. Plant life resources listed by frequency.**

| Common Name | Scientific Name | Availability |
|---|---|---|
| **Chuckley pear** | *Amelanchier bartramiana* | Midsummer to Early |

| | | |
|---|---|---|
| | | Autumn |
| **Wild strawberry** | *Fragaris vesca, F. virginiana* | Midsummer to Early Autumn |
| **Pin cherry** | *Prunus pennsylvanica* | |
| **Chokecherry** | *P. virginiana* | Midsummer to Early Autumn |
| **Bakeapple or cloudberry** | *Rubus chamaemorus* | Midsummer to Early Autumn |
| **Raspberry** | *R. idaeus* | Midsummer to Early Autumn |
| **Dewberry** | *R. pubescens* | Midsummer to Early Autumn |
| **Blackberry** | *Rubus spp.* | Midsummer to Early Autumn |
| **Crackerberry** | *Cornus canadensis* | Midsummer to Early Autumn |
| **Blueberry** | *Vaccinium angustifolium* | Midsummer to Early Autumn |
| **Marshberry** | *V. macrocarpon* | Midsummer to Early Autumn |
| **Partridge berry** | *V. vituss-idaea* | Midsummer to Early Autumn |
| **Crowberry** | *Empetrum nigrum* | Midsummer to Early Autumn |

## Chapter Summary

This chapter introduced the ecological context in which the Dorset Paleoeskimo likely lived. Information on climatic conditions and animal species was reviewed in order to understand the resource opportunities and constraints facing these people in

their subsistence and settlement choices. Greater emphasis was given to the species that may have been found in these inner bay regions during the Dorset occupation.

As one can easily see, there are a plethora of resources available spanning all four seasons, some in greater quantities than others. The information here shows that salmon would have been the most predictable resource in the area and likely one of the most abundant resources available. The predictable harp seal stocks allowed for the development of large multi-dwelling settlements on the west coast of Newfoundland, but the harp seal population in Notre Dame Bay would likely have been harvested much smaller and in a more opportunistic fashion if and when they came into the bay. Other resources must have been taken over harp seal in Notre Dame Bay. The resources in Notre Dame Bay are sufficient to support hunter-gatherers, but because they are not available in large numbers this region would not support large multi-dwelling habitation sites.

Instead, what we find is a settlement pattern in which we have a large number of small sites distributed more or less evenly across the landscape in locations where resources are harvesting predictable resources. These sites were probably occupied briefly, each corresponding to a different hunting episode. This type of settlement planning is an opportunistic resource acquisition strategy with an emphasis on search and encounter hunting tactics (Binford 1978:453). Nevertheless, most all of the resources listed above are predictable. Advanced planning to inhabit a specific site locale would only have been necessary to take advantage of seals, salmon seals and caribou because of their numbers and predictability.

Salmon are available for a short period of time but the location and the timing for potential capture is predictable. It is therefore logical to expect a settlement aggregation at this extremely rich point of procurement. Because of the reliability of inner bay sites location we might expect a strong pattern of reoccupation (repeated use) of the sites, but because salmon are available in large numbers for only a short period of time we might not find evidence of long term stays. Given the high predictability of salmon, both search time and settlement mobility are reduced, thus there might have been more emphasis on logistically organized resource use from camps near Rattling Brook. Resource predictability in the area also means that site activities should be highly predictable.

# Chapter 4: Excavations at Rattling Brook 1 (DgAt-1)

## Introduction

This chapter presents a description of the archaeological investigations at Rattling Brook 1(DgAt-1) that were undertaken in the summer of 2005. It outlines the excavation and recording methods used, and provides a description of individual features and deposits. The purpose of this excavation was to obtain additional data that would allow the research questions, outlined in Chapter 1, to be addressed.

At present, the site is situated on a densely overgrown terrace 1.3 meters above sea level, overlooking inner Notre Dame Bay, Newfoundland (Figure 9). The site is located at the northern extent of the river, Rattling Brook, on a terrace edge that slopes abruptly to a small sandy beach below. This beach is currently undergoing surface erosion. The site is bounded by another terraced edge to the east and surrounded by dense bush/ forest on the east with a modern, but now abandoned, gravel pit running parallel to the water's edge towards the south. Currently, the site is used as a recreational area and appears stable. The western side of the river is a campground. The eastern side, where the majority of the archaeological remains are located, is a 30-minute walk from the road servicing the community, facilitating its protection. The only real use of the area is for occasional timber felling by the local residents.

**Figure 9. Location of Rattling Brook 1(DgAt-1).**

A heavy amount of vegetation covers the majority of the site. Surface vegetation on the site consists of low grasses, poplar, birch, pine, spruce and alder. The site is generally dry throughout the year. However, the height of the river fluctuates seasonally based on the amount of runoff and precipitation, occasionally flooding the shoreline. This flooding is extremely rare, however, because the local hydro plant controls water levels. Elevations taken on various high and low points indicate an east-west slope to the site, ranging from 3.2 meters above sea level in the eastern area, to 1.6 meters above sea level on the western side of the site.

## Previous Investigations

The existence of a large Dorset site at the mouth of Rattling Brook had been known for over two decades (Schwarz 1994; Thomson 1982). The site was first identified by amateur archaeologist Don Locke who noted both a Late Paleoeskimo and a Maritime Archaic Indian component at the site. Previous archaeological surveys, based on Locke's preliminary findings, were conducted on two occasions. Callum Thomson visited the site as part of the Beothuk Report (1982) and Fred Schwarz visited again in August of 1993, as a part of the Exploits Valley Archaeological Survey.

The first proper archaeological investigation of the site occurred when archaeologist Callum Thomson visited the site (Thomson 1982). Thomson's (1982) preliminary work consisted of test pits (Figure 10) on the northern tip of the river mouth, revealing both a Middle Dorset component, and a Maritime Archaic component to the site. Thomson's work identified a number of possible archaeological features which included several hearths, and a series of upright stones which he suggested was a structure with a box hearth (Thomson 1982). Thomson assumed that the site was a late summer salmon harvesting locale, given its proximity to Rattling Brook which is known for its salmon run in October/ November. Based on his findings Thomson (1982) recommended the site for further testing, especially since the site was adjacent to an expanding gravel pit. However, none was attempted until Schwarz (1993) was contracted by the Exploits Valley Development Commission to conduct archaeological investigations in the area.

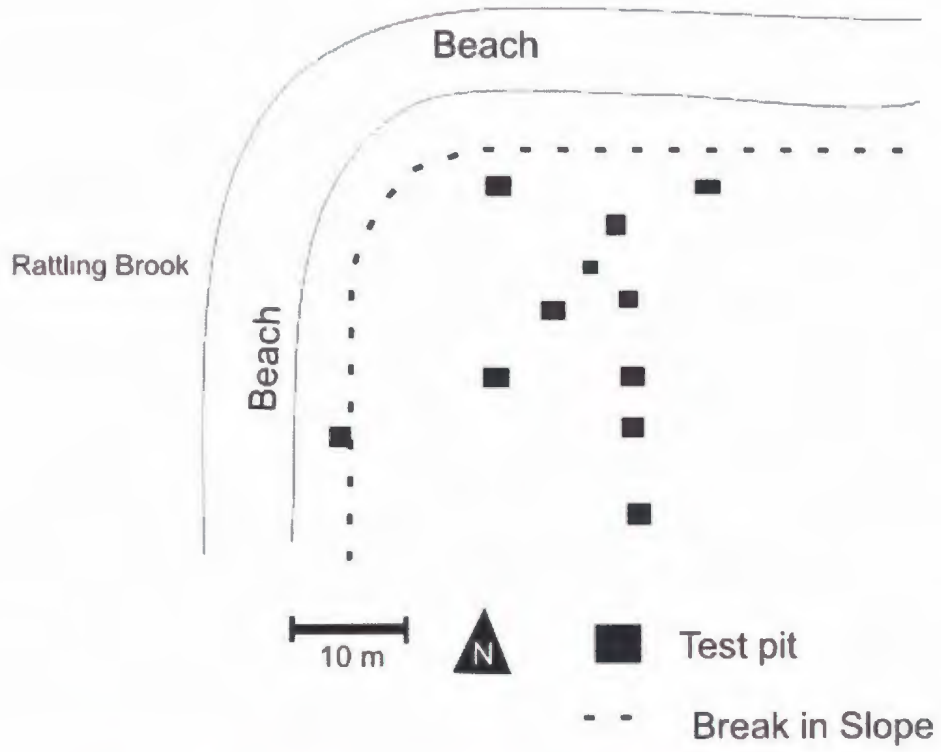


**Figure 10. Thomson's test units at Rattling Brook 1.**

Schwarz revisited the site in 1993, and found the remnants of what he termed "a possible Dorset structure" and the smaller remnants of a Maritime Archaic component (Schwarz 1993). Schwarz excavated two areas of the site (Figure 11, Figure 12). Area 1 of Schwarz's excavation was roughly 18 $m^2$ and revealed three features. Features 1 and 2 were designated as possible hearths. Feature 3 was designated as a sheet midden, or large dense pattern of cooking stones. Although it was suggested that there were the remnants of a structure, no such features were actually uncovered at the time (Schwarz 1993). Schwarz noted some disturbance in the area, possibly the remnants of Locke's investigations. Given the shallow stratigraphy at the site, disturbance could have occurred during any minor activity.

Schwarz's (1993) excavations at Rattling Brook 1 (DgAt-1) yielded a number of faunal remains which have since been lost and do not form part of the curated collection.

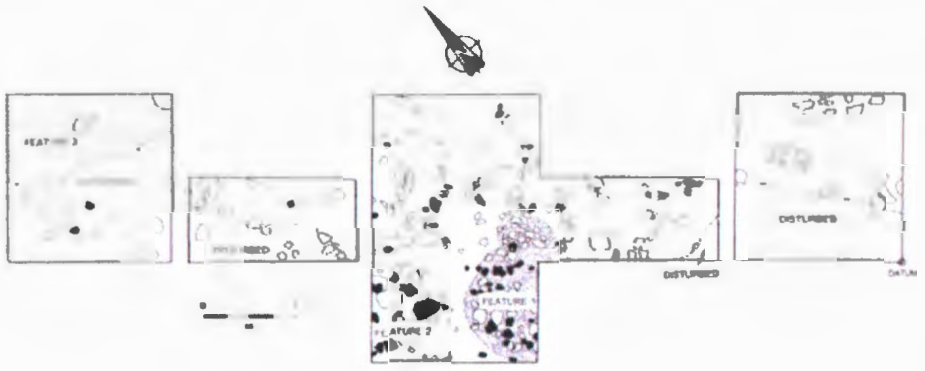

**Figure 11. Schwarz's 1993 (p. 13) Area 1 plan view.**

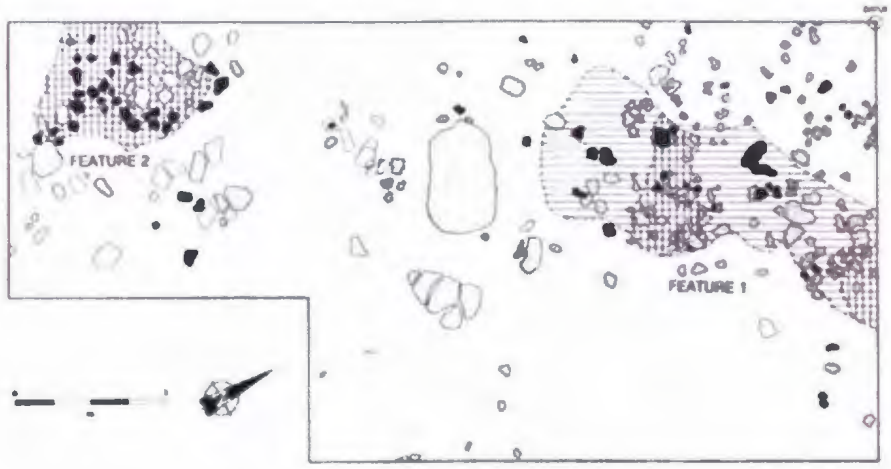


**Figure 12. Schwarz 1993 (p 16) Area 2 plan view.**

## Methodology

In the summer of 2005 I returned to Rattling Brook 1(DgAt-1) for a nine week excavation from June to August with a crew of ten local people from the community of Norris Arm. The first objective was to locate the areas previously excavated by Thomson (1981) and Schwarz (1993). These previous excavations were significant as both researchers had indicated the potential location of a Dorset structure or features (Figure 10, Figure 11 and Figure 12). By expanding both Thomson and Schwarz's excavation areas in 2005 I hoped to identify further features and recover faunal remains which could assist in the interpretation of the site. Using plan views of the site created by the previous site researchers I targeted three areas for excavation.

A grid system was then established overlying all three primary research areas totaling 68 1m$^2$units, to control context during the excavation. We placed the datum in the center of the site along the western edge of the slope, numbered N100 E100, from which to map the site (Figure 13). Each unit was broken into quadrants moving clockwise from the north east corner to further control for provenience. The units were excavated by quadrant and followed natural site stratigraphy. During the excavation all the soil removed from the site was sifted through a 1/4-inch mesh aluminum screen. Small items recovered in the screen could easily be associated with both unit quadrant and stratigraphy. Artifacts and soil samples recovered from both the excavation and test pits had their precise location recorded on a 1:20 site map and all important artifacts were photographed *in situ*. The locations of any features were also recorded, mapped and photographed. Care was taken to record the provenience of all artifacts and features on the site map so that I would be able to examine the horizontal relationships between features and artifacts to help discern any activity areas as well as interpret the purpose and function of artifacts, features and the site in general. Finally, soil samples were collected from test pits throughout the site in order to test for mercury to aid in identification of activity areas resulting from the decomposition of salmon. Soil samples were taken for a chemical analysis of the soil to see if they could shed light on subsistence activities in light of poor preservation of faunal materials due to the acidic soil conditions.

During our nine-week field season we excavated two out of the three research areas we designated (Figure 13). We were unable to excavate Area 2 due to time constraints. The following outlines the results of the 2005 excavations.

## Stratigraphy

Stratigraphy across the site is variable. In total, three natural and one cultural level can be recognized, although not all of the natural levels occur in all areas of the site. The overall depths of the soil profiles range from approximately 22 cm deep on the eastern edge of the site (Figure 14), to 4 cm deep in the grassy clearing on the south side of Area 1, to a mere 15 cm deep in the units within Area 3. The variability of the stratum depth follows the east-west slope of the site mentioned earlier. A brief description of the stratigraphic levels found at the site is as follows:

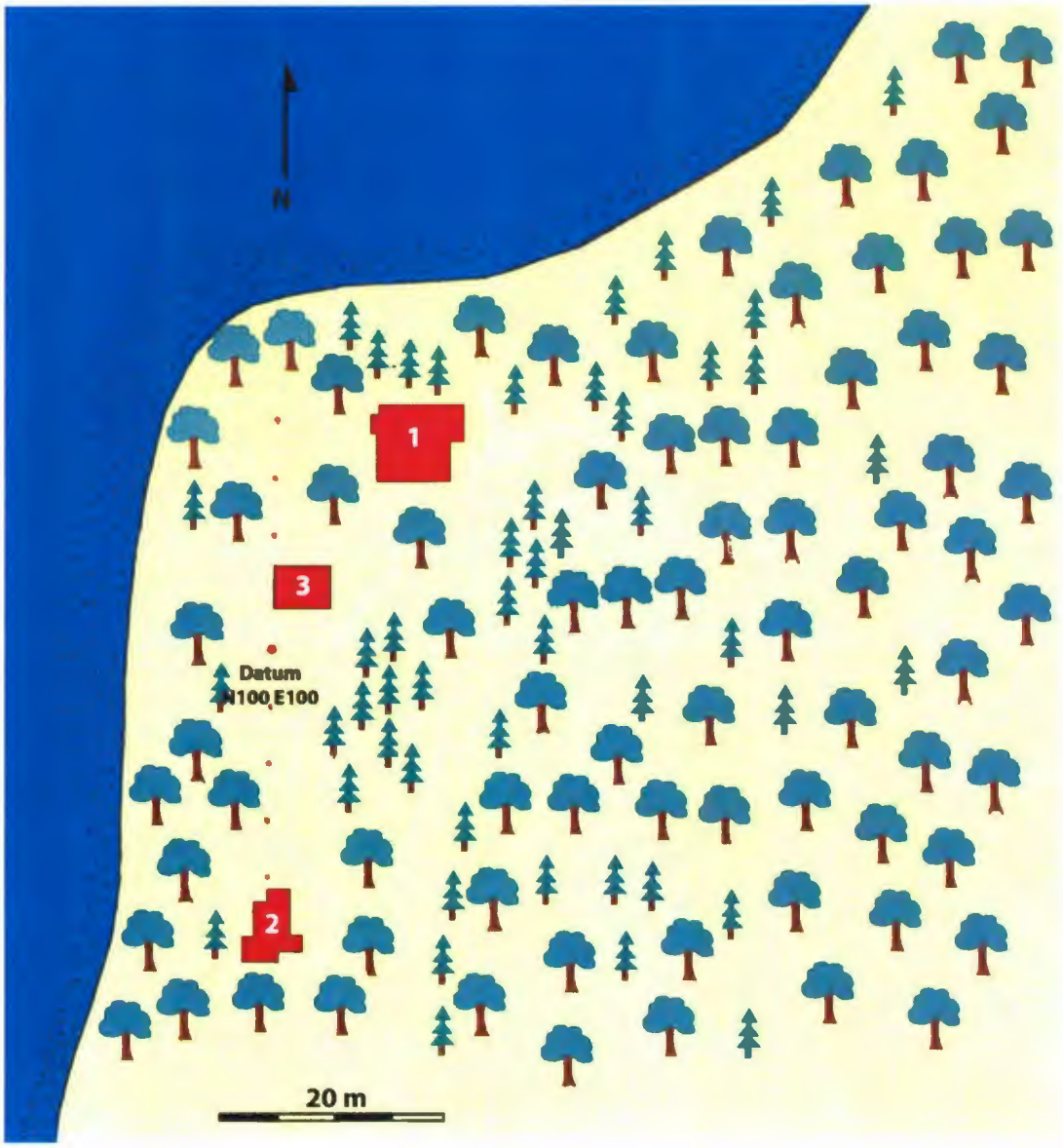


**Figure 13. 2005 Area designations.**

### Level 1

Layer 1 is a dark brown (Munsell 2.5y 5/1) grass/sod layer containing broken bottle glass, refined earthenware and other refuse of a recent origin. This layer ranges from a very thin grass level less than one cm thick, to a well-developed, root sod layer 3-5 cm thick. There were no prehistoric cultural deposits within this level.

### Level 2

Layer 2 is a loose, medium brown (Munsell 2.5yr 5/8), root-filled soil containing prehistoric material dating to around the time of the Middle Dorset occupation of Newfoundland. It ranges from 5-10 cm in thickness.

### Level 3

This is a fine grained clay (Munsell 2.5y 5/1) *Ae* horizon and was void of any cultural material. It is consistent throughout the site and underlies the cultural layer.

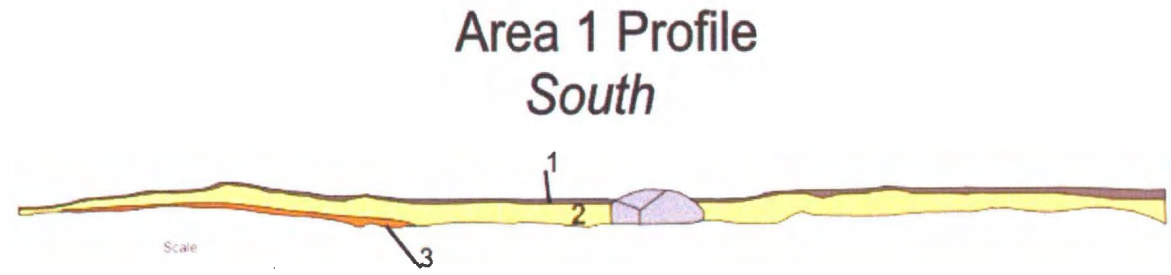


**Figure 14. Area 1 Stratigraphy.**

## Area 1

Area 1 (Figures 13, 16 and 18) was excavated in 2005, consists of 56 $1m^2$ units. Area 1 includes the remnants of a tent ring structure as well three possible hearth features associated with the structure. Other associated features include a cache pit, stone cairn, midden and two lithic caches. There was a large amount of slate around the outside of the structure which may have been a slate floor, for outdoor activity. In total 6,541 artifacts were recovered from Area 1 including those from Schwarz and Thomson's previous excavations. 2035 artifacts were recovered here from the 2005 excavations.

## The Structure

The largest feature located in Area 1, Feature 1, is a tent ring which contains and is surrounded by several other cultural features (two located inside and six located outside) (Figure 16). This complex of features measures approximately $15m^2$. The dwelling and associated features are entirely situated on a raised beach terrace which is flat and located above the present day flood line, ensuring their preservation and indicating that the dwelling complex was initially situated on dry ground.

There is one open space, relatively free of rocks, found inside the dwelling. This open space is large and flat, consisting of tightly packed soil. This would likely have been a living area. Analysis of the artifact distributions attests to this, with many activities taking place outside the dwellings, particularly around Features 5 and 7. The concentration of burnt rocks in the center of the dwelling appears to be the focal point for activity. This appears to be where the inhabitants cooked and possibly made tools.

The perimeter of the tent ring was defined by hold-down rocks which were used to keep the tent coverings in place. The abundance of stones on the perimeter of this dwelling suggests either the possibility of multiple habitations or an attempt by the occupants to secure their dwelling in poor weather.

Establishing the location of the dwelling's entrance was difficult as there was no clear architectural evidence of one. However, there was a small gap in the structure on the eastern side of the dwelling which coincided with a gap in the artifact distribution, and middens were located on either side of these gaps. Having the entrance located on the eastern side of the dwelling would make sense, as it would have provided a clear vantage of the river and surrounding bay.

There is some evidence of an activity area around the structure. Several soapstone vessel fragments were found in the centre of the structure as well as on the western end. A soapstone shatter was found on the north western side of the structure where the midden begins. The shatter is in proximity to a number of burnt rocks likely representing an earlier hearth.

### Area 1 Features

As well as the structure a number of distinct features can be identified in Area 1 (Figure 15). These include the remnants of a cache pit and stone cairn, as well as several middens and tool manufacturing areas. These features are described in the following section.

**Figure 15. Area 1 excavated.**

On the north east side of the site and just outside the tent ring there is a cache/ cooking pit referred to as Feature 2 (Figures 16, 17 and 18). This feature was plainly visible when first exposed but once excavated it became clear that it was a stone lined pit with an associated stone cairn to the north. A burn layer surrounded both. Artifacts recovered from the burn layer (Figure 17) included a thumbnail scraper and a large piece of bone identified as a piece of antler from a large ungulate, likely a caribou. The burn layer was a thick, black, greasy deposit measuring 3-5 cm in depth that extended in a circular pattern around the pit and contained numerous fire-cracked rocks. The pit itself measured 60 cm in diameter with a depth of 48 cm. Along the edges the lip had been supported by tightly stacked stones to reduce collapsing with intermittent stacking throughout the rest of the structure.

The three hearths at Rattling Brook 1 provide useful data with which to interpret the site. While one structure was located, the number of hearths suggests more structures may be located in the future. Alternatively, these hearths may well be outdoor features suggesting the site was occupied in the summer months, when even tents were not required, or they may reflect outdoor activity areas. Unfortunately, the hearths were little help in dating the site as most contained little organic material. We did manage to collect enough charcoal for a single test. Unfortunately, it post-dates what is obviously a Middle Dorset occupation (See Chapter 5), but does indicate that the site was reused at a later date by a Recent Indian population.

The only viable radiocarbon date to be taken from Rattling Brook 1 came from the top 1cm of the burn layer surrounding the cache pit. Unfortunately, this sample returned a date of 480+/- 70 BP (Beta -213326). This date reflects a Recent Indian time frame. Nevertheless, there were several artifacts found within this layer which are diagnostic of the Dorset, including a thumbnail scraper. Therefore, this date likely represents a reoccupation of the site by Recent Indian groups. This is not an uncommon occurrence as Recent Indians appear to have re-occupied a number of Dorset sites after they were abandoned (Renouf and Bell 2000). This occupation seems to have had only a limited impact on the site. No Recent Indian materials were recovered during the 2005 excavations. Only one artifact exists in the extant collections, and all of the features at the site were littered with Middle Dorset material.

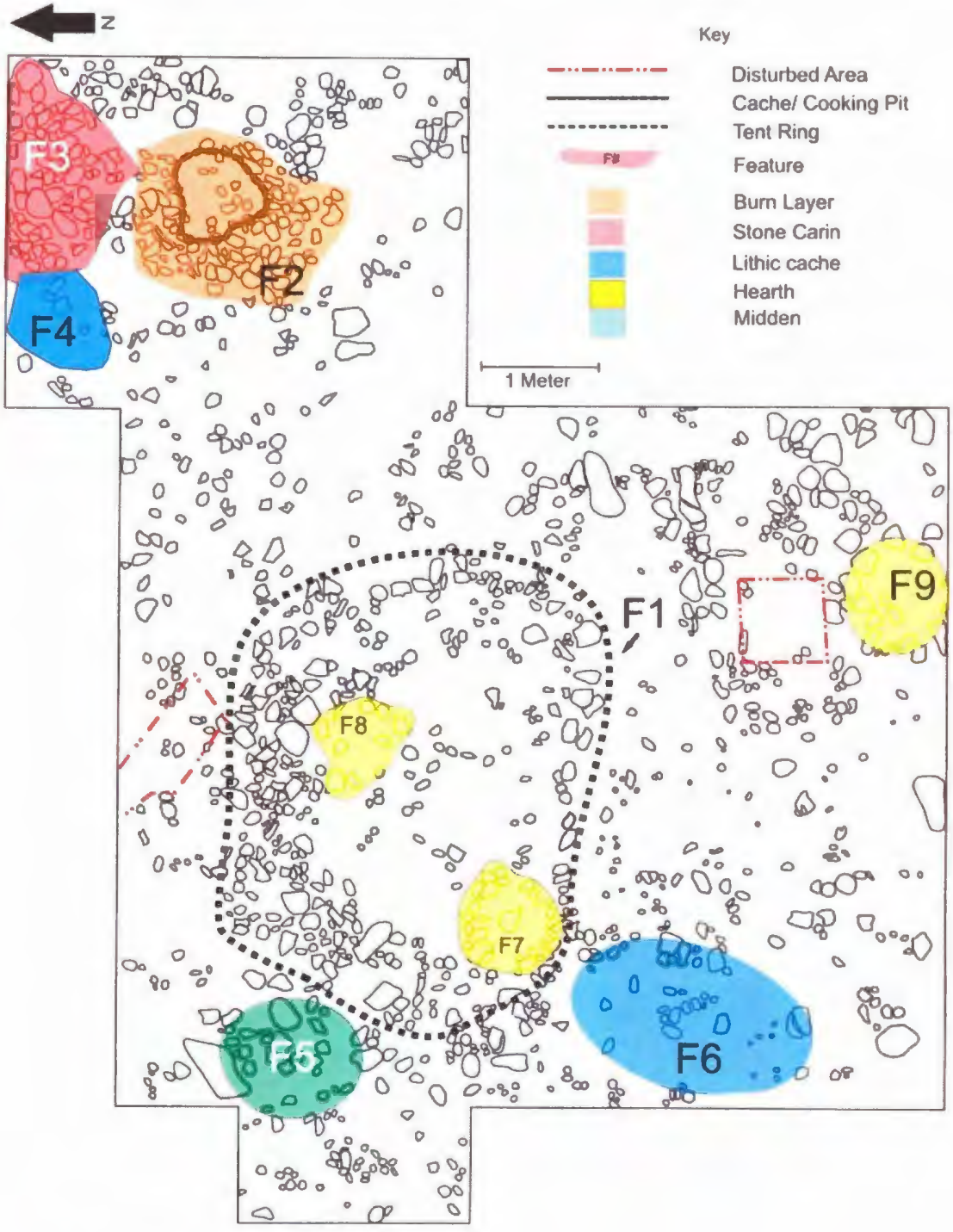


**Figure 16. Area 1 plan view.**


**Figure 17. Burn layer surrounding cache pit.**

Since the datable material came from the very top of the burn layer the most that can be said at this point is that an ephemeral Recent Indian occupation of Rattling Brook 1 followed the Middle Dorset occupation.

Immediately north of the stone lined pit was a stone cairn labeled Feature 3. This Feature measured approximately 1.5 meters in depth and 0.7 meters in width. This cairn was plainly visible through the surrounding brush prior to excavation. Once cleared it was undoubtedly not a natural feature. We conducted limited excavations around the cairn by sectioning the feature along the N122-E117 line that intersected

its midpoint. This sectioning revealed a limited cultural layer underlying the stones and no artifacts underneath or within the feature. Nevertheless, many of these stones appear to have been heated. This stone cairn may have been initially used as a covering for Feature 2 (the stone lined pit). If the pit was in fact a cooking pit the contents may have been covered to facilitate the cooking process. This would explain their heat alteration.

**Figure 18. Features 2&3.**

Immediately to the west of the cairn we located a midden designated Feature 4 (Figure 16). Feature 4 was situated approximately 0.59 meters from Feature 3 and .73 meter from Feature 2. Indeed, if Features 2 and 3 are contemporaneous, the midden might relate to both.

A second midden, Feature 5, is located on the eastern side of Area 1 next to the structure (Figure 19). This midden had a large, black and greasy cultural layer that contained a large amount of artifacts. This area is most likely where the inhabitants of the dwelling deposited their waste (bones, tools, etc.), forming an organic and artifact-rich layer. The soil in this area is not as compact as the area inside the structure, likely because there was not as much compression from human traffic. The rocks in the midden were of variable size and were found at different elevations and angles throughout the cultural layer due to differing depositions. The artifact frequency is quite high, with 49 chert microblades, two quartz crystal microblades, three soapstone fragments, three thumbnail scrapers, one endblade one core of chert and one of quartz crystal and 314 pieces of debitage.

Another feature located in Area 1, Feature 6, relates to tool manufacture. Feature 6 is a lithic cache consisting of a semi-circular arrangement of beach cobbles surrounding a dense concentration of lithic debris (Figure 18). It measured approximately 50 cm in diameter, and contained 266 pieces of debitage including: 40 primary decortication flakes; 85 secondary decortication flakes; nine cores/core fragments; 85 secondary flake blanks; 20 block shatter; 30 retouch/resharpening

flakes and 40 nonidentifiable flake fragments. All of these items were found within a depth of 5 cm.


**Figure 19. Feature 5**

Feature 7 (Figure 18) consisted of the remnants of a hearth, which may have been a secondary deposit as the hearth stones were not deeply deposited in Layer 2. Located inside the structure near the north wall this hearth consisted of a roughly circular ring of small to medium sized hearth rocks (whole fire-cracked rock as well as fragments),

approximately 60 cm in diameter and surrounding a dark stained area of soil. Unfortunately, charcoal was too sparse for collection.

Charcoal deposits and fire cracked flagstones indicate that Feature 8 (Figure 18) was a hearth. This hearth consisted of a circular ring of medium sized hearth rocks (whole fire-cracked rock), approximately 73 cm in diameter and surrounding a dark stained area of soil.

Feature 9 (Figure 18) is likely another hearth. Located several meters south of the structure, this hearth consisted of a semi-circular ring of medium sized hearth rocks (whole fire-cracked rock as well as fragments), approximately 83 cm in diameter. Again, charcoal was too sparse for collection.

To summarize, Area 1 appears to be a residential area, with domestic features, used by the Dorset. There was a small amount of post-depositional disturbance, which has been noted in previous excavations, but it appears to be localized towards the northern end of the site. Luckily we did not encounter this disturbance in our excavation.

There are a number of points that should be made about the structure. First, the tent ring is irregular and the large number of stones indicates that it may have been rebuilt over time. The irregularity may have also been exacerbated if gravel had been heaped against the outside of the structure, to seal and hold down the edges of a covering. The inside of the structure is very hard-packed, and together with the artifacts, suggest a living floor. There is evidence of a pavement on the southeast side of the site represented by a large amount of broken slate. There are also two hearths within

the structure. These hearths might pertain to different occupations, if the structure was occupied more than once. Finally, there was a distinct lack of fat staining around the hearth features that is characteristic of many Dorset sites in Newfoundland where seal is processed. This absence suggests that fat rich substances were not being burned in the hearths. This suggests that seals were likely not being processed at the site.

## Area 3

The excavation of Area 3 consisted of 12 1m$^2$ units, placed in this locale because Thomson (1982) noted the presence of a possible box hearth here. Area 3 was not as artifact-rich as Area 1 with a total of 240 cultural items recovered from the 2005 excavation; 44 were artifacts, and 196 were flakes. The artifacts were typically Middle Dorset in manufacture (See Chapter 5). Area 3 contained the remnants of a hearth type feature. It is possible that this hearth is associated with another structure at the site, as Thomson suspected. Unfortunately due to time constraints we were unable to excavate more of this area.

## Area 3 Stratigraphy

The stratigraphic layers present in Area 1 (Figure 20) are the same as those present in Area 3, but the depths of the strata were not always the same.

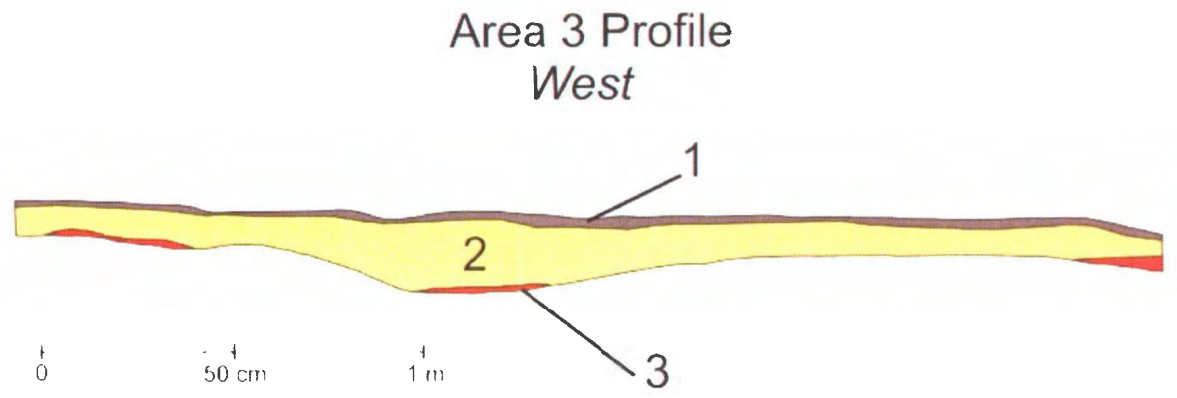


**Figure 20. Area 3 Stratigraphy.**

### Level 1

Layer 1 is a grass/sod layer containing broken bottle glass, refined earthenware and a number of iron artifacts of recent historical origins and other refuse of a recent nature. This layer ranges from a very thin grass level less than one cm thick, to a well-developed, root sod 3-5 cm thick. There were no cultural deposits within this level.

### Level 2

Layer 2 ranges from 3-10 cm in thickness and is a loose, medium brown soil that contains only prehistoric Middle Dorset material.

### Level 3

This is a fine grained clay layer termed an *Ae* horizon and was void of any cultural material. It is consistent throughout the site and underlies the cultural layer.

## Area 3 Features

Two features were identified in Area 3 are both classified as hearths. Feature 1 consisted of a roughly semi-circular ring of medium to large hearth rocks, approximately 65 cm in diameter and surrounding a darker area of soil with charcoal flecks throughout (Figure 22). Again, the flecks of charcoal proved to be too sparse and small for collection. Charcoal deposits and fire cracked rock indicate that Feature 10 was a hearth. There is, however, no obvious structure associated with the hearth. It seems likely that the hearth has been disturbed by tree and shrub growth, due to the shallow depth of the cultural layers. The upright stones associated with the hearth, which were noted by Thomson (1982), were found to be supported by tree roots and probably not in their original position. Therefore this feature cannot be considered a box hearth.

The last feature (Feature 11) (Figure 21) also consisted of the remnants of a hearth. This hearth consisted of a circular ring of small to large sized hearth rocks (whole fire-cracked rock as well as fragments), approximately 94 cm in diameter and surrounding a dark stained area of soil. Unfortunately, charcoal was too sparse for collection.

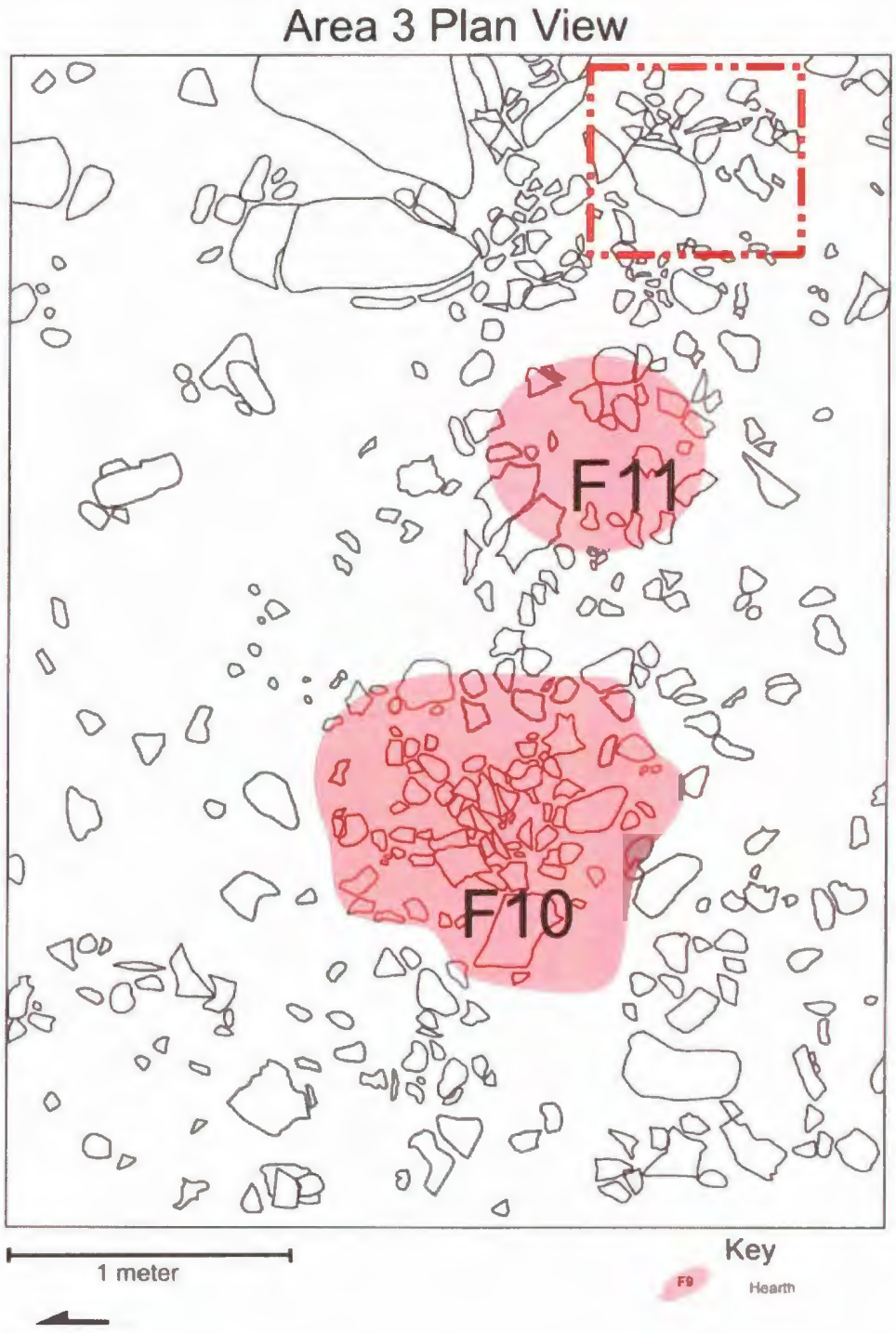


**Figure 21. Area 3 plan view.**

**Figure 22. Area 3 excavated.**

## Interpretation

There are a number of points that should be made about the structure. First, the tent ring is irregular and may have been rebuilt over time. For the purpose of my research, the differentiation of artifacts based on separate occupations is inconsequential as long as these artifacts are consistently associated with the same set of activities within the dwelling. This assumption is necessary in order to interpret the spatial distribution of artifacts throughout the dwelling in a meaningful way.

The irregularity may have also been exacerbated if gravel had been heaped against the outside of the structure, to seal and hold down the edges of a covering. The inside floor of the structure is very hard-packed, and the artifact distribution within these areas is scarce, suggesting a living floor. There is evidence of a pavement on the southeast side of the site represented by a large amount of broken slate. There are also two hearths (Features 7 and 8) within the structure; these hearths might pertain to different occupations, if the structure was occupied more than once.

The Dorset dwelling remains at Rattling Brook have very little in common with any of the Dorset dwellings elsewhere, including sites such as Phillip's Garden where all of structures are semi-subterranean. At Rattling Brook the dwelling is on raised ground.

Furthermore, the description of dwellings from other prehistoric Arctic and Sub-Arctic hunter-gatherer groups indicates that variation in dwelling type and construction, even within the same culture, is common. Despite this variation, it is important to keep in mind that most Paleoeskimo dwellings are first and foremost, defined by the presence of characteristic morphological features, which include some of all of the following: the axial hearth feature, rear platform, open living spaces, entrance-passage, dwelling boundary, and associated midden.

In general, variability can be attributed to cultural affiliation, site function, seasonality, location and available construction materials. Yet, it is also possible that chronology, and both personal and group styles and preferences may have also included dwelling construction. Apart from location and available construction

materials, one of the most difficult things to reconstruct, apart from a dwellings boundary, is its superstructure. When a dwelling is abandoned its superstructure will eventually collapse and scatter onto the ground. Archaeologically it is often difficult to find evidence of a superstructure, as materials used in its construction may have been scavenged and used to build other dwellings or deteriorated over time. Nonetheless, from archaeological evidence and ethnographic analogy, a superstructure consisting of a frame of wooden poles, draped with seal skins, sod and other vegetation, is inferred for Dorset dwellings (Krol 1986). As there is no stratigraphic separation of any of the architectural features associated with the dwelling, nor is there any evidence which indicates that these features were constructed at different times. This is important because the cultural layer and the artifact distributions in general, become meaningful when placed in the context of particular architectural features throughout the dwelling.

The large number of hearths at Rattling Brook 1 provides useful data from which to interpret the site. While one structure was located the number of hearths suggests more structures may be located in the future. Alternatively, these hearths may well be outdoor features suggesting the site was occupied in the summer months, when even tents were not required, or they may reflect outdoor activity areas. Unfortunately, the hearths were little help in dating the site as most contained little organic material and their boundaries were poorly defined. This is likely a common occurrence on repeated use sites as the boundaries between the activities become overlapped and more difficult to distinguish it has been demonstrated that as the duration of a site's

occupation increases, archaeological visibility of an activity area more blurred (Chatters 1987:361). As new activities take place, old features, including artifact distributions, will become disturbed and dispersed (Chatters 1987:346).

One feature relates to tool manufacture. The lithic cache Feature 6 consisting of a circular arrangement of beach cobbles surrounding a dense concentration of lithic debris, similar to one located at the Middle Dorset site of Broom Point (Kroll 1986). It is possible that these caches may have once represented hearth features as well, although no associated charcoal, staining or fire-broken rock were detected. This distinct lack of fat staining around the hearth suggests again that seals were not being procured during the sites habitation. For example, hearths at Port Au Choix sometimes have burnt seal fat on top of the stones (Eastaugh 2002).

All features that resembled or were designated as hearths were devoid of any fat staining and only presented fire cracked-rock and charcoal. This suggests that seals were likely not being processed at the site and thus we can assume that the site occupants were focused on a different resource, at Rattling Brook.

# Chapter 5: Artifact Analysis

A total of 2121 artifacts were recovered from the 2005 excavations at Rattling Brook, including 511 lithic tools and tool fragments and 1592 pieces of debitage and the remaining being slate collected from activity areas. All of these artifacts appear to relate to the Middle Dorset phase of the Late Paleoeskimo tradition. A detailed analysis has been performed on artifacts excavated in 2005, specifically from the Middle Dorset component of Rattling Brook (DgAt-1), the results of which are provided in this chapter. The extant collection was not subjected to the same examination as there is no provenience for any of the artifacts, but wherever possible I refer to total numbers of specific artifact types recovered over all previous excavations

A traditional Paleoeskimo typology was used in order to facilitate comparisons with artifact collections from other Middle Dorset sites in Newfoundland. Tools have been grouped into artifact classes that share morphological characteristics and technological traits (Crabtree 1972:97). There is a presumed shared function among tools in an artifact class, based on the assumption that among the people who used these tools these classes had a certain legitimacy (Tuck 1982:10, Robb 1998). The following is a breakdown of the artifacts recovered.

## Microblades

This site consistently produced more microblades than any other class of artifact. There were 349 recovered from the 2005 excavation of Rattling Brook 1 and 712 in the extant collection. This constitutes the largest class of artifacts, save flakes, in the assemblage (71 % of the total number of tools identified).

Microblade technology involves the production and use of small stone blades, which are produced by flaking silica-rich stones like chert or quartz (Odell 2003:96). Blades are a specialized type of lithic flake that are at least twice as long as they are wide. Generally, they have parallel sides and a triangular cross section. Microblades were generally used as cutting tools, which could be guided with the index finger to sever meat from a carcass (Odell 2003:96). They could also be incorporated into composite tools such as arrows or sickles. Microblade technology is easy to produce, extremely portable, efficient for processing and economical because of its ease of manufacture.

Of the 349 blades recovered during the 2005 excavation (Table 8), only 29 are complete and the remaining are fragments. Of these artifacts, 183 posses a single arris while 127 display double arrises or ridges. Of the blades recovered in 2005 there are 138 proximal - medial fragments, 80 proximal fragments, 59 distal fragments and 99 medial sections. Only 73 fragments, 67 medial and 6 distal, exhibit signs of modification, ranging from minimal retouch along one or both of the lateral edges, to shallow notching along both edges. There is one medial fragment that shows notching along both lateral edges. These notches are deep and form a regular pattern along the length of the fragment.

The majority of microblades were produced from an unidentified chert which likely comes from a local source (Schwarz 1994). Lithic Type 1 (See appendix 1) is the most common,

accounting for 127 microblades. It is an opaque chert that is light grey in colour with no evidence of banding. Lithic Type 2 (See appendix 1) accounts for 61 microblades. This is a grey blue chert which exhibits occasional bedding fractures. Lithic Type 3 (See appendix 1) accounts for 60 microblades from the 2005 collection. It is green in colour and opaque with no evidence of banding. Lithic Type 4 (See appendix 1), is a grey/ green chert which ranges from grey/ green to dark green in colour and accounts for 35 microblades. Fifty-eight microblades are made from Lithic Type 5 (See appendix 1), a grey mottled chert. It is a light grey in colour with white speckles and mottling. Lithic Type 6, Cow Head Chert (See appendix 1) this material is very distinctive and comes from the west coast of Newfoundland. It accounts for seven microblades. It is green to dark grey in colour, often exhibiting black banding . Lithic Type 7 is a brown opaque chert (See appendix 1) and accounts for only one microblade from the 2005 excavations. It is light brown in colour with no evidence of banding, although occasional black inclusions are visible.

**Table 8. Microblade dimensions.**

| | ***n*** | **Range** | **Mean** |
|---|---|---|---|
| **Length** | 29 | 19.8mm-30.5mm | 24.6mm |
| **Width** | 296 | 8.6. mm-15.9mm | 12.0mm |
| **Thickness** | 349 | 2.3mm-5.1mm | 3.6mm |
| **2005 Total** | 349 | | |

**Figure 23. Selection of Microblades from 2005 excavations.**

## Quartz Crystal Microblades

There are 27 examples of quartz crystal microblades from the 2005 collection (Figure 24). No artifacts from the previous collection were made of this material (Lithic type 8). The quartz crystal microblades recovered from the site (Table 9) are generally small with no visible retouch. The artifacts include seven proximal fragments and a two distal segment, all with a single arris.

**Table 9. Dimensions of quartz crystal microblades.**

| | *n* | Range | Mean |
|---|---|---|---|
| **Length** | 19 | 5.2 mm-9.0 mm | 6.2 mm |
| **Width** | 27 | 2.1 mm-4.1 mm | 2.8 mm |

| | | | |
|---|---|---|---|
| **Thickness** | 27 | 2.3 mm-3.1 mm | 2.8 mm |
| **2005 Total** | 27 | | |

**Figure 24. Selection of quartz crystal microblades from 2005 excavations.**

## Chert Microblade Cores

A total of 13 microblade cores and core fragments were recovered from Rattling Brook, in 2005. Forty-eight occur in the extant collection. Of those excavated in 2005 two are classified as Lithic Type 3, one as Lithic Type 1, one as Lithic Type 9 (a red opaque chert), nine as Lithic Type 5 and one as Lithic Type 10, (a slate-like chert; see appendix 1). To facilitate description, these can be separated into chert microblade cores and core fragments. All exhibit evidence of blade removal on at least one surface. There is one complete example (Figure 25), which shows platform preparation and visible scars on the majority of the strikeable surface. As well, the core

exhibits eight parallel and adjacent blade scars along one surface, all struck from the same direction. This core is of the same pale grey chert used in the manufacture of the majority of the blades found at the site. It measures 63.8 mm in length and 55.7 mm in width. It is an excellent example of a cone shaped core, not yet exhausted.

The complete exhausted example is smaller and irregular in shape, measuring 25.7 mm in length, 12.7 mm in width, and 8.4 mm in thickness. It is also made from dense grey chert with white speckles and mottling (Lithic type 5), and exhibits platform preparation and a number of blade removal scars. The remainder of the core fragments have a mean length of 46.6 mm and all represent local cherts (See appendix 1)


**Figure 25. Chert microblade core.**

## Quartz Crystal Microblade Cores

A total of eight clear quartz crystal cores and core fragments were recovered from the 2005 excavations (Table 10) and none were present in the extant collections. Of these, three are non-

fragmentary and 1 represents a core fragment. In addition, one naturally occurring quartz crystal measuring 30.8 mm in length, 7.0 mm in width, and 7.0 mm in thickness has been included as a potential core. This piece is charcoal black and is a perfect crystal; whether it was intended as a core or to be kept in its current state is not known. Of the non-fragmentary examples, two are bipolar. The remaining cores have blades removed from one direction and from one surface only. All of the cores and core fragments represent natural crystals that have been modified to form wedge-shaped cores. The non-fragmentary examples exhibit platform preparation on one surface, with blade scars appearing on the opposite surface. The function of these quartz crystal cores was clearly the production of the quartz crystal microblades.

**Table 10. Quartz crystal microblade core dimensions.**

| | *n*= | Range | Mean |
|---|---|---|---|
| **Length** | 8 | 15.7 mm- 34.0 mm | 26.9 mm |
| **Width** | 8 | 13.0 mm - 30.0 mm | 17.4 mm |
| **Thickness** | 8 | 3.4 mm - 18.0 mm | 10.9 mm |
| **2005 Total** | 8 | | |

## Endscrapers

Forty-five endscrapers (Figure 26, Table 11) and endscraper fragments were identified in the 2005 assemblage from Rattling Brook 1 and 62 were present in the extant collection. All examples from 2005 are made of chert which is thought to be of local origin. Sixteen are of Lithic Type 1, nine of Type 2, one of Lithic Type 5, two of Lithic Type 9, four of Lithic Type 10,

and three of Lithic Type 7. These artifacts are interpreted as processing tools, used in the cleaning of skins and processing of organic materials (Crabtree 1975).

The term endscraper is used here to denote a beveled tool with the bevel being formed by unifacial flaking or by use. These tools are usually constructed of either a flake or blade with a worked edge on either one or both convex ends (Crabtree 1972:60).

**Table 11. Endscraper dimensions.**

| | *n* | Range | Mean |
|---|---|---|---|
| **Length** | 38 | 9.6mm-30.02 mm | 22.1mm |
| **Width** | 37 | 13mm-27.54 mm | 18.1mm |
| **Thickness** | 45 | 3mm-9.40 mm | 5.1mm |
| **2005 Total** | 45 | | |


**Figure 26. Selection of endscrapers from 2005 excavations.**

All of the endscrapers in this artifact class are characterized by partial to nearly complete retouch on the dorsal surface in addition to modification on the working edge. They are all made on thick secondary flakes with concave ventral surfaces. Most are triangular in shape, although two specimens are rectangular with nearly parallel lateral edges. The shapes of the more fragmentary specimens are difficult to determine, although the lateral edges of one fragment flare slightly towards the bit, which was steep.

In addition to retouch on the dorsal surface, three examples also exhibit minimal retouch on the ventral surface; two have marginal retouch along the lateral edge of the ventral surface, and one has retouch on the entire left half of the ventral surface. Two of the endscrapers possess side-notches near the midsection. It is likely that these modifications would have facilitated hafting. Nineteen specimens have been marginally retouched along the lateral edges of the dorsal surface or along the distal end only.

## Blade Endscrapers

Two artifacts were recovered in the 2005 excavations (Table 12) that can be classified as blade endscrapers. These are not an uncommon find on Late Paleoeskimo sites in Newfoundland. They are all made of grey chert (see appendix 1: Lithic Type 3). The tools are complete (Figure 27) with retouch confined to the distal ends. Cross-sections are triangular and the bit angles are low. Both show double aris lines.

**Table 12. Dimensions of blade endscrapers.**

| | *n* | Range | Mean |
|---|---|---|---|
| **Length** | 1 | 38.7mm | - |

| | | | |
|---|---|---|---|
| **Width** | 2 | 10.7 mm-14.54mm | 12.6 mm |
| **Thickness** | 2 | 3.5 mm-5.05mm | 4.3 mm |
| **2005 Total** | 2 | | |

**Figure 27. Blade endscraper.**

## Burin-like Tools

A total of five burin-like tools (Figure 28) and tool fragments were recovered in 2005 and another five were present in the extant collections. Burin-like tools (BLT's) are usually interpreted as engraving devices, used to work organic materials such as bone, antler, ivory and wood. They may also have been used to incise softer lithic materials, such as slate or soapstone. Of the five BLT's recovered in 2005 four of these specimens are ground from slate (See appendix 1: Lithic Type 11 & 12) and the fifth appears to be a chipped stone endblade made of a brown opaque chert (Lithic type 9). One of the specimens exhibits side notching and has been ground into the right lateral edge near the base as well as on the proximal edge, with a box base that was apparently ground down to resemble a BLT. There is a beveled edge on the lateral side

as well as the chipped side notches. Another has the remnant of a notch on the left lateral edge base junction. The former two examples display double beveling along the left lateral edge as well as on the distal end. In the case of the third specimen, the left lateral edge is ground flat, angling inward to meet a double beveled distal end. This point of juncture represents the working edge and shows evidence of utilization. All of the above examples have been ground flat on both the dorsal and ventral surfaces and on the remaining edges. Only the chipped stone specimen possesses an intact base. The measurements for this complete example are as follows: 35.1 mm in length, 19.2 mm in width, and 3.3 mm in thickness. The chert burin-like tool also exhibits bifacial grinding and polish.

**Figure 28. Burin like tools.**

## Endblades

A total of 17 endblades (Figure 29) and endblade fragments (Table 13) were recovered in the 2005 excavations. There were 42 present in the extant collection. These tools are diagnostic of the Dorset culture and are generally small and triangular. They likely tipped harpoon heads and were primarily used to hunt sea mammals, but could have also been used for taking down any large game or spearing fish. Of the examples recovered in 2005, six are complete and the rest are missing portions of the base. Eight of the endblades are made from opaque grey chert (See appendix 1: Lithic type 1), eight are made from a grey white chert (See appendix 1: Lithic Type 2) and a single example is made from semi-translucent green opaque chert (See appendix 1: Lithic Type 3).

All of the examples are triangular in shape with softly rounded or excurvate lateral edges, and possess bases that range from slightly concave (n=6) to markedly concave (n=4). In addition, all of the endblades exhibit some degree of bifacial retouch, complete random or complete collateral flaking on the dorsal surface, and marginal retouch on the dorsal surface. Only three examples show tip-fluting, a sharpening process whereby a pair of small flakes are removed from the distal end of the ventral surface of the artifact. The rest do not possess this attribute. Three of the endblades are basally thinned, and two of these possess a basal flute on the ventral surface. Both of these are modifications that would facilitate hafting. For Middle Dorset Paleoeskimo this hafting is indicative of toggling harpoons (Linnamae 1975).

Only one endblade preform was recovered from excavations at Rattling Brook. This specimen is in the initial stages of manufacture and is made from a semi-opaque brown chert (See appendix 1: Lithic Type 7) that is not prevalent on the site. The preform measures 50.1mm in length 27.4 mm in width and 13.8 mm in thickness.

Generally, endblade preforms are placed in a separate artifact class, but since there is only one a simple description of the difference will suffice. Combining the two groups gives the impression that all of the endblades from Rattling Brook 1 were complete, working artifacts, when they were not. Complete endblades were used for large game hunting at the site or in the surrounding area. However, the presence of preforms suggests that endblade manufacture was also being carried out at the site. This suggests that those creating these artifacts may have been preparing for hunting large game.

**Table 13. Dimensions of endblades.**

| | *n* | **Range** | **Mean** |
|---|---|---|---|
| **Length** | 7 | 19.8 mm-30.50 mm | 24.6 mm |
| **Width** | 8 | 13.2 mm-15.4 mm | 13.8 mm |
| **Thickness** | 16 | 2.1mm-4.2 mm | 3.1mm |
| **2005 Total** | 17 | | |

**Figure 29. Selection of endblades from 2005 excavations.**

## Bifaces

A total of six bifaces were recovered from Rattling Brook 1 in 2005 and eight were included in the extant collections. The term biface is used to denote an artifact that has been flaked on both surfaces (Crabtree 1972:38). Obviously, this could be true a number of different artifact classes. In this instance it is more accurately used to denote butchering/cutting instruments or knives, but these artifacts may have served a variety of purposes.

Of the bifaces recovered in 2005 two were modified for hafting purposes. The most complete example is asymmetrical and trianguloid in shape, with a concave portion on the distal end (Figure 30). This biface is rather thin and could possibly have an earlier origin as it closely resembles Groswater Paleoeskimo bifaces. This biface is made from white chert (see appendix 1: Lithic Type 2) and measures 47.7 mm in length, 39.3 mm in width, and 4.4 mm in thickness. The

second example is made from a brownish-white chert (Lithic Type 2), has the proximal end, and although not complete measures 36.1 mm in length, 35.5 mm in width, and 4.3 mm in thickness. Both display well defined side-notches near the base. The lateral edges of both specimens are more or less straight and the left one slightly excurvate. The bases of both bifaces are straight the tips are blunt and bifacial retouch is complete and random. These bifaces probably represent expedient tools.

## Adze/ Axe

One adze/ axe (Figure 31) was excavated at Rattling Brook 1 in 2005; none have been recovered previously. Used primarily for woodworking, such objects are constructed so that when the blade is hafted the cutting edge lies perpendicular to the handle, similar to a hoe. This artifact is of chipped stone construction and made of a light grey chert (See appendix 1: Lithic Type 1). There is thinning on the lateral edges towards the proximal end, which is assumed to be for hafting. The distal section shows signs of grinding to a point and use wear. The artifact measures 72.4 mm in length, 56.6mm in width and has a thickness of 13.4 mm.


**Figure 30. Complete biface recovered from 2005 excavations.**


**Figure 31. Adze/ axe.**

## Tabular slate tool

A single tabular slate tool (Figure 32) was recovered from Rattling Brook 1 in 2005. It is a complete specimen made from a pale grey silicified slate with brown staining, (See appendix 1: Lithic Type 12). This slate piece measures 95.8 mm in length, 19.6 mm in width and 4 mm in thickness. The tool is triangular in overall shape with excurvate lateral edges. It possesses a relatively dull tip and a relatively straight base that appears broken. Both surfaces of the blade are ground flat and the lateral edges are double-beveled, producing a flattened hexagonal cross-section.

Examples of ground slate tabular tools have been found associated with Middle Dorset material at other sites in western Newfoundland, most notably Phillip's Garden (Renouf, Personal communication; 2006), although complete specimens are rare. It is possible that these tools were have been used in the processing of hides into clothing or other useable materials Renouf (2006) suggests that rounded-tip tabular slate tools found at Phillip's Garden could be associated with skin-boot making. The thin rounded tip of the tool could be used to crimp pleats to the rounded ankle and toe of boots.

**Figure 32. Tabular slate tool.**

## Soapstone Vessels

There are 18 soapstone (See appendix 1: Lithic Type 13) fragments were collected from the 2005 excavations; none were collected in previous visits to the site. All pieces are smooth and well shaped and all examples show evidence of burned residues on the interior (Figure 33). There are at least three distinct vessels, possibly four. Five fragments could be part of the same vessel as they were found together; three of the pieces were attached with a fourth piece appearing to belong to the same vessel. This bowl has a flat base and a straight outsloping side wall suggesting a rectangular shape rather than a rounded one. The base thickness is 16 mm, and the side wall thickness is 14.5 mm. The side wall meets with the base at an angle of about 78 °. A second basal fragment derives from a smaller vessel (Figure 34), with heavy residue on the inside. The base thickness is 8 mm and this side wall thickness is 9.6 mm. The side wall meets with the base at an angle of about 87 °.

**Figure 33. Soapstone Vessel 1.**


**Figure 34. Vessel 2.**

## Unidentifiable Tool Fragments

Eight unidentifiable tool fragments were recovered from the 2005 Rattling Brook 1 excavations. One of the fragments is made from opaque Cow Head chert, two are made of a white chert (see appendix 1: Lithic Type 4) and a single example is made from green opaque

chert (see appendix 1: Lithic Type 2). One fragment appears to represent an edge base section which has been bifacially ground and has a notch taken out of the center of the base. The remaining fragments also exhibit bifacial retouch but defy further description. There is also nine pieces of slate which may have been worked by grinding but it is ill-defined. Finally one historic artifact of recent deposit was catalogued

## Debitage

A total of 1506 flakes (Table 14) were recovered from the 2005 excavations. The flake size distribution is unimodal and skewed towards small flakes. This is likely due to core preparation for microblades but also suggests that tools probably entered that site in a finished state and were only retouched and sharpened as needed.

**Table 14. Dimensions of debitage.**

| Size(mm) | N | % |
|---|---|---|
| 0-5 | 203 | 13.48% |
| 5-10 | 804 | 53.39% |
| 10-15 | 283 | 18.79% |
| 15-20 | 108 | 7.17% |
| 20-25 | 89 | 5.91% |
| 25-30 | 5 | 0.33% |
| 30-35 | 2 | 0.13% |
| 35-40 | 6 | 0.40% |
| 40-45 | 3 | 0.20% |
| 45-50 | 3 | 0.20% |
| Total | 1506 | 100% |

## The Artifact assemblage

Artifacts recovered from the excavation of Area 1 totaled 1727, including flakes, and consisted entirely of Paleoeskimo lithics of which the vast majority appears to be from the Middle Dorset

period. Artifacts recovered from the excavation of Area 3 totaled 240 and again consisted entirely of Paleoeskimo lithics which all appear to be from the Middle Dorset period.

As with previous excavations at Rattling Brook 1 there is a limited range of functional types in the assemblage (Table 15). Microblades by far make up the majority of recovered artifacts, followed by blade cores, scrapers, endblades, bifacial knives and burin-like tools. Notably missing, or in low frequency, from the assemblage are endblades, endblade performs, spokeshaves adzes and tip flute spalls. This difference is in contrast to the assemblages the majority of Middle Dorset sites on the island of Newfoundland. The lithic assemblage is overwhelmingly dominated by microblades, so much so that Rattling Brook exhibits a higher frequency than any other site in the province (Schwarz 1993).

The artifact assemblage resembles those from the Rose Island site W in Saglek Bay, Labrador, which showed a high frequency of microblades as well as few endblades and an overall low diversity within the assemblage (Tuck 1975).

**Table 15. Total excavation results in percentages.**

| | Area 1 (2005) | Area 1 (1993)* | Area 2 (1993)* | Area3 (2005) | Testing (2005) | Museum Collection* |
|---|---|---|---|---|---|---|
| Microblade | 75.7 | 76.1 | 60.9 | 70.5 | 48.0 | 63.1 |
| Core | 1.1 | 2.8 | 12.5 | 2.3 | 28.0 | 3.9 |
| Endblade | 2.5 | 2.8 | - | 6.8 | 8.0 | 4.2 |
| Endblade perform | 0.6 | - | 1.6 | - | - | 1.8 |
| Biface | 0.5 | 4.6 | 4.7 | - | 4.00 | 6.7 |
| Biface preform | - | - | 6.3 | - | - | 2.8 |
| Endscraper | 8.6 | 10.1 | 7.8 | 6.8 | - | 4.9 |
| Utilized/retouched flake | 3.1 | 2.8 | 3.1 | - | - | 9.1 |
| Perforator | - | 0.9 | - | - | - | - |
| Adze/ Burin like tool | 0.8 | - | 1.6 | - | 4.0 | 0.4 |
| Spokeshave | - | - | 1.6 | - | - | 0.7 |
| Worked slate | 1.4 | - | - | - | - | 1.8 |
| Sidescraper | - | - | - | - | - | 0.5 |
| Worked Slate | 1.6 | - | - | 2.2 | - | - |
| Soapstone | 2.7 | - | - | 11.4 | - | - |

| | | | | | | |
|---|---|---|---|---|---|---|
| Blade | 1.4 | - | - | - | - | - |
| Total | 100.0 | 100.1 | 100.0 | 100.0 | 100.0 | 99.9 |
| n= | 441 | 109 | 64 | 44 | 26 | 935 |

* Information taken from Schwarz 1994, Table 1

## Comparative Collections

The evidence presented above suggests that Rattling Brook 1 is a processing site given that the assemblage is dominated by processing tools. In comparison to other Middle Dorset sites the assemblage is unique. The most productive Paleoeskimo sites on the island of Newfoundland are located in Port au Choix. Yet the Port au Choix artifact assemblage is completely different from that seen at Rattling Brook. The two most common artifact types at Phillip's Garden in Port au Choix are bifacially worked tools and blades (Renouf Database 2007). The triangular projectile points, or harpoon head endblades, have convex sides, slight or deep concave bases, and a width approximately 40-50% of their length. Most have flaking restricted to one surface, with the opposite face being either unworked or tip-fluted. The most common raw materials are chert and flint (Harp 1964:36). The smaller prismatic blades are made from crystalline quartz, and the large ones from chert and flint. One-quarter show utilization or purposeful retouch (Ibid: 48-50).

The Dorset sites in Port au Choix are located in a prime seal hunting locations, for example the analysis of food bone from House 4 at Port au Choix-2 reveals it was 98% seal, and of those mostly harp seal (Harp 1976:128). Given that the Port au Choix sites are set in a different regional context it is not surprising that the assemblage is completely different from that excavated at Rattling Brook 1.

Systematic archaeological research has been done at another Dorset Eskimo site on the northwest coast of the island, Broom Point. Tool types from Broom Point differ only slightly from the material recovered at Rattling Brook. Of the 518 tools found at the Broom Point site the

most common artifact types are processing tools, with prismatic blades accounting for 35.4% of the assemblage; endscrapers (11.5%) and chipped harpoon head endblades 10.4% are the other frequent artifacts (Tuck 1983:66). In comparison to Port au Choix sites, prismatic blades are about five times as plentiful, while endblades and endscrapers are slightly less common. This is likely due to the overall count including broken pieces. Endblades and endscrapers occur with approximately equal frequency (Krol 1986). Based on faunal analysis the primary subsistence focus of this site was probably the exploitation of gulf seal herds during the winter and spring.

A large Dorset Eskimo site located at Cape Ray, at the southern extreme of the west coast was excavated by Urve Linnamae (1975) and a total of 4,797 tools were recovered. Prismatic blades, or microblades, constitute the single largest category at 18.5%, followed by endblades at 14.1% and endscrapers at 12.6%. The relative frequencies of the latter two types compare favorably with sites on the northwest coast. With respect to endblades, a greater variety of forms are present than at other west coast site. Many specimens are similar to the Port au Choix type, but others present a different outline form that's both longer and narrower (Linnamae 1975). Likely because the subsistence of this site is directed towards hunting seals there is a greater percentage of endblades than at Rattling Brook 1. There is also a high amount of blades within the assemblage because processing at the site would have been a regular activity. The Rattling Brook assemblage is also distinct from other Dorset sites that are associated with seal hunting. These are the Pittman site and the Peat Garden North site, which are both on the Northern Peninsula. These sites are thought to be spring/summer sites where the inhabitants adopted on a much more generalized subsistence pattern (Hartery and Rast 2001). The Pittman site assemblage consists of 1495 artifacts and shows some similarities to the assemblage collected from Rattling Brook 1. It included a high percentage of microblades (30%) but there is an even higher representation of

hunting tools (40%). Peat Garden North is also is dominated by microblades but again there are more artifacts here that reflect hunting activities, such as endblades, than found at Rattling Brook 1.

While site locale and economic pursuits may dictate the type of assemblages encountered at Dorset sites in Newfoundland, another possible explanation for variation in the frequency of tool type in an assemblage is season of occupation, rather a better indication of economic pursuit. In a recent M.A. thesis Eastaugh (2002) investigated whether different activities were taking place at different times of year at Middle Dorset sites, and whether it is possible to see this reflected in the artifact assemblages. However, the results of this examination suggest that the season of occupation does not influence the tool type frequencies (Eastaugh 2002). Of the Dorset assemblages that Eastaugh (2002) compared: (Broom Point [Krol 1987:196]; Point Riche House Feature 8 [Renouf 1992:70]; Bird Cove [Penney 2001:56]; Peat Garden North [Hartery and Rast 2001], and the Pittman site [Linnamae 1975:54]) there appeared to be little correlation between the season of occupation and artifact assemblage (Eastaugh 2002). This suggests that assemblages are representative of the site activities based on function.

At the Rose Island site W in Saglek Bay, which is also a warm season fishing site, the artifact assemblages resembles those showed a high frequency of microblades as well as few endblades and an overall low diversity within the assemblage (Tuck 1975). This similarity shows the indicative nature of fishing site assemblages in the area, although again not suggesting season as this is determined by availability.

## Site Function

The Rattling Brook artifact assemblage consists of a variety of Middle Dorset lithic tools. The artifact types recovered from the 2005 field season are generally consistent with those found in previous seasons. Due to the generally unfavorable preservation conditions at the site the vast majority of the assemblage is comprised of lithic artifacts. An examination of the Middle Dorset artifact assemblage from Rattling Brook can help determine the range of activities performed at the site. This assumption is based solely on the idea that technology is related to economic function.

The assemblage is dominated by patinated cherts with a large majority made of a burnished green chert with a fine texture which is common on sites in the Exploits Valley (Schwarz 1993). Several other types of cherts were also recovered (appendix 1). The Ratting Brook lithic assemblage is composed primarily of cryptocrystalline silica's, represented by a variety of cherts as well as quartz crystal, although examples of quartzite and silicified slate are present. These cherts are likely local.

Very few endblades were recovered from Rattling Brook 1 suggesting that the hunting of large marine mammals was not a primary activity at the site. Sea mammal hunting, if it did occur, was likely opportunistic and given the location of the site this was likely limited to harbour seals. However, it is possible that the smaller endblades from the Rattling Brook assemblage may have served in the hunting of small terrestrial mammals, fish, or perhaps birds. Unfortunately, evidence is lacking regarding the technology used by the Middle Dorset in Newfoundland for the exploitation of terrestrial, avian and piscine resources. There is no evidence at present to indicate knowledge and utilization of the bow and arrow (Linnamae 1975:12), hence all lithic projectile

points tend to be interpreted as harpoon head endblades, despite the presence and location of notching or the relative size of the blade. In rare sites where organic artifacts are preserved, such as Phillip's Garden, small barbed unilateral and bilateral points of bone may indicate that fishing or birding activities were being carried out, and a variety of bone artifacts of indeterminate function in the site assemblage may have once formed part of a terrestrial hunting technology (Harp 1964). In addition, Wintemberg has stated that the smaller harpoon points from Dorset sites in Newfoundland were probably employed "only in securing fish and perhaps the smaller species of seal" (Wintemberg 1940: 324). It is evident that these species were being exploited by the Middle Dorset population on the Northern Peninsula to some extent.

Artifacts generally thought to be associated with butchering and processing activities were also recovered from Rattling Brook, comprising a rather large percentage (89.1 %) of the total tool assemblage. It should be noted, however, that the chert microblades are likely over-represented in the assemblage as fragments (distal, proximal, medial and proximal - medial), and as associated blade-like flakes were included in the count, yet few of these exhibit any signs of use-wear. It is also probable that a number of the retouched/utilized flakes in the assemblage, and possibly some of the marginally retouched endscrapers and unhafted bifaces, represent preforms discarded in their early stages of manufacture and not expedient tools. Nevertheless, it is probable, based on the number of bifaces, scrapers and quartz crystal microblades, that domestic pursuits such as the butchering of animals and the processing of fish and small game were the main focus of activity at the site. Large game may have been procured, but since the site assemblage contains few tools associated with procuring large land or sea mammals this would not have occurred either on a large scale or regularly.

The artifact assemblage from Rattling Brook 1 indicates that the most important activity at the site was processing. Given the site location, resource availability in the area and the poor representation of endblades associated with seal and terrestrial mammal hunting, processing was likely related to small game and fish. In the Rattling Brook 1 area today salmon are the most plentiful taxon, and this was likely the case during the Middle Dorset period. As well, the majority of tools recovered, including microblades, are tools that are particularly suited to salmon processing. They are sharp, easily made and require no after use labour. This is not to say that other subsistence activities did not occur at the site. Endblades indicate that there was preparation and perhaps occasionally hunting of larger game. But the dominance of microblades in the assemblage indicates that salmon were likely the most significant resource taken at the site.

# Chapter 6: Site Activities Analysis

## Introduction

Both historically and prehistorically salmon has been a sought after food, especially in the northern hemisphere (Schalk 1977). Salmon is rich in nutrients, available in large quantities, is predictable and can be trapped in great quantities. Site location, features and assemblage all suggest that Rattling Brook 1 was likely occupied because of its suitability for salmon fishing. Salmon were only available, in large numbers, at Rattling Brook 1 for a short period of time during the late summer salmon spawn. This season of occupation is well supported by evidence such the structure, lack of internal hearths and the small amount of sea mammal hunting signifiers. The following section will further outline the activities occurring at Rattling Brook 1. This chapter investigates patterns in the artifact and feature distributions that might reflect distinct activity areas within the site. Activity areas are then used to highlight the subsistence activities that might have taken place at the site in the absence of faunal remains.

## Activity area analysis

Differences in the relative frequencies of artifacts found inside and outside the structure indicate that different activities were taking place in the two areas. There are two identifiable patterns present: 1) microblade use occurs outside the tent ring; 2) tool manufacture occurs around the tent ring and in association with the cache/cooking pit.

There was a distinct lack of artifacts inside the tent ring and the majority located just outside of the structure. While it is possible that some of the artifacts within the tent ring might have shifted from their original depositional location during erosion and silting, events that took place after the dwelling's abandonment, it is unlikely that these artifacts would have moved a great distance.

It is more likely that the floor of the dwelling was covered, and that the cover was sporadically removed for cleaning or when dismantling the site. When this occurred, internal debris would have been re-deposited outside of the structure. Many ethnographic descriptions of tent structures, including that of the Nunamuit *Itchelik* (tent), indicate the use of temporary floor coverings could easily be removed (Ingstad 1954:39). An example of this, Feature 5, located immediately outside the dwelling entrance on the northwest side of the structure contained significant lithic and soapstone vessel remains. While it may be representative of activities which occurred outside the structure its proximity to the tent entryway suggests that it was the recipient of debris accumulated within the structure. This is similar to Inuit structures, where discarded household refuse is deposited outside the dwelling on either side of the entrance (Morrison 1983:53; Newell 1988:203). Examination of the artifact distributions outside the dwelling show distinct clusters of individual artifact classes. The distribution of most of the cores and primary flakes suggests that the primary stages of tool manufacture took place outside the house, close to Feature 4 (to the north of the structure) and Feature 6, immediately south of the structure (Figure 35).

The distribution of debitage produced an arc around Features 4 and 6 which was slightly asymmetrical and in keeping with Binford's (1983) observation of debitage patterns which results from tool manufacture, in this instance an arc of debris was formed. It is therefore likely that these two features were tool production areas. Feature 4 was dominated by primary flakes indicating that initial tool and core preparation was the primary activity. The artifacts found in Feature 6 suggest the main activity was microblade manufacture. The fact that this activity occurs outside the dwelling suggests a warm season occupation.

From the distribution of artifacts collected in 2005 there were a high proportion of microblades (150) and scrapers (30) on the southern edge of Area 1, just outside of the structure, suggesting a processing area (Figure 36). Although both tool types could be used for a variety of functions, microblades and scrapers are most often used in processing activities such as the preparation of animal skins or preparing salmon for drying (Schwarz 1994). The microblades appear to be concentrated towards the southern edge of the excavated area, close to the river bank. If microblades at Rattling Brook 1 were used to process salmon then performing this activity near the river would seem logical. Not only is this where the salmon would have been caught, but it would have been easy to discard faunal refuse back into the river. The apparent lack of faunal remains at Rattling Brook 1 is probably the result of the poor preservation conditions, but the cultural practices that were employed in the processing of the salmon caught at the site may also be a factor (Whitridge 2001).

The most prominent feature on the site is the cache pit. Caches were used to store surplus food, as a safeguard against shortfalls (Stopp 2002). This type of food storage is well suited to mobile societies as they are able to strategically place caches in seasonally revisited areas (Stopp 2002). As the salmon from this site would have been abundant within a short timeframe, it would have been important to assure access to this resource beyond the period of procurement. Storage would extend the period during which consumption is possible (Stopp 2002). Thus, storage is an important economic response, which allowed resources to be carried over into periods of scarcity and thus reduce risk.

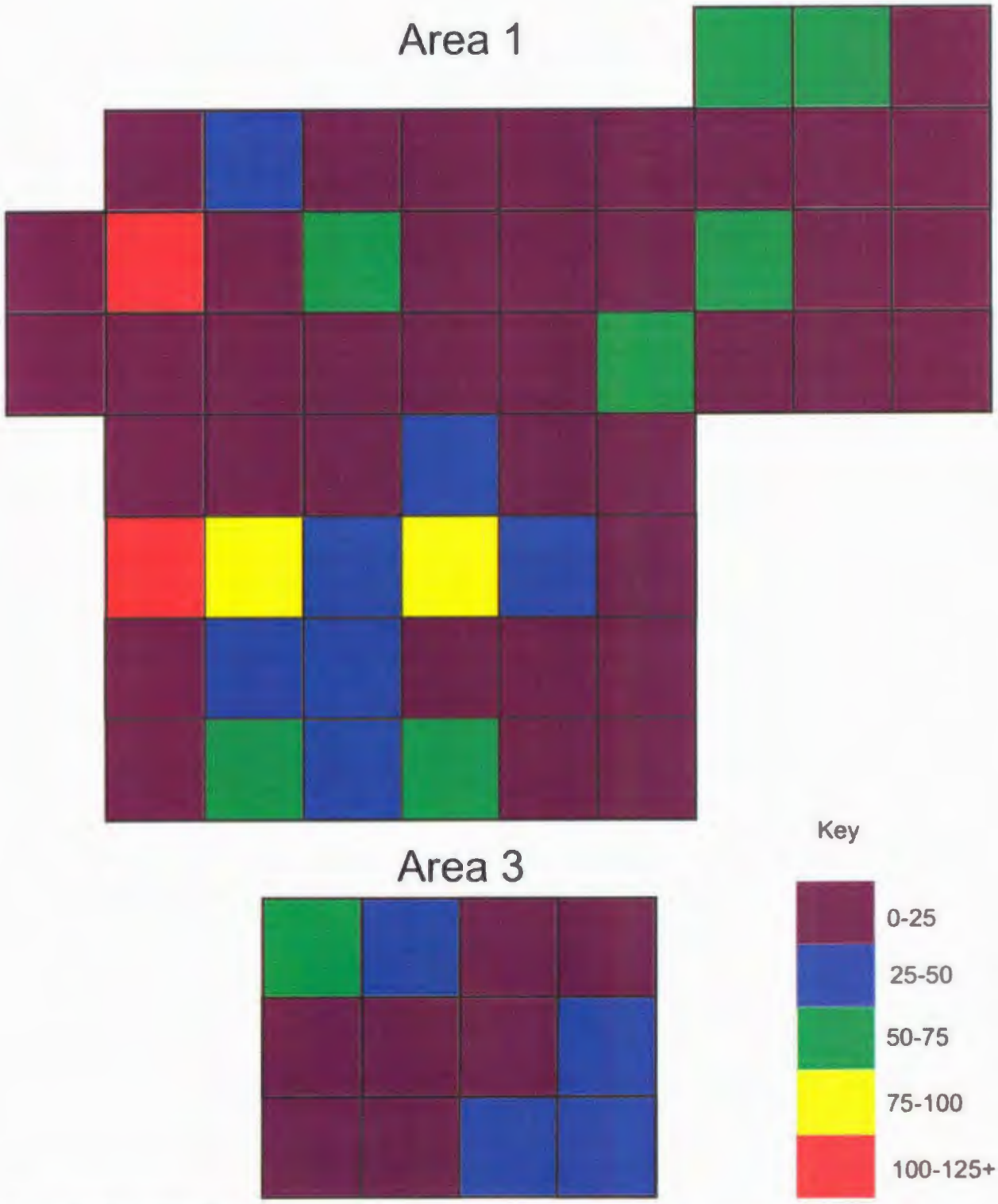


**Figure 35. Flake Distribution.**

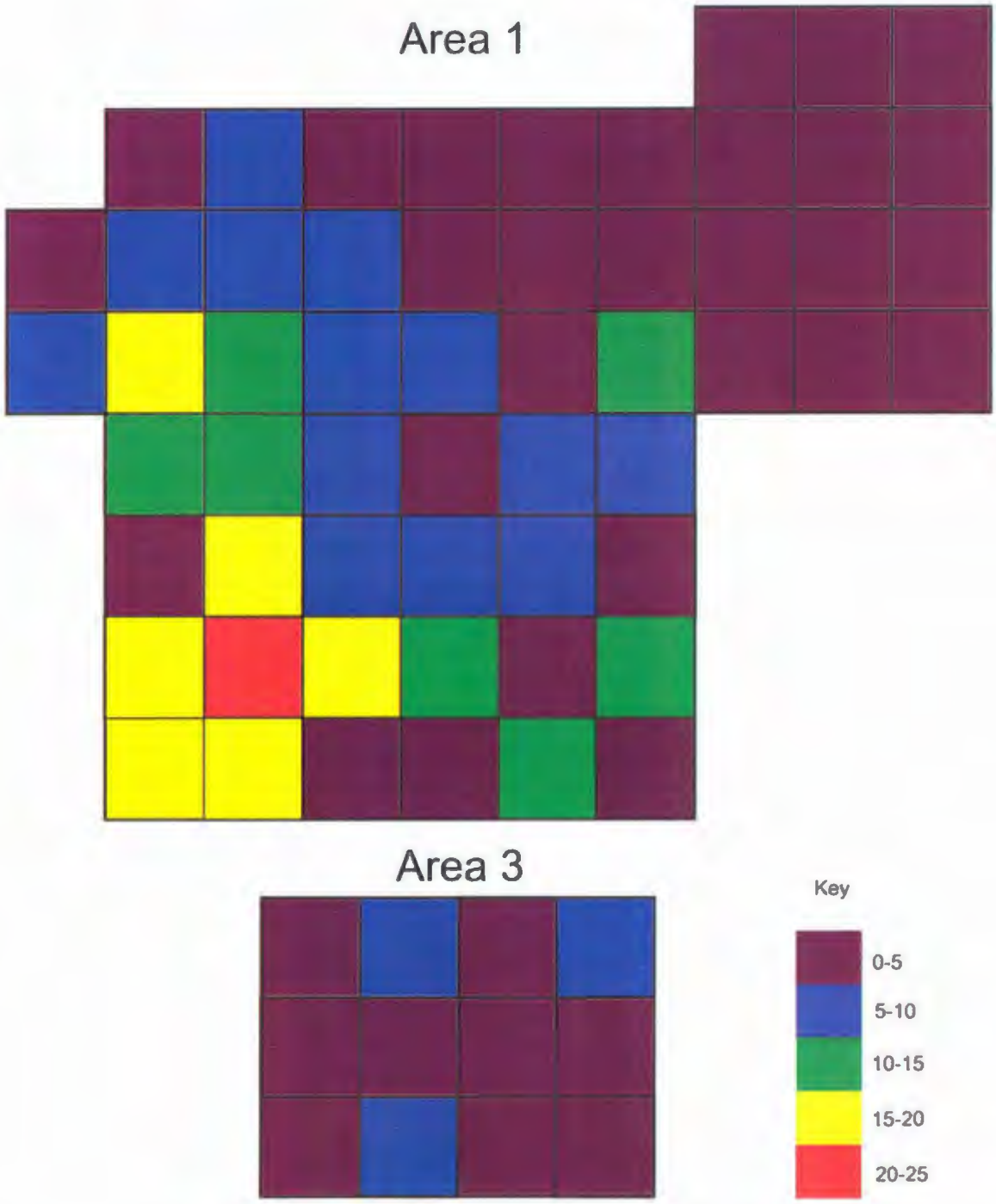


**Figure 36. Microblade Distribution.**

The evidence suggests that there was a limited temporal occupation of the site. Although the evidence is scant, it would seem likely that this camp was used only during the salmon run at which time the inhabitants would have moved into the interior for a Caribou hunt, this may be evidenced through the lone caribou bone located at the site. If this were a caribou processing site we might expect to see more faunal remains and tools to suggest as such. The existence of the cache pit may suggest that within this route the site may have been used as a regular stop along this travel line in the Dorset seasonal round.

## Harvesting

It is unknown how the Middle Dorset in Newfoundland harvested fish from sites such as Rattling Brook. We can only speculate based on the archaeological evidence and ethnographic reports from other cultures. There are a number of different methods that would have been appropriate for capturing salmon, including nets, fish weirs and box basket traps. The following represents a brief description of the possible methods of harvesting.

Two feasible ways in which salmon could be harvested are through spearing or netting. The easiest way of acquiring salmon would be using spears or nets from the riverbanks as the fish were moving up river to spawn. This method does not require complex planning and with a minimal amount of preparation. This method would have produced subsistence but with a great expenditure of time for the individual as it is not as productive as the other possibilities. A second method is completed by using a net, this usually required from one to several individuals people to drag a net through the water by hand or aided by watercraft (Godwin 1988). A fish caught in the net is held by both drag and by the momentum of the net being pulled through the water. This option would be more productive and would have yielded a high number of fish

during the spawn. It is fair to assume that one if not both of these methods were employed at Rattling Brook.

One prolific way to acquire fish from a river such as Rattling Brook is through the use of a fish weir (Figure 37). There is currently no conclusive evidence for such a structure at this site. There is a suspect line of stones crossing the river within 100m south of the site, but its context is uncertain. Past logging activity on the river would have destroyed any evidence. Archaeological evidence on the east coast of North America suggests that there are three basic designs to weirs on the east coast of North America (Luntis 1992). A tidal weir uses the tidal action of a river to trap the fish where they are more easily collected (Luntis 1992). The second is a maze like structure, this consists of a series of walls arranged so that fish may not escape (Luntis 1992) Lastly, is a barricade wall or fence which funnels the fish where they are removed (Godwin 1988:52; Luntis 1992). These structures would have been ideal as they would have yielded a high amount of fish for very little effort beyond the initial construction and upkeep versus the food being caught. This is advantageous as the structure would have to withstand the movements of the river, requiring only small repairs. One would expect that in the spring repairs would have to be made and that with time the structure would be in need of larger repairs. There are examples of weirs further north in Labrador as well. As an example, Inuit fish weirs are often located around narrow channels in rivers and streams (Clarke 1981). These weirs would have again funneled the fish to an area where collection would have been efficient with instruments such as a net or possibly with a spear (Clarke 1981).

**Figure 37. Cowichan Fish weir (BC Archives).**

Cylinder or box shaped basket traps were used in association with natural weirs, such as a dam of rocks that created a waterfall that salmon would have been forced to jump over in order to reach their spawning grounds (Stewart 1982). The entrance of the trap often narrowed from quite wide to very small, this would have let the fish enter easily but would have prevented their easy exit (Stewart 1982). These traps could have been made from easily bendable wood, such as alder which is common in the area surrounding the site. These types of traps did not have to be constantly maintained, the people who used them could leave them, to perform other tasks and return to empty the trap. With this arrangement it would have been possible to catch large numbers of salmon with a minimal work force.

There is direct no archaeological evidence for the extractive activities around the river, speculation must suffice. Likely, the simple methods such as spearing and drag nets were the

first methods used on this river. Eventually it would seem probable that structures like weirs would be constructed due to the likely continual re-habitation of the site, which would lower workforce necessities and produce a high yield with little effort. The ability to harvest high amounts of fish with little effort is of prime importance. This leads to the Dorset ability to process this resource effectively.

## Processing

Rattling Brook 1 contains at least one storage pit and a large number of hearths suggesting that the Dorset were preparing large quantities of readily available salmon for future consumption. Likely, fish that were processed for storage would have been either dried in the sun or smoked, as the fish would not preserve well if cached whole without actively preserving them (Ferguson 1961). The lack of faunal remains at Rattling Brook 1 means there is no archaeological evidence regarding how the Dorset processed the salmon. The lack of faunal remains likely results from the acidic nature of the soils in Newfoundland. There is also evidence a cultural practices play a role in the absence of faunal remains such as their discard in water (Whitridge 2001).

Since this site was likely used for capturing fish in large amounts there would be a propensity for these fish to spoil rapidly. So knowledge of preservation would be necessary (Schalk 1977:232). Several ethnographic records exist which detail the process for preserving fish in eastern North America. These included fire, sun, smoking, smoking alone, smoking, salting, freezing and combinations of these methods (Rostlund 1952:195-6). Given that the knowledge to preserve large quantities of fish existed in eastern North America and were likely widely used, it is likely that some or all these methods were used by Paleoeskimo in central Newfoundland.

Prior to excavation it was hoped that salmon processing might be recognizable using trace elements of methylmercury from the site soils. To this end soil samples were obtained from across the site. However tests showed low levels of methylmercury. Initial tests from around the site returned .005 and 0.006 ppm (Maxum 398514). Unfortunately it was not until late in the study that it was realized that salmon can have among the lowest levels of organic mercury detectable in fish (0.014 parts per million) (U.S. National Marine Fisheries Service Survey, 1978). Therefore, salmon fishing would not have left any substantial traces of mercury even if large numbers of salmon were being caught and processed at the site. Nevertheless, fish are the most likely subsistence species in the area of Rattling Brook 1 and the mercury tests allow us to eliminate those species that would have produced a higher mercury residue on the site, such as mackerel, were not occurring at the site.

There are a number of ethnographic references concerning Inuit fish processing strategies that may be relevant to salmon processing at Rattling Brook 1. Most refer to the fish being split and gutted with unwanted remains discarded (Mathiassen 1928:206; Rasmussen 1931). Ethnographies of the Copper Inuit provide detailed accounts of traditional char drying. The fish are split from the pectoral fin to the anus, then from the gills along each side of the spine (Whitridge 2001). This leaves the two sides hanging from the tail ready to be laid across a rack to dry, while the head remains attached to the spine (Jenness 1970:105). In this situation there is likely a hearth underneath the rack to facilitate the drying process.

The Polar Inuit prepared their fish for drying in a similar fashion. Lengthwise cuts made were so that the skin could be removed, cutting would begin at the tail and carving close to the spine along the fish removing the meat from the back (Whitridge 2001). Thereafter, the balance of the meat is split off the sides (Holtved 1967:142-143). Finally, an account of fish processing in the

Mackenzie Delta region is similar. In this account, the fish is split by removing the backbone, and head the inside of the fillets are then insisted and the fish is hung from a rack to dry (Ferguson 1961).

Although there are subtle differences, the fish are cleaned by removing the head and skeleton through incisions along the dorsal fin and ventral side of the fish (Whitridge 2001). The internal organs are discarded, likely back into the river, consumed or fed to dogs (Whitridge 2001). This process leaves the tail and skin intact to become the mechanism for hanging the fish to dry over a rack. The two fleshy sides of the fish are usually scored with cuts roughly one inch apart across the greater length of the fillet (Whitridge 2001). The rack would have either utilized the heat from the sun, the smoke and heat from a hearth, or both, to dry and preserve the fish (Figure 38). This fact might explain the large number of hearths found as well and the extensive charcoal scatter. Accounts from aboriginal groups in Labrador and the Beothuk in Newfoundland indicate that the principle season of meat drying was in the autumn, to establish winter stores (Stopp 2002), which is appropriate for a late summer to early fall salmon run.

**Figure 38. Shuswap Indians Drying Salmon (BC Archives)**

Archaeologically, the drying of salmon would have left little in the way of quantifiable evidence. Fish would have been suspended on an organic frame, most likely timber that would have been easily supported without the use of postholes. Before the site was abandoned, these various props likely would have been removed and stored near the workplace. As well, faunal refuse may have been discarded into the river, thus leaving little faunal evidence. Since the majority of microblades were found within close proximity to the hearths it would seem that these are the areas where processing took place. Conversely, there was a lack of microblades in the areas where there was a high amount slate, which may have represented an alternate drying area.

In North eastern North America there is a lack of archaeological information on fishing sites, for a number of reasons. Firstly, the nature of fishing sites leaves little evidence with regards to their associated features (Luntis 1992). Furthermore, there is a limited amount of material technology associated with the exploitation of fish (Whyte 1988:115; Brumbach 1978:7, cited in Luntis 1992). With the adoption of a structure such as a fish weir it is easy to assume that little archaeological evidence would remain as to the nature of the activities at the site (Luntis 1992). Although the excavations at Rattling Brook 1 were undertaken to uncover evidence of fishing, no such conclusive features were uncovered, this seems consistent with other sites of this type in eastern North America (Luntis 1992). Little evidence exists for method of capture, rather the evidence lies within the processing assemblage. The lack of faunal remains might be cultural methods of processing as well as due to preservation of these faunal remains within the acidic soils in Newfoundland.

## Comparative Sites

Like Newfoundland, the Arctic ecosystem is characterized by long cold winters, short cool summers and, in general, a small number of food resources. As in Newfoundland the height of fish spawning occurs in the Arctic during the autumn upstream migration of char (Balikci 1980). For example, the Inuit of Pelly Bay followed an annual migration cycle which is similar to that of the Newfoundland Dorset. In winter they relied on seals harvested on the sea ice, in summer they moved inland, harvesting seals along shore and occasionally hunting caribou (Balikci 1968). In early autumn they fished for Arctic char using stone weirs (Balikci 1968). In late autumn the Netsilik fished for char through the thin river ice. In winter, they moved again onto the sea ice to pursue the seal (Balikci 1968). As Balikci (1980) suggests Arctic char was a very important food source in the Arctic and most harvesting took place during the autumn upstream migrations, a

similar situation as we might expect in central Newfoundland. Furthermore, the Inuit of the Central arctic seem to have practiced similar methods. Fishing for arctic char during the autumn spawn, they maximized their return for effort because arctic char were present in great abundance and were vulnerable in the shallow rivers (Balikci 1980).

## Diet

A late summer/early fall spawning procurement site also has metabolic advantages. Speth and Spielmann (1983) suggest that spawning fish would be consumed in late winter and early spring because of their high fat content. These types of fish were also desirable as they would have spent the time previous to spawning feeding in the sea presenting an energy-rich subsistence resource. During the winter months principal prey species would have become fat depleted thus supplementing these resources with preserved, nutrient rich, salmon would have been advantageous (Speth and Spielmann 1983). There is evidence that hunter-gatherers actively sought out such food stocks. As Kaplan and Hill (1992) suggest, foods that are high in lipids and protein are important to the hunter gatherer diet. When we take into account the reliance of seal by the Paleoeskimo and its high fat content, then in times when seal we scarce salmon could have been important. In a particularly bad year of seal confluence on the North East coast there is a greater need for resources such as salmon caught during the annual migration up-stream. It seems unlikely that hunter-gatherers would ignore such a valuable resource during spawning season when rates of return are at their highest.

## Conclusions

The information provided in this chapter suggests that tool manufacture was occurring around the structure and that processing tools dominate the assemblage. These processing tools were being used on the southwest side of the site, towards the river. This is the area where salmon

processing was likely to occur for a number of reasons: it is close to where salmon were likely being retrieved and it is the best place to dispose of waste resulting from processing. It seems the Dorset likely utilized a number of different processes from spearing, netting and weirs to acquire these fish in large numbers. Unfortunately as it has been shown there is generally little evidence for the methods employed, although this evidence was the impetus for excavating Rattling Brook 1. As well, in conjunction with evidence for methods, the structures for the processing of the salmon were likely ephemeral, but the large number of hearths scattered throughout the site may relate to this process, as well as the slate pavement, which may have been used for drying.

# Chapter 7: Summary and Conclusions

## Summary

The Paleoeskimo were without question adept at surviving in a maritime environment. Their outer coast marine specialization is reflected in the archaeological record so overwhelmingly that the Newfoundland Dorset are often referred to as a maritime-adapted people. This outer coast adaptation may have been critical on the west coast of the island but in other areas where seals were neither as numerous nor predictable the Dorset were more likely generalists, opportunistically hunting whatever species were available. The preceding chapters have demonstrated this in various ways by examining the Dorset occupations in different parts of Newfoundland and by observing the options and limitations placed on Dorset subsistence strategies by local species availability, geography and climate. Greater emphasis was given to the species that may have been available in Notre Dame Bay and particularly in the inner regions of this bay during the Dorset occupation. Finally, all this information is linked through an examination of Rattling Brook 1.

This thesis suggests that resource availability directed Dorset site location and that exploitation away from the west coast of the island was more generalized than sites like those at Port au Choix would lead us to believe. On the Northeast coast the Dorset occupied seasonal camps, likely in small residential groups consisting of only one or a few families (Schwarz 1994). Over the course of their seasonal round these small groups would have moved from area to area in a planned pattern, to exploit particular resources. Thus, their choices were determined, to a large degree, by what resources were available in that region of occupation and where those resources were located.

The resources in Notre Dame Bay might seem limited when compared to the abundance of the west coast, but this is not necessarily the case. The resources are more widespread and over greater distances which would require regular seasonal movements throughout their regions of habitation. There are no large settlement aggregations in Notre Dame Bay but there are a large number of smaller sites at key exploitation locales. These sites were probably occupied briefly, each corresponding to a different hunting/ harvesting phase. This type of settlement planning is termed an opportunistic resource acquisition strategy (Binford 1978:453).

Subsistence-settlement strategies inevitably involve making well-organized decisions based upon the resources which are available. At Rattling Brook 1 salmon would have been the most important local resource. Salmon are available for a short period of time but the location and the timing of potential capture are predictable. It is therefore logical to expect at least a small settlement aggregation at a predictable salmon stream. We would also expect a strong pattern of reoccupation of the site. Given the predictability of salmon, both search time and settlement mobility are reduced (Figure 39), thus there might be more emphasis on logistically organized resource use from camps on, or near, Rattling Brook. Resource predictability in the area also means that activity and function at Rattling Brook 1 are highly predictable. Generally, at Rattling Brook 1 the artifact assemblage is dominated by processing tools. These processing tools were being used in the south western portion of the site. Processing was likely occurring towards the water for a number of reasons: it was close and so it provided a convenient location to dispose of waste where the salmon were being retrieved, while the numerous of hearth features and a slate pavement may have been used to smoke or dry fish for storage.

Several general observations about the site and its inhabitants can be made as a result of the excavation. The first observation is that Rattling Brook 1 was likely occupied in the late summer

and or early fall when the salmon run occurs at Rattling Brook. The second is that the artifact assemblage is dominated by Middle Dorset artifacts. Although three Groswater and one Recent Indian artifact were present in the assemblage the representation of these groups is ephemeral at best. Third, the dwelling which was excavated was the remains of a tent structure which contained two hearths and several soapstone fragments and was surrounded by large numbers of hold-down rocks. These factors combine to suggest that the tent was more durable than a purely summer dwelling and may have been occupied in the late autumn.

The Rattling Brook 1 artifact assemblage consists of a variety of Dorset lithic tools. The artifact types recovered from the 2005 field season are generally consistent with those found in previous seasons. A wide range of activities is reflected in the artifact assemblage. First, in terms of extractive pursuits, the limited number and small size of endblades indicates that the hunting of large mammals, marine or terrestrial, was in all probability not a major pursuit at the site. The smaller endblades from the Rattling Brook 1 assemblage may have served in the hunting of a variety of small terrestrial mammals, fish or perhaps birds. Artifacts generally thought to be associated with butchering and/or processing activities were also recovered from Rattling Brook, comprising a large percentage, (89 %) of the total tool assemblage.

From the evidence available the activity engaged in at Rattling Brook appears to have been the capture and processing of salmon. Aside from the large number of processing tools and outdoor hearth features, a storage pit was located in Area 1, which suggests a strategy for times of low food stocks (Bettinger, 1991; Binford, 1978; Kelly, 1995; Kelly and Todd, 1988; Spiess, 1979; Stopp 2002). Processing and storage of these food stocks was strategic, as the Dorset would have passed by the area on the return from inner regions.

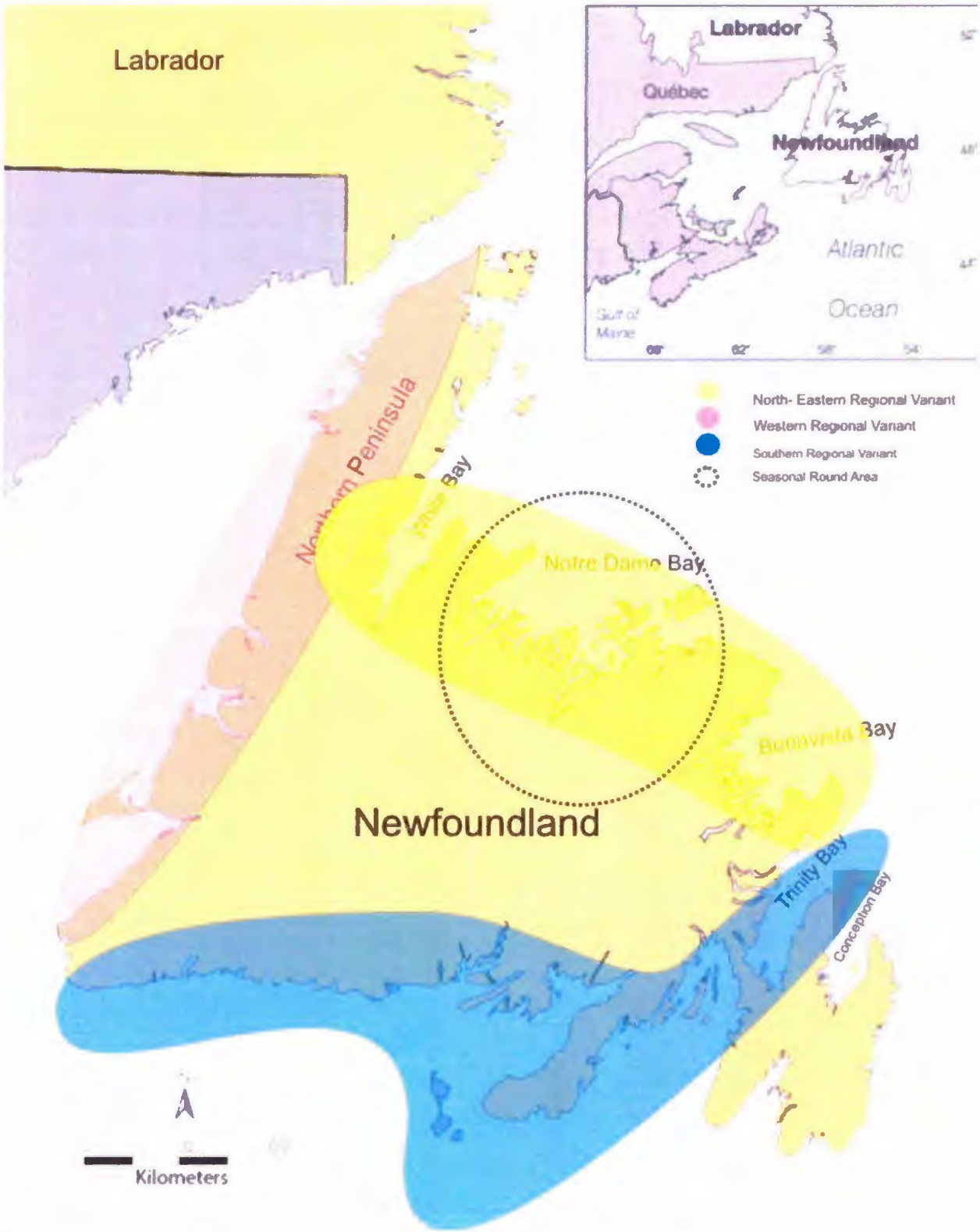


**Figure 39. Dorset Variants.**

It has been shown that primary tool manufacture was occurring at this site, primarily around the structure. This is consistent with the hypothesis that Rattling Brook 1 was a small habitation site focused on processing salmon. Occupation at this site is probably linked to a late summer/fall fishing season that was followed by a fall caribou hunt, with groups returning to the outer coast in the winter to harvest seals in the spring. This time frame accords with the fall migration of caribou, which begins in October and continues through to November, when herds mass in the open lowlands for rutting. Once the salmon run was over Middle Dorset groups would have been in a good position to travel into the interior to hunt.

**Conclusions**

The excavation of Rattling Brook 1, located at the mouth of a salmon river, offered the opportunity to explore a poorly understood Middle Dorset subsistence activity, thereby expanding our understanding of Middle Dorset economies. By examining sites such as Rattling Brook 1, we can learn about Dorset seasonal movements as well as the extractive and processing technology employed.

The identification of Rattling Brook 1 as a salmon exploitation site, it is based on circumstantial evidence. There are no absolutely diagnostic features that would suggest the harvesting of salmon, and no faunal remains were recovered. However, the assemblage suggests a heavy investment in processing. The site is located on a salmon stream with few other resources reliably available in great numbers. Together these elements suggest a late summer to early fall salmon fishing and processing site.

Occam's razor states that an explanation of any particular phenomenon must make as few assumptions as possible, eliminating assumptions that make no difference to the hypothesis. In short, when given two equally valid explanations for a phenomenon, one should embrace the less

complicated formulation. This is the premise of this argument; taking into account all the information pertaining to the sites excavation; the results suggest a salmon exploitation site even though no salmon are present. Thus, using Occam's razor we must assume that the most logical explanation for its placement is the location of the resource.

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# appendix I

## Lithic Types

**Lithic Type 1 Grey opaque chert**

This chert makes up only 21.8 % of the tools found in Rattling Brook 1. It is ligh grey in colour with no evidence of banding. It is a cryptocrystalline with medium silica content. The chert is opaque with a flat luster, and displays no evidence of thermal or natural alterations. The source is again likely local.

**Lithic Type 2 White chert**

This chert makes up 21.2% of the tools from the site. It is white in colour, exhibiting occasional bedding fracture, but with generally excellent flaking characteristics. It is crypto-crystalline, highly siliceous, and semi translucent, with a flat luster. The source is thought to be local.

**Lithic Type 3 Green opaque chert**

This chert makes up only 14.5 % of the tools from Rattling Brook 1. It is green opaque in colour with no evidence of banding. The chert is cryptocrystalline, and has medium silica content. There is no evidence for thermal modification or natural alterations of the material. The source is believed to be local.

**Lithic Type 4 Grey/ green chert**

This chert makes up 20.7% of the tools from the Middle Dorset component of the Rattling Brook assemblage. The chert ranges from grey/ green to intermittent dark green in colour. The chert is cryptocrystalline with a low silica content, opaque, and has a dull flat luster. It does not appear that the chert is of local origin as no cortical material or shatter was retrieved from the site.

**Lithic Type 5 Grey mottled chert**

This chert represents 10.3 % from the site. It is a light grey in colour with white speckles and mottling. The chert is microcrystalline with a granular. The silica content is low with a waxy lustre.

**Lithic Type 6 Cow Head chert**

This material is very distinctive but is limited in the Rattling Brook 1 assemblage, forming 1.4 % of the tools. It is green to dark grey in colour, often exhibiting black banding. Grain size ranges from microcrystalline to cryptocrystalline in the collection, and silica content is low to medium. The material is opaque with a dull and flat, to wax like lustre. Cortex, where present, shows signs of weathering and has a light grey appearance. The best known quarry source is the Cow Head outcrop located on the Cow Head peninsula (James and Stevens 1982).

**Lithic Type 7 Brown opaque chert**

This chert makes up 1.6 % of the tools from the site. It is light to light brown in colour with no evidence of banding, although occasional black inclusions are visible. Cryptocrystalline

amounts with a low to medium silica content. It is opaque with a flat luster with some patination. The source is thought to be local cobbles as a large amount cortical material is present.

**Lithic Type 8 Quartz crystal**

This material represents a crystalline form of silica, and makes up 5.7 % of the tools Rattling Brook. The material is cryptocrystalline, highly siliceous, and has a vitreous lustre. It is probably indigenous to the area and associated with veins in granite.

**Lithic Type 9 Red opaque chert**

This chert is rare in the assemblage and makes up only .2 % of the tools from the site. It is a homogenous red. It is cryptocrystalline with small amount of silica content, opaque, and has a slightly waxy luster. No alterations were identifiable. It is likely a non-local lithic material.

**Lithic Type 10 Slate like chert**

This material makes up 1 % of the Rattling Brook 1 assemblage. It is light brown to grey in colour. The chert is cryptocrystalline with a smooth, almost ground texture. Silica content is low, and the material is opaque with a flat lustre.

**Lithic Type 11 Brown slate**

This material is found in only one artifact from the site of the tools. The slate is light brown to red in colour. The material is microcrystalline, opaque, and has a dull, flat lustre even when ground. The material is probably local in origin.

**Lithic Type 12 Light grey slate**

This metamorphic slate is light grey in colour. The material is microcrystalline, and has a glimmer like luster when ground. The material is probably local in origin.

**Lithic Type 12 Soapstone**

This soft stone is composed essentially of talc, chlorite, and often some magnetite talc a soft mineral that is a basic magnesium silicate. It is grayish in colour with a soapy feel, and occurs in foliated, granular, or fibrous masses and is likely from Fleur de Lys on the north east coast.