

MIDDLE DORSET IN SOUTHERN LABRADOR:
AN EXAMINATION OF THREE SMALL SITES IN THE
PORCUPINE STRAND REGION

CENTRE FOR NEWFOUNDLAND STUDIES

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CHRISTOPHER B. WOLFF



MIDDLE DORSET IN SOUTHERN LABRADOR:
AN EXAMINATION OF THREE SMALL SITES IN THE PORCUPINE
STRAND REGION

By

Christopher B. Wolff, B.A.

A Thesis

Submitted to the School of Graduate Studies

In Partial Fulfillment of the Requirements

For the Degree

Master of Arts

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TITLE: Middle Dorset in Southern Labrador: An Examination of Three Small Sites in the Porcupine Strand Region.

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Abstract

This thesis examines Middle Dorset demographics in southern Labrador, defined here as the coastal region between Hamilton Inlet and the Strait of Belle Isle. Its focus is on three small sites on Huntingdon and Horse Chops Islands in the Porcupine Strand Region: Snack Cove 2 (FkBe-2), Snack Cove Island West 1 (FkBe-5), and Horse Chops 3 (FIBg-3). Southern Labrador is relatively unknown archaeologically in comparison to the island of Newfoundland and Northern Labrador. In those regions there is a substantial body of research relating to the Middle Dorset culture. In contrast, southern Labrador has primarily been considered a relatively uninhabited landscape that the Middle Dorset, and other prehistoric cultures, traveled through on their way to the north, or south, for trade and/or social exchange, and little research has been conducted there. The research presented in this thesis suggests quite a different picture of Middle Dorset demographics in southern Labrador.

To date, there have been no large Middle Dorset settlements found in southern Labrador as exist on the Northern Peninsula of Newfoundland, most notably Port au Choix. The evidence that does exist is composed of a series of small seasonal sites that are found along the entire coastline of southern Labrador. Three of those sites are the focus of the research presented in this thesis. The examination of these sites is intended to demonstrate not only that there was a Middle Dorset presence in Southern Labrador, but to evaluate their settlement-subsistence patterns in connection to Middle Dorset groups on the island of Newfoundland and Northern Labrador.

This thesis provides information concerning the culture history of southern Labrador, and may serve as a valuable platform on which to build future research in the region. The settlement patterns of southern Labrador Middle Dorset groups presented in this thesis may also serve as a valuable hypothesis to be tested as further evidence from Middle Dorset sites in the region is recovered.

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First, and foremost, I would like to thank my wife Rebecca for all of her support and patience. A guy could not get as lucky as I am to have been the recipient of that. Secondly, I would like to thank my supervisor Lisa Rankin for all of her guidance.

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Chapter One

Introduction

The coast of southern Labrador is relatively unknown archaeologically. Although there have been a few surveys (Fitzhugh 1981; Fitzhugh 1986; Fitzhugh 1989; Stopp and Reynolds 1992) that involved brief explorations of strategic locations, there has been no substantial systematic research in that region until recently. Dr. Lisa Rankin of Memorial University began a research initiative in the summer of 2001 that has thus far consisted of a systematic survey of the Porcupine Strand region of southern Labrador (Rankin 2001). Her work is changing what we know of prehistoric cultures in that region. My research on Huntingdon and Horse Chops Islands, which are adjacent to the Porcupine Strand, is part of that initiative.

This thesis reports on three small excavations I undertook in the summer of 2002, and, as such, aids in the construction of the culture historic record for this little known region. The primary goal is to evaluate the role of the Middle Dorset in southern Labrador. In order to do this, I have compared and contrasted lithic materials, and other archaeological remains, recovered from the three sites on Huntingdon and Horse Chops Islands with similar remains along the coasts of Newfoundland and Labrador. Particular

attention was paid to changes in the frequencies of lithic raw materials. Finally these data will be used to evaluate the significance of current models of Middle Dorset demographics in Newfoundland and Labrador.

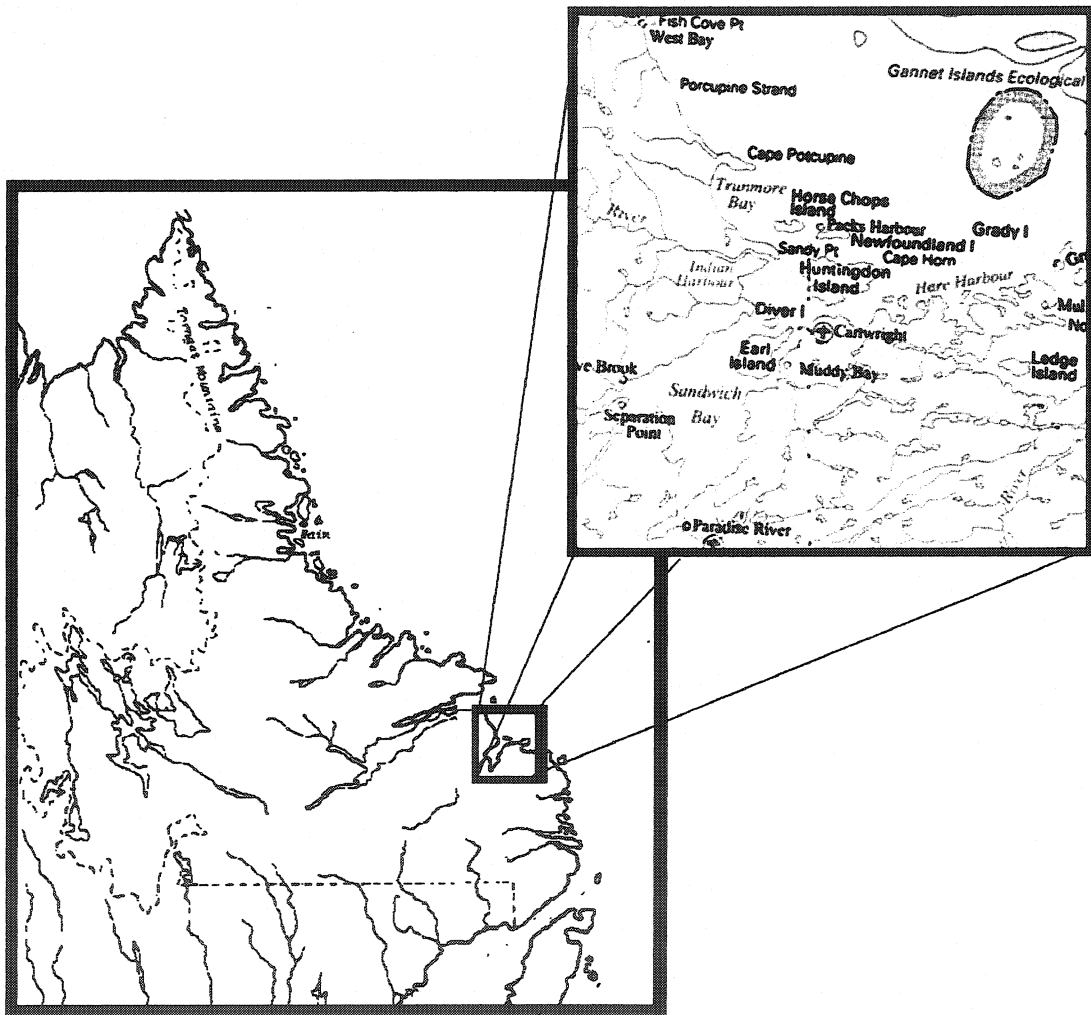


Figure 1.1: Map of Research Area.

Previous to my research in the summer of 2002 there had not been a single excavation between Hamilton Inlet and the Strait of Belle Isle in southern Labrador, other than some test pitting (Fitzhugh 1981; Fitzhugh 1986; Fitzhugh 1989; Stopp 1992; Rankin 2001). There are several reasons for this lack of research. The primary cause is a research bias toward larger, highly visible archaeological sites, located in northern Labrador, the Strait of Belle Isle, and Newfoundland, which has been perpetrated for decades. Thus, sites with greater prehistoric populations, and intensive resource exploitation, have been given more attention. There has been a relative wealth of information recovered from those regions. Unfortunately, this has translated into the belief that southern Labrador, where there appears to be a lower population density and less predictability of resources, was a region that was relatively unoccupied by prehistoric peoples (see Fitzhugh 1980; Jordan 1986; Loring and Cox 1986; Fitzhugh 1997). This assumption is based on little real evidence, and Dr. Rankin's and my research is proving otherwise.

Research Locations

In the summer of 2002 a small research team and I conducted a series of three excavations, two on Huntingdon Island and one on Horse Chops Island (Figure 1.1).

Huntingdon Island is a rather large island situated in the mouth of Sandwich Bay. The two sites excavated on that island, Snack Cove 2 (FkBe-2) and Snack Cove Island West 1 (FkBe-5), are located on the eastern extremity of the island.

Snack Cove 2

Snack Cove 2 (FkBe-2) is located on an isthmus between the main island and Cape Horn, a promontory jutting out into the Labrador Sea (Figure 1.2). It is a beautiful location that has a long history of occupation from prehistoric times up until the present. The site is located at the crest of the isthmus and extends down the northwest slope towards North Cove. The other slope of the isthmus also shows signs of past and present human occupation. Historically, the Snack Cove area has been a popular place to conduct fishing expeditions for both cod and salmon, and a nice place for a stopover on your way up or down the coast, hence the name (Davis 1980). The location also provides easy access to the open sea and a good viewpoint for monitoring the sea both to the north and south. In current times, the summer months offer plenty of seabirds, the occasional seal, and many whales occupying the coves. There are also small numbers of caribou that inhabit the island. In the winter months Snack Cove is at the northern boundary of the

seal breeding areas (Pastore 1986). There are accounts of harp seals occupying the sea ice in harbors and coves in the areas just north of Snack Cove as they proceeded along the



Figure 1.2: Aerial Photo of Snack Cove and Bill's Island.

coast during migratory periods (Loring and Cox 1986). There is no reason to think the same thing did not occur in the Porcupine Strand region. There is evidence that some groups, such as the Inuit, occupied Snack Cove in a variety of seasons (Fitzhugh 1986) and this may be the case for earlier Paleoeskimo groups as well.

Dr. William Fitzhugh, of the Arctic Studies Center at the Smithsonian, first noted the Snack Cove 2 site in 1986. Residents of the nearby community of Cartwright who have fishing cabins at Snack Cove brought the site to his attention. During a survey of the area Fitzhugh (1986) discovered a “small Ramah chert station eroding out of a footpath”. He recovered two artifacts at this location: a Ramah chert biface, and a flake of nephrite. He identified the biface as Middle Dorset. Because this site was considered to be a “good arrowhead hunting location” by local residents, and because of the artifact’s provenience on a well-used path, Fitzhugh (1986) determined that the site was a deposit of unwanted lithics, discarded during modern arrowhead collecting activities, and did not warrant further research. In 1992, Dr. Marianne Stopp and Ken Reynolds (1992) revisited Snack Cove 2 and found no further prehistoric cultural material. This seemed to confirm Fitzhugh’s hypothesis.

In 2001, Dr. Lisa Rankin of Memorial University started the Porcupine Strand Archaeological Project in order to conduct a more systematic study of the Porcupine Strand region. As part of this project Dr. Rankin, and a small research team including myself, conducted a survey that revisited Snack Cove. At the Snack Cove 2 site several Ramah chert flakes were once again recovered along the footpath. Test pitting was subsequently done and we recovered over 850 Ramah chert flakes just below the surface

peat at a depth of approximately 5 cm. A partial Ramah chert biface was also recovered.

These finds indicated that Snack Cove 2 was not simply a refuse area for modern arrowhead collecting. Dr. Rankin and I thought that it warranted further research and I subsequently decided to include an excavation of that site in my Master's research in the summer of 2002.

Snack Cove Island West 1

The Snack Cove Island West 1 site (FkBe-5) is located approximately one kilometer due south of Snack Cove 2. It is on the north end of a smaller island, called Bill's Island, which is connected to Huntingdon Island by a tidal basin that can be traversed easily at low tide (Figure 1.2). It has direct access to the open sea and easy access to the same resource base as Snack Cove. There are few visible signs of occupation on the island but it was occupied up until recent historic times (Pardy 1986).

Snack Cove Island West 1 was also first noted by Fitzhugh (1989). He found a "possible Dorset floor surrounded by cobble walls, and a mound...", as well as possible Maritime Archaic structures and a cache or burial feature. Stopp and Reynolds (1992) also revisited this site and only found a "small row of rocks...a rectangular cobble structure with a possible central stone feature... and one small cache on an upper

terrace". The cobble structure is probably the same one that Fitzhugh (1989) recorded. He thought that it might have been a Dorset camp for part of its occupation.

In the summer of 2002 my research team and I revisited Snack Cove Island West

1. We located a circular structure with a central stone feature with a cobble floor on one side. The structure was located on a cobble beach and was not easy to find, because it blended into the larger beach. This may have been the cause for the slight inconsistencies in the two earlier reports. We subsequently excavated the interior of the house and some of its surroundings.

Horse Chops 3

The final site is located on Horse Chops Island. Horse Chops Island 3 (FlBg-3), is situated on the western shore of the island (Figure 1.3). It is facing the Porcupine Strand, which is approximately five kilometers away and easily visible. The site is located in a naturally sheltered cove that rises steeply to the north and east and levels nicely onto an area covered with small brush and berry bushes before it descends down to the beach. To the south are fairly dense trees and shrubs that are easily skirted along the shoreline.

Dr. Marianne Stopp and Ken Reynolds first noted the Horse Chops Island 3 site in 1992 (Stopp and Reynolds 1992). They recovered Ramah chert flakes, brown chert flakes, earthenware sherds (from later historic disturbance) and ground slate sections.

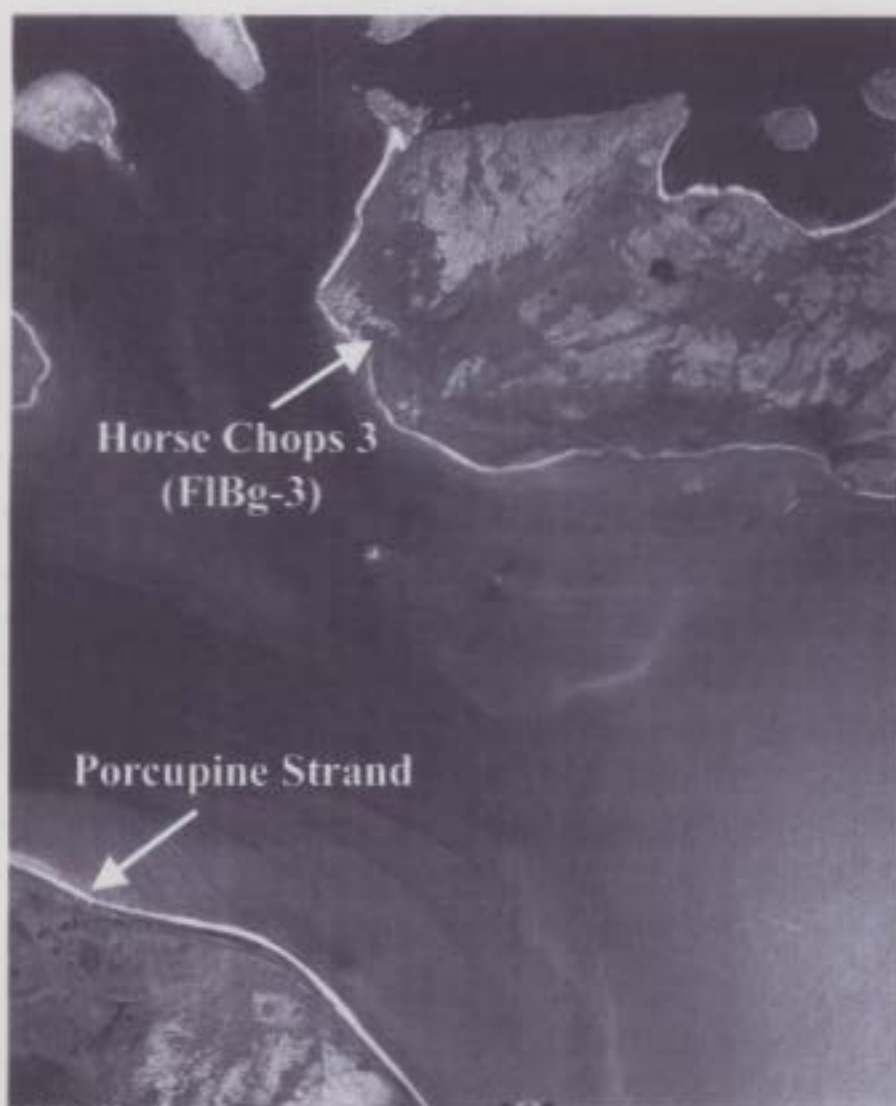


Figure 1.3: Aerial Photo of Horse Chops Island and Porcupine Strand.

They thought it was a campsite location perhaps for the purpose of intercepting caribou crossing to the island from the Porcupine Strand, or nearby Norman's Island. They were able to get one date of 1050 ± 50 BP (Beta 56253) from charcoal recovered at the site

(Stopp and Reynolds 1992, Stopp 1997). No diagnostic artifacts were recovered at that time, but because of the chert flakes, ground slate sections, and radiocarbon date they attributed it to the Dorset culture (Stopp and Reynolds 1992; Stopp 1997).

In 2001 Dr. Rankin, and a small research team including myself, revisited the site and systematically test pitted part of the area. We found no artifacts. In the following summer of 2002, my research team and I again test pitted the area and found evidence of prehistoric occupation.

Research Questions

As individual sites I believe all three of these sites to be interesting and important contributors to the culture history of the region. Small sites, such as these, are often overlooked in favor of larger, more archaeologically visible sites, but they are equally important. Much of prehistoric hunter-gatherer activity was conducted at small, spatially discreet locations. Furthermore, these single-component sites are less obscured by the background noise of multi-component sites related to multiple activities, and therefore often give researchers a more comprehensible view of past activity. An examination of these types of sites is necessary for a fuller understanding of past cultures.

As a set, I believe the three small sites on Huntingdon and Horse Chops Islands will expand our knowledge of cultures in Newfoundland and Labrador. In particular, they will provide evidence of the Middle Dorset culture in a region currently not considered as part of their territory (e.g. Fitzhugh 1976, 1980; Jordan 1986; LeBlanc 2000; Linnamae 1975; Tuck and Fitzhugh 1986). My contribution to the culture history of Southern Labrador is based on one primary research question: What are the implications of a Middle Dorset presence in southern Labrador considering the current models of Middle Dorset population distribution in Newfoundland and Labrador? To answer this question I will first attempt to answer four smaller questions: (1) What do the lithic assemblages from these three sites tell us about their settlement and subsistence patterns? (2) What do the site locations tell us about Middle Dorset settlement and subsistence patterns? (3) What do the lithic raw materials tell us about cultural connections between the island of Newfoundland and Labrador? (4) What implications do the dates I obtained have with regards to population movement and cultural change over time in Newfoundland and Labrador?

What are the implications of a Middle Dorset presence in southern Labrador considering the current models of Middle Dorset population distribution in Newfoundland and Labrador?

The current models of cultural history in Newfoundland and Labrador state that southern Labrador was a relatively resource poor landscape that was mostly unoccupied except for the rare campsite where travelers would stop on their way north or south (Cox 1978; Fitzhugh 1980, 1997; Jordan 1986; Linnaeae 1975). Although it may be true that the main food resource for the Middle Dorset – seals - were not as predictable and abundant in southern Labrador as they were in the north or south (Pastore 1986), there is a growing body of evidence of a substantial Middle Dorset presence in southern Labrador. In her survey of the south Labrador coast, Stopp (1997) found that Late Paleoeskimo sites outnumbered sites from all other time periods. The presence of Middle Dorset groups in Southern Labrador should change current notions of their settlement-subsistence patterns in that region. This should, in turn, affect how future research is conducted in Newfoundland and Labrador.

What do the lithic assemblages from these three sites tell us about the settlement and subsistence patterns of the occupants?

To answer this question I will examine the diagnostic stone tools that were recovered at the sites, as well as the lithic debitage, to assess the types of activities that took place there. Formal tools can be the most useful way of assessing what kinds of activities were conducted at a location. Middle Dorset groups had some very specialized stone tools to meet their subsistence needs, such as harpoon endblades, but lithic debitage can be just as informative concerning general site activity (e.g. Sullivan and Rozen 1985; Seddon 1992; Seeman 1994; Whittaker 1994; Andrefsky 1998). Through this examination I will be able to understand better why these locations were chosen.

What do the site locations tell us about Middle Dorset settlement and subsistence patterns?

Along with the information from the preceding question I will also investigate what the locations themselves can tell me about why the sites were chosen. Information about Middle Dorset economy combined with knowledge of the local resource base and the landscape can tell us much about why a culture chose to inhabit a particular location.

This in turn can inform us about the types of activities that took place at that location, and perhaps the season of occupation.

What do the lithic raw materials tell us about cultural connections with the island of Newfoundland and Labrador?

There are very few good quality lithic sources in Newfoundland and Labrador. An examination of lithic raw materials at a site can tell you where these raw materials originated and the distances traveled to procure them. This information can lead to a better understanding of trade networks, social exchange, and perhaps distances the groups themselves traveled to procure needed materials. I will examine the raw materials found at these three sites and assess the exchange routes I believe the Middle Dorset utilized, as well as the social affinities these sites may have with other groups to the north and south.

What implications do the dates I obtained have in regards to population movement and cultural change over time in Newfoundland and Labrador?

I received three dates from charcoal from two different cultural events at Snack Cove 2. Dr. Marianne Stopp (Stopp and Reynolds 1992) received one other date from charcoal at Horse Chops Island 3. I will put these dates into the larger context of Middle

Dorset population movement and cultural change in Newfoundland and Labrador. I will then examine how this information affects the previous questions, in particular the spread of lithic raw materials.

Organization of Chapters

In this thesis I combine the answers from all of these questions into one cohesive picture of Middle Dorset population distribution in Newfoundland and Labrador. Chapter Two presents the methodology utilized in the survey, excavation, and analysis of Snack Cove 2, as well as the resulting data. Chapter Three presents the methodology utilized in the survey, excavation, and analysis of Snack Cove Island West 1, and its resulting data. Chapter Four presents the methodology utilized in the survey, excavation, and analysis of Horse Chops 3, and its resulting data. Chapter Five contains an analysis of the data resulting from my research at each of the three sites. It also contains different hypotheses that were helpful in my examination of the data. Finally, it contains a synthesis of the data from all three sites, and a brief discussion about Middle Dorset settlement/subsistence patterns. In Chapter Six I conclude with my views on what implications my research has in regards to a Middle Dorset presence in southern

Labrador, and how my hypothesis can be tested. I will also briefly discuss what directions I believe future research on Paleoeskimos in southern Labrador should take.

Chapter Two

Snack Cove 2

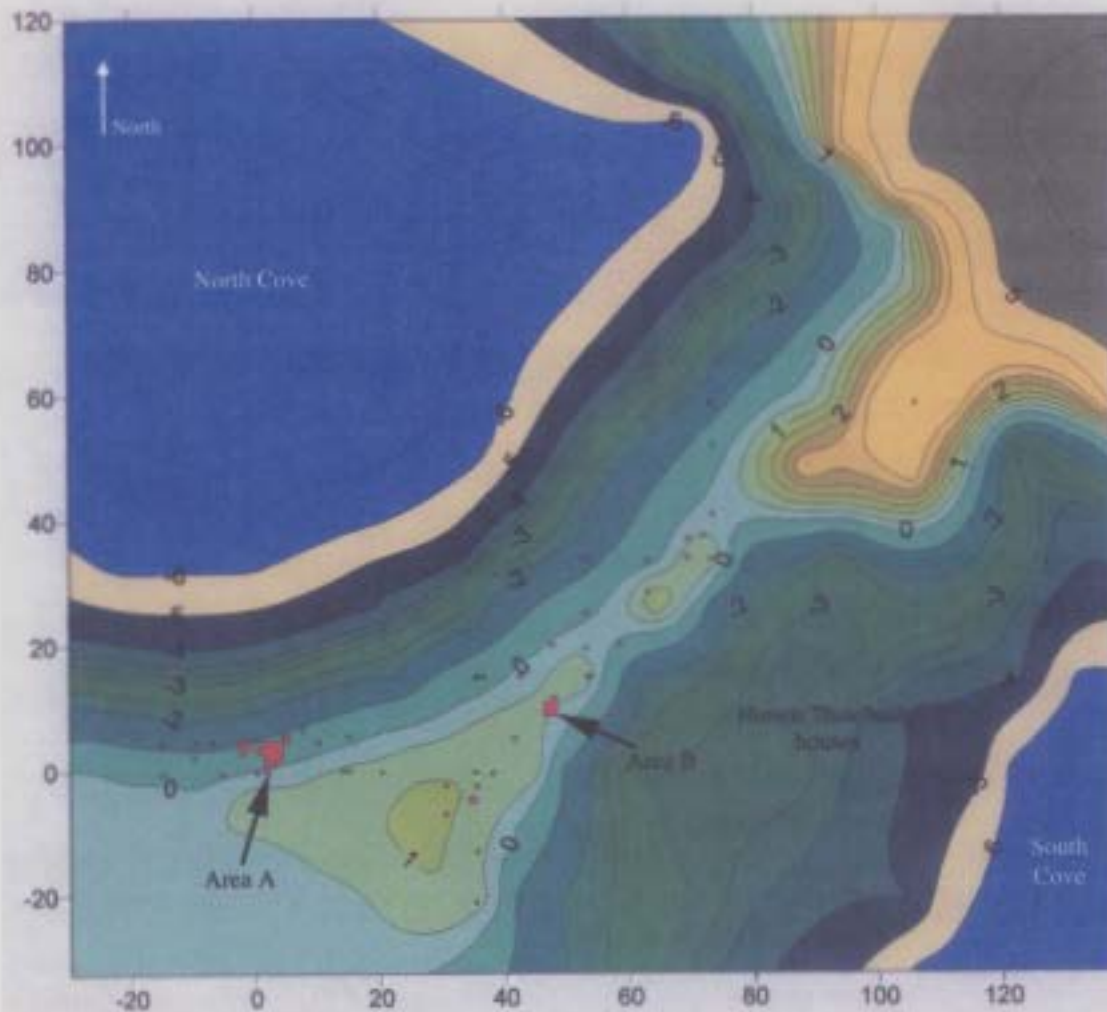


Figure 2.1: Site Map of Snack Cove 2 (FkBe-2). Contour numbers reflect their position relative to original datum point. Scale is represented in meters.

Introduction

The Snack Cove 2 (FkBe-2) site is actually a series of smaller activity areas located on the northwest slope of the isthmus that connects Cape Horn to Huntingdon

Island (Figure 2.1). The first thing we did was to conduct a topographical survey of the area to provide an accurate map of the landscape. Subsequent survey and excavation were then conducted and two primary activity areas were located and investigated. The first area, Area A, (Figure 2.1) was the site first noted by Fitzhugh in 1986, and where Dr. Rankin conducted test pitting in 2001. It is located approximately six meters above current sea level, and is situated on an approximately twenty-degree slope that descends down to North Cove.

The second area, Area B, (Figure 2.1) is located uphill from Area A on a higher terrace near the top of the isthmus ridge. It is approximately seven meters above current sea level.

The test pits scattered across the remaining hillside (Figure 2.1) were looked at in aggregate because of the relative paucity of remains recovered from them. They are considered background scatter, but may represent several different activities, and/or occupations.

Methodology

The primary goal at Area A was to extend the test trench that was opened in 2001 (Rankin 2001) in an attempt to determine the spatial extent of the artifact assemblage,

and locate any activity areas. We created a grid of 1 x 1 m units that encompassed the test trench. We then proceeded to excavate these units following natural or anthropogenic stratigraphy that we encountered and screened the matrix through a quarter-inch mesh. We recorded and mapped the position of all formal tools. The units were further divided into quadrants of 50 x 50 cm and lithic debitage collected and bagged according to quadrant for later assessment of spatial patterning. Charcoal was also carefully collected, recorded, and bagged for possible radiocarbon dating.

Originally, I had planned to open an area of 5 x 5 m surrounding the test trench, but after opening an area of 3 x 3-meters the extent and direction of the lithic concentration seemed apparent. In accordance with this assessment I determined the activity area extended further to the northwest and excavated an additional four 1 x 1m units in that direction (Figure 2.1).

In order to assess if there were other discrete activity areas associated with Area A in the vicinity we excavated one 1 x 1 m unit to the northeast, and two more 1 x 1 m units to the south. In all these additional units the same excavation strategies outlined above were utilized. A total of 16 square meters was excavated at Area A.

Area B was first located in the course of our test pitting activities along the northwest slope of the isthmus (Figure 2.1). A test pit revealed a relatively high number

of flakes compared to other test pits so I thought it necessary to excavate a wider area at that location. In total we excavated five 1 x 1 m units following the same procedures as outlined above with regard to Area A.

All other excavation at Snack Cove 2 consists of a series of 50 x 50 cm test pits covering the northwest slope of the isthmus. This was done to get as complete a view as possible of the cultural activity conducted there. Test pit locations were chosen that would give maximum coverage of the area, taking into account the topography and accumulations of topsoil (Figure 2.1).

After returning from the field, I examined the morphology of all the artifacts recovered from the three areas at Snack Cove 2. The functional and stylistic morphologies of the formal tools were measured and recorded. I also recorded the lithic raw material type of each item recovered in order to assess the source of the material and the distances from the source.

The lithic debitage was divided into three categories for analysis: complete flakes, broken flakes, and debris. Complete flakes are those that have intact margins which can be measured. Broken flakes are those that exhibit flake attributes, such as bulbs of percussion, enlèvement scars, concentric rings caused by percussion or pressure flaking, platforms, and/or obvious feathered margins (see Andrefsky 1998; Whittaker 1994 for

complete discussion of terminology). Debris is defined as shattered lithic fragments that often have jagged margins and display no indications of being purposely created as those mentioned above.

The complete flakes were divided into categories based on raw material, and were counted, measured, weighed, and recorded according to the quadrant from which they were recovered. Length was measured along the axis from the platform to the distal tip. Width was measured at approximately the middle of the flake. Both attributes were measured to the nearest millimeter. Weight was measured on a bar scale for each complete flake and was rounded to the nearest one-tenth of a gram.

The broken flakes were divided into categories based on raw material, and counted. They were weighed and recorded in aggregate according to the quadrant in which they were recovered. If refitting could be done, then those fragments were counted as a single artifact. If a refit could be measured as a complete flake it was included with the other complete flakes.

Lithic debris was divided into categories based on raw material, and was counted, weighed, and recorded in aggregate according to the quadrant in which it was recovered.

Data

Area A

The cultural layer at Area A was found at the interface between an old cobble beach and a shallow layer of peat (Figure 2.2). The test trench from 2001 (Rankin 2001) contained 735 Ramah chert flakes and pieces of debris, as well as one biface fragment. My excavation in that same area uncovered hundreds more. In Figure 2.3 I have recorded the distribution of flake counts according to 50 x 50 cm units. The lithic debitage at Area A consisted of 2197 specimens (flakes and debris) of Ramah chert weighing 1076.3g. It also contained one brown chert flake (from the Cow Head chert group of the Northern Peninsula of Newfoundland), one quartz flake, one chipped slate flake, and one flake of red rhyolite (Table 2.1).

Table 2.1: Frequency and weight of debitage from Area A at Snack Cove 2.

Raw Material	Frequency	Total Weight (g)
Ramah Chert	2197	1076.3g
Newfoundland Chert	1	0.1g
Quartz	1	25.1g
Slate	1	1.7g
Rhyolite	1	3.1g

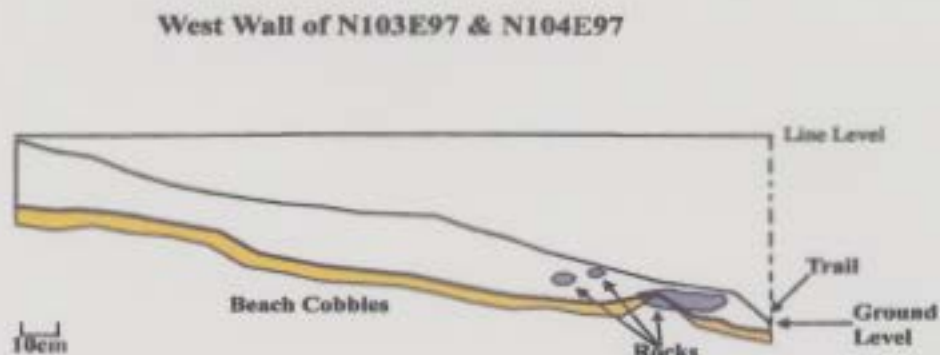


Figure 2.2: The profile of two units at Area A of Snack Cove 2. The cultural layer was found just above the beach cobbles (shown in yellow).

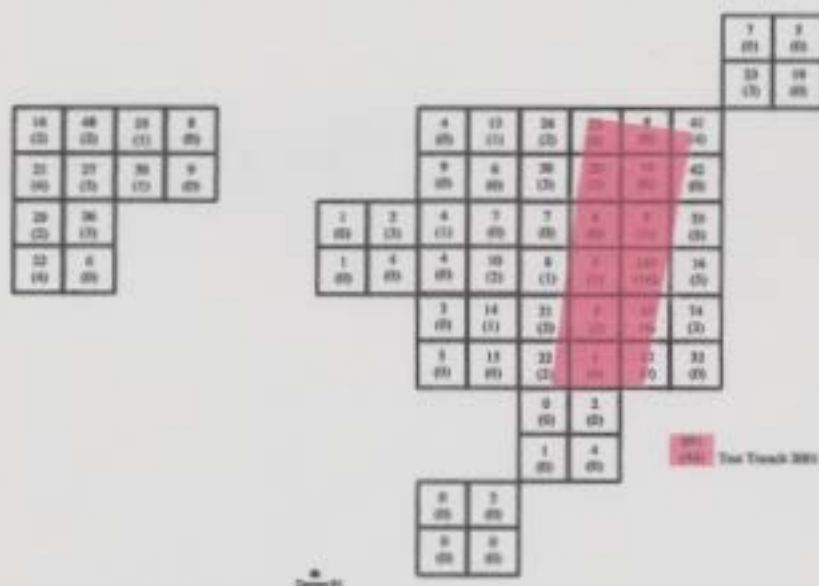


Figure 2.3: Area A flake counts. Each square is 50 x 50 cm. Numbers indicate the sum of complete and broken flakes. Numbers in parenthesis indicate debris count. Numbers in squares containing the 2001 test trench do not include flakes recovered during the excavation of the test trench. That total is indicated in the pink square.

Size analysis, as outlined above, was conducted on the lithic debitage and presented a relatively consistent pattern. Regardless of raw material and length, the flakes were generally thin and light with some outliers (Figure 2.4). Because of the inherent nature of Ramah chert, which is a white translucent material often streaked with black, it is difficult to recognize cortex, but it appeared to be absent from the assemblage.

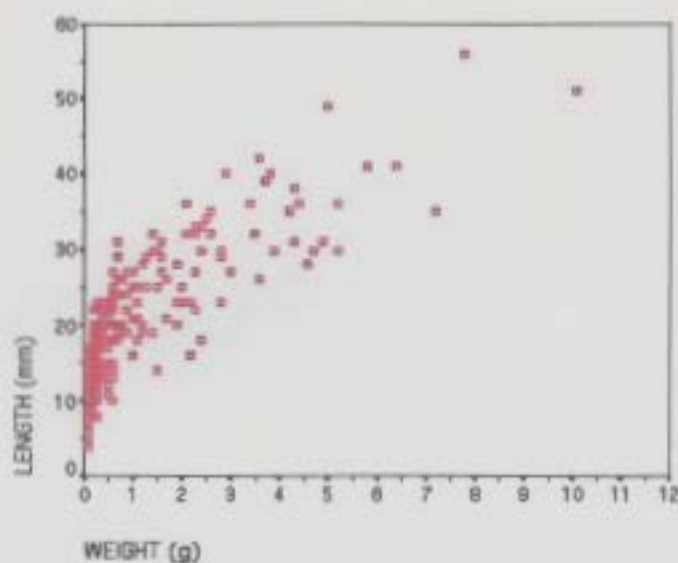


Figure 2.4: Area A length to weight ratios of complete flakes (includes all lithic raw materials; n=471).

The lithic debitage at Area A was composed primarily of complete (21.3%) and broken (72.2%) flakes. Lithic debris made up only 6.5% of the assemblage.

Other than lithic debitage only one complete formal tool (FkBe-2:246) was recovered (Figure 2.5a), at a depth of approximately 5 cm. This is a Ramah chert biface 10.4 cm in length, 3.1 cm wide, 1.0 cm thick and weighing 36.4g.

I received two dates from charcoal in good context with the same cultural layer from which the lithic debitage and Ramah chert biface were recovered. One was an AMS date of 1690 ± 40 BP (Beta 173905), and the other was a radiometric date of 1660 ± 80 BP (Beta 173906).



Figure 2.5: Bifaces from Snack Cove 2 Area A.

Area B

The cultural layer at Area B was again found at the interface between the old cobble beach and a shallow peat layer (Figure 2.6). At Area B we recovered 294 specimens of lithic debitage, including both flakes and debris. As at Area A it was composed almost entirely of complete (29.4%) and broken (65.9%) flakes. Debris (4.8%) made up only a relatively small part of the assemblage. This pattern was consistent regardless of the lithic raw material.

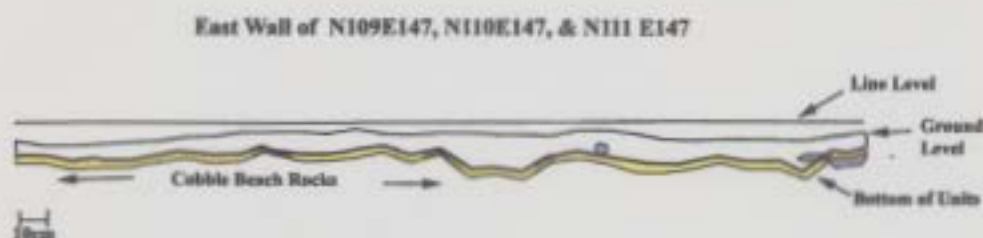


Figure 2.6: The profile of three units at Area B of Snack Cove 2. The cultural layer was found just above the cobble beach rocks (shown in yellow).

Lithic raw material did not influence the types of debitage that were produced at the site. As at Area A, the debitage consisted primarily of small, thin, and lightweight flakes (Figure 2.7) with only a few outliers.

The lithic assemblage differs from Area A in the types of raw materials that were used and the higher quantity of formal tools recovered. 52.4% (n=154) of the lithic debitage was composed of Cow Head chert whose origin is on the island of

Newfoundland. The rest of the debitage was 42.9% (n=126) Ramah chert, 3.0% (n=9) slate, and 1.7% (n=5) quartz (Figure 2.8). Table 2.2 shows the frequency and total weight, according to raw material, of the lithic assemblage from Area B.

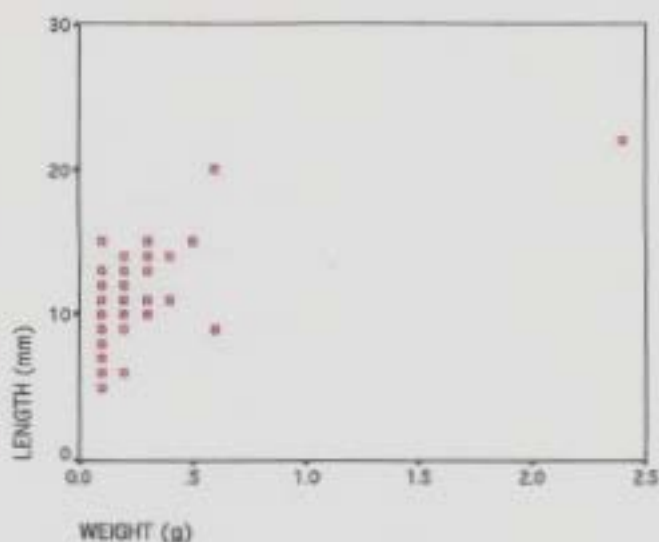


Figure 2.7: Area B length to weight ratios of complete flakes (includes all lithic raw materials; n=87).

Table 2.2: Frequency and weight of debitage from Area B at Snack Cove 2.

Raw Material	Frequency	Total Weight (g)
Ramah Chert	126	27.1g
Newfoundland Chert	154	39.2g
Slate	9	9.7g
Quartz	5	0.8g

Two endblades were recovered from units N111 E147 and N109 E147 (A29 & A36 in Figure 2.11) both made from Ramah chert. Both were bifacially worked, tip-fluted, and triangular in outline. One endblade (FkBe-2:251)(Figure 2.8a) has a concave

base and lacks side notches. It is 23 mm long, 12 mm wide, and 4 mm thick. The other endblade (FkBe-2:253)(Figure 2.8b) has only a slightly concave base and side-notches. It is 24 mm long, 15 mm wide, and 4 mm thick.



Figure 2.8: Middle Dorset endblades from Snack Cove 2 Area B.

There were also three tip-flute spalls recovered from the Area B units. These were all made from Cow Head chert.

Seven endscrapers (Table 2.3) of Newfoundland cherts were recovered from throughout the Area B units (Figure 2.11). All except one have square margins that taper slightly towards the proximal end (Figure 2.9). The one exception, FkBe-2:276 (Figure 2.9f), is similar but more elongated.

Fourteen microblades (Table 2.4) of Newfoundland cherts were recovered from the Area B units (Figure 2.10). Only two of them were complete specimens (Figure 2.10e,m).



Figure 2.9: Endscrapers from Snack Cove 2 Area B.

Table 2.3: Area B endscrapers.

Artifact #	Raw Material	Length(mm)	Width(mm)	Thickness(mm)	Weight(g)
FkBe-2:247	Black/Brown Chert	19	17	4	1.9
FkBe-2:248	Gray Quartzite	21	22	7	4.6
FkBe-2:250	Tan/Brown Chert	16	14	6	1.5
FkBe-2:259	Gray Chert	16	12	6	1.1
FkBe-2:276	Tan/Brown Chert	34	15	9	3.8
FkBe-2:284	Black/Brown Chert	12	20	7	2.2
FkBe-2:287	Tan/Brown Chert	23	17	7	3.4



Figure 2.10: Microblades and core from Snack Cove 2 Area B.

Table 2.4: Area B microblades.

Artifact #	Raw Material	Length(mm)	Width(mm)	Thickness(mm)	Weight(g)
FkBe-2:249*	Green/Tan Chert	30	10	3	0.8
FkBe-2:258	Black/Brown Chert	19	9	2	0.4
FkBe-2:267	Quartz	14	6	2	0.2
FkBe-2:268	Green/Tan Chert	13	19	2	0.4
FkBe-2:270	Translucent Brown Chert	17	7	2	0.3
FkBe-2:271	Ramah Chert	9	6	2	0.2
FkBe-2:275	Brown Chert	15	8	4	0.5
FkBe-2:277	Black Chert	16	12	5	1.1
FkBe-2:278	Tan/Brown Chert	13	7	3	0.3
FkBe-2:288	Green/Tan Chert	16	9	3	0.4
FkBe-2:290*	Quartz	21	7	3	0.5
FkBe-2:293	Brown Chert	11	8	3	0.3
FkBe-2:297	Green/Tan Chert	8	6	2	0.1
FkBe-2:298	Quartz	6	6	2	0.1

* indicates complete microblades



Figure 2.11: Area B artifact distribution.

One standard radiocarbon date (CS5 in Figure 2.11) was obtained from charcoal from Area B in unit N110 E147 in good context with the cultural layer. It dated to 1890 ± 60 BP (Beta 173907).

Test Pits

The remaining artifacts consist of the aggregate assemblage from the various test pits not directly correlated with Areas A and B. The lithic debitage was composed of 32% (n=16) Newfoundland cherts, and the remaining 68% (n=34) was Ramah chert. The debitage was also mainly complete (36.7%, n=18) and broken (57.1%, n=29) flakes with only a small proportion of debris (6.1%, n=3). The size analysis was also consistent with the other areas in that it was made up of primarily small, thin, lightweight flakes.



Figure 2.12: Groswater endblade from a Snack Cove 2 test pit.

One Groswater type endblade (Figure 2.12) was recovered from unit N95 E134 made of a gray and tan Cow Head chert. It measures 34 mm in length, 18 mm wide, and 5 mm thick. It has bilateral side-notching and a large box-shaped base that is diagnostically Groswater. In that same unit, seven severely charred lamp fragments were also recovered, although not enough to determine the dimensions or shape of the lamp.

Chapter Three

Snack Cove Island West 1

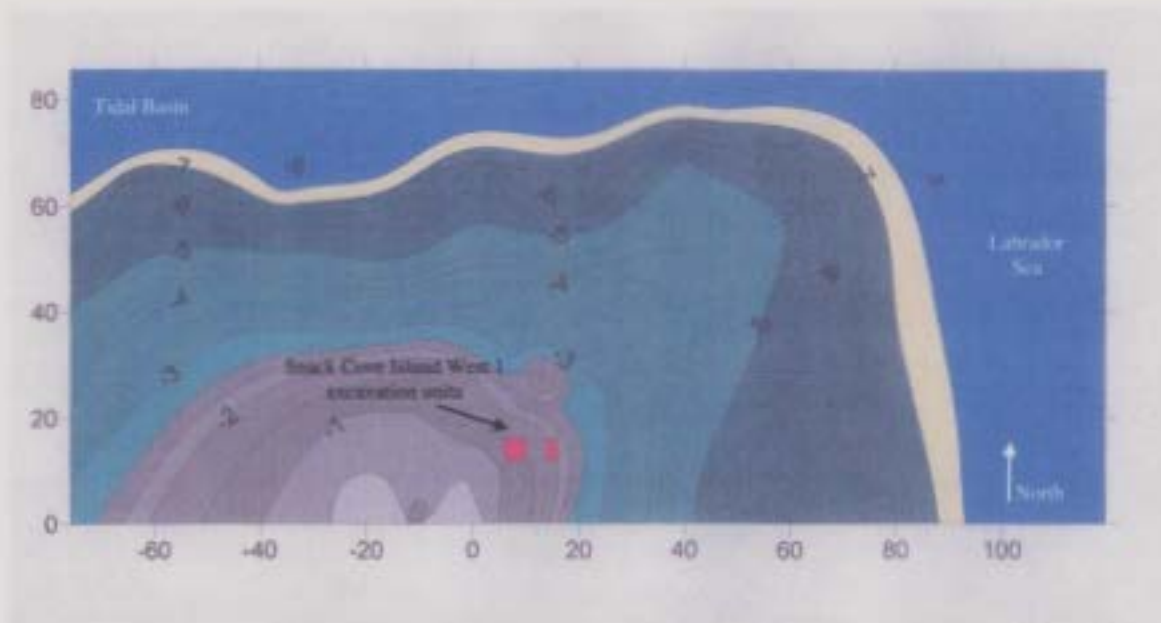


Figure 3.1: Site map of Snack Cove Island West 1 (FkBe-5). Contour numbers reflect their position relative to original datum point.

Introduction

Snack Cove Island West 1 (FkBe-5) is located on an island called Bill's Island just off the east coast of Huntingdon Island. A tidal basin, which is easily traversed at low tide, separates it from Huntingdon Island. It is approximately a 25-minute walk across the tidal basin from Snack Cove. The site itself is located on a cobble beach that spans much of the northeastern tip of the island (Figure 3.1). There is direct access to the Labrador Sea.

Methodology

The first thing we did at the Snack Cove Island West 1 (FkBe-5) site was establish a datum point and map the topography of the northeast corner of Bill's island (Figure 3.1). We then created a grid of 2 x 2 m units that encompassed the structure located by Fitzhugh in 1987 (1989) and revisited by Stopp and Reynolds in 1992. The grid was also extended beyond the structure in case a midden was discovered.

The stone walls and the central stone feature were mapped (Figure 3.2) and the interior of the structure was subsequently excavated. Because the structure is located on a cobble beach this involved the removal of cobbles and boulders to a depth of approximately 1.5 m. At this depth the boulders became too large to move.

The provenance of the artifacts was recorded, including information about where they were found in each unit and their depth from the surface. The artifacts were then collected and bagged for later analysis.

After returning from the field, I examined the morphology of all the artifacts recovered from Snack Cove Island West 1. The functional and stylistic typology of the formal tools were measured and recorded. I also recorded the lithic raw material of each item recovered in order to assess the source and the distances from the material source.

The lithic debitage was divided into three categories for analysis; complete flakes, broken flakes, and debris. Lithic analysis was conducted in the same manner as described in Chapter Two.

Data

The structure at Snack Cove Island West 1 is approximately 8 m above sea level and is roughly circular in shape with an interior diameter of approximately 4m (Figure 3.2). It has cobble walls an average of approximately 50 cm in height and over a meter wide in some places. The walls appear to be intact, with the exception of the east wall, which is more ephemeral. It also appears to have a short entrance passage in the northeast wall. There is a series of flat stones that were arranged linearly along the east/west axis of the structure, which effectively divides the house into two main compartments. The southern compartment is made up of smaller cobbles that have been arranged to form a level surface. The northern compartment was not leveled and was made up of larger boulders. The central stone feature does not have any obvious hearth structures although it appears that the stones directly in the middle of the structure may have been a collapsed box-shaped hearth. No charcoal or organics were found at this site.

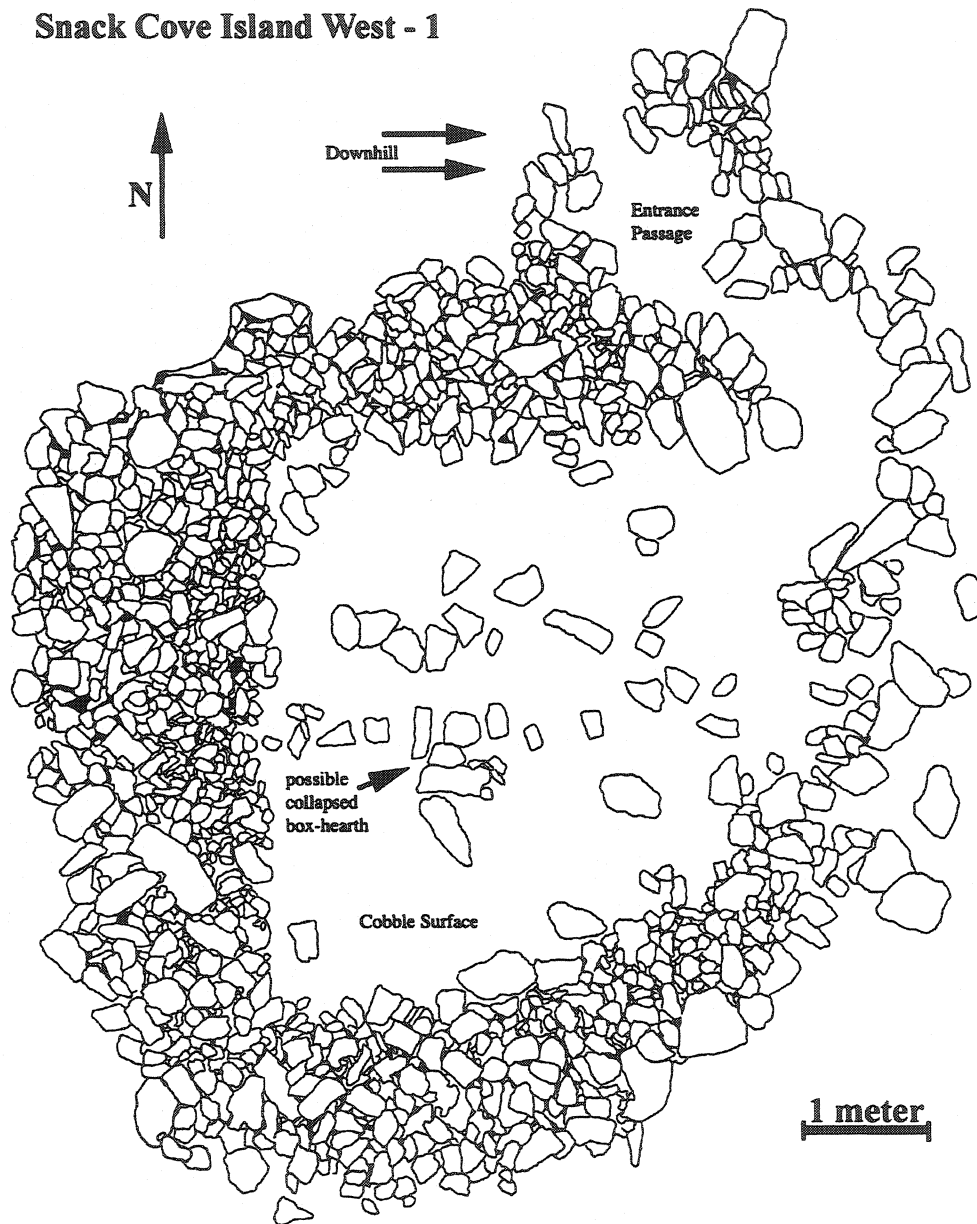
Snack Cove Island West - 1

Figure 3.2: Structure at Snack Cove Island West 1.



Figure 3.3: Two artifacts from Snack Cove Island West 1.

Other than the lithic debitage only two artifacts were recovered at Snack Cove Island West 1 (Figure 3.3). The first is a biface fragment (FkBe-5:1) made of brown and gray chert that is macroscopically similar to many of the Cow Head cherts (Figure 3.3a). Microscopic examination of the biface fragment revealed radiolari that are commonly found in Newfoundland Cow Head cherts. It appears to have shoulders, but both the stem and distal end are missing. The second is a microblade core (FkBe-5:5) made of a smoky brown quartz (Figure 3.3b). Both were recovered from the northwest unit of the

structure's interior close to the linear arrangement of stones rather than the northern wall at a depth of 30-35 cm.

Lithic debitage was scarce as well. A total of 32 pieces of lithic debitage was recovered. It is composed of 1 complete flake, 29 broken flakes, and 2 pieces of debris. The complete flake was made of a coarse, green chert and the rest of the assemblage was the same smoky brown quartz as the microblade core. None of the debitage specimens resembled the material of the biface fragment. All of the lithic debitage was found adjacent to the linear arrangement of stones in the southwestern interior of the structure.

The paucity of artifacts recovered at this site may be the result of their falling through cracks in the cobble matrix of the site. The depths of the artifacts that were recovered suggest that they fell through the cracks to an appreciable depth. It is very possible that other artifacts fell through the cracks to a depth at which we were unable to recover them.

Chapter Four

Horse Chops Island 3

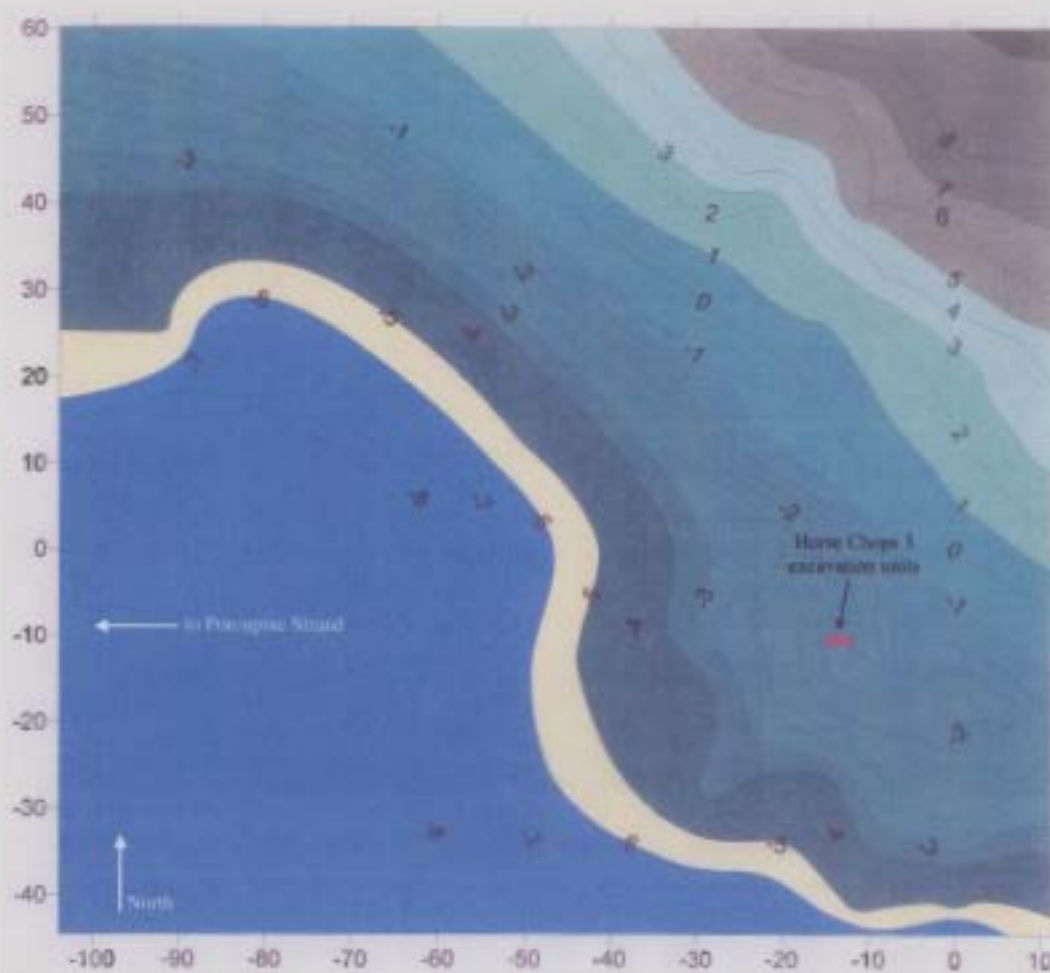


Figure 4.1: Site map of Horse Chops 3 (FIBg-3). Contour numbers reflect their position relative to the original datum point.

Introduction

Horse Chops Island 3 (FIBg-3) is located on the western coast of Horse Chops Island adjacent to the Porcupine Strand, which is approximately five kilometers away and

easily visible. It is on a gentle slope that is naturally sheltered on three sides by a sharply rising hillside, and has direct access to the water. The first thing we did at that site was to conduct a topographic survey of the site to create a map of the area (Figure 4.1).

Methodology

After surveying the area we conducted systematic test pitting, starting near the coast and working our way up the slope. A few of the test pits contained small amounts of Ramah chert debitage. Eventually, at a location almost directly in the center of the area we recovered a heavy concentration of lithic debitage, charcoal, and mussel shells. We were nearing the end of the field season, so I decided to concentrate my team's effort at that location and forego any further test pitting. We opened three 1 x 1 m units following any natural or cultural stratigraphy (Figure 4.2). We collected and recorded debitage in 50 x 50 cm quadrants within the larger units. Concentrations of charcoal and mussel shells were also collected for dating and analysis. We excavated until we reached a sterile sandy layer, just below the cultural material.

After returning from the field, I examined the artifacts recovered from Horse Chops 3. The functional and stylistic morphology of the formal tools were measured

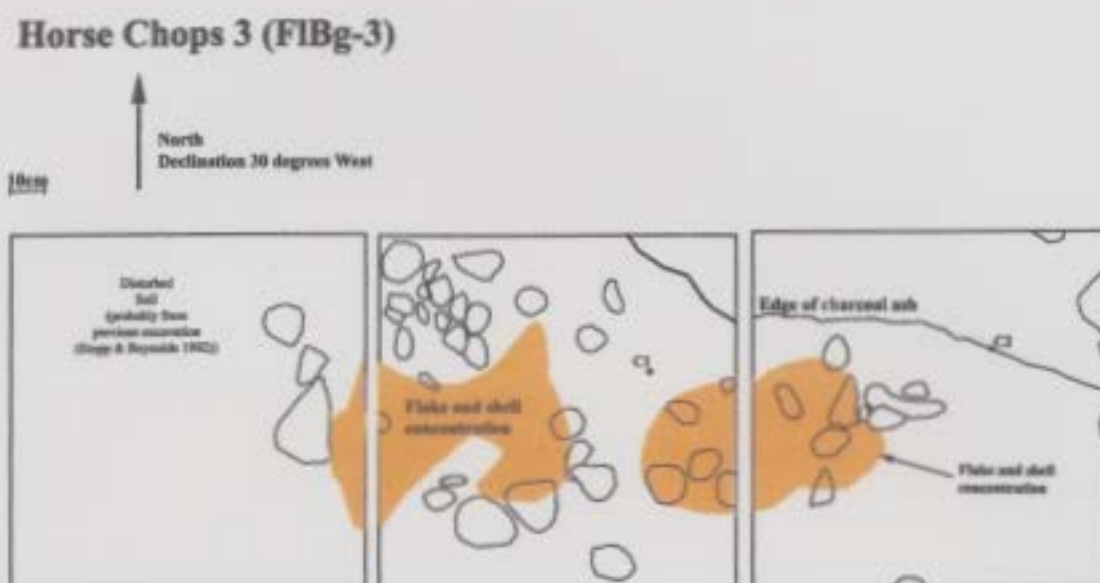


Figure 4.2: Excavation units at Horse Chops 3.

and recorded. I also recorded the lithic raw materials of each item recovered in order to assess their source and the distances from their material sources.

The lithic debitage was divided into three categories for analysis: complete flakes, broken flakes, and debris. Lithic analysis was conducted in the same manner as described in Chapter Two.

Data

The cultural material at Horse Chops 3 was found primarily in association with the hearth feature, at an elevation of approximately 7.5 m above sea level. Unfortunately, time did not permit us to map the stratigraphy. Primarily, it consisted of a thin peat layer

just above a small amount of historic ceramic material, mostly pearlware (Blair Temple personal communication). Just below the historic material there was a prehistoric cultural layer composed of concentrations of lithic debitage, mostly burnt, and mussel shells mixed with charcoal contained by cobble stones that were culturally placed and probably collected from the nearby beach. Artifacts were recovered between a depth of 13 and 20 cm. There was a denser charcoal layer, approximately 5-7 cm thick that was under the artifact assemblage (Figure 4.3). Below the charcoal layer was a sterile sandy beach.



Figure 4.3: Cultural layers from the excavation at Horse Chops 3.

The artifact assemblage was composed, mostly, of lithic debitage that appeared to either have been thrown into the fire as refuse, or deliberately heat-treated for manufacturing purposes. It was almost exclusively Ramah chert debitage (94.1%, n=112) weighing a total of 43.0 g, with a small amount of Newfoundland Cow Head chert (0.8%, n=1) weighing 0.1 g, and quartzite (5.1%, n=6) weighing 1.4 g (Table 4.1). The morphology of the flakes followed the same pattern that was found at the other sites: small, thin, and lightweight (Figure 4.4).

Table 4.1: Frequency and weight of lithic debitage from Horse Chops 3.

Raw Material	Frequency	Weight (g)
Ramah chert	112	43.0g
Newfoundland chert	1	0.1g
Quartzite	6	1.4g

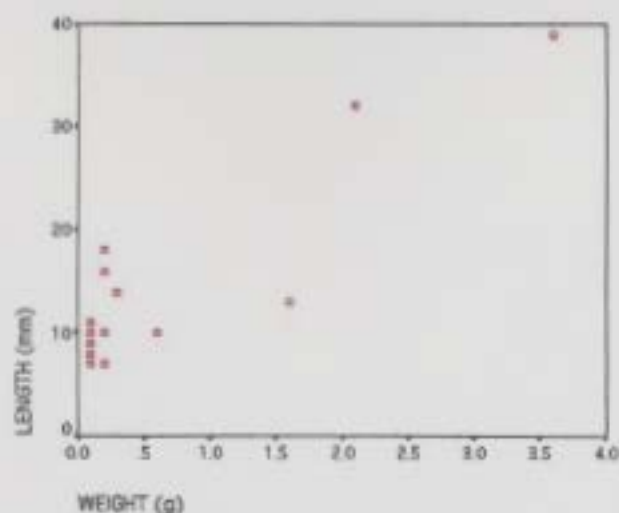


Figure 4.4: The morphology of complete flakes at Horse Chops 3.

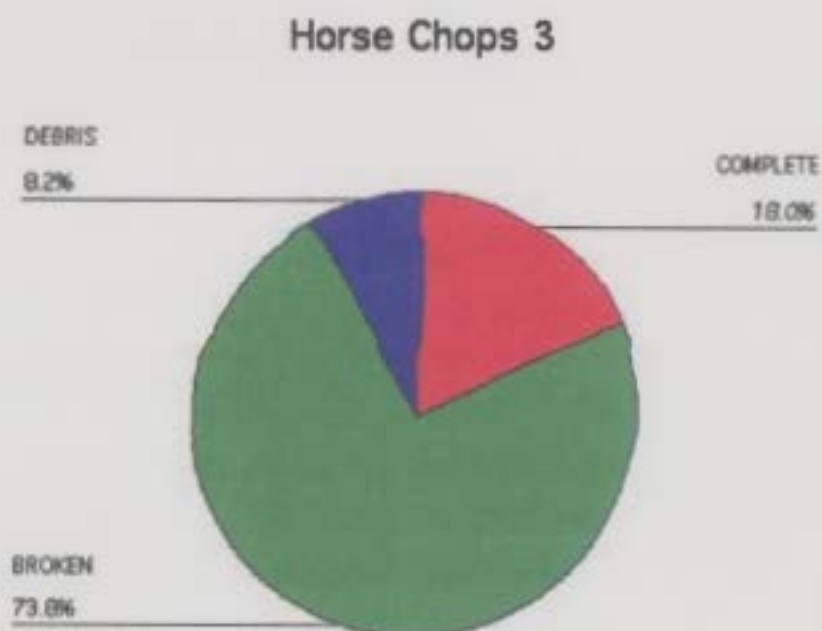


Figure 4.5: Debitage types at Horse Chops 3.

Although debris constituted a higher percentage of the assemblage at Horse Chops 3 than the Snack Cove sites, it still made up the smallest percentage of the debitage types (Figure 4.5). Complete and broken flakes comprised the largest percentages of the assemblage.

The formal artifacts were fragmentary, and contained no specific culturally diagnostic attributes, although the single Ramah chert microblade fragment (Figure 4.6c) suggests a paleoeskimo origin. The other formal artifacts – including two biface fragments – were manufactured from Ramah chert as well. That includes two biface

fragments. One appears to be the base of an ovate knife (Figure 4.6d). It has no shoulders, or notches, and has been broken just above where the margins start to constrict towards the distal end. It appears to have been discarded into the fire and is burnt. The other biface fragment also appears to be the proximal end of a crudely manufactured tool (Figure 4.6a). It has a platform and appears to have been broken during manufacture. It does not show signs of having been exposed to fire. It appears to be a more expedient type of tool form.



Figure 4.6: Formal artifacts from Horse Chops 3 (FIBg-3).

Another expedient tool type was also recovered: a large, Ramah chert, utilized flake (Figure 4.6e). It displays many flake scars, which suggests that it may have been a failed attempt at manufacturing a more formal tool. It has been resharpened on one edge and was probably used as a cutting implement. It does not show signs of heat exposure.

The last formal tool is the distal tip of a unifacial endblade (Figure 4.6b). It is also made from Ramah chert and does not show signs of heat exposure.

The site probably extends beyond the units excavated, and may be as large as 100 m². Several of the other test pits contained small amounts of Ramah chert debitage extending in all directions from the units excavated, but no other major concentrations were indicated.

Chapter Five

Analysis and Discussion

Prior to the research of the Labrador South Coastal Survey in 1991 and 1992 (Stopp 1997), the southern coast of Labrador, from the Strait of Belle Isle north to Hamilton Inlet, was thought to have been relatively uninhabited by Paleoeskimo cultures. One of these cultures, the Middle Dorset, is discussed almost exclusively in the contexts of Northern Labrador and the island of Newfoundland. They were not believed to have occupied the intervening territory, except perhaps to pass through during their migration south. My research in the Porcupine Strand region is adding to a growing body of evidence that suggests otherwise. This chapter is an analysis and discussion of my research of three small sites in that region: Snack Cove 2 (FkBe-2), Snack Cove Island West 1 (FkBe-5), and Horse Chops 3 (FIBg-3).

Interpreting Snack Cove 2

Although it appears Snack Cove 2 was an area of repeated activity for centuries, my research concentrated on two of the larger lithic concentrations. The first, Area A, is the location of the original artifact finds by Fitzhugh in 1986, and where Rankin

conducted test pitting in 2001. The second lithic concentration, Area B, was found during the course of my research at Snack Cove. While the artifact assemblage at Area B is unmistakably Middle Dorset, Area A's assemblage is not as certain.

I will first discuss the implications that the Middle Dorset assemblage from Area B has with regards to their settlement-subsistence patterns in Newfoundland and Labrador. Secondly, I will discuss how the later lithic concentration at Area A differs from Area B and some of the possible factors that could explain this difference.

Area B: Middle Dorset at Snack Cove 2

Area B at Snack Cove 2, with its diagnostic Middle Dorset artifacts (Figures 5.1 and 5.2), and a radiocarbon date of 1890 ± 60 BP (Beta 173907), places the occupying group only a few generations from the time of initial expansion by Middle Dorset groups onto the island of Newfoundland (ca. 2000 BP) (Renouf and Murray 1999a). Once the Middle Dorset reached Newfoundland, many researchers believe they quickly became isolated from their northern kin (Cox 1978; Fitzhugh 1980, 1997; Jordan 1986; Linnamae 1975). Research conducted by Stopp (1997) and Rankin (2001, 2002), as well as my own research, is beginning to cast some doubt on this hypothesis, as well as many of the axioms that current theories of Middle Dorset settlement patterns are based upon.



Figure 5.1: Middle Dorset endblades.



Figure 5.2: Middle Dorset endscrapers.

Recent research suggests there is a strong correlation between lithic raw material availability and settlement patterns (e.g. Andrefsky 1994; Bamforth 1986; Jones et al. 2003). Some have even suggested that settlement configurations cannot be validly examined without first considering the availability of raw materials (Andrefsky 1994). The time and energy that are needed for the procurement of lithic raw materials, whether through trade or direct acquisition, would necessarily influence the scheduling of seasonal activities. The lithic raw materials recovered from Area B at Snack Cove 2 indicate a settlement pattern that either included visits to Newfoundland chert sources, or brought the occupants of Snack Cove 2 into regular contact with other groups that had

access to those sources. Taking into account the Middle Dorset's intense focus on harp seals (Pastore 1986; Renouf and Murray 1999a; Tuck and Fitzhugh 1986), I believe the former is more likely. Lithic procurement in Newfoundland may have been part of an embedded subsistence strategy (Binford 1979; Seeman 1994). As they traveled south to take advantage of the large herds of migrating harp seals that breed and whelp on the pack ice in the Gulf of St. Lawrence, and just north of the island (Pastore 1986; Sergent 1965), they procured material to meet their anticipated needs.

For a highly mobile population, as the Middle Dorset are believed to have been (Fitzhugh 1976; Linnamae 1975; Maxwell 1984; Tuck 1976), it makes sense that they would have taken advantage of high quality, local, lithic materials when available and gear up for the next stage of their seasonal round. This would be reflected in the archaeological record. The raw materials used for tool manufacturing, and left behind as debitage, would reflect lithic procurement strategies (Andrefsky 1994; Bamforth 1986). At the very least, the Snack Cove Middle Dorset would have needed to adjust their mobility strategies to encompass trade with northern groups to procure Ramah chert, and with southern groups for Newfoundland cherts. At most, they traveled very long distances between, and possibly beyond, known lithic sources.

If the Southern Labrador Middle Dorset groups did not have direct access to needed chert sources, then the group from Area B at Snack Cove 2 must have exchanged raw materials with Northern Labrador, and Newfoundland, groups (Cox 1978; Fitzhugh 1997; Loring 2002; Odess 2002). If this were the case, their trading locations can be considered, in effect, lithic sources. If such an exchange network existed, or the Area B Middle Dorset had direct access to both Newfoundland and Ramah chert, what could explain the subsequent change to almost exclusive use of Ramah chert as found at Area A 100 to 300 years later?

Chi-square tests show that the raw material change has a chi-square value of 1279.124 at a significance level of 0.001 at one degree of freedom. This almost completely negates the role of chance in the raw material frequencies between Area A and B. There are two plausible explanations that could explain such a change. The first is that the culture group occupying Snack Cove 2 changed, and they had a different settlement-subsistence pattern than that of the Middle Dorset culture in southern Labrador. The dates associated with Area A, 1690 ± 40 BP (Beta 173905) and 1660 ± 80 BP (Beta 173906), are within the time range of Recent Indian occupation in southern Labrador. It is possible that Recent Indians expanded their subsistence activity to include outer island locations, and that Area A is the evidence of such activity.

The other explanation is that Area A is the result of a continuous presence of Middle Dorset groups at Snack Cove 2, and the change in the lithic assemblage reflects other factors. The following will be the analysis and discussion of both of these explanations, and why I believe that the latter is the stronger of the two.

Area A: Recent Indian Hypothesis

In the one to three centuries that separate Area B (1890 ± 60 BP) from Area A (1660 ± 80 BP), other cultural groups, such as the Recent Indians, whose culture is contemporaneous with the Middle Dorset, may have expanded their territories into outer coastal environments in the Porcupine Strand region. To date there is no direct evidence of this. There does appear to be an influx of Recent Indian Groups, such as the Daniel Rattle and Point Revenge cultures in the region that lasted from ca. 2000 – 400 BP (Nagle 1978; Loring 2002; Stopp 1997). They have been found throughout the Hamilton Inlet region (Nagle 1978; Fitzhugh 1986), and a few sites have been located in the Porcupine Strand and Sandwich Bay regions (Stopp 1997). They are also well known to the north of Hamilton Inlet near Okak, Labrador (Cox 1978). Both of these cultures used Ramah chert almost exclusively. If Area A is a Recent Indian site, then what caused the Middle Dorset to abandon the area?

The Middle Dorset's narrow subsistence focus on harp seals would make them highly vulnerable to environmental fluctuations that had direct influence on the seal population (Tuck and Pastore 1985). The position of seal herds is dependent on environmental factors, such as the position and extent of sea ice that they need for breeding and whelping (Pastore 1986; Sergent 1965; Woolett et al. 2000). When these environmental factors fluctuate, seal hunting is less predictable and may lead to hardships and necessary changes in Middle Dorset demographics and subsistence strategies (Tuck and Pastore 1985). If this occurred for a number of seasons, the result may have been a withdrawal from the southern coast of Labrador into regions where resource predictability was higher, such as the island of Newfoundland and Northern Labrador. These changing demographics may have left territory abandoned and open to an influx of other cultures.

If the Middle Dorset in Southern Labrador lost access to that region and its resources through abandonment, and shifted their focus to Newfoundland, then they would have been effectively cut off from their northern kin. Trade and subsistence routes that brought them in contact with each other, and strengthened cultural connections, may have been completely severed. A situation like this could easily lead to the isolation of Middle Dorset groups in Newfoundland from their counterparts in the north. A lack of

cultural exchange such as this, may have led to the differences in material culture that are often identified as a result of isolation of Middle Dorset culture on the island of Newfoundland (Cox 1978; Fitzhugh 1980, 1997; Jordan 1986; Linnamae 1975; LeBlanc 2000).

While it does appear that Recent Indians had a subsistence-settlement pattern that allowed them to take advantage of a wider range of resources than the Middle Dorset, and therefore were better suited to cope with environmental change, the Recent Indian cultures have never been found in outer island locations and seem to prefer inner bays and coastlines where they have access to more diverse resources, both maritime and terrestrial (Nagle 1978; Stopp 1997). However, outer island locations, and coastlines with open access to the sea, appear to be favored heavily by the Middle Dorset throughout Newfoundland and Labrador.

Area A: Middle Dorset Hypothesis

There are a few lines of evidence that point towards a Middle Dorset origin for Area A at Snack Cove 2. First of all, the Middle Dorset had access to Ramah chert at a time when the Middle Dorset culture was prevalent at its source, and there is evidence that Middle Dorset groups occupied territories between Ramah chert sources

and Snack Cove (e.g. Cox 1977, 1978; Fitzhugh 1976; McGhee 1990; Nagle 1986).

Secondly, the outer coastal location of Snack Cove 2 fits better into Middle Dorset settlement-subsistence patterns than that of Recent Indians. Finally, there is artifact evidence, and radiocarbon dates, that point towards the Middle Dorset.

In 1986, Fitzhugh recovered two artifacts at the surface of Area A: a Ramah chert biface and a flake of nephrite. He identified the biface as Middle Dorset. I examined the biface at the Newfoundland Museum and found it less conclusive, but it could easily fit into a Middle Dorset assemblage. The artifact that I am more confident of is a Ramah chert microblade fragment. While this is not a diagnostic Middle Dorset artifact it is diagnostically Paleoeskimo. These artifacts, in conjunction with the radiocarbon dates of 1690 ± 40 BP (Beta 173905) and 1660 ± 80 BP (Beta 173906) (right in the heart of Middle Dorset occupation in Northern Labrador and the island of Newfoundland), are compelling evidence of Middle Dorset activity at Area A.

If Area A is a later occupation of a Middle Dorset group at Snack Cove 2, there are several factors that could have produced the change in lithic material from predominantly Newfoundland cherts at Area B, to almost exclusive use of Ramah chert at Area A. Firstly, if there was a change in the availability of harp seals in Southern Labrador and Newfoundland, then Middle Dorset groups on the southern coast of

Labrador may have decided that their needs, in the face of unpredictable resources, would be better met with stronger alliances in the north, rather than to the south. Their material culture would reflect that change. In the case of Southern Labrador Middle Dorset groups, this may have exhibited itself as a heavier reliance on northern chert sources, in this case, the Ramah chert group in the Ramah Bay region. It is highly speculative to assume such a culture change from this small collection, but it is possible that Area A at Snack Cove 2 may reflect activity by a Northern Middle Dorset group.

Another explanation is that the change in lithic raw material at Snack Cove 2 simply reflects a different stage of a Middle Dorset seasonal round along the Labrador coast. Changes in direction of travel because of seasonal subsistence strategies may have a direct correlation to changes in the frequencies of lithic raw materials that were utilized (Jones et al. 2003).

If the Middle Dorset groups at Snack Cove 2 were moving between sources of lithic material, then Area A could represent the southern leg of their seasonal migration. If the last lithic source that they visited was a trade location with groups from the north, then that would be reflected in the lithic assemblage. The fact that the assemblage is almost exclusively small flakes of Ramah chert, and that they are a long distance from their source, suggest to me southerly movement. If they were traveling between areas of

high quality lithic materials that were easily accessible in Newfoundland and high quality Ramah chert in the north, then the lack of Newfoundland cherts at Area A may be the result of distance decay, which states that as distance from a raw material source increases, the frequency of that raw material in the archaeological record will decrease (Bamforth 1986; Jones et al. 2003; Nagle 1986).

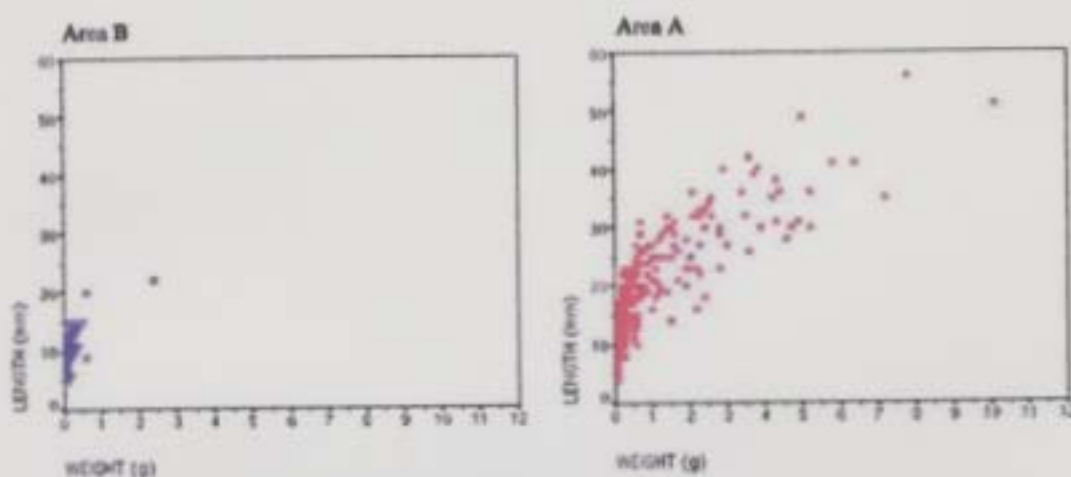


Figure 5.3: Length to weight ratios of complete flakes from Snack Cove 2.

The frequency of lithic materials, and the morphology of flakes, change in relation to the distance from raw material sources (Andrefsky 1994; Bamforth 1986; Jones et al. 2003; Kuhn 1989). As distance from a source increases, the frequency of lithic debitage procured from that source decreases. The morphology of flakes also changes with distance. As distance increases, flake attributes change from large, relatively heavy flakes, which are often associated with primary and secondary

reduction strategies, to small, lighter flakes, that are associated with finishing stages of tool manufacture (Andrefsky 1994; Bamforth 1986; Kuhn 1989; Magne 1989; Seddon 1992). The flakes found at Area A are over 99% Ramah chert and are primarily small, thin, lightweight flakes (Figure 5.3). This implies that tool manufacture at this site primarily involved finishing and retouch, and that the source of Ramah chert for the occupying group at Area A was a substantial distance away.

Depending upon whether the Ramah chert was acquired from trade or direct procurement, the distance from Newfoundland chert sources to Ramah chert sources, and back to Snack Cove, could be anywhere from 500-600 km, to as much as 1900 km (Figure 5.4). The latter seems an excessive distance to travel throughout the course of a year, so I believe that the Ramah chert at Area A was probably procured through trade with Middle Dorset populations living in Northern Labrador.

Finally, the change in lithic material from Area B to Area A may reflect a different type of activity for which the Middle Dorset used Ramah chert exclusively. Different activities leave different artifact signatures in the archaeological record. Close examination of debitage morphology can give us general ideas of site activity, and in some cases very specific ones (Andrefsky 1994; Binford 1978; Bradbury and Carr 1999; Kuhn 1989; Magne 1989; Seddon 1992).

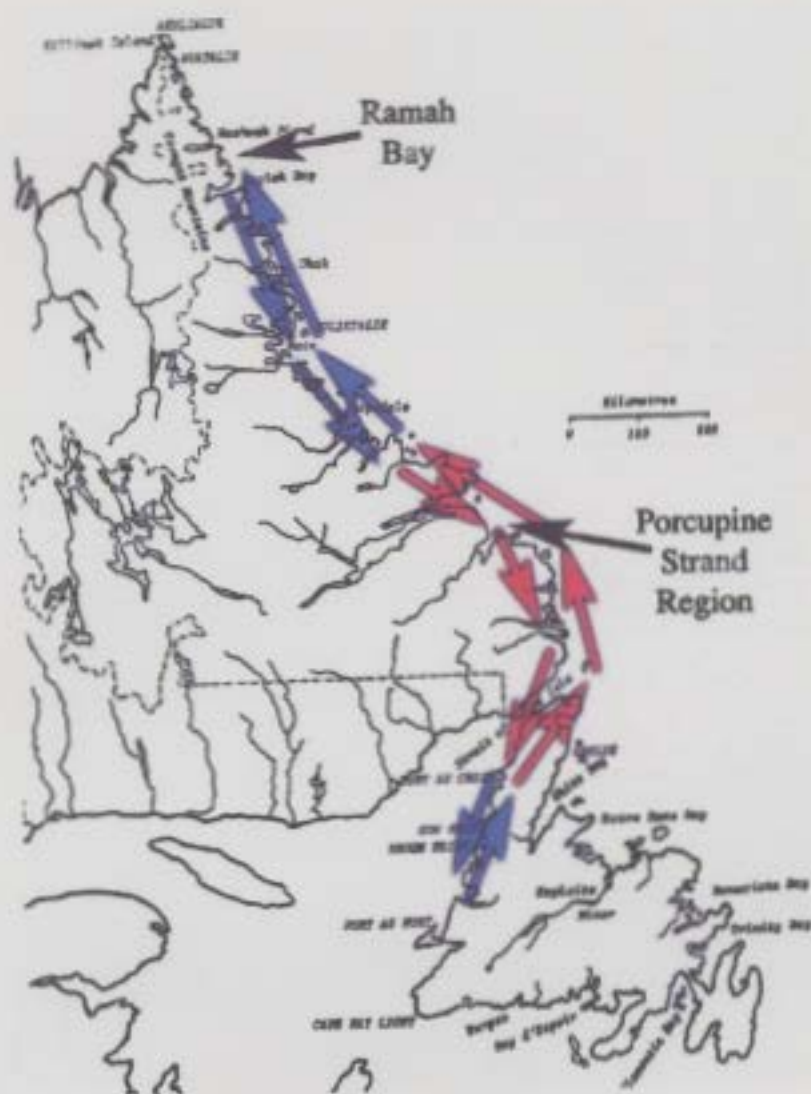


Figure 5.4: Map of possible migrations of Snack Cove Middle Dorset group. (Red arrows alone indicate hypothesized minimum distance of travel. Blue and red arrows together indicate maximum distance.)

Excavation at Area A did not reveal any patterning in the lithics deposited at that location except in a broad sense. The amount of lithic material deposited indicates a short, but intense, episode of lithic reduction. The morphology of the complete flakes (Figure 5.3) recovered from Area A indicates that this activity consisted mainly of final

reduction of tools and edge retouch. The percentage of the lithic debitage that did not show evidence of being purposefully created (debris) was very small (Table 5.1). This is an indication of tool production rather than core reduction. Core reduction often creates more debris than other types of tool reduction (Seeman 1994; Sullivan and Rozen 1985). A similar pattern was also found at Area B (Table 5.1).

Table 5.1: Types of lithic debitage listed by site (for definitions of debitage types see Chapter 2).

Sites	Complete flakes (%)	Broken flakes (%)	Debris (%)
Snack Cove 2 Area A	21.3	72.2	6.5
Snack Cove 2 Area B	29.4	65.9	4.8
Snack Cove 2 Area C	36.7	57.1	6.1
Snack Cove Island West 1	3.1	90.6	6.3
Horse Chops 3	18.0	73.8	8.2

The examination of flake to debris ratios, in relation to the percentage of lithic artifacts that are cores, can inform us about types of site activity. A high percentage of cores and complete flakes in an assemblage indicate that core reduction was the main lithic reduction strategy. If there is a low percentage of cores and still a high percentage of complete flakes, then the indication is that tool production was the primary lithic reduction strategy (Sullivan and Rozen 1985). Table 5.1 indicates that at all three areas of

Snack Cove 2 the frequency of complete flakes is much larger than that of debris. Broken flakes make up the largest percentage of the lithic debitage. Because of their provenance on a layer of beach cobbles, breakage could easily be attributable to falling on the rocks or post-depositional trampling.

The fact that flakes make up the bulk of the assemblage, that there is a low frequency of debris, and that there was only one core recovered at Snack Cove 2, make it plausible to state that the main lithic reduction activity at Snack Cove 2 was tool production. Tools most probably arrived at the site in finished, or nearly finished, form (Seeman 1994). Core reduction took place, but only represented a small portion of the activity conducted at this site. The paucity of spent tools, and the low frequency of expedient tools and debris, suggest that Area A was a staging area where they were sharpening and finishing tools in preparation for future activity.

All this evidence indicates, to me, that Area A is a Middle Dorset site. It also shows that the Middle Dorset had an intermittent, if not continuous, presence at Snack Cove 2 for at least 100 years and possibly for over 300 years.

Site Choice and Activity

Assuming that Area A was a Middle Dorset occupation, what can Area B tell us about why they occupied Snack Cove 2? While the small number of formal tools at Area

A cannot tell us much more about activities that took place at Snack Cove 2, Area B can shed more light on the subject. Area B contained formal tools associated with seal hunting (harpoon endblades), and with domestic activities (scrapers, microblades, and utilized flakes). These artifacts suggest that the Middle Dorset group that occupied that location were probably hunting in the area and preparing meat and hides for consumption, clothing, and/or getting them ready for travel. The small number of artifacts at the site suggests only a short period of occupation, but the volume of scrapers that were expended and left behind suggest intense use of those tools over that short period. The main animals being prepared were probably seals.

As discussed above, Middle Dorset people were primarily seal hunters. The migratory patterns of harp seals brought them past Snack Cove two times a year. They passed by during their southern migration in late December, and during their northern migration in late Spring (Jackson 1982; Pastore 1986). They may have also been available during the winter as pack ice was blown ashore along with the seals that were occupying it for breeding and whelping purposes. That was the case periodically in historic times (Jackson 1982), but hunting for seals based on such unpredictable circumstances seems unlikely to have been part of the Middle Dorset subsistence strategy. It would be better suited for a more sedentary population such as the European

settlers in the region. A more mobile population would go to where resources are more predictable and substantial. In the fall, migratory harp seals would have been available in the Groswater Bay region (Woolett et al. 2000), as well as many strategic locations along the southern coast of Labrador, and the island of Newfoundland. In the spring, the west coast of Newfoundland would have been a good location where harp seals were plentiful and procured with less energy and better returns (Pastore 1986; Robbins 1985). To date, there is no evidence of any large Middle Dorset sites in the Groswater Bay region. There are, however, large Middle Dorset sites that have been found on the northern peninsula of Newfoundland (Harp 1976; Pastore 1986; Tuck and Pastore 1985).

Seal hunters in southern Labrador would probably need to move quickly and would only be able to sustain small numbers as they hunted migrating seals. They would have only occupied sites in the region for short periods and moved quickly to the next bay or peninsula where seals gathered on their way to the north or south, taking advantage of a small variety of other resources as they traveled. Intensive scheduling, and frequent moves, may have been needed to take advantage of small temporal windows of resource availability. This settlement-subsistence strategy would necessarily keep groups small and mobile. Small sites, such as those in this research, may be the only signs of Middle Dorset occupation in southern Labrador. All of the Paleoeskimo sites found in

southern Labrador by the Labrador South Coastal Survey (Stopp 1997), and by Rankin (2001), were small sites. This may be the reason that Middle Dorset culture has been overlooked in the region.

Small sites leave a less visible archaeological signature and are therefore more difficult to locate and study. If Middle Dorset activity in southern Labrador was confined to small, mobile, hunter-gatherer camps then it is easy to see why they were thought to be absent in the region. It appears to me that they were not absent at all, only more difficult to locate.

Interpreting Snack Cove Island West 1

Snack Cove Island West 1 (FkBe-5) presents a different set of problems for analysis. Its structure, consisting of cobble walls and flooring, a linear stone arrangement, and a possible entrance passage (Figure 5.5), strongly suggests that it was constructed by a Paleoeskimo group. The size (4 x 4m interior) suggests it was probably a small family group. There are similar structures that have been located at the Port au Choix Dorset site on the Northern Peninsula of Newfoundland (Renouf and Murray 1999b; Renouf 2003 personal communication) and at Middle Dorset sites in northern Labrador (Cox 1978; Hood 1986). There are also similarities with Pre-Dorset and Groswater structures in

northern Labrador (Cox 1978). All have similar overall shapes that are roughly sub-rectangular to circular, and exhibit stone features that divide the space. Unfortunately, once again, there are no diagnostic formal tools that were recovered there to help assign a cultural identity to their construction. Despite this absence, the artifacts that were recovered bolster the idea that the structure belonged to Paleoeskimos.

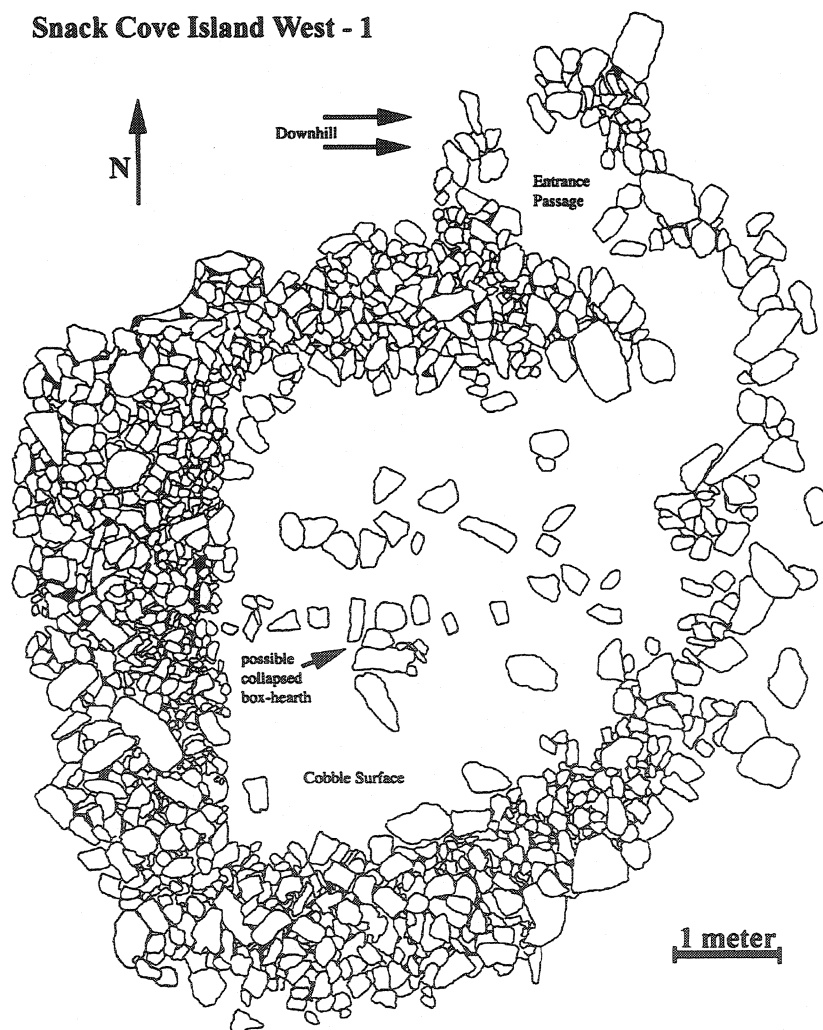


Figure 5.5: Paleoeskimo house at Snack Cove Island West 1.

One microblade core (Figure 5.6b) made from a smoky, brown, translucent quartz was found close to the axial feature. Microblade core technology is one that is associated with Paleoeskimo subsistence strategies. To date there appears to be no conclusive evidence that cultural affinity can be determined through microblade core and blade typologies, although there has been some research that suggests possible cultural differences in microblade core reduction strategies (Morlan 1970; Sanger 1970; Wyatt 1970).



Figure 5.6: Artifacts recovered from Snack Cove Island West 1.

The only other formal artifact is a biface fragment made of a brown chert with bands of gray and tan (Figure 5.6a). Microscopic examination of the artifact revealed radiolari that are associated with Newfoundland cherts. This suggests at least some contact with the island of Newfoundland, either direct or indirect.

There was only a small amount of lithic debitage at the site and it would be misleading to say any more than that it was composed of the same raw materials as the artifacts mentioned above. Because of the nature of the cobble beach the house was constructed upon, the paucity of artifacts can easily be explained. First, the inhabitants more than likely would have covered the rocky ground with animal skins to soften it and to sleep on. This would prevent tools and debitage from falling onto the ground surface. They were probably collected and dumped somewhere else, or conserved for future use. Secondly, the matrix of the cobble beach is one that would allow artifacts to fall through the cracks to an appreciable depth. The artifacts we recovered were at depths of 30-60 cm and could have easily fallen deeper. We removed cobblestones to a depth of approximately 1.5 m in the interior of the house until we reached boulders too large for us to move, and still there were cracks that led deeper. Artifacts could easily be lost in those cracks. I dropped a camera lens cap and was unable to retrieve it because it fell deep into the cracks below. Therefore, the lack of artifacts may a result of the lack of means to excavate deep enough, or to the removal of artifacts by the inhabitants themselves.

The location of the site suggests a Paleoeskimo occupation as well. It is on the northeast corner of an island with open access to the Labrador Sea, which would be an

ideal location for the exploitation of migrating seals. It is approximately 8 m above current sea level. This places it temporally just before or contemporaneous with Area B at Snack Cove 2, only approximately 1.5 km away. More research on prehistoric sea levels must be done to get a more definite temporal range, but roughly this suggests the structure had either a Groswater to Middle Dorset origin. Late Dorset structures tend to be larger and, because they are more recent, are closer to the present shoreline, because of isostatic rebound.

Site activity cannot be determined from the few artifacts recovered at Snack Cove Island West 1. The length and season of occupation are also difficult to assess, although the structure itself gives us some circumstantial evidence. The entrance passage, and the walls of the structure, seem to indicate an occupation that took place when the weather was inclement. They are more substantial than Paleoeskimo structures that have been identified as summer structures (Harp 1976; Renouf 1999b). Summer structures are normally only a circle of stones used to hold down a tent, or simply a hearth feature without indications of walls at all, and winter structures would have been constructed when there was snow cover, and were often made from snow and ice (see Ramsden and Murray 1995). The structure at Snack Cove Island West 1 has cobblestone walls that reach a thickness of over a meter in some places and a height of over 50 cm and was

probably occupied in the fall, when the weather was cooler, but before the winter snow.

These substantial walls, however, can be misleading when it comes to determining length of occupation. While the structure appears to be a relatively large undertaking, the easy availability of the stones used to construct it may have made it possible to build in a short time. It would not take long for a small group to simply pile the stones into a structural foundation. That fact, coupled with the paucity of artifacts, suggests to me a short-term occupation, probably in the late fall during the seasonal migration of harp seals.

Interpreting Horse Chops 3

The Horse Chops 3 (FIBg-3) site also presents some problems for interpretation. The main feature that was excavated at this site was a linear hearth feature (Figure 5.7). Because of time constraints we were only able to open three 1m units to expose the feature. It is difficult at this time to state whether it was an open-air site, or part of a structure. An expansion of the excavation would be needed to determine if there is any evidence of a tent ring or walls. However, the evidence we did recover, and the site location, suggests a few things about what activities were conducted at the site.

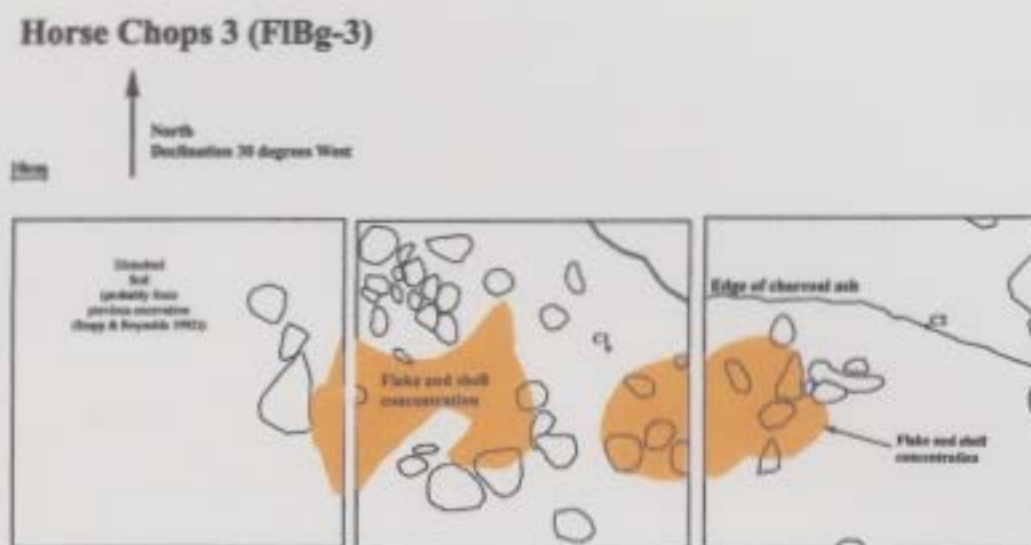


Figure 5.7: Excavated Units at Horse Chops 3.

Throughout the hearth feature high concentrations of mussel shells were recovered. These were probably harvested from the nearby littoral zone. Investigation of the shoreline revealed a ready supply of mussels that could be exploited easily. This suggests an occupation of the site at a time when the water would not be frozen. The hearth feature also contained a substantial amount of Ramah chert debitage that was either thrown into the fire as waste, or was deliberately heated as part of a reduction strategy. Often the heating of cherts was done to change their crystalline structure, which allows them to fracture in more predictable ways (Crabtree 1975; Whittaker 1994). The debitage is primarily small, thin, and lightweight flakes that are associated with the finish and retouch of tools (Figure 5.8). Again, debris comprises only a small percentage of the debitage (Table 5.1). There is a greater percentage of broken flakes at Horse Chops 3

than at Snack Cove 2, which may indicate post-depositional trampling and recurrent occupation of the site. Unfortunately, none of the lithics at Horse Chops 3 are diagnostic. The main lithic raw material used at Horse Chops 3 was Ramah chert (over 80%), while there were only trace amounts of Newfoundland cherts and quartzite. All of the formal artifacts found at Horse Chops 3 were made from Ramah chert (Figure 5.9), except for a ground slate fragment, which was recovered by Stopp and Reynolds in 1992. Only the fragments of a Ramah chert microblade and the ground slate suggest a cultural affinity.

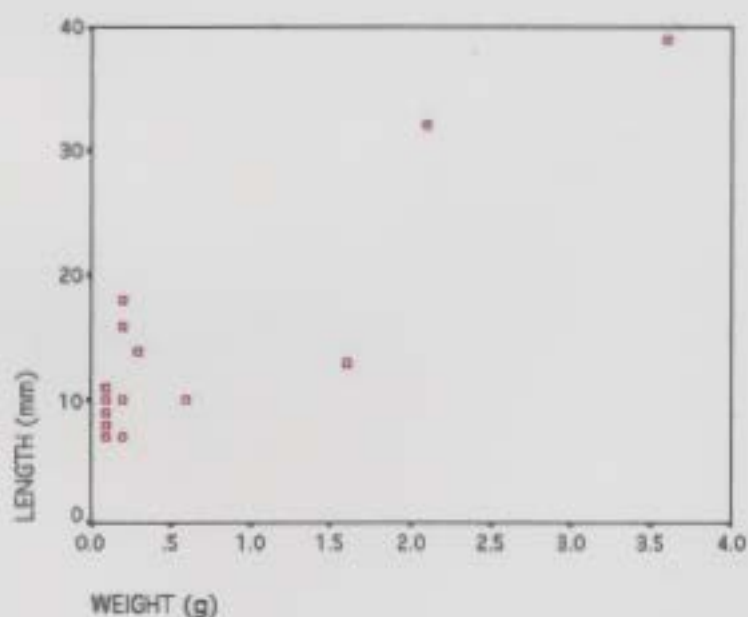


Figure 5.8: Length to weight ratios of complete flakes from Horse Chops 3.



Figure 5.9: Artifacts recovered from Horse Chops 3.

The other formal artifacts are nondiagnostic Ramah chert biface fragments. Microblade technology is associated with Paleoeskimo cultures and not believed to have been used by Recent Indian groups. Paleoeskimo groups also commonly used ground slate, although early Paleoindian groups such as the Maritime Archaic Indians also had a ground slate industry.

The elevation of Horse Chops 3 is approximately 7.5 m above sea level. This is close to the elevation of both Snack Cove 2, and Snack Cove Island West 1, which are both Paleoeskimo sites.

While all this evidence is not conclusive, it is suggestive of a Paleoeskimo occupation of Horse Chops 3. The date of 1050 ± 50 BP (Beta 56253) places it near, or beyond, the end of the Middle Dorset cultural sequence in Newfoundland and Labrador and at the transition into Late Dorset seen in northern Labrador. So far there is no evidence of Late Dorset occupation in southern Labrador.

All of these lines of inquiry lead me to believe that Horse Chops 3 was a late Middle Dorset group that was taking advantage of a few different resources in the area. The campsite is an ideal location for hunting caribou as they cross from the Porcupine Strand or nearby Norman's Island. The inhabitants of the site may have been using local food resources, such as the mussels and/or berries as they waited for caribou or seal to come within range of their hunting technology. There was one small bone fragment that is too small to give species information, but has been broadly identified as terrestrial mammal (Hodgetts personal communication), possibly from a caribou or smaller game. This implies that the inhabitants of Horse Chops 3 were not exploiting a single resource, but were taking advantage of some of the resource diversity of the region. If these were Middle Dorset people, as I have suggested, then Horse Chops 3 may have been occupied at a season in which seals were not as readily available and diverse subsistence strategies were more effective. That implication, in tandem with the seasonal availability of

mussels, suggests a Middle Dorset occupation of Horse Chops 3 during the late spring to fall.

If this is a late Middle Dorset site, then what would explain, once again, the almost exclusive use of Ramah chert. I have discussed above some of the factors that may lead to a preference of one lithic material over another in this region, in particular resource unpredictability, changes in activity, and/or seasonal subsistence strategies. In my opinion, Horse Chops 3 is the result of the latter.

The small amount of Newfoundland cherts in the assemblage implies there was direct or indirect contact with the Northern Peninsula of Newfoundland. Because the assemblage is primarily Ramah chert, Horse Chops 3 may be the remains of a campsite that was occupied during the southerly migration of a small Middle Dorset group. The small amount of Newfoundland lithic material may be the result of distance decay. The group that occupied Horse Chops 3 may have been the last remnants of a changing Dorset culture south of the Hamilton Inlet. To date, there is no evidence of Late Dorset groups in southern Labrador or Newfoundland.

The date from Horse Chops 3 (Stopp 1997) indicates a presence of a Paleoeskimo group at a time when Indian groups were expanding into the Porcupine Strand region (Loring 2002), and probably competing for the same resources. The absence of Late

Dorset sites in that region may be the result of this expansion. This site is one of the latest Paleoeskimo sites in southern Labrador, and on the island of Newfoundland, and may indicate a shift of cultural demographics throughout Labrador. The late Middle Dorset groups at Horse Chops 3 may have been a reflection of a new northerly cultural orientation in Dorset settlement patterns.

In the next chapter I will synthesize all the lines of evidence discussed above, from all three sites, and state the conclusions that I believe they support. This will include conclusions about a settlement-subsistence pattern that I believe is more applicable to Middle Dorset demographics in southern Labrador and Newfoundland than commonly held hypotheses.

Chapter Six

Conclusions

The evidence, and lines of argument, presented in the previous chapters, suggest to me that it is time to reconsider Middle Dorset settlement-subsistence patterns in Newfoundland and Labrador. It is evident that the current models are not valid for the regions of southern Labrador and the island of Newfoundland, although they may still be valid in northern arctic areas where there is less seasonal fluctuation of resources. It is easy to see that at times of scarce resource availability there would be a need to aggregate in areas that were more stable. Fringe groups probably kept close ties with groups occupying areas with a more predictable resource base to protect themselves for hard times, and to maintain cultural connections.

In southern Labrador, I believe a different picture is emerging. The people that inhabited that region, and the island of Newfoundland, had chosen a different subsistence strategy, and were not simply fringe groups. This strategy was based on a large, mobile food source; harp seals. This decision would have had a large impact on the type of settlement pattern they followed. This impact is reflected in the archaeological record.

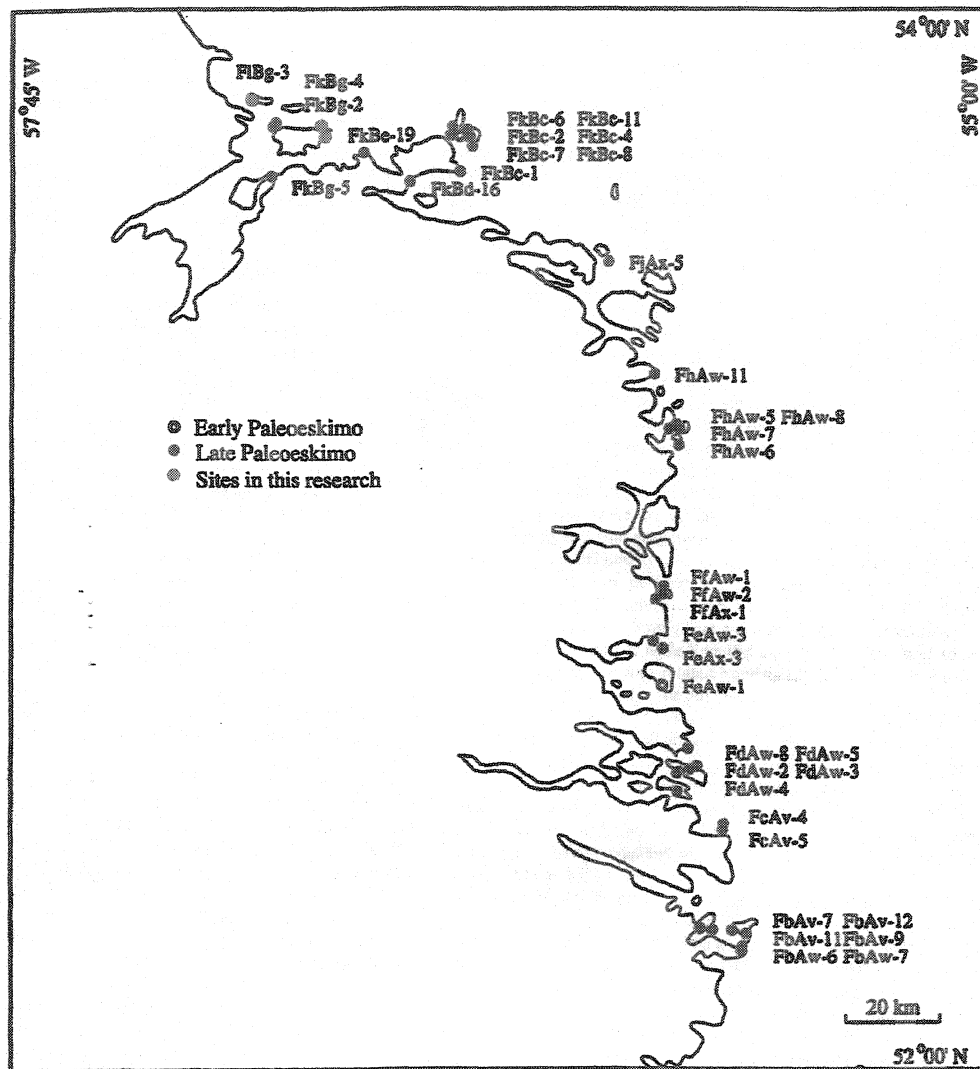


Figure 6.1: Paleoeskimo sites in southern Labrador (Adapted from Stopp 1997).

Figure 6.1 illustrates that in the last decade there has been a growing number of Paleoeskimo sites discovered in southern Labrador. At least thirty-six of these sites appear to have been Middle Dorset sites, and all of them have been relatively small sites. It is plainly visible that Middle Dorset people had occupied the entire coastline. I am

positive that a more systematic survey of the region would affirm this conclusion, and significantly increase the number of known sites.

What kind of settlement-subsistence system would create such a pattern in the archaeological record? I believe that all evidence points to a demographic pattern of seasonal aggregation and diffusion. Small family units along the southern Labrador coast would mobilize towards the northern peninsula of Newfoundland in late winter to take advantage of the large, migratory, harp seal herds that were more easily accessible at that location in the spring (Pastore 1986; Sergent 1965). There they would aggregate and maintain social connections by participating in large group subsistence activities, and probably ritualistic ceremonies. Collections from sites in the Port au Choix area, on the northern peninsula, reflect a relatively large population.

There were other factors that brought the Middle Dorset to Newfoundland, besides harp seals and cultural connections. There was the practical need to exploit lithic resources, which are rare, or absent, in most places in southern Labrador. Newfoundland cherts, which dominate most Paleoeskimo collections from southern Labrador, are high-quality lithic resources found primarily in the Cow Head, and Port au Port regions of the northern peninsula.

I believe that Middle Dorset groups from southern Labrador, and perhaps the rest of the island of Newfoundland, aggregated on the northern peninsula of Newfoundland to exploit large harp seal herds, procure lithic material, and to make and maintain social and material exchange networks. When the harp seals migrated to the north, and the carrying capacity of the area decreased, it would be necessary for the community to break up into smaller groups and become more mobile. If this movement was made in boats this may mean that they would have wintered on the island of Newfoundland or in Labrador along the Strait of Belle Isle. This population movement may explain the higher frequency of sites in these two regions, relative to southern Labrador.

The Middle Dorset of southern Labrador spent the rest of the year in small, family units exploiting a wider range of resources. The paucity of stable resource locations would make it necessary for Middle Dorset groups in southern Labrador to be highly mobile. In that way they could take advantage of a wider array of resources that are only available during short periods of time. For instance, in the Porcupine Strand region there are a wide variety of resources that are available at different times. At Snack Cove there are salmon that pass by as they head towards the mainland to spawn. Historically it has been a good place to fish for salmon and cod in the summer months (Jackson 1982). Also there are a number of berries, including bakeapples, crowberries, partridgeberries, and

blueberries, that are only available for short periods and dependent on climatic factors and location. Sea birds are also seasonally available.

The assemblage at Horse Chops 3 demonstrates that they had knowledge of shellfish and when they would be best harvested, and probably hunted terrestrial mammals. Sea mammal hunting, and opportunistic hunting of terrestrial mammals, such as caribou, were still probably the main subsistence activities, but intense scheduling and mobility would be needed to take advantage of all these other resources to subsidize their diets.

The poor preservation at sites in southern Labrador has made it difficult to answer these kinds of questions directly. The presence of harpoon endblades at Snack Cove 2 and other sites along the southern coast (Stopp 1997), in conjunction with shellfish remains at Horse Chops 3, and knowledge of site locations, causes me to believe that Middle Dorset people in southern Labrador subsidized their seal economy with other resources. This would explain why there have only been small sites that have been found so far in that region. A high degree of mobility would mean that people were not staying at one location for lengthy periods, and therefore not creating large sites.

This high mobility strategy would also help the Middle Dorset extend the period in which they could exploit the seasonal availability of harp seals. In the fall, harp seals

may have been more easily exploited on the southern coast of Labrador, rather than the northern peninsula of Newfoundland. They appear to have been exploited in large numbers by later neoeskimo groups in the Hamilton Inlet area (Woolett et al. 2000).

The seasonal northern movement of Middle Dorset groups from Newfoundland into southern Labrador probably also served as a cultural, and economic, link to Middle Dorset groups in Central and Northern Labrador. That would explain the presence of Ramah chert found in southern Labrador, and in small frequencies in Newfoundland. The relative quickness with which technological innovations, such as the tip-fluting of endblades, traveled throughout the Middle Dorset culture could easily be explained by the maintenance of relationships with groups in Central Labrador, and Newfoundland. It would only take a few years at the most for information to travel from the Arctic to the island of Newfoundland if there was a series of these scheduled seasonal meetings. This would preserve cultural continuity and provide networks for social and informational exchange.

A more systematic survey of the Central Labrador region may turn up trade locations, but for now there is not much that can be said about the northern extent of the southern Labrador Middle Dorset settlement pattern, other than that there was some cultural interaction that took place. What we do know is that Middle Dorset groups in

southern Labrador had regular contact with groups in Newfoundland at least once a year, but probably in fewer numbers several times a year. The necessity for high-quality lithic materials would need to be met either through trade or direct procurement. I believe, therefore, the widely held principle of Newfoundland Dorset isolation from their Labrador kin is erroneous.

This idea is not a new one, but very few researchers today subscribe to this theory. Only Rankin (personal communication), and Renouf (1999, personal communication) have stated similar ideas to my knowledge. There have been similar ideas concerning Middle Dorset seasonal aggregation sites in Newfoundland put forth by other researchers (e.g. Krol 1987; Robbins 1985), but they have not included Labrador Middle Dorset groups. In fact, they have maintained the idea of Newfoundland Middle Dorset groups developing in isolation.

In my opinion, the idea of the Strait of Belle Isle acting as some sort of impenetrable cultural barrier is not valid. Many earlier, and later, groups did not find it so (see e.g. LeBlanc 1996). In good weather you can see across the Strait to the land on the other side. Boats, in open water conditions, and sleds, in icy conditions, could easily make the journey, and it appears quite often did. The Middle Dorset must have had both of these technologies for them to survive, and thrive in the outer coastal and island

environments in which their sites have been discovered. This means that examination of Newfoundland Middle Dorset as a separate entity from the Middle Dorset of southern Labrador is misleading. If my hypothesis is correct then they are a single cultural entity that should be looked at in total, and not as isolated populations, although regional variants do exist. Future research should take this idea into account.

For the hypotheses put forth in this thesis to be proven, or not, it would be necessary to conduct a more systematic form of research in southern and Central Labrador. I acknowledge that the excavations described in this thesis are limited in scope and the conclusions much broader, however the extent of the sites was discovered and they represent distinct cultural activity. I believe this activity fits best into the hypothesis outlined above. More large-scale projects, such as the current project in the Porcupine Strand region by Dr. Lisa Rankin of Memorial University, are needed to further validate (or invalidate) these conclusions. Detailed analyses of the current artifact collections from southern Labrador, and a comparison to those in Newfoundland, would be a good start.

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