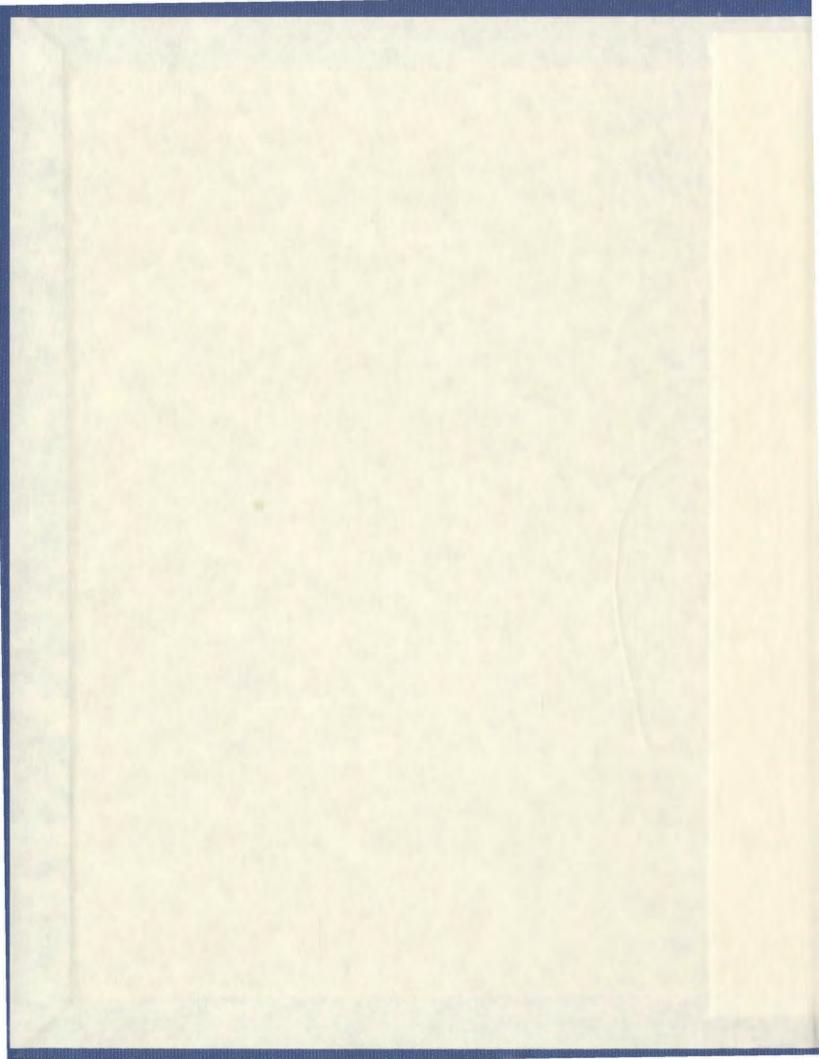
THE INUIT IN SOUTHERN LABRADOR: A VIEW FROM SNACK COVE

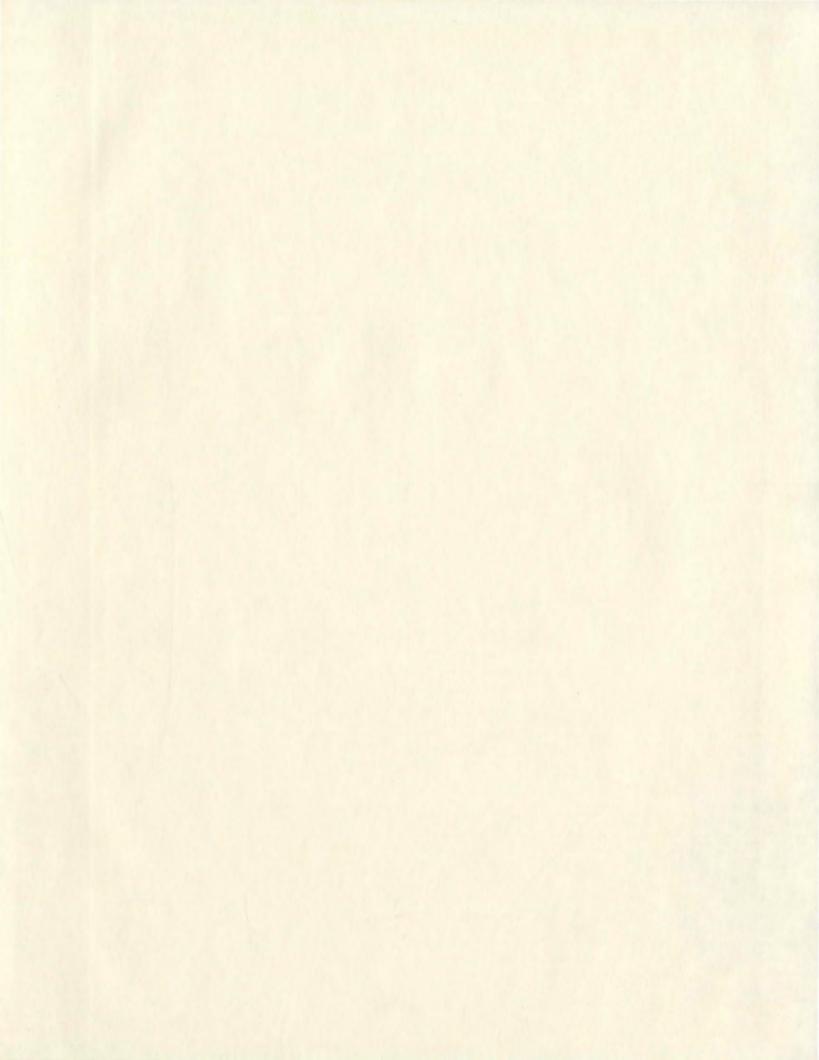
CENTRE FOR NEWFOUNDLAND STUDIES

TOTAL OF 10 PAGES ONLY MAY BE XEROXED

(Without Author's Permission)

NATALIE BREWSTER





THE INUIT IN SOUTHERN LABRADOR: A VIEW FROM SNACK COVE

By

©Natalie Brewster

A thesis submitted to the School of Graduate Studies In partial fulfillment of the requirements for the degree of Master of Arts Department of Anthropology Memorial University of Newfoundland

> May 2005 St. John's, Newfoundland



Abstract

This thesis explores the nature of Inuit occupations in southern Labrador, and their contacts with Europeans during the 17th century, based upon excavations from Snack Cove 1 and Snack Cove 3. Due to a paucity of archaeological investigations of the Inuit in southern Labrador, there is little known about how the Inuit lived in this area, and the form of their interactions with Europeans during the early Contact Period. Data from Snack Cove has been analyzed and compiled with ethnohistoric data to address the objectives of this research, and to situate the occupations at Snack Cove within the long term culture history of the Inuit in Labrador. The results of this research have shown that the Inuit occupations in southern Labrador during the 17th century were much the same as those in northern Labrador, with the exception that they are a part of the southern most frontier of Inuit expansion. Further, the results of this analysis show that the nature of Inuit contact with Europeans was such that a large quantity of European materials flowed into Inuit exchange networks, but that the flow of European ideas, information and beliefs was less frequent during the early Contact Period. Through this research, it has been possible to portray the central role of the Inuit, and their decision making in the unfolding of events during the Contact Period.

Acknowledgements

The ability to undertake this research was facilitated by grants from the Northern Scientific Training Program, the Institute for Social and Economic Research, the J.R. Smallwood Foundation, and the Department of Tourism, Culture and Recreation of the Government of Newfoundland and Labrador. Additionally, funding from the School of Graduate Studies at Memorial University of Newfoundland and the Social Sciences and Humanities Research Council have been instrumental in my ability to complete this research.

There are numerous people who have helped in to complete this research in one way or another, and deserve my sincerest thanks. I would like to thank Jean Chrestien for identifications of the French stonewares from Snack Cove 3. Thank you also to Steve Mills for your help with the metals from Snack Cove 3. Many thanks are in order to Peter Ramsden for the lovely drawings. I should also like to thank Jennifer Campbell for helping in the sorting of faunal materials and preliminary identifications. I also with to thank the field crews who participated in the excavations at Snack Cove 1 and Snack Cove 3, during the heat, the cold, the sun, the rain, and the flies.

A special thank you is in order for Lisa Rankin, for suggesting this project and for your guidance, your advice, your patience and your help. You have been a true mentor to me.

I would like to thank my family for their love and encouragement. Pinkerton Willie, Pistachio Disguisie, Saffron Monsoon, and Patsy for keeping my thesis warm. Last but not least, thank you to my husband Jon, for his support and understanding.

ii

Table of Contents

Abstract	i
Acknowledgements	ii
List of Tables	v
List of Figures	vi
List of Plates	vii
Chapter 1 Introduction	2
1.1 Introduction	2
1.2 The Inuit in Southern Labrador	2 2 3
1.3 Theoretical Approach	7
1.3.1 Past Approaches	7
1.3.2 Theoretical Context	10
1.3.3 Archaeology and Ethnohistory	12
1.3.4 The Multi-scalar Approach to Time	15
1.4 Thesis Outline	17
Chapter 2 Background Cultural Information	19
2.1 Introduction	19
2.2 The Development of Thule Culture	19
2.3 The Thule Migration and Occupation of Labrador	21
2.4 The Thule/Inuit Adaptation in Labrador	22
2.4.1 Seasonal Round	23
2.4.2 Architecture	27
2.5 Cultural Contacts	30
2.5.1 Inuit and Dorset Contacts	30
2.5.2 Inuit and Recent Indian Contacts	30
2.5.3 Inuit and European Contacts	33
2.6 Summary	38
Chapter 3 Environment	39
3.1 Location and Environment of Snack Cove	39
3.2 Animal Resources	42
3.2.1 Sea Mammals	43
3.2.2 Terrestrial Mammals	47
3.3.3 Birds	49
3.3.4 Fish	51
3.3.5 Marine Invertebrates	51
3.3 The Little Ice Age	51
Chapter 4 Excavation of Snack Cove 1 and Snack Cove 3	55
4.1 Summary of Past Work at Snack Cove 1 and Snack Cove 3	55
4.2 Excavations at Snack Cove 1 and Snack Cove 3	56
4.2.1 Excavation Methodology	56
4.2.1.1 Snack Cove 1 Excavation Methodology	57
4.2.1.2 Snack Cove 3 Excavation Methodology	58

4.2.2 Results of Snack Cove 1 Excavation	60
4.2.3 Results of Snack Cove 3 Excavation	62
4.3 Analysis of Snack Cove 1 and Snack Cove 3 Artifacts	71
4.3.1 Field Laboratory	71
4.3.2 Artifact Classification	72
4.3.3 Dating Methodology	72
4.3.3.1 Radiocarbon Dating	73
4.3.3.2 Pipe Stem Dating	75
4.3.3.3 Ceramics and Glass	76
4.3.4 Snack Cove 1 Artifact Analysis	76
4.3.5 Snack Cove 3 Artifact Analysis	78
4.4 Analysis of Snack Cove 1 and Snack Cove 3 Faunas	87
4.4.1 Identification of Faunas	87
4.4.2 Quantification of Faunas	88
4.4.3 Taphonomic Considerations	93
4.4.4 Snack Cove 1 Faunal Analysis	93
4.4.5 Snack Cove 3 Faunal Analysis	94
4.5 Snack Cove Excavation Summary	96
4.5.1 Snack Cove 1 Excavation Summary	96
4.5.2 Snack Cove 3 Excavation Summary	99
4.6 Conclusion	103
Chapter 5 Conclusion	104
5.1 Introduction	104
5.2 The Nature of Inuit Occupations in Southern Labrador	104
5.2.1 What is the seasonality of occupation?	105
5.2.2 What is the Social Composition and Organization of	
Settlements?	107
5.2.3 Do Settlements Represent Permanent Migrations or	
Seasonal Staging Grounds?	109
5.3 The Nature of the Relationship Between the Inuit and Europeans	112
5.3.1 Was Contact Direct or Indirect?	112
5.3.2 What Goods were the Inuit Interested in Acquiring	
From Europeans?	116
5.3.3 How were European Goods Integrated into Labrador	
Inuit Society?	117
5.4 The Inuit in Southern Labrador: A View from Snack Cove	119
5.5 Conclusion	122
Bibliography	126
Appendix A Plates	140
Appendix B Artifacts from Fill Layers	149

List of Tables

Table 4.1 Snack Cove 1, Tent Ring A Artifacts	77
Table 4.2 Snack Cove 3, Artifacts	78
Table 4.3 Snack Cove 3, Metal	84
Table 4.4 Snack Cove 3, Iron	84
Table 4.5 Snack Cove 1, Tent Ring A Faunal Data	94
Table 4.6 Snack Cove 3, Faunal Data	95
Table 4.7 Snack Cove 1, Dates	97
Table 4.8 Snack Cove 3, Dates	101
Table B1 Artifacts from House 1 Fill Layer	150
Table B2 Artifacts from House 2 Fill Layer	151
Table B3 Artifacts from House 3 Fill Layer	152

List of Figures

Figure 1.1 Map of Labrador Place Names	3
Figure 3.1 Map of Sandwich Bay	39
Figure 3.2 Arial Photo of Snack Cove	40
Figure 3.3 Map of Ecological Regions Near Huntingdon Island	41
Figure 4.1 Map of Snack Cove	55
Figure 4.2 Snack Cove 1, Tent Ring A	61
Figure 4.3 Snack Cove 3, House 1	63
Figure 4.4 Snack Cove 3, House 1 Stratigraphy	64
Figure 4.5 Snack Cove 3, House 2	66
Figure 4.6 Snack Cove 3, House 2 Stratigraphy	67
Figure 4.7 Snack Cove 3, House 3 Stratigraphy	69

List of Plates

Plate 1 Snack Cove 1, Tent Ring A Artifacts	141
Plate 2 Snack Cove 3, Stone Artifacts	142
Plate 3 Snack Cove 3, Bone Artifacts	143
Plate 4 Snack Cove 3, Martin Camp Stoneware	144
Plate 5 Snack Cove 3, Normandy Stoneware	145
Plate 6 Snack Cove 3, Glass and Wood Artifacts	146
Plate 7 Snack Cove 3, Ulu	147
Plate 8 Snack Cove 3, Knife Handle	148

Chapter 1: Introduction

1.1 Introduction

The Labrador Inuit have settled farther south than any other Inuit population in the world. Archaeological data coupled with ethnohistoric documentation provide compelling evidence for Inuit living as far south as the Strait of Belle Isle during the 18th century. The Labrador Inuit successfully sustained settlements in southern Labrador for nearly three hundred years.

The initial movement of the Inuit into southern Labrador roughly coincides with the arrival of Europeans in the Strait of Belle Isle during the 16th century. The southern extent of permanent Inuit settlements in Labrador dates to the 17th century, with the habitations at Eskimo Island 3, in the Hamilton Inlet region. It is widely accepted that the Inuit movement into parts of Labrador south of Hamilton Inlet was prompted by a desire for European materials, and that it does not represent permanent migrations. While this interpretation is compelling, it has yet to be proven through archaeological data. Further, the possibility that multiple factors may have led to a southward movement of several Inuit families during the Contact Period (c. AD 1500-1850) is not considered. This is likely due to the paucity of research conducted on the Inuit in southern Labrador.

The majority of extant research focuses on central and northern Inuit transformations before, during, and after the Contact Period. Very few studies have focused on the Inuit in southern Labrador (Stopp 2002; Auger 1991a, 1991b, 1993; Clermont 1980; Taylor 1980; Martjin 1980a). It is the primary goal of this thesis to provide a description of the Inuit in southern Labrador, the nature of their settlements, and their relationship with Europeans during the early Contact Period. This will be

undertaken through an examination of 17th century Labrador Inuit settlements at Snack Cove 1 and Snack Cove 3, in the Sandwich Bay region of Labrador (Figure 1.1).

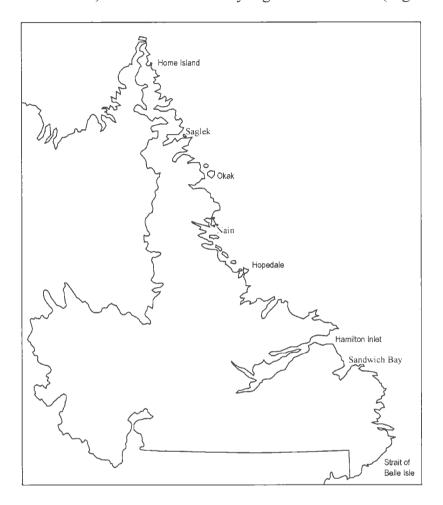


Figure 1.1 Map of Labrador Place Names

1.2 The Labrador Inuit in Southern Labrador

During the early Contact Period a vast complex of changes were occurring in southern Labrador including the migration of Inuit into areas such as Sandwich Bay. The relatively few archaeological and ethnohistoric studies of Inuit in southern Labrador during this time period have made it difficult to address questions regarding the nature of Inuit occupations in southern Labrador and their relationship with Europeans. Through an understanding of the events of the early Contact Period, and new archaeological data such as that from Snack Cove, insight regarding the nature of Inuit occupations in southern Labrador and contacts with Europeans can be gained. The following is a description of the events of southern Labrador during the early Contact Period, the current interpretation of Inuit occupations in southern Labrador, and the specific questions of this research.

At the time of European Contact (c. AD 1500), the cultural landscape of Labrador was in a state of flux as cultural boundaries between the Inuit and Recent Indians were being renegotiated. The Thule, ancestors of the Labrador Inuit, had recently migrated into Labrador and were expanding southward along the coast. The southward movement of the Thule and Inuit brought them to occupy areas of the central coast that had previously been used by Recent Indian populations. As the Inuit were occupying areas of central Labrador, Recent Indian populations who had lived along the southern and central Labrador coast for the past 2000 years were beginning to focus on a more interiororiented adaptation (Loring 1988, 1992).

At the same time, Europeans began to frequent the fishing and whaling grounds in the Strait of Belle Isle. In Addition, European explorers began periodic voyages along the southern and central Labrador coast in search of the north-west passage (Delanglez 1948; Bird 1945; Krupp and Hart 1976). The movement of the Inuit into more southerly areas of Labrador during the early Contact Period facilitated contacts and interactions between the Inuit, Recent Indians and Europeans forming the basis of the cultural landscape upon which the results of this research take place.

Current interpretations posit that the Inuit movements into central and parts of southern Labrador during the Contact Period, such as those found in Hamilton Inlet, were intended as base camps for seasonal ventures into the Strait of Belle Isle to acquire European goods through trade, theft or scavenge (Taylor 1974; Jordan 1977; Fitzhugh 1972, 1985; Kaplan 1985). The presence of Inuit in more southern areas of Labrador therefore, is not interpreted as permanent settlements, but as staging grounds for more southerly trips to the Strait of Belle Isle. The validity of this hypothesis has yet to be proven as these interpretations are made with little to no archaeological investigation into Inuit occupations in southern Labrador.

Yet, it is also possible that the above mentioned interpretation draws on a preconceived notion of the Inuit as a strictly Arctic population that would not settle so far south, rather than the actual nature of Inuit settlements in southern Labrador. Nevertheless, the limited archaeological data that are available (Stopp 2002; Auger 1991a, 1993; Dumais and Poirier 1994) and ethnohistoric evidence (Martijn 1980a, 1980b; Clermont1980; Trudel 1980) all indicate that the Inuit maintained year round occupations in southern Labrador, and that they had a social and economic organization similar to that found in more northerly regions. New archaeological data from Snack Cove coupled with ethnohistoric texts could shed light on this dilemma and address the nature of Inuit occupations in southern Labrador.

The majority of what is known about the past actions and intentions of the Inuit in southern Labrador come primarily from European documents written during the 16-18th century. These documents provide information regarding the Inuit from a Eurocentric

viewpoint and seldom provide any details that would prove useful in reconstructing the nature of Inuit settlements, or describe Inuit-European relations from a neutral viewpoint. This thesis relies primarily on archaeological data from Snack Cove 1 and Snack Cove 3 supplemented with ethnohistoric data to provide an alternative perspective of Inuit settlements in southern Labrador, and their relationships with Europeans. In creating an alternative perspective it is intended that the Inuit will be the central actors in this narrative, who were continuously acting and reacting to events in the Contact Period.

This research deals with the broad ideas regarding the nature of Inuit settlements in southern Labrador, and their relationships with Europeans. The insight gained from excavations at Snack Cove 1 and Snack Cove 3 is used to address the following questions concerning the nature of Inuit settlement in southern Labrador: a) what is the seasonality of occupation? What might this suggest about the seasonality of the Inuit in southern Labrador; b) what is the social composition and organization of these settlements? Did entire family groups live in southern Labrador with a social organization similar to that of northern Labrador, or did settlements in southern Labrador represent something different; and c) did settlements represent "permanent migrations"? Does all or most of the seasonal round take place in southern Labrador or were they only temporary, seasonal staging grounds?

With regard to the nature of Labrador Inuit and European contact it is necessary to determine: a) If the contact was direct or indirect? Did the Inuit have extensive face to face contact with Europeans, or were they primarily indirect contacts where the exchange of cultural ideas, beliefs or information exchanged is minimal; b) what goods were the

Inuit interested in acquiring from Europeans? This question seeks to determine if there were any items in particular that the Inuit wanted to obtain from Europeans; and c) how did the Inuit integrate European goods? Did the Inuit modify European goods or change their function, or did European goods perform the same function in both Inuit and European society?

Through these questions valuable insight is provided into the nature of Inuit settlements in southern Labrador and the nature of their relationship with Europeans from an alternative perspective which can then be used to provide a comprehensive scenario for the movement of Inuit peoples into southern Labrador.

1.3 Theoretical Approach

1.3.1 Past Approaches

In the past, studies of the Labrador Inuit have taken a variety of approaches in explanation of change during the Contact Period. Initially, they were focused on winter dwelling sites, and the transformation from small, single family semi-subterranean houses of the Early Phase of Inuit occupancy in Labrador (AD 1450-AD 1700) to the larger multi-family houses of the Communal House Phase (AD 1700-1850) (Schledermann 1971, 1976a, 1976b). Such studies focused specifically on the Communal House Phase in order to understand the causes for the departure from the smaller traditional winter dwelling.

The very first studies of the transition to communal houses suggests that they represented an adaptation to the environmental cooling, and limited resource availability of the Little Ice Age (AD 1550-1850) and provided a means to facilitate food sharing

(Schledermann 1976a, 1976b). The Communal House provided the families who lived together a means of protection against poor yield in hunting. This theory has been criticized for its environmentally deterministic explanations. Further, Woollett (2003) has shown that the 18th century was not a time of environmental degradation, and as such the Little Ice Age is not the only causative factor for the development of the Communal House. Thus, the development of the Communal House would not likely have occurred in order to facilitate food sharing, as food resources were not more scarce during the 18th century.

Other studies focus on the economic effects of contact with Europeans. Kaplan's (1983, 1985) regional synthesis of the 18th century Contact Period in Labrador focused on Inuit cultural change as a direct result of trade with Europeans. The social organization of the Inuit communities changed during the 18th century to focus on a few prestigious men who were whale boat captains, and controllers of European trade. This is evidenced by the larger communal dwellings which appear during this time (Kaplan 1983, 1985). The emergence of these prestigious men occurred as increasing contact with Europeans led to the greater importance of trade in European goods and whaling (Kaplan 1983, 1985; Jordan and Kaplan 1980). This analysis provides a compelling scenario to explain cultural transformations which occurred after European contact; however, it portrays the Inuit as reactionary to external factors, and does not demonstrate how change may have been directed by the political, social and economic goals of Inuit agents.

These initial analyses of the social changes which occurred during the Contact Period have been expressed in an etic framework that looks to external factors in order to

provide an explanation for cultural change (Wolf 1982). Such explanations are problematic because they do not allow for any social agency on the part of the Inuit, whose behaviours and activities are largely portrayed as reactive. Additionally, they provide an account of change that is simplified and often predicated upon a single causal factor. It is rare that change can be credited to one or even two single factors. It is more likely that multiple factors work in concert to effect change, and many factors of change are motivated by agents within the culture under study.

Recently, this simplified view of Inuit social change has been amended to include internal causal factors drawn from Inuit culture and context. Kaplan and Woollett's (2000) study of the 18th century Inuit dwellings at Uivak Point in the Okak region describe a scenario whereby the ambitions and goals of individual agents seeking out a monopoly on European trade goods as a source of power and prestige, coupled with internal tensions resultant from intensive contact with Europeans, are the predominant factors effecting cultural change during the Contact Period. Cabak and Loring (2000) have illustrated how Inuit decision making has played a central role in adapting European material culture, and in Inuit cultural transformation. These forms of explanations are more inclusive of the Inuit as social agents in the transformation of their culture. They contribute new ideas with regard to Inuit agency and the experience of Native peoples during the Contact Period using ethnohistoric and archaeological data.

This research picks up on the current vein of thought, taking into account Inuit social agency, and considers the confluence of multiple contributing factors in the explanation of cultural change. In addition, this research builds upon current approaches

by situating the short term events of the Contact Period within the context of the long term history of the Inuit. In so doing, the role of contingency comes into focus, as does the role of long term cultural structures and past interactions. In portraying the long term history of the Inuit, we are better able to view Inuit action during the Contact Period from an alternative perspective.

1.3.2 Theoretical Context

Within the context of Native American archaeology, the Contact Period is an interesting time of study as European Contact marks the beginning of a series of profound changes and transformations to native cultures all over North America, and beyond. In addition to archaeological data there are historic documents written by Europeans that provide details which cannot be obtained from the archaeological record. When combined, archaeological and ethnohistoric data can be used to create rich cultural histories, and to address research questions which may not easily be treated by each method on its own.

To understand how and why changes to Native groups occurred during the Contact Period, it is necessary to understand the way in which contact and interaction happened. Previous research has indicated that the nature of the relationship between Europe and Native groups was in large part influenced by how they perceived and interpreted each other (Wilson and Rogers 1993; Sahlins 1985). Yet the way in which Native cultures perceived Europeans is often not described or discussed in culture contact studies; this may be a result of lack of sufficient data, archaeological or ethnohistorical, to document it (Wilson and Rogers 1993). The use of a broad temporal scale, comprised of

both archaeological and ethnohistorical data is helpful as it permits the identification of content and the understanding of the structures which were central to Inuit life. Through use of data obtained from analysis of the broad temporal scale, perceptions particular Native groups may have had regarding Europeans can be addressed.

In order to create an hypothesis of how a Native group perceived Europeans, one must access the long term cultural history of the Native group, along with data pertaining to the Contact Period in general, and specific events and encounters with Europeans. Multiple lines of evidence must be examined to obtain a long term history of the Labrador Inuit and their ancestors. Archaeological data spans a long time period, and can provide insight into long term cultural processes such as migration, subsistence and settlements, social organization, and previous cultural contacts providing the context of Inuit history prior to contact with Europeans (Wilson 1993; Wilson and Rogers 1993). The information that is gained through archaeological data provides the context within which the contact event will be situated.

Archaeological data can be utilized to understand the events of the Contact Period as well. An analysis of archaeological data has the potential to give voice to Native cultures that are often misrepresented or underrepresented in ethnohistoric texts. In order to shift the perspective toward Native cultures and away from a European viewpoint, this research relies primarily on the analysis of archaeological data. Archaeological data is used in conjunction with ethnohistoric data, to obtain additional information not typically preserved in archaeological contexts. Ethnohistoric texts often provide a refinement in temporal scale not typically available in archaeological data. Ethnohistoric data usually

consists of documents written by Europeans who visited the New World, and interacted with Native populations; they often provide descriptions of various interactions with Native groups as well as specific details regarding places, names, dates and events.

To conduct the proposed research and situate it with the context of long term Inuit history and the shorter term time scale of the early Contact Period, particular methodological and theoretical approaches are necessary. The Annales concept of multiple, inter-connected time scales is employed here as a theoretical framework for interpretation. In the context of this research, multiple time scales such as the short term occupations of Snack Cove 1 and Snack Cove 3, the medium term scale of the early Contact Period, and long term Inuit culture history are all investigated, and integrated to answer the questions proposed by this research. In utilizing the multi-scalar approach as an interpretive tool, it is possible to project a picture of the Labrador Inuit experience of the Contact Period to illustrate the factors influencing decision making during the short term events and create a perspective of the Inuit in southern Labrador during the early Contact Period that views them as dynamic actors on the frontier of change.

1.3.3 Archaeology and Ethnohistory

When assessing the changes that occurred during the Contact Period for huntergatherers world wide, we see that hunter-gatherers are often portrayed as passive acceptors of the activities of Europeans. This may be largely the result of how huntergatherers have traditionally been viewed by social scientists (Wolf 1982). Wolf (1982) aptly points out that anthropologists have a tendency to view modern hunter-gatherers as "contemporary primitives". In a sense, they are thought to be people displaced in time

with no cultural change or development and thus a people with no history (Wolf 1982). Holly (2002) has shown how this perception has been adopted in archaeology, and how the idea of the static hunter-gatherer has been read back into history, thus portraying hunter-gatherers as ahistoric. Such a view is problematic, as it prevents us from fully understanding how Native populations experienced the Contact Period, and from truly understanding how and why Native cultures were transformed and what role they played in directing their transformations.

In attempting to understand how the Native populations have changed, and how they experienced the Contact Period, it is essential that they be understood in their historical contexts (Lightfoot 1995). Contact Period studies are fortunate to have access to both archaeological data and historic texts. Through an integration of archaeological and ethnohistoric data, dimension can be added and Native populations can be portrayed as dynamic and changing entities (Wilson and Rogers 1993).

All of the events in their history leading up to European Contact influenced the way Native groups responded to the Contact event (Lightfoot 1995). This includes looking at all of the other interactions and cultures on the landscape. It is important to keep in mind that in Labrador contact did not just occur between the Inuit and Europeans. Other Native groups including the Recent Indians were involved with the same Europeans forming a complex network of group interaction.

The primary source of ethnohistoric data comes from the journals of French explorer Louis Jolliet (in Delanglez 1948). Toward the end of the 17th century Jolliet made two voyages along the southern Labrador coast as far north as Hamilton Inlet.

Jolliet's journal represents a departure from the typical European texts of the time period because it contains detailed records his interaction and trade with the Inuit. These journals provide invaluable insights into Inuit architecture, social organization, activities and interactions with Europeans that help in the interpretation of the Snack Cove occupations.

Additional ethnohistoric texts employed in this research come from a variety of sources. Most recently, Trudel (1977, 1980), Clermont (1980), Martijn (1980), Barkham (1980, 1984), and Taylor (1974, 1979, 1980) have published analyses from historic accounts from southern Labrador and the Strait of Belle Isle. Each study provides a different perspective of events in southern Labrador during the 16th to mid-18th centuries, and primarily focus upon documents written during this time period by French administrators and merchants.

It is the opinion of Martijn (1980a), that during the mid to late seventeenth century, the Inuit began to occupy southern Labrador on a permanent basis; however, as French occupations in southern Labrador began to expand, the Inuit were forced further north. Clermont (1980) provides a similar hypothesis, whereby the Inuit were living permanently in southern Labrador from the mid-sixteenth century onward, but that French use of the land in the early eighteenth century forced them northward along Labrador's Atlantic coast. Taylor (1974, 1979) posits that Inuit presence in southern Labrador was seasonal in nature, and that at no time were they of a permanent nature. Trudel (1980) provides insight into the nature of Inuit and French relations from 1660-

1760, and lists numerous factors that contributed to the violence and hostility that existed between the two groups.

Taken together, archaeology and ethnohistory provide a multi-disciplinary approach comprising two complementary data sources, which can be cross-checked against each other in order to eliminate some of the bias and/or deficiencies inherent in each approach (Wilson and Rogers 1993). The two methods work well together because the archaeological data can provide the long-term cultural context within which the short term events described in ethnohistoric texts can be situated.

1.3.4 The Multi-Scalar Approach to Time

This thesis draws on the Annales concept of multiple time scales. The theoretical construct of multiple time scales is based upon the work of Annales historian Fernand Braudel. Braudel's model posits three scales of time, each of which is characterized by different yet interrelated processes, including the long term or *longue duree*, the medium term or social history and the short term event or *histoire evenementielle* (Braudel 1980). When the different scales of time are considered together they can provide insight about the Inuit in southern Labrador (Braudel 1980). Within the context of this study multiple periods of time are considered, including long term Inuit history (the *longue duree*), the early Contact Period, and short term events. The long term is defined as the period for which the Inuit and their Thule ancestors have moved across the arctic and inhabited Labrador. The early Contact Period is a medium term time scale (social history) lasts from AD 1500-1690. Short term events are represented by the occupations at Snack Cove. In the context of this research there are multiple representations of the event

(*histoire evenementielle*). There are the occupations of Snack Cove 1 and Snack Cove 3. There is also the individual contacts between the Inuit and Europeans as described in ethnohistoric texts.

The second scale of time, the social history can last from several decades to several centuries. Included in this scale are social structures such as prices, demographic and technological change and economic trends (Knapp 1992; Pagden 1992). The types of changes that can occur over the social history can include things such as the Industrial Revolution (Smith 1992) or the Contact Period. Further writing of the Annaliste school has broken this second scale into two parts which comprise conjuncture and structure (Fletcher 1992). The conjunctures are medium term scales which more closely approach events, whereas the structures are longer scales that more closely approach the *longue* duree. The structures are more enduring aspects of history, though not as unchanging as the longue duree. This research looks at the early Contact Period as the time of conjuncture. This period is known through both archaeological and ethnohistoric data from the time period when the Inuit had settlements in southern Labrador. The period of structures is also considered, and is represented by the long term history of the Inuit in the Arctic, including Labrador. This is information that is entirely gained from archaeological data.

The *longue duree* represents the relationships between the environment and man (Pagden 1992). This third scale of time is a largely believed to be environmentally deterministic; over the long term stretches of time the same environmental factors act, and interact with various different cultural groups (Bailey 1983). While the

particularities of each groups adaptations may differ in how they hunt the same animal, or how either group builds their dwellings (the social history, and the event), they are all adapting, shaping and being shaped by the same environmental factors (Bailey 1983). The *longue duree* is a time period that will be briefly addressed in this research through description of how and why Inuit ancestors came to Labrador. Additionally, the particularities of the environment with regard to Snack Cove, the area of southern Labrador that is being focused on. It will be used as a way to show how the relationship between the Inuit and the environment operates in Labrador; this relationship will play an important role in determining the feasibility of an Inuit permanent settlement in southern Labrador.

1.4 Thesis Outline

This thesis will follow an outline aimed at the integration of multiple time scales. Chapter 2 will provide the requisite background information for understanding the nature of the Labrador Inuit settlements in southern Labrador and the nature of their relationship with Europeans. This will include all of the scales of time considered in this research. Chapter 3 will provide description of the immediate environment surrounding Snack Cove. In chapter 4, the history of archaeological investigation at Snack Cove 1 and Snack Cove 3 will be presented, followed by site descriptions, artifact analyses, faunal analyses, and interpretations at the site level. Chapter 5 will integrate the information from Snack Cove within the context of the early Contact Period. All of the research questions presented in the preceding pages will be addressed, and situated within the long term history in order to provide a scenario for the nature of Labrador Inuit settlements in southern Labrador, and the nature of their relationships with Europeans.

Chapter 2: Background Cultural Information

2.1 Introduction

The long term history of the Inuit in general, and the Labrador Inuit in particular is essential to understanding the Contact Period and the role that the Inuit played in the cultural transformations that occurred during this time. The long term history provides a backdrop against which the short term can be compared, and it outlines the cultural structures within which the actions of individual agents take place. This is particularly important in the context of Contact Period studies, as the long term history, past experiences and interactions of Native populations will influence the ways in which particular populations respond to European Contact.

Prior to contact with Europeans, the ancestors of the cultural group known today as the Inuit are referred to in archaeological contexts as the Thule. The change of name occurs at the time of European Contact to reflect the desire of the Inuit to be referred to by their own name. This can cause confusion and has led some prehistoric and Contact Period researchers to utilize the term Neoeskimo instead of Thule or Inuit. As the sites analyzed in this research fall firmly within the Contact Period, the term Inuit will be used; however, when describing the long term history, I use the term Thule to refer to archaeological materials which pre-date European Contact.

2.2 The Development of Thule Culture

Numerous studies have addressed the origin of Thule culture and their migration across the Arctic (see Maxwell 1985 for a summary). The Thule culture was identified and defined by Therkel Mathiassen (1927), then working in the Eastern arctic as a part of

the Fifth Thule Expedition. Mathiassen (1927) described the Thule as a culture of whale hunters, who likely originated from a north Alaskan or Siberian culture. Some of the cultural traits attributed to the Thule include habitation in semi-subterranean pit houses constructed with whale bone, skin and sod roofs, which have paved floors and a long entrance tunnel (Mathiassen 1927). The material culture of the Thule includes throwing boards, darts, spears, harpoons, lances and bows and arrows all of which are components of a technology that was highly adapted to hunting Arctic species (Mathiassen 1927; Maxwell 1985). The Thule had multiple forms of transportation including the dogsled, and two forms of boat, the single person kayak and the multi-person umiak (Maxwell 1985). Their many tools were made primarily out of bone, ivory and slate (Mathiassen 1927).

Much debate has focused on where this culture developed. Mathiassen (1927) felt that the central Arctic was an unlikely place for development of a culture which required large boats made from wood which is a scarce resource; he suggested northern Alaska and Siberia as the likely sources for Thule culture. Initial studies indicate that the Thule developed out of the end of the Birnirk culture, shortly after it ended (Ford 1959). As this coincides with the beginning of the Medieval Warm Period (AD 900-1200), it is possible that the Thule then migrated across the Arctic, following bowhead whale populations (McGhee 1970). The increased warming of this period led to reduced ice conditions in the waters of the central arctic that would have permitted whales from the western arctic to swim eastward. Later studies revealed that the Thule are in fact an amalgamation of two Alaskan cultures, the Birnirk and Punuk (Yamaura 1979). Several

factors are thought to have contributed to the Thule migration across the Arctic: these include climate, resource availability, population pressures, conflict and a greater emphasis on bowhead whale hunting (McGhee 1970; Yamaura 1979; McGhee 1984).

2.3 The Thule Migration and Occupation of Labrador

The exact timing of the Thule migration across the Arctic is still a topic of debate, as radiocarbon dates do not conform to hypotheses (McGhee 2000; Park 2000; Morrison 1989, 1999). Nevertheless, it is evident that the Thule moved rapidly across the Arctic (McCullough 1989). The Thule entered Labrador via Baffin Island shortly after AD 1300 (Fitzhugh 1977).

At the time that the Thule migrated into Labrador, the region was already inhabited by other cultural groups. The Dorset Palaeoeskimos lived along the northern coast of Labrador from AD 900-1400 (Cox 1978; Fitzhugh 1980, 1981). The Dorset disappearance from the Labrador coast coincided with the Thule advance (Fitzhugh 1980; Kaplan 1985). It is unclear if the Dorset were outcompeted, or if they were absorbed within the advancing Thule culture.

Recent Indian populations inhabited coastal and interior areas of central and southern Labrador since AD 200 (Loring 1992). The Recent Indians were a highly mobile population with an economy that focused primarily on the exploitation of caribou. The movement of the Thule into Recent Indian territories deprived Recent Indian populations of access to coastal hunting grounds, leading to hostility and conflict (Loring 1988, 1992). As the Thule migrated southward along the Labrador coast they exploited every possible coastal ecological niche available. Archaeological evidence has shown that their descendants, the Inuit, settled as far south as the Strait of Belle Isle (Auger, 1991a, 1991b, 1993). Numerous estimations of the southern terminus of Thule expansion prior to European Contact have been posited, with little resolved (Stopp 2002; Gosling 1910; Taylor 1974; Hawkes 1916; Clermont 1980; Martijn 1980a, 1980b; Martijn and Clermont 1980a, 1980b; Taylor 1974, 1979, 1980; Auger 1991a). At present, it is believed that Thule did not settle further south than Hamilton Inlet, and that trips to the Strait of Belle Isle are seasonal in nature (Jordan and Kaplan 1980). The lack of identified Thule occupations in southern Labrador prior to European Contact could also be a reflection of researcher bias, as the southern Labrador coast is rarely examined for Inuit sites. Alternatively, it may simply reflect the lack of research as Labrador is a very large region and there are still several areas which remain unexamined by archaeologists.

It is possible that with further archaeological investigation into Inuit sites in southern Labrador, pre-Contact sites may be located. Stopp (2002) has conducted survey in southern Labrador that hints at the possibility of Inuit movements into southern Labrador that are unrelated to European Contact and could possibly pre-date the contact event.

2.4 The Thule/Inuit Adaptation in Labrador

The Thule exhibit many similarities across all areas of the Arctic, as well as regional variations specific to the environment they inhabit. Their subsistence and settlement patterns are largely described in terms of Optimal Foraging Theory, and

Binford's model for logistically oriented collectors (Rowley-Conwy 2001; Savelle and McCartney 1988), whereby the complex logistical organization of Thule subsistence and settlement was required as an adaptation to the decreased species diversity at higher latitudes (Yenser 1994; Binford 1980). The highly specialized site locations and subsistence technology of the Thule and Inuit indicate a logistically oriented strategy that provided optimal access to seasonally abundant resources (Helmer 1992; Park 1997). The Thule relied on cooperative strategies for much of their hunting endeavours, particularly for the larger species of seal, walrus, and whale (Freeman 1979).

2.4.1 Seasonal Round

The relationship between subsistence and settlement is best understood when these concepts are examined together within the context of the seasonal round. The seasonal round of the Thule and Inuit was designed to permit maximum access to all seasonally available resources (Savelle and McCartney 1988; Helmer 1992). Described below are both the main subsistence resources of the Thule and Labrador Inuit, the types of structures found on these sites, and their locations.

Late Summer

The late summer months, from mid-August to mid-October were a time when the Thule fissioned in order to exploit two abundant resources at the same time period (Kaplan 1983; Taylor 1974). Some families moved into the interior to hunt caribou, while others stayed on the coast to fish. Those families that moved into the interior to hunt caribou participated in communal caribou drives (Kaplan 1983). Meat from these endeavors was stored for the winter, while hides were used to make bedding and clothing (Taylor 1974, 1977).

Those families that remained along the coast during the late summer spent their time fishing, collecting berries, and hunting seals (Kaplan 1983). In mid to late August salmon would migrate from upstream toward the sea, providing an abundant resource for those who remained along the coast (Taylor 1974; Brice-Bennett 1977; Ames 1977). In addition to salmon, cod and char were abundant along the coastal areas at this time of year (Brice-Bennett 1977). The fish caught could be dried and stored for later consumption (Taylor 1974; Brice-Bennett 1977; Kaplan 1983).

The type of dwelling occupied in the late summer was a tent that is conical in shape, covered in skins and weighted down with large rocks (Fitzhugh 1972). The archaeological remains of these structures are the rings made by the weighting rocks. These tents, and their rings, would be located inland for those hunting caribou and on beaches for those fishing and sealing along the coast (Fitzhugh 1972).

Fall

The fall season lasted from Mid-October to approximately Mid-December (Taylor 1974; Fitzhugh 1972; Kaplan 1983; Park 1988). During the fall months numerous species were hunted for food such as caribou, seal, migratory birds, hare and porcupine (Brice-Bennett 1977). Fur bearing species such as fox, marten, mink, beaver and muskrat were hunted for furs (Brice-Bennett 1977). In post contact times, the exploitation of fur bearing species increased, as their furs could be traded for European goods.

At the beginning of fall, the Thule and Inuit moved into their winter habitations, which were typically the sod house (Fitzhugh 1972; Taylor 1974). Sites tended to be located in inner island environments which would provide shelter from fall storms, as well as access to migrating herds of harp seal (Fitzhugh 1972; Kaplan 1983; Schledermann 1976b). Fishing could also take place at this time period, and was often turned to in the event that the yield of seal was lower than expected (Brice-Bennett 1977; Taylor 1974).

Early Winter

The early winter lasts from mid-December to March. At this time, the ice edge would be frozen permitting travel over the ice by dogsled. Specialized hunting groups could travel from winter base camps to the ice edge to hunt cooperatively at breathing holes hunting for ringed and bearded seals (Taylor 1974; Kaplan 1983). Additionally, walrus, whales and seal could be hunted on the ice edge or open water (Kaplan 1983; Brice-Bennett 1977). In the event of poor catches on the ice, stored resources such as cached seal and caribou from the fall could be relied upon (Taylor 1974; Kaplan 1983). Additionally, they could focus on cod fishing through the ice, or hunt caribou, ptarmigan, fox, hare or porcupine (Brice-Bennett 1977; Ames 1977).

Late Winter

The late winter months of March and April mark a time of low productivity. The Thule and Inuit would still hunt along the ice edge at this time for walrus and seal (Taylor 1974). Additional resources exploited include rock cod and char which could be obtained through the ice and in freshwater ponds with the 3-pronged leister (Fitzhugh 1972; Taylor

1974). Caribou, seal and fish caches were relied on for food sources as well as polar bear, mussels and sea grass (Taylor 1974). At this time the Thule may have continued to live in their winter sod-houses, or they may have moved into skin tents located along beaches (Fitzhugh 1972).

Spring

With the onset of spring, the sea ice would begin to break up and movement into tents would occur. The spring tents were located near beaches on seaward islands, in order to give hunters access to the first sources of open water (Brice-Bennett 1977; Taylor 1974). The kayak was employed to hunt seals and walrus as well as sea birds (Taylor 1974; Kaplan 1983). Additional resources hunted include beluga whale, caribou along the coast, cod, char, capelin, eider ducks, while bird eggs were also collected (Brice-Bennett 1977; Ames 1977; Taylor 1974; Kaplan 1983).

Early Summer

In July, the Thule and Inuit would move from their outer island camps, and gather in groups in bay areas or other islands where the resources were abundant enough to support a larger group (Fitzhugh 1972; Taylor 1974). At summer sites, people lived in conical skin tents weighted down by heavy rocks (Fitzhugh 1972). Sea resources were hunted including bearded, ring, harp and harbour seals, along with the occasional beluga whale (Taylor 1974; Kaplan 1983). Fishing was an important activity at this time. Arctic char would begin their migration to the sea, followed by Atlantic salmon, and Atlantic cod (Brice-Bennett 1977; Ames 1977; Taylor 1974; Kaplan 1983).

2.4.2 Architecture

The architecture of both the Thule and the Inuit exhibits adaptation to a seasonal round of varying degrees of mobility. The dwelling types used were adapted to the estimated duration of stay, season of use and availability of resources. Each type of dwelling will be discussed.

The Sod House

The winter or sod house was initially defined and described by Mathiassen (1927) and there has been little change to the original definition since. The winter house typically has one or two rooms, it is semi-subterranean, square to oval in shape with a paved stone floor, and boulder walls. Depending upon available resources, the roof could be constructed of whale bone or timber roof rafters, and covered with skins and sod. The winter house would have a long, paved, cold trap entrance that was sunken below the house floor to prevent cold air from getting into the house. Sod houses usually had a raised sleeping platform at the back of the dwelling that was paved with rock and could be either put on top of gravel or unexcavated sand. The sod house may also contain a lamp platform and or storage area near to the sleeping platform, or a small cooking area built into the entrance passage. The sod house was typically used for an entire winter, and was usually inhabited by a single family.

Schledermann (1971) has shown the variety of sod house constructions in Labrador, and arranged them into a chronology. The Early Period (AD 1450-1700) is defined by the small, single room dwelling with a rear platform. The Communal House Phase (AD 1700-1850) followed the Early Period and is characterized by a change

toward larger, multi-family winter houses. Schledermann (1971, 1976a, 1976b) claims that due to environmental cooling and decreased resource availability, many families pooled resources and lived in larger, rectangular dwellings with multiple sleeping platforms along the sides and back of the dwelling. The Late Period (AD1850-present) shows a movement back toward the single family dwelling. The architectural changes represented in the Late Period are likely the result of the attempts of the Moravian Missionaries to have the Inuit living in single family units (Schledermann 1971). While Schledermann's chronology for sod houses in Labrador still remains valid today, his explanation for the development of the Communal House Phase has been challenged. Most recently, Woollett (2003) has illustrated that the Communal House Phase cannot be associated with a period of environmental degradation or resource scarcity. During the 18th century, when the Communal House developed, environmental conditions were relatively mild. Faunal and environmental analyses from various locations in Labrador have indicated that the Inuit were not suffering from any resource stress that would motivate them to adopt a house that would facilitate food sharing (Woollett 2003). The Qarmat

A similar dwelling type to the winter sod house is the qarmat. This is a semisubterranean dwelling that has only a skin roof, and does not have extensive rock walls built up along the sides (Mathiassen 1927). There is some disagreement as to the season of use for the qarmat. Mathiassen (1927) indicates that the dwelling was used temporarily during the fall, when temperatures were too cold for a tent, but it was yet too warm to comfortably occupy the sod house; however, in the historic period garmat have

been occupied throughout the winter (Mathiassen 1927). Park (1988: 171) indicated that there is no qualitative difference between the winter house and the qarmat; however, they are often distinguished by season of occupation, and roof construction (Park 1988); One can only speculate as to why one family might choose to winter in a qarmat instead of the sod house. Nevertheless, the presence of multiple dwelling types for the same season indicates that Thule/Inuit did not have a rigid settlement system, and that their flexibility permitted them to take advantage of seasonal variability in resources (Park 1988).

The Snow House

In parts of the eastern Arctic, the snow house was occupied throughout the winter, whereas in Labrador it was utilized as a temporary structure on trips during the winter that were of short duration (Fitzhugh 1972). The snow house was typically built on sea ice, and as such leaves no archaeological trace.

The Tent

The final type of dwelling used by the Labrador Inuit is the temporary tent dwelling. Little archaeological attention is paid to these features because they rarely have many artifacts associated with them. Additionally, tent rings can, at times, be difficult to identify. Tents are typically oval or rectangular in shape and covered in hides held down by boulders (Fitzhugh 1972; Kaplan 1985). The tent is a more temporary structure which was used from the spring to fall months when the Thule and Inuit had a more mobile settlement pattern (Fitzhugh 1972).

2.5 Culture Contacts

2.5.1 Thule and Dorset Palaeoeskimo Contact

Since the Thule initially entered Labrador, they and their Inuit descendants have had occasion to be in varying degrees of contact with many different cultural groups. Upon first entering Labrador, the Thule may have come into contact with the Dorset Palaeoeskimos. There is disagreement as to whether or not face to face contact actually occurred (Bielawski 1979; Fitzhugh 1994; McGhee 1997; Plumet 1979 for example). The Thule may have been able to out compete and/or absorb the Dorset as a result of their more specialized technology and adaptation to whale hunting (Maxwell 1985). Many suggestions have been made that the mythological Tunnit people of Inuit oral history who lived on the land before the Inuit ancestors came there refer to the Dorset (Fitzhugh 1985; Kaplan 1985; Maxwell 1985).

Evidence of indirect contact between the Thule/Inuit and the Dorset is more evident. There are several instances where Thule dwellings were built over or beside preexisting Dorset middens in the eastern Arctic (Maxwell 1985; McGhee 1984; Taylor and McGhee 1979 etc.). It would be difficult for the Thule to inhabit sites previously occupied by the Dorset and not notice their lost tools and middens. Through the reoccupation of Dorset sites, it is possible that the Thule and later Inuit were at least aware that another people had occupied the land before they did.

2.5.2 Inuit and Recent Indians Contact

The Thule and later Labrador Inuit also had occasion to come into contact with Recent Indian populations in Labrador. Like the Thule/Inuit division, Recent Indians

undergo a name change at the time of European Contact, as the prehistoric Point Revenge Indians become known as the Montagnais-Naskapi in the Contact Period. Within the context of this thesis, both groups are referred to collectively as the Recent Indians. For hundreds of years the Recent Indian populations had been living along the central and southern Labrador coasts, and making trips to Ramah Bay in northern Labrador to acquire Ramah Chert (Loring 1988, 1992). The movement of the Thule and later the Inuit south along the Labrador coast cut off Recent Indian access to the coasts, and hindered their ability to acquire Ramah Chert, leading to conflict between the two groups (Loring 1988, 1992).

Contacts between the Inuit and Recent Indians during the Contact Period are often described as hostile. During the 18th century, European documents describe battles occurring between the Inuit and Recent Indians, though evidence of such battles has not been observed archaeologically (Taylor 1979). Further, ethnohistoric texts from the early Contact Period refer to Recent Indian claims that they do not get along with the Inuit because the Inuit are aggressive and warlike (Delanglez 1948). In the Contact Period the Recent Indians were allies of the Basques and the French, helping them to process their catches, and defend against Inuit raids (Gosling 1910; Barkham 1980; Barkham 1984). The presence of Europeans and European trade goods would no doubt have altered the cultural landscape and dynamic of interactions or relationships among native Labrador populations.

2.5.3 Inuit and European Contact

Pre-AD 1500 Contacts

Prior to the arrival of Europeans in the Strait of Belle Isle, the Norse were exploring the eastern Arctic. After AD 1200, cultural contacts between the Thule and Norse were underway, and goods of Norse origin, including iron, appear in Thule trade and exchange networks (Odess, Loring and Fitzhugh 2000; Sutherland 2000). Knowledge of the Norse, and their material culture may have filtered through Inuit information and exchange networks. Through the sporadic contacts, the Thule may have become familiar with Europeans, and European technology (Fitzhugh 1985). Archaeological excavations of Thule sites have shown their use of both Norse iron, and iron obtained from the Cape York meteorite to make small knives and harpoon tips (Odess, Loring and Fitzhugh 2000). Through contact with the Norse the Thule may have become familiar with European material culture, and developed ways to integrate into their culture. Therefore, whether as a result of face to face contact, or through stories and exchange of information the Thule now knew about Europeans and had some notions about what to expect from them.

Post-AD 1500 Contacts

The arrival of Europeans in the Strait of Belle Isle provided a stable source of iron, which may have enticed the Inuit to participate in trade and/or theft from Europeans and their fishing stations. Analyses of European documents from the Contact Period leaves no doubt that relations between the Inuit and Europeans were hostile, and frequently violent (Martijn 1980a; Trudel 1980; Barkham 1980, 1984; Taylor 1974). In

many instances the Inuit hampered the ability of the Europeans to conduct their business because of attacks and raids on their stations. The Inuit would also scavenge shipwrecks, or burn the boats and scaffolding of European fishing boats to obtain iron. Yet despite the hostilities and distrust, both the Europeans and the Inuit sought each other for trade.

Numerous historic documents from the Contact Period indicate the presence of Inuit dwellings in the Strait of Belle Isle and along the coast of southern Labrador (Delanglez 1948; Auger 1991b; Martijn 1980a; Stopp 1997, 2002; Clermont 1980). Archaeological data has been less forthcoming. Auger (1991a, 1993) has shown the Inuit in the Strait of Belle Isle in the late 18th and early 19th century. Stopp (2002) has since synthesized the results of an archaeological survey from southern Labrador, with the possible locations of Inuit dwellings in historical texts, to give an impressive list of potential Inuit occupations in southern Labrador; however, the majority of these sites have not been tested and the cultural affiliation and period that they date from is unknown. This paucity of known sites and times is likely also a result of lack of attention paid to Inuit in southern Labrador. Due to the insufficient archaeological data in southern Labrador, the history of contact between Inuit and Europeans is described through recreation of European documents.

The Basques

The Basques were the first European group to have a sustained presence in Labrador. At some point in the early to mid 16th century the Basque whalers discovered the abundant whale populations in the Strait of Belle Isle and began to exploit them extensively (Tuck and Grenier 1989; Barkham 1980, 1984) The first written document

pertaining to Basques in Labrador is from the Spanish archives, written in 1547; however, this document indicates that the Basques were present in Labrador for several years before (Barkham 1980, 1984). At the height of Basque presence in the Strait of Belle Isle (1545-1585) at least one thousand men would be in Labrador for six months each year (Barkham 1984; Tuck and Grenier 1989).

The Basques would leave Europe for Labrador in mid-June and conduct their whaling in Labrador until mid-July (Kaplan 1980; Auger 1991a). The seasonal settlements of the Basques in southern Labrador can be found in St. Peter's Bay, Chateau Bay, Red Bay, Blanc Sablon, and East St. Modeste (Barkham 1980). The Basques would travel to Labrador in large galleons which could hold up to 700 tonnes of cargo and about 130 man crew (Barkham, 1980). Excavations from Red Bay, Labrador show that the Basque whalers built structures and ovens for rendering oil, for coopers to make barrels, habitations etc (Tuck and Grenier 1989). The Basques did not over winter in Labrador, unless environmental conditions prevented them from leaving (Tuck and Grenier 1989). In the majority of instances, the Basques would return to Spain for the winter prior to freeze up, and they would cache all of their onshore goods for their return the next year (Auger 1991a; Barkham 1980). The Basques had a profitable monopoly on whaling in the Strait of Belle Isle until about 1580 when their presence began to decline, due to increasing pressure from the English and Dutch, and the discovery of the Spitzbergen whale population (Kaplan 1983; Barkham 1980, 1984). After 1580 the majority of whale boats went to the Spitzbergen whale population; however, a small number continued to

conduct whaling along the Labrador coast until the 1620's when the Labrador whaling grounds were abandoned (Tuck and Grenier 1989; Martijn 1980a; Barkham 1980,1984).

Basque documents do not make reference to extensive contacts with the natives in Labrador. The population that they write about most frequently is called the Montaneses, which is most likely a reference to the Montagnais-Naskapi, or Recent Indians (Barkham 1980). It is indicated in the Basque documents that the Montaneses would help to prepare fish on shore in exchange for bread, biscuits and cider. As well, they indicate that the Montaneses would trade skins in exchange for metal knives and axes, and would warn Basques if they knew of impending Inuit attacks (Barkham 1980).

From what can be discerned, the Basques did not share the same type of relationship with the Inuit. This may be due in part to the Basque relationship of friendship with the Recent Indians. As already indicated, the movement of Inuit into Recent Indian territories led to conflict and hostility between the two groups. The relationship of the Recent Indians and Basques may have influenced the way that the Inuit and Basques perceived each other. Basque documents refer to Inuit stealing metals from their caches, and describe the Inuit as hostile (Auger 1991a). There is only one document, from 1574, where a man dies in *Terra Neuve* from fighting with *sauvages*; but it is not said what native group it is, nor whether it occurred in Newfoundland or Labrador (Barkham 1980).

There is little more that is known about Inuit and Basque contacts from archaeological evidence from Basque or Inuit sites. Materials that the Inuit could have obtained from the Basques include red roofing tiles, barrels, nails, axes, picks, crowbars,

saws, etc. (Auger 1991a). Similar items, such as red roofing tiles, nails, and spikes were found at Eskimo Island 3 (Jordan and Kaplan 1980). Yet the presence of these items at Eskimo Island does not indicate face to face contact as they could have been obtained through scavenging, or perhaps through direct or indirect contact with Recent Indian populations.

The French

In the seventeenth century French fishermen began to overwinter in southern Labrador. Fishermen and merchants had an interest in the development of the cod fishery in Labrador and trade with Native populations (Trudel 1977, 1980). Areas that the French initially went to were on the north coast of the Strait of Belle Isle, but were abandoned due to raids from Inuit (Trudel 1977). During the later half of the seventeenth century, the French renewed their interest in the Labrador cod fishery. The King of France began to award concessions in Labrador to French merchants, and thus began the development of the French sedentary fisheries (Trudel 1977). After the Treaty of Utrecht (1713) and the loss of Hudson Bay and the Strait of Belle Isle to England, the French interest in Labrador grew even more (Trudel 1977). From this time on, the French occupation in southern Labrador occurred on a more permanent and intensified basis.

Various French adiministrators believed that there was potential profit that could be obtained through trade with the various Natives in the area (Clermont 1980). The contacts with the French and the Inuit were both indirect and face to face and sustained for several decades, though they were not necessarily peaceful. French documents from the time period report mutual distrust, apprehension and hostility surrounding trade

encounters (Trudel 1977, 1980). In instances of contact between the French and Inuit, both parties are known to have been cautious. The Inuit would approach the French by boat, waving furs in the air, calling out "*Ahé*, *Ahé*, *troquer*,*tcharacou*" which were cries of peace (Delanglez 1948; Trudel 1980).

Unlike the French administrators, the concession holders and fishermen living in the Strait of Belle Isle continually reported that they were the victims of Inuit violence and raids, frequently requesting greater fortifications and military presence along the coast (Trudel 1977). Trudel (1977) describes the relationship between the Inuit and French prior to 1740 as follows:

"as far as the fishermen were concerned [the relationship was] one of reducing the Inuit to slavery and massacring them, and, from the Inuit point of view, one of looting, plundering and attacking the white man's posts and fishing stages"

During the 1730's, French administrators thought that by obtaining cultural information on the Inuit they might better be able to have a good relationship with them (Trudel 1980). This led to French documentation with more cultural information; however, it did not have the desired effect of making relations better. The French relied upon Inuit prisoners to learn the language and act as intermediaries between the French and Inuit (Trudel 1980). This led to increasing distrust of the French and retaliations on the part of the Inuit.

Though many of the relationships in the Strait of Belle Isle were hostile, it does not characterize the nature of all Inuit and French interactions. A French cartographer, Louis Jolliet, sailed along the Labrador coast at the end of the 17th century in order to explore and trade with the Inuit along the coast. Jolliet's voyages brought him into

contact with several Inuit families, of which he described his interactions, and the Inuit sites he visited. Jolliet (in Delanglez 1948) noted that the Inuit were friendly people who laughed a lot and liked to sing, a marked difference in description from what the other documents of the time period suggest. Further, he indicates that the Inuit had infrequent contact with Europeans, and he noted a high amount of European goods in their possession, along with his concern that they may not have acquired the goods through trade.

2.6 Summary

This chapter has provided the long term history within which the analysis of Snack Cove is situated. It shows that the Thule and Labrador Inuit were a logistically organized population of hunter gatherers with an adaptation well suited to exploit the seasonally available resources of Labrador. They spread quickly across the Arctic and south through Labrador. The most southward known permanent settlement is Hamilton Inlet. Once the Europeans were present in the Strait of Belle Isle, the Inuit moved south and the Recent Indians moved into the Labrador interior, though the exact order of events still remains unclear. Nevertheless, it is evident that Inuit families moved into coastal areas previously unoccupied by Inuit, and that they made an effort to acquire European goods. The increasing frequency of attempts to acquire European goods necessitated a greater degree of contact with Europeans.

Chapter 3: Environment

3.1 Location and Environment of Snack Cove

Snack Cove is located on Huntingdon Island at the mouth of Sandwich Bay (Figure 3.1). Snack Cove is horseshoe shaped and situated along an isthmus that connects the larger portion of Huntingdon Island with the smaller Cape Horn (Figure 3.2). The cove faces south west, toward the mainland. Nevertheless, it provides easy access to the Labrador Sea. At the centre of the cove, Snack Cove 3 is located footsteps back from a sandy beach. At the western edge of the cove on a cobble outcrop, Snack Cove 1 is located about 10 meters back from the water. Running behind Snack Cove 3 is a beach ridge, on top of which rests a Dorset Palaeoeskimo settlement, Snack Cove 2.

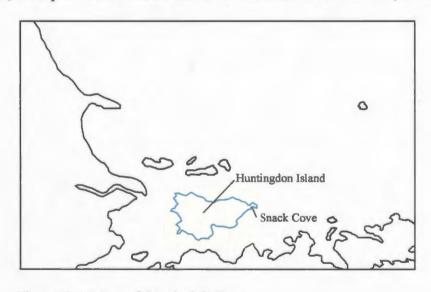


Figure 3.1 Map of Sandwich Bay

Huntingdon Island is the largest island in Sandwich Bay. There are several high points of ground which provide good vantage points for viewing the bay and ocean, and monitoring resources. The island is primarily covered with mosses and lichen, patches of white spruce, small shrubs and berries. When the tide is out, one can walk out from the beach at Snack Cove to exposed mussel beds. Ponds, marshes and streams on the island provide a source of fresh water and habitat for many animals.

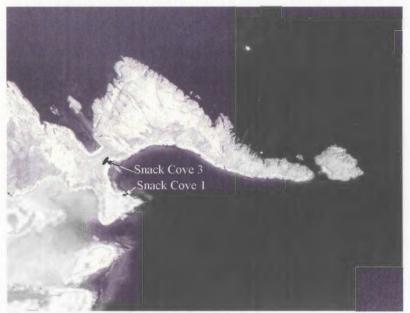
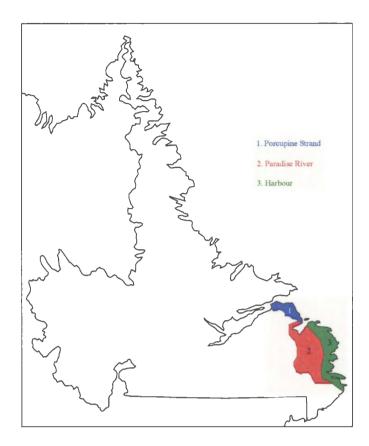


Figure 3.2 Arial Photo of Snack Cove

Huntingdon Island falls within the large ecological region described by Rowe (1972) as Forest Tundra. The Forest Tundra is a region which spreads from the Atlantic coast to the McKenzie River Delta. It is described as highly variable, though sharing the central similarity of a transitional zone from tundra to boreal forest (Rowe 1972). There are more subtle variations in the environment in direct relation to Huntingdon Island that can be perceived. Huntingdon Island is well positioned such that it is at an interface between three ecological land regions including Harbour, Porcupine Strand and Paradise River (Figure 3.3). While positioned in the Harbour region, Huntingdon Island has easy access to the Paradise River and Porcupine Strand (Lopoukhine et. al 1977). Those living at Snack Cove could have easily accessed all these regions.





The Harbour region is characterized by a maritime climate with a mean annual temperature of 0°C, and an annual precipitation average of 500mm per year, and 300-400 cm of snow per year, the highest amount of which falls inland (Lopoukhine et. al 1977). As the land in this region is highly exposed to wind, waves and ice it is a primarily barren and rocky surface (Lopoukhine et. al 1977). The predominant vegetation is *Empetrum barren*, while the dominant tree species is white spruce (*Picea mariana*) in coastal regions, and inland black spruce (*Picea glauca*) predominates (Lopoukhine et. al 1977). The Harbour region is an ideal location for hunting birds, as its position along the Atlantic Migratory Flyway affords it several locations to hunt at the resting spots of migratory birds (Lopoukhine et. al 1977).

The Porcupine Strand extends north from Sandwich Bay to Groswater Bay. The mean annual temperature is 0°C, with mean annual precipitation of 900-1000mm, approximately 500mm of which falls as snow (Lopoukhine et. al 1977). The ice season is relatively short, as breakup begins in April, but it could remain until as late as June (Lopoukhine et. al 1977). Along the coast white spruce is the dominant tree, with mosses and lichen groundcover and cloudberries (*Rubus chamaemorus*), inland ground shrubs with blueberries (*Vaccinium uliginosum*), crowberries (*Empetrum nigrum*) and dwarf birch (*Betula nana*) can be found. The woodland caribou, along with several bird species are abundant in this region.

The Paradise River region is made up of river valleys and rolling uplands which follow the inland areas of the Harbour Region (Lopoukhine et. a. 1977). The average annual temperature is 0-2.5°C with precipitation average of 1000-1100mm, and over 500cm of snowfall per year (Lopoukhine et. al 1977). The Paradise River region is characterized by bedrock covered with shallow soil and forest (Lopoukhine et. al 1977). Black spruce and lichens are the common vegetation the Paradise River region; however, in more fertile areas white spruce and balsam fir (*Abies balsamea*) predominate (Lopoukhine et. al 1977). There are several rivers in this region, many of which contain an abundance of anadramous fish (Lopoukhine et. al 1977).

3.2 Animal Resources

A number of animal resources, both vertebrate and invertebrate can be found in the environs near Huntingdon Island. Those species that were of economic importance to the Inuit will be highlighted below.

3.2.1 Sea Mammals

A number of sea mammal species can be found along the coast of Labrador. They include Cetacean species such as the minke whale (*Balaenoptera acutorostrata*), humpback whale (*Megaptera novaeangliae*), right whale (*Balaena glacialis*), and the bowhead whale (*Balaena mysticetus*). Such species were economically important to the Inuit as sources of meat for food, oil for fuel and trade, bone for building and tool making material, and in species that contained baleen, it is used as a material for tool making and trade. Cetaceans were of particular importance to the Inuit as a source of oil and baleen for trade with Europeans during the intensified trading of the 18th century.

Pinnipeds, including various species of seal, as well as walrus (*Odobenus rosmarus*) were of importance to the Inuit, particularly the seals. Seals were of primary importance to the Inuit, and were hunted during all seasons of the year. Seals and walrus provided a food resource, skins, ivory from walrus, and the oil for fuel. In later times the useable portions of seal became important to the Inuit as a trade commodity as well. In particular, there are several different species that the Inuit exploit, and as each species is available at different times and under different conditions, they will be treated individually.

Grey Seal (Halichoerus grypus)

The grey seal is distributed in small numbers along the Labrador coast from Okak Bay south to the Gulf of Maine (Speiss 1993; King 1983). They prefer to breed along islands in ice free waters on fast ice and tend to have pups in the end of December to beginning of February (King 1983). Grey seals predominantly feed on fish, as well as some crustaceans and mollusks (King 1983). They are a gregarious species of seal which haul out to breed in colonies and along the Labrador coast they can be found in inner island and bay regions in the summer (Speiss 1993). As the grey seal is relatively rare, it was not often hunted by the Inuit and was not a large portion of their subsistence economy (Brice-Bennett 1977; Mansfield 1967).

Harbour Seal (Phoca vitulina)

The harbour seal is distributed from Baffin Island southward (Speiss 1993; King 1983; Beck 1983). This species enjoys fresh water, and is often found in estuaries, rivers and lakes, as well as along coasts (King 1983; Beck 1983; Speiss 1993). During the winter months they prefer to inhabit ice free waters (King 1983). The breeding and birthing season lasts from April to June, when they will give birth to a single pup (Beck 1983; King 1983).

The harbour seal was used by the Inuit as a source of meat and blubber for both humans and dogs (Mansfield 1967). In addition, the coat of the harbour seal was often used as a material for making clothing (Mansfield 1967). The Inuit hunted harbour seals using a harpoon by kayak during the open water seasons and after the winter freeze-up they would focus on hunting along the ice edge (Brice-Bennett 1977).

Harp Seal (Phoca groenlandica)

The harp seal is found along the coast of Greenland, Baffin Island, Southampton Island, Labrador, east Newfoundland and the Gulf of St. Lawrence at various different times of the year (King 1983). They are a gregarious species and migrate in large numbers (Speiss 1993; Bowen 1985; King 1983). The population that is found in Labrador is divided into two herds which are defined by breeding centres; the "Gulf" herd breeds in the Gulf of St. Lawrence northwest of the Magdalen Islands, the "Front" herd breeds off the Labrador coast between the Strait of Belle Isle and Hamilton Inlet (King 1983; Bowen 1985; Speiss 1993). The breeding/birthing season occurs in the spring months of March and April after which they begin to migrate northward toward Arctic waters, where they reside for the summer (Bowen 1985). In September harp seals begin to migrate south again, reaching the Strait of Belle Isle by mid-December (Bowen 1985, King 1983). Harp seals are perhaps the most important resource utilized by the Inuit. The Inuit intensively hunted harp seals during both the spring and the fall migration periods (Brice-Bennett 1977). The surplus of seals that were caught during the fall season were often stored for consumption during the winter months (Brice-Bennett 1977).

Ringed Seal (Phoca hispida)

The ringed seal is the most common Arctic seal and is found all along the Labrador coast as far south as Newfoundland (King 1983). They prefer open water areas with land fast ice, where they maintain winter breathing holes (King 1983; Speiss 1993), and are often found in areas where ice is firm, such as bays and fjords (King 1983). In the months from December to May ringed seals maintain breathing holes in the ice, and in May-June they haul out on the ice to bask in the sun (Speiss 1993). Ringed seals maintain lairs in the snow and ice which are used for breeding and birthing chambers, and offer some protection from predators such as polar bears and arctic fox (King 1983). Pups are born between March and April, and breeding occurs from March to May (King 1983).

Meat from the ringed seal was consumed by the Inuit, and it was also used as a food for their dogs (Mansfield 1967). Ringed seals were often hunted from a kayak during the open water months, and harpooned through their breathing holes after the winter freeze up (Brice-Bennett 1977). In addition, the ringed seals were stalked and harpooned while they were basking in the sun during the spring (Brice-Bennett 1977). Hooded Seal (*Cystophora cristata*)

The hooded seal is found in Arctic waters and the North Atlantic. They prefer deeper waters and ice floes (King 1983). Hooded seals are predominantly solitary, though they do congregate in March for the breeding season, and again in July and August for molting (King 1983). They have breeding concentrations in the "Front" of north of Newfoundland and smaller groups in the Gulf of St. Lawrence and Davis Strait (King 1983). Hooded seal pups are born in the second half of March, after which breeding begins when lactation ends (King 1983). The hooded seals were often hunted at the same time as the harp seals while both species were at their spring breeding location along the "Front" (Mansfield 1967).

Bearded Seal (Erignathus barbatus)

Bearded seal is distributed in Arctic coasts all along North America (King 1983). They are generally found in shallow, ice free waters near the coast or on ice floes that are not very far out at sea (King 1983). They are not a gregarious species, pups are born on ice floes around May, but there is not much of a congregation at this time (King 1983). They feed on bottom animals such as shrimp, crabs, clams, holothurians, whelks, snails, octopus, sculpin, flounder and cod (King 1983). The Inuit often hunted the bearded seal in harbours and bays from a kayak during the fall months (Brice-Bennett 1977).

3.2.2 Terrestrial Mammals

A variety of species of terrestrial mammal live in Labrador. The terrestrial mammals of Labrador are utilized by the Inuit as a source of food, furs for making clothing, and bone for tool making and personal adornment items. Many of these terrestrial species were exploited on a seasonal basis.

Ursids

The bear species (*Ursids*) can be found in Labrador on a seasonal basis. Polar bears (*Thalarctos maritimus*) are found along the coast and on sea ice. They spend most of their time out to sea or wandering to find food (Peterson 1966). The black bear (*Ursus americanus*) is a terrestrial bear species that could be hunted by the Inuit in the spring and fall when they were not in their dens (Brice-Bennett 1977; Ames 1977). They prefer wooded areas and subsist on carrion of all types, berries, grasses, leaves, fish, small mammals, birds, insects and frogs (Peterson 1966). The favoured time to hunt the black bear was in the late summer to fall, as their meat would be sweet from feeding on berries (Brice-Bennett 1977).

Ungulates

Multiple ungulate species can be found in Labrador, including caribou (*Rangifer tarandus*), moose (*Alces alces*), and muskox (*Ovibos moschatus*). The ungulate species most frequently hunted by the Inuit is the caribou. All of the caribou in Labrador are

woodland caribou (*Rangifer tarandus caribou*), which are browsers that feed on willow and birch shoots, grasses, sedges, fungi and lichen (Speiss 1993). The main herd is the George River herd which is in the Labrador/Ungava region; there are smaller herds to the northwest and southwest of Hamilton Inlet (Speiss 1993). In southern parts of Labrador caribou would have been a seasonal resource (Speiss 1993).

Canids

In Labrador canids live as both wild species and tame species that were used by the Inuit to pull their sleds. The grey wolf (*Canus lupus*) is not an important food source for the Inuit, though it is a predator to many of the small mammals in Labrador. Wolves were often feared by Inuit hunters as they could destroy the animals caught in their traps, or get caught themselves (Brice-Bennett 1977).

Foxes are an abundant canid found in Labrador and include the red fox (*Vulpes vulpes*) and the arctic fox (*Alopex lagopus*). The red fox can live in a variety of habitats as long as there is cover and a food source, while the arctic fox prefers tundra and is frequently found along the coast (Peterson 1966). Both species of fox are known for their thick furs, and are frequently trapped during the fall and winter when the quality of their furs is at their best (Brice-Bennett 1977; Ames 1977).

Mustelids

Small fur bearing mammals belonging to the weasel family (*Mustellidae*) were hunted by the Inuit for their furs. The mustelid species hunted in Labrador include mink (*Mustela vison*), marten (*Martes americana*), fisher (*Martes pennanti*), otter (*Lutra canadensis*), and wolverine (*Gulo gulo*). These species tend to be found in boreal forest

regions and live near watery areas such as lakes, streams, rivers and ponds (Peterson 1966). They could be hunted all year round, but were typically trapped in the fall and winter when their coats were thickest.

Other Small Mammals

Rodents are the most abundant group of species found in Labrador including mice, lemmings and squirrels. While they are not a resource that is of economic importance to the Inuit, they are a vital part of the diet of many other Labrador species. Other small mammals of economic importance to the Inuit present in Labrador include the muskrat *(Ondatra zibethicus)*, beaver (*Castor Canadensis*), and arctic hare (*Lepus arcticus*). The arctic hare is an herbivore found throughout Labrador known for its thick fur. The muskrat is found in water areas such as marshes and primarily eats aquatic vegetation (Peterson 1966). The beaver is found in eastern Labrador in lakes and streams where it can find food (Peterson 1966). They are known for their brown fur and wide, flat tails; they mostly eat bark, twigs and other vegetation (Peterson 1966). These other small mammals could be hunted and trapped by the Inuit as a source of both fresh meat and fur. As with the foxes and furbearers, other small mammals would be hunted in the fall and winter months when the quality of their fur is at its best (Ames 1977).

3.3.3 Birds

Within Labrador there are 49 permanent bird species that winter in the area (Todd 1963). There are an additional 200 migratory species that spend their spring and summer living and breeding along the Labrador coast (Todd 1963). There are several large breeding colonies found along the Labrador coast, such as the Gannet Islands, which can

be seen from Snack Cove, in the Porcupine Strand region, which is the 10th largest breeding colony and has the largest population of Razorbills in North America (Piatt 1981).

Birds are an important source of both meat and eggs to the Inuit. Migratory birds were often hunted in the spring and fall. Terrestrial birds that spent their time in Labrador all year were often an important secondary food resource to the Inuit in the fall and winter months. A variety of sea birds live along the Labrador coast such as eiders, oldsquaws, scooters, geese, mergansers, loon, auk and gulls (Brice-Bennett 1977).

The migratory birds found in Labrador include fulmars, kittiwakes and murres which come from the arctic and spend their winters along the coast (Piatt 1981). Additionally, gulls, terns, and sea ducks would come to Labrador to breed in the spring and summer before flying south again in the fall (Piatt 1981). Migratory birds are an important seasonal source of meat in the spring and fall, and eggs in the spring (Brice-Bennett 1977; Ames 1977). Some of these types of birds that the Inuit would hunt in the spring and fall include the harlequin duck (*Histrionicus histrionicus*), eider duck (*Somateria mollissima*), black duck (*Anas rubripes*), mallards (*Anas platyrhynchos*), red breasted merganser (*Mergus serrator*), loon (*Gavia immer*) and Canada goose (*Branta Canadensis*), which could all be found in and around bays (Brice-Bennett 1977; Ames 1977).

Terrestrial birds that were of economic importance to the Inuit include the rock ptarmigan, and willow ptarmigan. The willow ptarmigan (*Lagopus lagopus*) is found in low scrub growth, and rarely below the tree line, and undergoes an eight year fluctuation

cycle (Todd 1963). The rock ptarmigan (*Lagopus mutus*) is found in rocky areas, it is unknown if it undergoes a cycle of fluctuation (Ames 1977; Todd 1963). The ptarmigan was relatively easy to catch and was an important source of fresh meat in the fall and winter (Brice-Bennett 1977).

3.3.4 Fish

A variety of fish are found in the coastal regions of Labrador. Both marine and freshwater species are available. They are most heavily exploited by the Inuit in the summer, but are often jigged through ice in the fall to spring months (Brice-Bennett 1977). The summer catch of fish can also be stored for later consumption by both humans and dogs (Brice-Bennett 1977). Species of economic importance to the Inuit include various species of the cod family (*Gadidae*), capelin (*Mallotus villosus*), Arctic char (*Salvelinus alpinus*), various species of the salmon family (Salmonidae) and sculpin (*Cottus bairdi*).

3.3.5 Marine Invertebrates

There are numerous species of marine invertebrates that can be found in the waters in and around Labrador. A species of particular importance to the Inuit is the blue mussel (*Mytilis edulis*). The blue mussel is a bivalve, with a range in the North Atlantic that extends from Baffin Island to North Carolina (D.F.O. 2003). Blue mussels tend to be harvested in mussel beds, which are located in coastal areas.

3.3 The Little Ice Age

The ecological conditions and animal resources described are based upon twentieth century climatic conditions. During the seventeenth and early eighteenth centuries environmental conditions in southern Labrador were different from the present. During this time period the North Atlantic was generally cooler in temperature, and had increased climatic variability. This is largely due to the effects of the Little Ice Age.

The Little Ice Age is a recent climatic period when glaciers around the world extended and remained enlarged (Grove 2001). The timing of the Little Ice Age varies from region to region, but tends to fall in the time period of AD 1550 to AD 1850. During the Little Ice Age climate and temperature fluctuated considerably, and on average the North Atlantic was slightly colder in temperature and to have had higher levels of precipitation than the twentieth century (Ogilvie and Jonsson 2001). Various methods are employed in the recreation of past environmental conditions, including historical documentation, dendroclimatology and ice core δ^{18} O values. Each will be briefly defined, with their climatic evidence presented.

Tree Ring Data

Dendroclimatic evidence is employed by using tree ring records to extend further in time beyond modern climatic measuring instrumentation. Studies have shown the reliability of tree ring growth data as an indicator of fluctuation in temperature (Payette et. al 1985; Briffa et. al 1988, 1992). Tree ring data can reliably reconstruct temperature data back to AD 1600 (D'Arrigo and Jacoby 1995). Tree ring data from the Okak region has shown variability in warm and cold temperatures in the late 1600's and early 1700's (D'Arrigo et. al 1996). Tree ring data from the southeast Labrador series correlates with the Okak tree ring series, which suggests similarities in climate (D'Arrigo et. al 1996). Northern Canadian tree ring samples indicate below average temperatures in the early

1600's and cooling from the late 1600's to early 1700's followed by warming in the mid 1700's and decline again in the 1800's (D'Arrigo and Jacoby 1993). Tree ring data from Gaspé, Quebec have narrow width indices in the early 1600's and early to mid 1800's, which are also indicative of colder temperatures (D'Arrigo and Jacoby 1995).

Ice Core Data

Similar trends are found in ice core data from northern glaciers. Reliable measures for long term temperature change can be obtained through measurement of levels of δ^{18} O of ice cores removed from the Greenland ice sheet (Jouzel et. al 1997). Ice sheet data shows variability in temperature from decade to decade with 1610, 1620 and the 1660's notable for their average to above average temperatures (Barlow 2001). The 1630-40's show below average temperatures, as do the 1670-1700's, with the lowest decade temperature being the 1690's (Barlow 2001). From the Greenland Ice Sheet Project (GISP) 2 the decadal summer records show 1570-1670's did not have low average summer temperatures, with the exception of the 1640's, the 1680-90's were lower than average; however, they were followed by five decades of higher than average temperature summers (Barlow 2001).

Historical Documents

In many areas historical qualitative recordings of temperature and sea ice conditions were made. Such records for Iceland show that there was decadal variation in temperature and sea ice conditions (Ogilvie 1995). Additionally, there was high annual variability. The historic records from Iceland again show that the early 1600's and beginning 1700's have a cooling trend that is punctuated by mild periods in the 1610's, and 1641-1670 (Ogilvie 1995).

Importance of the Little Ice Age

The climatic data from the Little Ice Age shows that during the time of occupation of Snack Cove 1 and Snack Cove 3, the climatic conditions were highly variable, and on average cooler and wetter than at present. Some years and decades were relatively mild, while others were marked by extreme cold and ice conditions. This climatic fluctuation could have led to changes in the number and availability of animals. Vibe (1967) has demonstrated the effects of climatic variability upon arctic wildlife: colder, moister periods can lead to drastic fluctuation in animal populations and force them to migrate to other areas. This variability is known to have had drastic effects in Europe with regard to both farming and fishing endeavors (Fagan 2000; Kurlansky 1999). The cooling temperatures and increased ice in northern waters had their effect on cod populations, and their availability as the arctic waters became too cold for the cod to survive. Further, extreme sea ice conditions affected the ability to fish for cod, thus forcing Europeans to seek out new whaling and fishing grounds (Fagan 2000; Kurlansky 1999). Under similar conditions of climatic and resource variability, the Inuit may have encountered difficulties in procuring resources, and may have been forced to seek new or wider hunting territories.

Chapter 4: Excavation of Snack Cove 1 and Snack Cove 3

4.1 Summary of Past Work at Snack Cove 1 and Snack Cove 3

Snack Cove 1 and Snack Cove 3 were discovered by Dr. William Fitzhugh (1989) as a part of the Hamilton Inlet and Cartwright Reconnaissance (Figure 4.1). At the time that it was located, Fitzhugh (1989) recorded and tested two Labrador Inuit sod houses with a characteristic keyhole shape, entrance passage and rear and side platforms at Snack Cove 3. Three test units excavated in House 1 and the two test units excavated in House 2 recovered evidence of twentieth century dumping from the nearby fishing cabins as well as ceramics and a pipe bowl fragment at greater depths. Based upon the recovered artifacts, and a carbon date of 300±80 BP (Fitzugh 1994) an early 18th century period of occupation was assigned to Snack Cove 3.

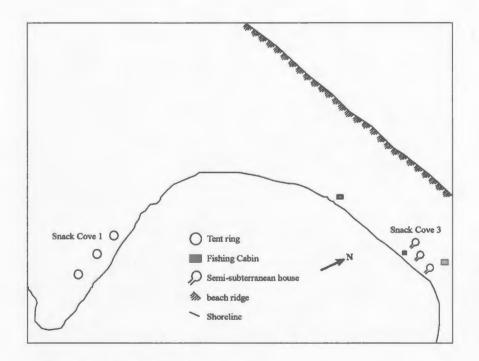


Figure 4.1 Map of Snack Cove

At Snack Cove 1 Fitzhugh (1989) identified three rectangular Inuit tent locales, each containing two tent structures. The three tent house locales were identified as A1, A2 and A3. The interior of the tent structures at locale A1 contained a u-shaped hearth and a pavement at the opposite ends of the house, suggestive of a dual family use (Fitzhugh 1989). The tent structures at Snack Cove 1 share structural similarity to cobble tent ring structures dating to the historic period found at Sculpin Island, and based on the structural similarity, a 17th-18th century date was suggested for Snack Cove 1 (Fitzhugh 1989). A radio carbon sample later dated this site to 360±100 (Fitzhugh 1994). The potential overlap in dates of Snack Cove 1 and Snack Cove 3 led Fitzhugh to suggest that the sites may be a part of the seasonal round of the same group.

In 2003 Dr. Lisa Rankin, Memorial University returned to Snack Cove 3 as a part of the Porcupine Strand Archaeology Project. During the 2003 field season House 1 was excavated, and revealed a paved stone house floor, faunal material and artifacts of European and traditional Inuit origin. A third house depression was identified adjacent to House 2; however, time constraints precluded testing to determine if the depression is in fact representative of a dwelling.

4.2 Excavations at Snack Cove 1 and Snack Cove 3

4.2.1 Excavation Methodology

During the 2004 field season House 2 at Snack Cove 3 and Tent Ring A at Snack Cove 1 were excavated as a part of the Porcupine Strand Archaeology Project. This fieldwork took place over an eight week period in the months of July and August. The first six weeks of the season were focused on Snack Cove 3 and the remaining two weeks on Snack Cove 1. The fieldwork was carried out by a nine member crew, which provided sufficient people to maintain both an excavation and field laboratory. Every attempt was made to maintain similar excavation and recording methods between dwellings at each site, but due to differences in the nature of the sites, some modifications had to be made. The methods specific to each site are discussed separately.

4.2.1.1 Snack Cove 1 Excavation Methodology

Snack Cove 1 was an ideal location to investigate due to its close proximity to Snack Cove 3. Additionally, as Snack Cove 1 represents a warm season dwellings, it provided the opportunity to investigate another aspect of Inuit occupations in southern Labrador. At Snack Cove 1 the research objective was to locate, map and excavate one tent ring locale. Upon arrival at the site only one tent ring, in the area Fitzhugh (1989) identified at Locale A1 could be clearly identified. The rocks that would have been used to weight down the skins of the tent were found sitting on the surface. As such, this tent ring from Locale A1 was selected for investigation and is referred to in this research as Tent Ring A.

An effort was made to utilize the same methods between Snack Cove 1 and Snack Cove 3. A datum was established at Snack Cove 1, and a grid composed of 1x1 meter units was extended over Tent Ring A. The grid ran in a north-south, and east-west orientation with all unit measurements taken from the north west corner of the unit.

The location of all perimeter rocks and internal features was mapped. Tent Ring A is primarily a surface site; however, given the porous nature of the cobble outcrop that the tent ring was built upon it was decided that the Tent Ring would be excavated in case

any artifacts had trickled down through the cobbles. Cobbles from within the tent ring were removed by hand, placed in buckets and then piled outside the tent feature. Due to the difficult nature of the rock matrix, excavation in precise intervals proved difficult. Two strata of approximately 15cm depth were excavated before the matrix became too compact for artifacts to have trickled through. Cobbles removed from the excavation were not screened due to their large size.

There was no notable stratigraphy at Tent Ring A, and as a result profile maps were not created for this excavation. In the case of internal house features, such as Feature 1 and Feature 2, excavation proceeded as entire units. Carbon samples, faunal remains and artifacts were collected and labeled. Once excavation was completed within the interior of the tent ring, the perimeter rocks were removed, and any fauna or artifacts underneath were collected.

4.2.1.2 Snack Cove 3 Excavation Methodology

The research objective at Snack Cove 3 included excavation of House 2, as well as testing in House 1 and House 3. In House 1 testing was conducted in an attempt to locate a midden outside of the dwelling. In House 3 the goal of excavating test units was to confirm that it was a dwelling structure. Testing in House 1 consisted of a 5x1 meter trench behind the dwelling, while in House 3 two 1x1 meter units were excavated in the interior of the depression.

The methods employed in this research are a continuation of those established by Rankin during the 2003 field season excavation of House 1(Rankin 2004). The initial step was to locate the house features. This proved to be an easy task, as the large keyhole

shaped depressions which represent the remains of the dwellings were visible from the surface of the site. The site datum established by Rankin was located, and the site grid extended to include House 2 and House 3. Using a total station a grid consisting of 1x1 meter units was created along a north-south and east-west orientation. All measurements were recorded from the north west corner of a unit. The sod covering the excavation area was removed in order to facilitate excavation by trowel. The 1x1 meter units were excavated by trowel in 10cm increments until sterile soil, or house pavement stones were reached. Artificial excavation layers of 10 cm increments were used because stratigraphic units were limited. Stratigraphic layers consisted of recent fill from nearby fishing cabins, and a combined roof-fall and occupation layer of varying thickness. Provenience for artifacts and carbon samples found in situ was recorded prior to collection. Soil removed from the excavation units was screened through a ¹/₄^{**} mesh, and any artifact or faunal material caught in the screen was collected.

Due to the destructive nature of excavation, effort was made to record as much data as possible while excavation progressed. A profile section of the house stratigraphy was mapped and photographed. As features became evident, their location was recorded and photographed. Internal house features were excavated as entire units. When the living floor of the dwelling was uncovered, it was photographed; afterwards, the depth of each house floor stone was measured and a plan view was made of all stones comprising the house floor. Once all provenience data for the house floor was recorded, the floor stones were removed and excavation continued to ensure there was no earlier component

of the dwelling. Within the first 10cm level below the house floor, sterile soil was reached, and excavation stopped. All excavation units were then backfilled. 4.2.2 Results of Snack Cove 1 Excavation

Tent Ring A is a large, roughly rectangular structure defined by a perimeter of large, closely placed rocks (Figure 4.2). Running through the centre of the structure is an arc-shaped string of closely placed rocks that divide it into two distinct sections. The larger portion of the tent ring is an oval shape that overlaps the smaller, more rectangular section of the tent. The structure runs along a north-west to south-east orientation, with a total length of 12.5 meters. The larger of the two sections in the structure measures 8x6 meters while the smaller section is 7x4.5 meters. There are two rock features located within the larger section of the tent ring. No internal features were found within the smaller section.

In the larger section of the Tent Ring A there is a u-shaped feature composed of rock piled 30cm high. The feature is such that the opening faces the north-east portion of the structure. Fitzhugh (1989) identified this feature as a hearth. A carbon sample removed from Feature 1 revealed a date of 360±100BP (B-22400) with a calendar date of AD 1333-1490. The removal of a carbon sample does not appear to have greatly disturbed Feature 1, though there was a spot in the centre of the feature where the absence of any lichen growth suggested that a rock had been removed. A second date of 300±80 (B-40401) with a calendar date of AD 1430-1637 was recovered from a hearth in a structure in Locale A3 (Fitzhugh 1994). Excavation of Feature 1 revealed bone, mussel

shell, charcoal and wood. The presence of bone, wood and charcoal is consistent with an interpretation of Feature 1 as a hearth.

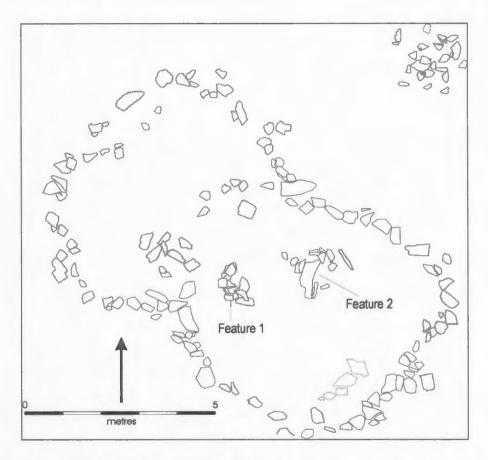


Figure 4.2 Snack Cove 1, Tent Ring A

Feature 2 is a large flat rock slab surrounded by several other large rocks. Fitzhugh (1989) suggested that this feature is also the remains of a hearth. Excavation did not yield any evidence of fire having been made in association with these rocks. Further, the configuration of the rocks do not provide any suggestion of a fire area. This feature is likely the remains of an internal activity area, perhaps it provided a flat working space where activities such as food processing may have taken place. There are structural similarities between Tent Ring A and structures from Sculpin Island described by Kaplan (1983). Like structure 15 at Sculpin Island, Tent Ring A shares a u-shaped hearth feature, and a central division of the structure into two areas, where one portion is a sleeping area, and the other a working or living space. A similar interpretation of space is applicable for Tent Ring A, with the smaller area being a sleeping area, and the larger a living area.

4.2.3 Results of Snack Cove 3 Excavation

At Snack Cove 3, excavation of House 1 and House 2 was completed, while testing in House 3 confirmed the presence of a third structure. The three structures at Snack Cove 3 are situated in a linear arrangement along the cove, with House 1 being the most easterly structure. Results of the excavations of each house are described separately.

House 1

House 1 was excavated during the 2003 field season of the Porcupine Strand Archaeology Project. Excavation revealed a single room dwelling roughly rectangular in shape with a tightly placed paved stone floor, entrance passage and rear sleeping platform (Figure 4.3). There were no stone walls or a whalebone roof frame both of which are common among Inuit winter dwellings. Instead, the walls were made from sand and sod built up along the sides of the house floor. Several wood pieces found during excavation indicate the likelihood of a wooden roof frame.

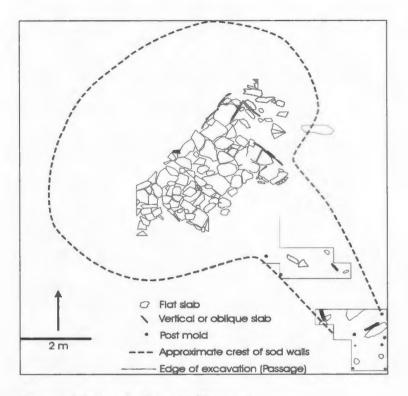


Figure 4.3 Snack Cove 3, House 1

Several post occupational disturbances have made interpretation of the stratigraphy from House 1 difficult. Mussel steaming pits dug into the centre of the house depression left large shell deposits and altered the locations of many artifacts, faunas and soils. This is likely a recent disturbance created by the inhabitants of the nearby fishing cabins. More recently, three test pits were excavated by Fitzhugh (1989). The numerous disturbances to the house have limited the utility of house profiles in illustration of the house construction. Additionally, the disturbances have greatly affected they placement of artifacts within the dwelling and as such, there is a limited number of artifacts that can be positively associated with the house floor. Yet in areas where there have been no post-occupational disturbances, the stratigraphy is similar to House 2 and House 3 (Figure 4.4). Below the sod is a fill layer of dark soil composed of post occupational dumping, presumably from the nearby fishing cabins (Appendix B: Table B1). Under the fill layer is a combined roof collapse and occupation layer composed of marbled grey soil, structural rocks, and wooden roof fragments. This layer is interrupted by the flagstone floor within the dwelling, and by a light brown sterile sand outside of the dwelling.

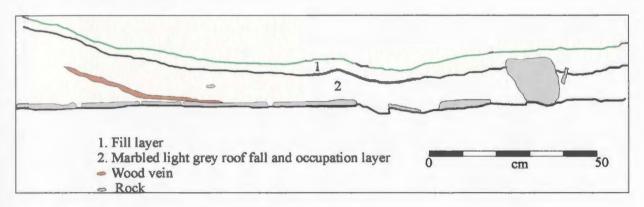


Figure 4.4 Snack Cove 3, House 1 Stratigraphy

An alcove area of the dwelling was uncovered during excavation. The alcove is a small square area of the house floor located in the north west portion of the dwelling, beside the sleeping platform. Within this portion of the dwelling was found the majority of bone associated with the dwelling which extend into the house wall. The large number of bone found in this portion of the dwelling implies that the area may represent a storage and/or midden area; however faunal materials were collected throughout the house floor.

Two carbon samples were recovered from inside of House 1 during the 2003 field season. Both samples are composed of charred wood fragments. The first sample, obtained from the area of the alcove/midden at a depth of 30cm returned a date of 610±40BP with a calendar date of AD 1290-1420 (B-198379). This date is too early for the occupation of an Inuit group in possession of European goods. The early date may reflect the delayed use or reuse of wood by the Inuit, or could have resulted from the old wood effect. A second carbon date of 390±60 (B-198380) with a calendar age of AD1420-1650 was obtained from the floor of the entrance passage.

During the initial 2003 excavation there was no midden found in association with the dwelling. Efforts to locate an external midden were continued in the 2004 field season. A 5x1 meter trench was excavated on a north south orientation behind House 1 where a raised portion of earth was visible. The trench was excavated to a depth of 30cm below the surface before sterile soil was reached. The test trench did not locate a midden or any other associated external features behind the dwelling and the mound was likely the result of house sods collapsing or deteriorating. Artifacts and faunal materials were found within the fill layer; however, there were none found to be in association with the occupation of the dwelling.

House 2

The excavation of House 2 revealed a tightly placed paved house floor and entrance passage (Figure 4.5). The house is a single room roughly square in shape, with rear platform and a storage area. The house was surrounded by sod and turf walls, and wood found within the house is suggestive of a wood framed roof. House 2 was smaller in size than House 1.

A niche/storage area was uncovered at the north east end of the house. It had a large boulder on each side, and large flat slabs on the front and top, there was no back to the feature. Excavation of the feature yielded seal and caribou bone, various iron implements including the point of a pin, and portions of modified wrought nails, and a

carbon sample. The carbon sample returned a date of 340±40BP (B-198377) with a calendar age of AD 1450-1650.

In the northwest corner of the house several loosely arranged upright stones, and a raised flat slab of rock were uncovered. The flat slab is possibly the remains of the sleeping platform located at the back of the house, whereas the upright stones may represent a storage feature similar to that of the north east end of the house. A quantity of small terrestrial mammal bone was recovered from the area of these upright stones. They could have been placed there for storage or as refuse.

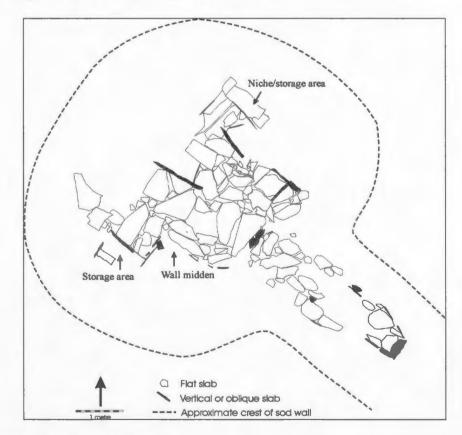


Figure 4.5 Snack Cove 3, House 2

There was a small rock concentration at the eastern corner of the house. It does not appear as though the rock was part of the internal architecture; rather, it is likely the remains of hold down rocks that collapsed inward after the dwelling was abandoned. Underneath the rocks some iron objects, including modified nails, were found.

House 2 had less post-occupational disturbance than House 1, revealing a more easily interpreted stratigraphy (Figure 4.6). A fill layer comprising dumping, presumably from the nearby fishing cabins, occurs just below the sod layer (Appendix B: Table B2). Below the fill layer is a marbled grey soil, with alternating light and dark bands, and wood fragments which represents a combined roof collapse and occupation layer. The bottom of the occupation layer is demarcated by the pavement stones of the floor in areas within the house and a light brown sterile soil outside of the house.

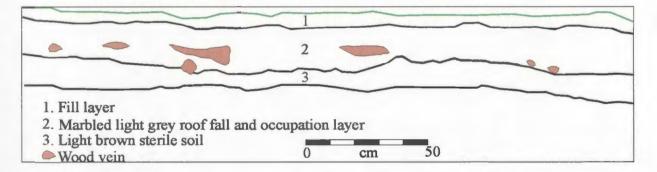


Figure 4.6 Snack Cove 3, House 2 Stratigraphy

Faunal materials were found throughout House 2, with notable concentrations located in the two storage areas, as well as in a small midden in the western sod wall. The wall midden extended from 22 to 34cm below surface, and had an approximate 1m diameter. It was composed primarily of caribou bone, with a small amount of seal. Test pits were excavated in front and on the sides of the entrance passage in an attempt to locate an additional midden. Though a small number of items were found outside the entrance passage, the wall midden is the only midden associated with the house.

House 3

The test units excavated in House 3 have provided evidence to confirm the presence of a third dwelling. Test unit 1 was located in the centre of the depression, and test unit 2 was in an area that appeared to be the entrance passage. The excavation of test unit 1, revealed a similar stratigraphy as House 2. The unit was excavated to a depth of 50 cm below the surface. In the south east corner of the test unit two upright stones, and a flat pavement stone were located. The upright and flat stones confirmed the presence of a house floor, though what part of the house cannot be established. Within the test unit was found refuse, presumably deposited by the inhabitants of the nearby fishing cabin (Appendix B: Table B3). In the areas that were not part of the house floor excavation was conducted to a lower level to determine if there was the potential for another house floor; however, none was reached in this unit before sterile soil.

Test unit 2 was excavated to 70 cm below surface before house floor was reached. In addition to having flat pavement stones, large upright slabs and many large rocks were located in test unit 2. As with test unit 1, the stratigraphy was similar to that of House 2 (Figure 4.7). The excavation of test unit 2 resembled portions of the entrance passage of House 2, such as the large upright stones, which would suggest that it may be the location of the entrance passage. The greater depth of floor stones in test unit 2 is indicative of a sunken entrance passage. When fully excavated, House 3 may reveal an entrance passage that is similar to House 2.

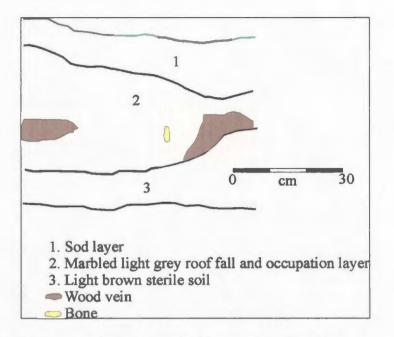


Figure 4.7 Snack Cove 3, House 3 Stratigraphy

The results of the test excavations in House 3 are too limited to make any decisive conclusions about the dwelling construction; however, it is possible to confirm the remains of a third dwelling at Snack Cove 3. Based upon the similarity in stratigraphy and the build up of sod and turf around the dwelling, it is probable that House 3 shares architectural similarities to House 1 and House 2.

Other Houses

In 2004 the spring came late and when the field crew arrived at Snack Cove the vegetation had not yet grown in, and the presence of four additional house depressions in a line along the beach at Snack Cove 3 became evident. The additional depressions have had more erosion occurring along the house walls than Houses 1, 2 or 3 and are almost unnoticeable when the vegetation is grown in. This may explain why the depressions were previously unidentified. Time constraints prevented testing of the depressions. In

any case, the presence of the additional dwellings is suggestive that Snack Cove 3 is larger than previously thought.

Summary

The houses from Snack Cove 3 each have unique characteristics yet share many similarities which permits discussion of their form and seasonality. Several architectural features expressed in House 1 and House 2 are consistent with typical Thule winter house construction, such as the sleeping platform, sod and turf construction, paved floor, and the sunken entrance passage of House 2. Based on these similarities an Inuit cultural affiliation for the dwellings can be ascribed. Yet, the Snack Cove 3 structures are missing some important aspects of Thule winter house such as stone walls, and the whale bone roof frame; however, the absence of a whale bone roof frame is not surprising in southern Labrador as there is an abundance of wood. Further, the house depressions are not exceptionally deep. Instead what is found is sand and sod walls built up around the house floor, remains of wood roof frame, and hold down rocks. These points suggest a greater similarity to the historic Inuit structure commonly referred to as a qarmat.

The qarmat was built like a winter house, with paved stone floor and sunken entrance passage, but had a wooden tent frame, covered with skins placed atop it (Mathiassen 1927). Mathiassen (1927) described the qarmat as a predominantly temporary dwelling occupied during the fall months when it was too cold for a tent, but too warm to move into a sod house. The qarmat was frequently used by the Inuit during the historic period, and sometimes it was occupied throughout the winter (Mathiassen 1927; Park 1988). The Snack Cove 3 dwellings are built in the architectural style of the

qarmat. The construction of House 2 with a cold trap entrance indicates that the Inuit who built it may have intended to occupy the dwelling during the colder months of the year, including the fall and winter.

There is a stylistic similarity between the dwellings at Snack Cove 3, and those described by Jordan (1977, 1978) and Kaplan (1983) for Eskimo Island 3. Eskimo Island 3 is a 17th century Inuit site located in the Narrows of Hamilton Inlet. The Eskimo Island 3 dwellings are small, semi-subterranean structures with short entrance passages, and rear sleeping platforms. These dwellings were likely occupied by nuclear families. Kaplan (1983) has noted the structural similarity between the Eskimo Island 3 dwellings and other pre-contact Thule houses from Iglosiatik 1 in the Nain region and Staffe Island 1 in the Home Island region.

4.3 Analysis of Snack Cove 1 and Snack Cove 3 Artifacts

4.3.1 Field Laboratory

Preliminary analysis of artifact and faunal materials began in the field laboratory. All artifacts and faunal materials recovered from excavation were cleaned, measured and assigned a catalogue number. Preliminary identification and descriptions were made for each specimen, and recorded on a catalogue data sheet. All information was then entered into an electronic database. Once preliminary identifications were made, materials were sorted to separate artifacts from faunal materials. All materials were then packed for transport back to Memorial University.

4.3.2 Artifact Classification

At Memorial University artifacts were unpacked and photographed. Composite artifacts were then x-rayed to better understand the nature of their manufacture. All artifacts were then compared to reference materials to confirm the field identifications. If any changes to identifications were necessary, they were noted on both the catalogue form and in the electronic database.

Upon completion of identifications, artifacts were separated into analytical categories. Artifacts were assigned to a category based upon fabric, or the material of composition: bone, ceramic, metal, glass, clay, stone, wood and composite. In some cases, these categories have been further divided into sub-categories (i.e. metal is divided into iron, tin, copper, and lead). Fabric plays an important role in differentiating between artifacts of "traditional Inuit" origin and artifacts of "European" origin. The Inuit are known to have made use of wood, bone, slate, soapstone, baleen, hide, ivory and other raw materials from their environment in the manufacture of objects, while metal, ceramic, glass and clay are the typical fabric of European goods. Categorization based upon fabric provides for the quickest differentiation between items of European origin versus those of Inuit origin. Interpretation can then be made of the form and function of the artifacts, and in turn, the role of European goods in Inuit culture.

4.3.3 Dating Methodology

Multiple methods have been used for assessing approximate date ranges for the occupation of Snack Cove 1 and Snack Cove 3. An approximate date range has been obtained from radiocarbon analysis, datable European artifacts, and established

Thule/Inuit cultural chronologies based on architecture form. The ranges for each date source are compared, and the date range for occupation is taken from the period intersected by the highest number of sources. Each dating method is discussed separately.

4.3.3.1 Radiocarbon Dating

In instances where an association could be made between a carbon sample and a House, radiocarbon analysis has been used. Carbon from charred wood was sent to Beta Analytic Inc. for radiocarbon analysis. To counter the possible effects of contamination from more recent carbon, the samples had an acid/alkali/acid pretreatment prior to standard carbon-14 or AMS analysis depending on sample size. The radiocarbon dates were calibrated against a dendrochronological database. Results of the analyses are presented in radiocarbon years before present (BP) and in calendar years at 2-sigma calibration.

As has been discussed by Park (1993, 2000), and Morrison (1989) problems associated with radiocarbon dating in an Arctic context include fracturation, the marine reservoir effect, contamination from sea mammal oil, and permafrost. In the case of samples recovered from Snack Cove 1 and Snack Cove 3, dates were obtained from charred wood carbon. Problems associated with radiocarbon dates from wood are not limited to arctic regions, and include the old wood effect, the delayed use of wood, and reuse of wood. All of these factors can contribute to a date that is too old for the occupational context (Bowman 1990).

The marine reservoir effect has the potential to produce carbon dates that are much older than the actual age of the object being dated. The marine reservoir effect occurs as a result of the slower rate of mixture for deep ocean waters (Bowman 1990). New carbon dioxide is only slowly mixed in the deep ocean waters and as upwelling occurs, the deep ocean waters with poorly mixed carbon rise closer to the surface (Bowman 1990). Carbon dates obtained from objects that have been in marine environments, such as shell, or marine mammal bones, have the potential to produce an older date as a result of the slow mixture of marine carbons.

The old wood effect occurs when a living organism such as a tree discontinues its exchange with the biosphere prior to death (Bowman 1990); this is especially problematic among long lived species (Bowman 1990). In the case of a delayed use of wood an unknown time interval occurs between the death a tree and its use by humans, such as the use of driftwood as a building material or for fuel for a fire (Bowman 1990). The reuse of wood as a building material will have similar effect (Bowman 1990). In all of these cases, the carbon sample can return an older date.

In addition to numerous possible factors which may provide a date that is older than anticipated, there is also the problem of the utility of radio carbon analysis for dating recent materials. Radiocarbon analysis is best suited for samples which are at least a few hundred years old. It was anticipated that the Snack Cove samples would return dates which fall very close to the limits of which radiocarbon analysis could be used to date, and could possibly result in a date that is too recent. In the context of this research the interpretation of carbon dates has been treated with great care. In order to compensate for

the potential problems associated with radiocarbon dating, the carbon dates are considered along with the date ranges from artifacts recovered, and the architectural style of the dwellings excavated.

4.3.3.2 Pipe Stem Dating

Pipe stem fragments have previously been used as a method for obtaining a date range for the manufacture of English pipe stems. Harrington's (1951) analysis of pipe stems of English manufacture from Jamestown has shown that between 1620 and 1800 there was a progressive reduction in bore diameter, which can be used as a proxy for the pipe's date of manufacture. Using a drill bit to measure the width of the bore diameter in /64ths of an inch a pipe stem date range is obtained (Harrington 1978). Based upon the bore diameter a chart for the manufacture range of pipes was created and a relative date for a period of no more than 100 years assigned to a pipe stem (Harrington 1978).

In the context of this research, caution must be employed in the use of pipe stems as an indicator for the occupation date of the dwellings. The pipe stem sample from Snack Cove 3 contains four specimens, all from House 2. The bore diameter date range for the pipe stems is presented; however, it must be remembered that Harrington's (1951) methodology was intended for use on pipe stems of English manufacture. The origin of the Snack Cove 3 pipe stems is unknown. Therefore, though the date ranges obtained from the pipe stems correlate with other datable items recovered from Snack Cove 3, pipe stem fragments cannot be utilized as a reliable indicator for the date of the dwelling occupations.

4.3.3.3 Ceramics and Glass

Ceramics and glass provide a useful tool in dating sites, as many have a known date range for manufacture. French Stonewares which have been in production for an extensive time period are utilized as a dating method. The range of time when they were commonly found in a French Canadian context is used as a date range for the site occupation period. There were no refined earthenware found in association with the house occupations in Snack Cove 3, though a large quantity was recovered from the fill layer. The absence of such materials from the house floor can be used to provide further insight into dating the sites.

A glass fragment found in House 2 is of distinctive form that can be dated. The bottle glass that was found in House 2 is used to provide a relative date range for the house occupations.

4.3.4 Snack Cove 1 Artifact Analysis

Very few artifacts were recovered in the excavation of Tent Ring A (Table 4.1), which may be a reflection of a short duration of stay, of post-occupational disturbances, or of the cobble beach itself. The only artifact categories represented are metal and bone, each with only one specimen. The nature of the site matrix and the potential postoccupational disturbances require serious consideration of the association between the structure and the artifacts. The association between the carbon, fauna and artifacts recovered from within the features or under the hold down rocks can be assumed with relative confidence because there is no visible post-occupational disturbance observed; however, for those artifacts found within the structure but not associated with a feature or hold down rock, confidence is less assured.

Table 4.1 Snack Cove 1, Tent Ring A Artifacts

Category	Tent Ring A Amount	
Metal		1
Bone		1
Total		2

Metal

The metal category comprises a single object found beneath a perimeter rock (Plate 1a). The object is made of lead and is shaped like one lead drop stacked atop another. There is an indentation in the centre of the upper drop. The object is similar to lead pendants found by Bird (1945) at Iglosoataligarsuk, in the Hopedale region. Bird (1945) found seventy five such pendants in association with a grave. The lead artifact from Tent Ring A exhibits a similar shape to an ivory pendant recovered from Brooman Point (McGhee 1984: Plate 26m). Therefore, based upon the similarity to other pendants recovered from Inuit and Thule sites, it can be concluded with relative confidence that the lead artifact from Tent Ring A is a pendant.

Bone

From Tent Ring A there was a single specimen of worked bone (Plate 1b). The object is a modified portion of a mammal long bone fragment. It is 5cm in length with an approximate 40° angle notch in one end, resembling a portion of a harpoon foreshaft. This artifact was found in the centre of the tent ring, at a depth of 15 cm and has clearly been modified by humans. Association with the tent ring cannot be absolutely established.

Summary

Very little about the activities of the people who occupied Tent Ring A can be inferred from the few artifacts recovered from Tent Ring A. The artifact forms show a continuity with Thule/Inuit types in northern Labrador and the eastern Arctic. Additionally, it can be ascertained that the Inuit who occupied Tent Ring A had access to metal, suggesting an historic occupation date.

4.3.5 Snack Cove 3 Artifact Analysis

The artifacts from Snack Cove 3 are more numerous and varied than those from Snack Cove 1 (Table 4.2). Each raw material type and the artifacts associated with it will be discussed separately.

Category	House 1	House 2	
	Amount	Amount	
Ceramic	0	29	
Glass	0	1	
Clay	0	4	
Bone	1	3	
Stone	2	3	
Metal	26	46	
Wood	0	2	
Composite	0	2	
Total	29	. 44	

Table 4.2 Snack Cove 3, Artifacts

Stone

Stone artifacts do not comprise a large portion of the artifact assemblage for either dwelling. The stone category is divided into two sub-categories including ground slate and Ramah chert.

Ground slate, a material commonly used by the Thule and Inuit for making knife blades and points is represented in each dwelling. The specimen from House 1 is a brown, ground slate fragment that was broken, and found in the fill layer (Plate 2a). Its association with the living floor of the dwelling cannot be certain. The high degree of post-occupational disturbance from House 1 could be responsible for its position in the fill layer. From House 2 a green slate endblade was found (Plate 2b). The endblade displays small chips along the edges and may have been discarded for this reason.

A secondary Ramah chert flake was found in House 1 and House 2 (Plate 2c,d). Fitzhugh (1972) has noted a Thule/Inuit use of Ramah Chert; however, it is not a material commonly used by the Inuit or the Thule. There is no further evidence of tool making with Ramah or any other chert at Snack Cove 3. Large amounts of Ramah chert were found sitting on the surface at Snack Cove 2, a Groswater Dorset site located on the ridge just behind the houses. The Groswater Dorset site is the likely source of the chert in House 1 and House 2. The flakes may have been scavenged by the Inuit for use as a tool or a trinket.

Bone

Bone artifacts were found in small quantities in House 1 and House 2, with the greater number found in House 2. A single bone artifact was recovered from House 1. It

is from the rib of a large mammal and has been worked on all sides (Plate 3a). The top end of the bone has a small jagged stud which gives the appearance that something has been broken off from it. The function of the bone cannot be determined; however, it does resemble the toy bows found at Avertok (Bird 1945). In this case, the tip where the bow string would attach has been broken off.

A large modified bone was recovered from the floor of House 2. Examination shows it has clearly been ground in order to produce its shape, and that given its size, it came from a large mammal, possibly a whale. Another bone tool from House 2 was made from a large mammal bone, and has holes drilled into it, along with a grooved opening along the centre of the bone (Plate 3b). The numerous holes drilled into the bone object suggest it was lashed to something, possibly part of a harness. The final bone artifact from House 2 is a small socket (Plate 3c). This artifact was presumably a piece of hunting equipment, perhaps part of a harpoon or lance.

Ceramics

Ceramics make up the second largest category of artifacts for House 2, and are found in both the fill layer and the house floor. No ceramics were found in association with House 1 floor, but several were found in the fill layer. Within the category of ceramics, artifacts have been broken down into two categories: French Stonewares, and Refined Earthenwares. Each type of ceramic will be treated individually.

Refined Earthenwares

In the mid-18th century a development in stoneware manufacture led to the production of white wares, which are commonly referred to as refined earthenwares

(Noel Hume 1969). After their introduction they came to be the dominant form of table wear, and date no earlier than 1740 (Noel Hume 1969).

Refined earthenwares have been recovered in relatively equal amounts from both House 1 and House 2. Though they represent the most abundant type of ceramic found, they are strictly limited to the fill layer in each house. It is likely that they represent the refuse deposited from the occupants of the two fishing cabins located beside the site. The absence of any of these wares from the occupation layer of both dwellings is indicative that they were occupied prior to the introduction of refined earthenwares and thus prior to 1740.

French Stonewares

The French stonewares are only found in association with the living floor of House 2, and are useful for establishing a relative date for the occupation. There are two types of French Stoneware found; Martin Camp and Normandy Stoneware. Each type of French stoneware is described separately.

Martin Camp is a stoneware produced in a small town of the same name, located between Dieppe and Beauvais (Noel Hume 2001). It is located in the northen part of the Pays-de-Bray pottery production area centred on the village of Beauvais (Hurst, Neal and van Beuningen 1986). Martin Camp stoneware is common in French Canadian contexts from the end of the 17th century to the early 18th century (Brassard and Leclerc 2001).

All five portions of the Martin Camp stoneware were recovered from House 2 (Plate 4). The pieces all come from the same vessel, and were refitted revealing the base of a small vessel. Jean-Pierre Chrestien of the Canadian Museum of Civilization, a

specialist in the archaeology and history of New France has identified this vessel as a small Martin Camp flask or medicine bottle.

Normandy stonewares were produced in large quantities, and were typically jars and bottles with flanged lids and handles that are hollow, round or strapped (Burns 1991). These wares were often used for storage of goods such as butter and other dairy products, and cider (Burns 1991). The Normandy stoneware was produced in three main production areas: Domfront is the earliest to begin production in 1402 (Burns 1991) and is centred on the villages of Ger (Brassard and Leclerc 2001). The other two production areas began during the 16th century and are called Bessin, which is centred around Noron and Le Tronquay, and Contentin which is centred on the villages of Vindefontaine, Nehou and Saussemesnil (Brassard and Leclerc 2001). In archaeological contexts in Quebec, Normandy Stoneware typically dates from the 17th to mid 18th century (Brassard and Leclerc 2001; Chrestien and Dufournier 1995).

In House 2, 24 fragments of Normandy Stoneware representing multiple production regions have been recovered. Nine of the pieces were recovered from the same general area of the dwelling as the Martin Camp vessel have been refitted (Plate 5). The refitted pieces form the partial side of a bottle with a lip, and a small horizontal handle. This type of bottle was produced from the 17-19th century and would have had two horizontal handles on either side; a rope would be passed through the handles to permit it to be worn over the shoulder (Jean-Pierre Chrestien: personal communication). This example would have come from the Bessin or Contentin region (Jean-Pierre Chrestien: personal communication).

Glass

Fragments of Dutch case bottle glass were found in and around the entrance passage of House 2 (Plate 6a). These bottles were a dark green in colour, with square sides (Noel Hume 1969; Wicks 2003). They were made in both the Netherlands and England, and were common between 1625 and 1675, and again during the later part of the 18th century when they were used as gin containers (Noel Hume 1969; Wicks 2003). Wood

There were only two wooden artifacts found, both coming from House 2 and are similar in form (Plate 6b,c). The wood pieces have been modified such that the ends taper into small points. Given their shape, it is most likely that the two pieces of wood were modified in order to perform a task of punching holes, and may have been used as awls. The wooden artifacts were found just outside of the dwelling entrance passage. Metal

In both houses, the metal objects were found dispersed throughout the dwelling, including wedged beneath and between the floor stones. Metal is by far the most common material in both dwellings. The metal category has been subdivided into iron, lead, copper and tin. House 2 shows a greater diversity of metal artifacts, including iron, copper, lead and tin, while House 1 shows only iron and copper (Table 4.3). Analysis has shown iron to be the preferred metal, and the most abundant material the Inuit had.

Almost every piece of iron associated with the House 1 or House 2 living floor has been modified in some way. Parts of objects that have been broken such as a smoking companion, tip of a pin, nails, spikes and other unidentifiable objects have been

recovered. Most notable among the metal artifacts are the large number of wrought iron nails found in both House 1 and House 2 (Table 4.4). Nails make up the majority of metal artifacts found, most of which have been modified. In House 1 88% of nails exhibit some form of modification, and in House 2 modified nails account for 86% of the total nails. The most common nail forms recovered are nails with the head and shaft, or just the nail shaft. There are few instances where nail tips have been found. The nails appear to have been modified to remove the tip. In few instances, bent nails were found, frequently without a tip.

Table 4.3 Snack Cove 3, Metal

Category	House 1	House 2
	Amount	Amount
Iron	25	41
Lead	0	2
Copper	1	2
Tin	0	1
Total	26	46

Table 4.4 Snack Cove 3, Iron

Category	House 1	House 2	
	Amount	Amount	
wrought iron nail, shaft and tip wrought iron nail, head and	0	1	
shaft	6	11	
wrought iron nail, tip	1	2	
wrought iron nail, complete	2	4	
wrought iron nail, shaft	8	11	
other iron object	2	4	
unidentified iron object	6	8	
Total	25	41	

Other artifacts of metal include a copper ring from House 1, two lead pieces from House 2, an unidentified copper fragment and unidentified tin fragment. There is the possibility that the other metals, such as the tin and copper, are intrusive. In any case, metals other than iron do not appear to have held the same value as iron.

Clay Pipes

Four pieces of clay pipe stem fragments were found in association with House 2. The pipe stems found do not attach at any point, which make it difficult to determine the number of pipes that the fragments came from. Two pipe stems have a bore diameter of 6, and two pipe stems have a bore diameter of 7 which indicates a date range of manufacture from AD 1680-1720 and AD 1650-1680 respectively. As already stated, the origin of these pipe stems is unknown, and as such these dates are not relied upon in dating the Snack Cove 3 dwellings.

Composite Tools

The composite artifact category is perhaps the most interesting of all. These are artifacts made with more than one material type. Two composite artifacts were found at Snack Cove 3, both specimens from House 2. They were both made of bone and metal, and perhaps best illustrate the adaptation of European raw materials to Inuit lifeways.

A bone and iron ulu was found along the eastern wall of House 2 (Plate 7). The ulu had a bone handle, and iron knife blade. X-ray of the ulu blade shows that a tang of the blade extended into the bone handle. The ulu blade is made of iron, and could have been modified by the Inuit to make the characteristic semi-lunar form. The top part of the ulu, perhaps also made of bone, is missing.

The second composite artifact is a bone knife handle with iron rivets (Plate 8). There is no blade associated with the artifact, though a groove at the base of the handle where the blade would have attached is visible. The rivets appear at the other end of the handle from the groove for a blade. It is possible that the rivets were intended to hold another blade, and that the knife had two blades.

Summary

The artifacts from Snack Cove 3 give a relative date range for the occupation of the dwelling, and provide insight into the activities of those that lived there. The French stoneware from House 2 is a similar type to those typically found in the 17th and early 18th century in French Canadian contexts. Additionally, the absence of any refined earthenware in association with the house floor further supports a date of occupation that was prior to the 1740's. The clay pipe stems and bottle glass collectively date to the 17th century. Comparison of all datable artifacts shows a cluster of time periods in and around the mid to late 17th century.

There is similarity in tool type and material to Thule and Inuit in northern Labrador and the eastern Arctic. This continuity is expressed through the usage of bone and stone as raw materials. Additionally, traditional tool types such as the end blade, socket and lashing equipment are made and presumably employed in traditional hunting methods.

The presence of European goods indicates the incorporation of new raw materials and increased variability to Inuit material culture. There is an absence of some typical Inuit objects such as soapstone lamps, pots or any other food storage vessels. The absence of such objects may represent replacement by European materials such as glass and ceramic vessels. For example the French stoneware may have been utilized as lamps, and/or vessels for cooking. Small amounts of burnt residue found on the inside of the Normandy stoneware bottle recovered from the floor of House 2 may have occurred as a part of the firing process in the vessel's manufacture; alternatively, the burnt residue could have appeared as the result of Inuit usage of the vessel as a lamp or in food preparation.

The most notable European good is the iron, particularly the nails. The majority of nails recovered from House 1 and House 2 do not have tips. Two nail tips recovered appear to be flattened, and have a similar shape to an Inuit end blade. Thus, there is a strong possibility that like ceramics, iron objects were adapted in order to suit Inuit needs. This is further shown by the bone and iron ulu and the bone and iron knife handle. In this instance, iron acquired by the Inuit was modified to a more typical Inuit shape, and presumably used to perform an activity typical of the Inuit.

4.4 Analysis of Snack Cove 1 and Snack Cove 3 Faunas

4.4.1 Identification of Faunal Material

In the laboratory at Memorial University all faunal material was rough sorted into mammal, bird and fish. Faunal materials were then identified to the lowest possible taxa. Identifications were made with the aid of reference guides including Gilbert (1990), Gilbert, Martin and Savage (1996), Cannon (1987), and Hodgetts (1999). Reference specimens for birds, fish and terrestrial mammals borrowed from the Museum of Nature and access to seal specimens from the Natural History section of the Provincial Museum of Newfoundland and Labrador were used for comparison. In all instances, access to only one reference specimen per species was available. The identification of seal species is often quite difficult. In optimal circumstances, there is access to multiple specimens for each species, and there is little reliance on published reference guides. The identifications of Snack Cove seals proceeded under less than optimal circumstances, with access to a juvenile and adult harp seal, a hooded seal, and portions of a ring seal. In the absence of extensive reference collections, identifications were made as well as possible from the available resources. Bones utilized for differentiation between species include the auditory bulla, mandible, humerus, femur, innominate, tibia, fibula, ulna, radius and scapula, each of which has a different level of utility for species differentiation.

Due to the limited number of bones used to identify seal species, they are likely to be underrepresented in a list of identified taxa. The underrepresentation of seal species is somewhat corrected for by the presentation of a Phocidae (seal family) category in the list of taxonomic abundance; however, only the number of identified specimens (NISP) is presented, which limits the comparability of seal with other species.

4.4.2 Quantification of Faunas

Quantification of Snack Cove faunal materials was done to provide insight into season of occupation of the sites and to provide basic subsistence information. These goals are obtained through measures of species abundance. The relative abundance of identified species is compared against Thule/Inuit subsistence and settlement data to identify seasonality and basic subsistence practices for Snack Cove 1 and Snack Cove 3. To ensure that dumping from later occupations at Snack Cove does not skew the data, only faunal materials from below the fill layer in undisturbed contexts were included in the quantification of faunas.

The elimination of faunal materials from the fill layer greatly reduced the total number of specimens for each site. The reduction in total number of specimens has made sample size an issue when considering the utility of the faunal materials as an indication of subsistence for comparison between sites. Grayson (1981, 1984) has illustrated the effects of sample size on quantification of faunal materials and shown that as sample size increases, so does the diversity of species represented. Thus the small size of the Snack Cove 1 and Snack Cove 3 samples becomes an important consideration in interpretation.

Perkins (1973) has suggested that a minimum of 1000 identified specimens is necessary before the minimum number of individuals (MNI) becomes a reliable indicator of species abundance. Yet, an analysis of archaeofaunas from the North Atlantic and Eastern Arctic have led Amorosi et. al (1996) to conclude that once 300 NISP has been obtained, the addition of more specimens does not significantly alter the pattern of species abundance already established. Thus, a sample with a minimum of 300 NISP is sufficient for comparison of major taxa (Amorosi et. al 1996).

The sample for Snack Cove 3 exceeds 1000 NISP, thus making it a reliable indicator for species abundance, and large enough to reliably produce a list of MNI; however, the small sample size from Snack Cove 1 excludes any meaningful interpretation or comparison. Though the sample from Snack Cove 3 is large enough for quantification, it still runs the risk of the biasing effects of small sample sizes. To compensate for the effects of sample size on different counting units, multiple units are

utilized including NISP, MNI and relative frequency (RF). The advantages and disadvantages of each unit are discussed separately.

Number of Identifiable Specimens

The number of identifiable specimens (NISP) is the basic unit for quantification and comparison of faunas. Little calculation is required as NISP is the total number of specimens of a particular species for a specified time and location (Ringrose 1993). The advantage to using NISP is the limited amount of mathematical transformation, and its additive nature (Klein and Cruz-Uribe 1984). Additionally, there is only one method for calculating NISP (Klein and Cruz-Uribe 1984).

Though NISP is an easily used unit for calculation, there are many problems associated with its use as the sole indicator of species abundance. The problems associated with NISP are numerous, a detailed discussion of which is beyond the scope of this research; however, they are outlined in detail by Grayson (1984). The most notable problem associated with NISP is interdependence (Grayson 1984). A calculation of NISP treats each specimen for a species as a separate individual (O'Connor 2000). The obvious problem with this interpretation is that multiple bones from the same individual could have contributed to the count of NISP. Yet this does not mean that NISP does not hold any value as a counting unit. NISP is used in this research as a counting unit for species abundance. Nevertheless, heed is paid to the advice of Klein and Cruz-Uribe (1984) and NISP is used in conjunction with other methods of species abundance

Minimum Number of Individuals

The problem of interdependence associated with NISP is corrected for by the estimation of MNI. MNI is defined as the smallest number of individuals needed to account for a species found at a site (Shortwell 1955). The method for calculation of MNI was described by White (1953) as a division of the most abundant element into left and right, and taking the higher number as the MNI. Later refinements to this method were made by Bökönyi (1970) and Chaplin (1971) who advocate checking the age, size and sex of paired bones to determine if they came from the same individual. Thus elements, left and right, that do not come from the same individual can be counted toward a species MNI. Alternatively, Klein and Cruz-Uribe (1984) advocate summing fragmentary portions of an element i.e. left distal humerus to obtain MNI. Finally Binford (1978) devised a method for obtaining MNI where the left and right elements were added together and then divided by the expected frequency of that element in a living individual.

In all methods for calculation of MNI, the problem of interdependence inherent in NISP counts is avoided by ensuring that no individual is counted twice (Klein and Cruz-Uribe 1984; Reitz and Wing 1999; Ringrose 1993). Additionally, it has the advantage of easy comparison across multiple species. However, MNI tends to over estimate the importance of rare species, particularly in the case of small samples (Grayson 1984; Klein and Cruz-Uribe 1984; Reitz and Wing 1999). Additionally, the numerous methods for calculating MNI are problematic, especially when researchers do not indicate which method that they have used to calculate it (Ringrose 1993; Klein and Cruz-Uribe 1984;

Reitz and Wing 1999). In this research, MNI is calculated utilizing the method described by White (1953), with the modifications advocated by Bökönyi (1970) and Chaplin (1971). MNI is not calculated for unidentifiable species or the Phocidae category, as it contains multiple seal species.

Relative Frequency

Relative Frequency (RF) is well suited to a comparison of species in small samples, and in this research is used to compensate for the biasing effect that small sample size may have on MNI. RF is defined as an abstract number used to permit comparison of species within an archaeologically defined temporal unit (Hesse and Perkins 1974). It is important to remember that RF is not an estimation of the actual number of animals represented in the sample. It is an abstract measure used to permit comparison between taxa, and should only be considered among other RF's (Hesse and Perkins 1974).

Hesse and Perkins (1974) outline the steps for calculating RF of a species. RF is obtained by first calculating the NISP of all element types, omitting elements which are variable in number between individuals or are often smashed (i.e. ribs and vertebrae). The NISP of each element is then divided by the expected number of that element within a living individual for each species. The resulting numbers are then ranked for each species with the number for any element that is either over or under represented removed. The arithmetic mean is then calculated for the remaining numbers, the resulting number being the relative frequency.

4.4.3 Taphonomic Considerations

Results of faunal analysis of the Snack Cove 1 and Snack Cove 3 are presented in the following section. The quantifications represent only an estimation of the number of the species present and their relative abundance. Numerous taphonomic factors affect the faunal collection from the living population through to the results of the faunal analysis. It is thus important to remember that the faunal assemblage is only a proxy indicator of the species hunted and/or consumed by the Inuit and discarded in the vicinity of their dwellings and does not represent the actual living populations, or the total quantity and diversity of species exploited by the Inuit.

4.4.4 Snack Cove 1 Faunal Analysis

As with the artifacts, very few faunal materials were recovered from Tent Ring A, all of which were fragmentary and poorly preserved. All faunas were recovered through excavation of Feature 1, or from beneath hold down rocks. Due to the locations from which faunal materials were recovered, association with the structure occupation can be inferred.

The results of an analysis of faunal materials from Tent Ring A are presented in Table 4.5. It is readily apparent that the sample is too small for any meaningful comparison or interpretation of subsistence and/or seasonality; however, it can be noted that during the time of occupation, both seal and ptarmigan were exploited.

Taxon	Common Name	NISP	
Aves	unidentified bird	10	
Lagopus sp.	ptarmigan unidentified	2	
Mammalia	mammal	23	
Phocidae	seal family	8	

Table 4.5. Snack Cove 1 Tent Ring A, Faunal Data

4.4.5 Snack Cove 3 Faunal Analysis

The faunal materials from Snack Cove 3 indicate a range of species including bird, fish, sea mammal and terrestrial mammal. The faunal material presented in Table 4.6 indicates the NISP, MNI and RF for all identifiable groups of species. The faunal data from House 1 and House 2 are presented together to permit generalization about the site.

For each counting unit the major taxa become apparent. The generic seal category is the most abundant as reflected in the NISP value; however, the MNI and RF are not calculated for this group as it is representative of numerous species. Yet of any single group, seal has the highest NISP. Fox, caribou, ptarmigan and cod are all notable as major taxa; however, their rank order differs between counting units.

The relative frequency and the diversity of species are used in this project to provide insight into site seasonality and to give basic subsistence data. It is evident that seals were an important part of the Inuit diet at Snack Cove 3. The high frequency of ptarmigan, cod, fox and caribou species all reflect important seasonally available resources. Their high numbers at Snack Cove 3 are indicative that they were intensively exploited during the site occupation, hinting at a fall time period. Rare species such as the sea ducks and bear could have been hunted during the fall months.

Taxon	Common Name	NISP	MNI	RF
Aves	unidentified bird sub-family, sea	124		
Aythynae	duck	4		
Lagopus sp.	ptarmigan	70	6	2.6
Pisces	unidentified fish	147		
Gadidae	cod family	46	4	1.63
Myoxecephalus scorpius	sculpin	1	1	1
Salmo salar	Arctic salmon unidentified	2	1	0.5
Mammalia	mammal	1152		
Phocidae	seal family	298		
Erignathus barbatus	bearded seal	1	1	0.5
Halichoerus grypus	grey seal	1	1	0.5
Phoca groenlandica	harp seal	4	2	0.75
Phoca hispida	ringed seal	5	1	0.625
Phoca vitulina	harbour seal	5	1	0.83
Canis sp. Vulpes vulpes/Alopex	dog/wolf	11	1	0.47
mutus	red/arctic fox	181	4	2.02
Gulo luscus	wolverine	1	1	0.5
Lutra Canadensis	river otter	1	1	0.5
Mustelidae	mustelid family	5	2	1.125
Ondatra zibethicus	muskrat	1	1	0.5
Rangifer tarandus	caribou	156	5	1.73
Rodentia	rodent family	1	1	0.5
Synaptomys borealis	lemming	1	1	0.5
Ursidae	bear family	1	1	0.25
Lepus sp.	Arctic hare	10	2	0.63

Table 4.6 Snack Cove 3, Faunal Data

It is difficult to guage the relative frequency with which different species of seal were exploited, largely due to the problems inherent in seal identification. Based on NISP alone, a comparison of seal to all other categories shows seal to be the most abundant group; however, the seal category does not reach the high amounts that are typical of a winter occupation for the dwelling. This along with the presence of late summer/fall resources would suggest that the dwellings were only occupied for the fall. The presence of juvenile seals, most likely harp, further supports a fall seasonality. Juvenile seals would have been moving south along the coast with adult harp seals at this time of year toward the winter breeding grounds. Were newborns to be found as well, it would indicate occupation in the spring, when herds were moving back to their summer grounds in the arctic.

In addition to hinting at site seasonality, the high numbers of fox, caribou and ptarmigan found at House 1 and House 2 could provide insights into the nature of the occupations at Snack Cove 3. The hunting of these species, in addition to being important seasonal resources, was also an activity that was relied upon when the yield of seal was smaller than expected. The high percentage of secondary resources from Snack Cove 3 indicates that in addition to a fall occupation, the people who occupied House 1 and House 2 may have been experiencing some degree of resource stress forcing them to rely more heavily on secondary resources.

Therefore, when compiled with the architectural information, a fall occupation for the dwellings is strengthened. Were the Inuit to have over wintered at Snack Cove 3, it would be expected that the seal would be much more abundant, and the rare and seasonal taxa would appear less frequent.

4.5 Snack Cove Excavation Summary

4.5.1 Snack Cove 1 Excavation Summary

Though excavation of Tent Ring A yielded limited data, there are some conclusions that can be drawn regarding the nature, duration, and date of occupation.

The time period of occupation at Snack Cove 1 is difficult to pinpoint (Table 4.7). The carbon dates from Snack Cove 1 have a low margin for overlap at 360±100BP (AD 1333-1490) for Locale A1 and 300±80BP (AD 1430-1637) for Locale A3 (Fitzhugh 1994). A similar date can be estimated through stylistic similarity to structures at Sculpin Island which date to the Early Period (AD 1450-1700) in Thule/Inuit culture history (Kaplan 1983). Collectively, the dating methods available for Snack Cove 1 imply a date range of AD 1425-1600 for the occupation of the site, suggesting an early Contact Period date. Further, the presence of the lead pendant in association with Tent Ring A indicates that the occupation of the site likely falls closer to the end of the date range. The potentially biasing effects of the carbon dates must be remembered, and the possibility that the site was occupied post AD 1600 should not be excluded.

	Carbon Date B-22400	Carbon Date B-40401	Early Phoese	Lood Dondon
	B-22400	B-40401	Early Phase	Lead Pendant
1700				1
1675			I	1
1650			1	1
1625		L	1	1
1600		1	1	I
1575		1	1	1
1550		1	1	1
1525		1	1	1
1500		I.	1	1
1475	I	1	1	
1450	1	1	1	
1425	1	1	1	
1400	1		1	
1375	1		1	
1350	1		1	
1325	1			
1300				

Table 4.7 Snack Cove 1, Dates

The closely spaced rocks that delineate the perimeter of Tent Ring A are most likely hold down rocks intentionally placed to secure a skin roof that was held up by a wood frame. The shape outlined by the hold down rocks suggests that it may have had a conical construction. The internal partition of the structure into two areas may serve a dual function, such as a support for structural beams, and a delineation between sleeping space and living space. This method of construction suggest a warm weather occupation. Mobility during the warm months was higher for the Inuit. If the site was only occupied for a few nights, it could explain the low levels of artifact and faunas recovered.

Historical documentation of an Inuit tent by Jolliet (in Delanglez 1948) provides information related to Inuit occupation in tents during the early Contact Period that cannot be obtained from archaeological investigation, and is helpful in interpreting Tent Ring A. Jolliet made the following observations of an Inuit tent while in the Sandwich Bay region in July, 1694:

"Their beds are one foot above the ground; the blankets are pelts of caribou, seals, bears and of other animals. Their cabins are neat and clean. In the summer they are circular in form and covered with seal hide, really tents." (Delanglez 1948:228)

Additionally, Jolliet records that the tent structures he visited were each inhabited by a small family unit (in Delanglez 1948).

Fitzhugh (1989) suggested that the structures were occupied by two families based upon the possible presence of two hearths within the tent; however, excavations revealed only one hearth within the structure. The presence of only one hearth, along with the presence of one sleeping area, and the available dating sources indicate a single family occupation of Tent Ring A for a few nights in the summer during the early Contact Period.

The social organization of those living at Snack Cove 1 was likely such that small family units lived together in a single tent structure. Though insufficient data is available to determine whether or not the tents were occupied contemporaneously, historic descriptions of Inuit habitations, such as those recorded in the 17th century by Jolliet (in Delanglez 1948) and by Fornel in the 18th century (In Clermont 1980), would suggest that they were occupied at the same time.

4.5.2 Snack Cove 3 Excavation Summary

The excavations at Snack Cove 3 have provided extensive information regarding the nature of Inuit occupations in the area. Architectural and faunal data indicate that the dwelling was occupied during the fall. The form and construction of the houses resemble the historic Inuit qarmat, and in this instance represent a fall occupation. The relatively low levels of artifacts and faunas indicate that the dwellings were only occupied once, and for a short period of time, a conclusion supported by the absence of any extensive middens either within or outside the dwellings.

The single-roomed dwellings at Snack Cove 3 are similar to winter structures from Eskimo Island 3, and share linkages to pre-contact winter dwellings further north along the Labrador coast. Based on the single room, and single sleeping platforms in House 1 and House 2 it is likely that the dwellings were occupied by nuclear or small extended family units. The occupations of House 1 and House 2 (along with the other five dwellings) may have occurred at the same time. Again, historical documents written

by Jolliet (in Delanglez 1948) and Fornel in the 18th century (in Clermont 1980) are instructive in their description of Inuit villages, and indicate a strong likelihood that the dwellings may have been occupied at the same time. Comparison of faunal elements and sides represented from House 1 and House 2 do not indicate an abundance of a particular element or side that might indicate food sharing, and thus contemporaneous occupation of the dwellings. Yet, this does not necessarily indicate that the dwellings were not occupied contemporaneously as species that were typically shared between houses, such as walrus or whale, are not present in the faunal collection at Snack Cove 3.

The nature of the artifact collection coupled with the qarmat structure indicate an historic occupation date for Snack Cove 3. A comparison of available dates including those obtained from artifacts and radiocarbon analysis is useful in determining a date. Table 4.8 lists all available date ranges and shows that they cluster around the mid to late 17th century. Given the number the materials used, it is thus possible to conclude that Snack Cove 3 was occupied at various times during the mid to late 17th century, placing it within the early Contact Period.

Many of the artifacts of European origin recovered from Snack Cove 3 are items that could have been scavenged from abandoned and/or unattended sites, such as iron nails, spikes and other objects such as French stoneware and glass. Artifacts of European origin from Snack Cove 3 do not approach the variety or the abundance that they do at later Inuit sites dating to the 18th century from Eskimo Island, such as those described by Jordan (1977, 1978). Instead, the goods of European origin from Snack Cove 3, though they are the most abundant material types, still occur in small quantities. Further, artifact data indicate use of traditional Inuit tools, along with the adoption and incorporation of European manufactured goods. It appears that European materials are used in conjunction with, as well as in place of, traditional Inuit tool types. The frequent modification of iron nails suggests that tips were systematically removed, and the remaining parts of the nails discarded. The adaptation of iron is further illustrated by the presence of composite tools including the bone and iron knife handle, and the bone and iron ulu. The ulu unequivocally shows the modification of iron to distinctive Inuit forms. Table 4.8 Snack Cove 3, Dates

	Carbon Date B-198379	Carbon Date B-198380	Carbon Date B-198377	Normandy Stoneware	Martin Camp Stoneware	Bottle Glass	Early Phase Architecture
1750							
1725				1	1		
1700				1	T		
1675				1	I		L
1650		I	1	1	- 1	I	1
1625		1	1	1		- 1	1
1600		I	1	I		1	1
1575		1	1				1
1550		1	1				1
1525		I	1				1
1500		1	1				1
1475		1	I				1
1450		1	I				1
1425	1	I					1
1400	1						1
1375	1						1
1350	1						1
1325	1						
1300	1						
1275	-1						
1250							-

Faunal materials indicate reliance primarily on seal, supplemented by intensive use of seasonally available resources. The presence of a caribou midden, including the cranium, show caribou was being transported to the site whole, presumably for consumption and the manufacture of winter clothes. It further indicates that caribou was not a stored resource. A caribou population currently inhabits Huntingdon Island, and may also have been present at the time that Snack Cove 3 was occupied. Additionally, though seal does represent the most important species, the high levels of secondary sources might also indicate some degree of resource stress. Fox and ptarmigan remains in high numbers further indicate typical fall subsistence and hunting activities. Fox was not typically utilized as a food resource by the Inuit, as they were primarily trapped for fur; however, if the Inuit were experiencing resource stress, it is possible that fox might also have been utilized as a food source.

House 1 has a larger faunal collection than House 2. This could be the result of a longer duration for occupation at House 1; however the total size of House 1 is also larger than that of House 2, which could be a factor of more people living in the dwelling. It is unclear if the larger size of House 1, and its associated faunas is a function of a larger family size, or if it might be representative of a chief or prestigious individual, or both. The total size of the House 2 faunal assemblage is 36% smaller than that of House 1 (where the total fragments in House 1 is 2238 and House 2 is 810), whereas the total floor space of House 2 is 29% smaller than that of House 1 (where square meters is measured for pavement stones excluding the entrance passage, House 1 is 13.08 m² and House 2 is 9.36 m^2). The difference between house size and faunal assemblage size is not overly large, and may in fact simply be a function of a larger number of individuals living within the dwelling and duration of stay at House 1 which is longer than that of House 2.

The interpretation of House 1 as a chief or prestigious individual's dwelling is compelling, yet House 1 has smaller variety and quantity of artifacts (including those of European origin) than House 2. This finding does not appear to coincide with the interpretation of a chief or prestigious individual who was successful in trade with Europeans. Were House 1 to be the dwelling of a chief or other prestigious individual, it would be expected that the greater number and variety of artifacts should also be found within that dwelling. Thus, it is likely that House 1 had more inhabitants than did House 2, or was occupied for a longer period of time.

4.6 Conclusion

Excavations at Snack Cove 1 and Snack Cove 3 have provided sufficient information to address questions regarding the nature of Inuit occupations in southern Labrador, and the nature of their relationship with Europeans. Both excavations have revealed dwellings that are architecturally similar to pre-contact Thule dwellings in northern Labrador, linking the Snack Cove sites to a pre-existing subsistence and settlement pattern. Additionally, both sites represent a social organization similar to that of the pre-contact Thule. The excavations have revealed the great potential that archaeological data can contribute to the understanding of the early Contact Period as it was experienced by the Labrador Inuit. Further, it provides the data base for a scenario of Inuit behaviour during this time period. This is discussed in the next chapter.

Chapter 5: Conclusion

5.1 Introduction

The previous chapters have provided detailed information regarding the long term history of Thule and Inuit, the medium scale of history of events that occurred during the early Contact Period, and the short term occupations representing events at Snack Cove 1 and Snack Cove 3. Knowledge of the medium and long term time scale of Inuit history provides invaluable insights which aid in the interpretation of the sites occupied at Snack Cove. Likewise, the data obtained from the excavations at Snack Cove 1 and Snack Cove 3 provide a unique view of the early Contact Period that places the Labrador Inuit at the centre of interpretations. The information obtained from each time scale is integrated in this chapter in order to address the research question posed at the beginning of this thesis. Through answers to the specific questions asked, a perspective on the broader concepts such as the nature of Inuit occupations in southern Labrador, and the nature of the Inuit and European relationship during the early Contact Period is provided. 5.2 The Nature of Inuit Occupations in Southern Labrador

Excavations at Snack Cove 1 and Snack Cove 3 have yielded considerable data regarding Inuit occupations in southern Labrador. In particular, knowledge of social organization, architecture, mobility, seasonality, subsistence, material culture, and contact with other populations has been gained. The use of historic documentations, particularly the journals of Louis Jolliet (in Delanglez 1948), provide an additional source of cultural information that could not be obtained through excavation. The following section answers questions regarding the nature of Inuit occupations in southern Labrador during the early Contact Period.

5.2.1 What is the Seasonality of Occupation?

The common perception regarding Inuit in southern Labrador posits that the Inuit did not maintain "permanent" occupations in southern Labrador, but rather that they were only visitors, making seasonal trips to the region to acquire European goods (i.e. Taylor 1974, 1979). Thus, locating Inuit winter dwellings and sites from multiple seasons of the year has become the mainstay of studies of Inuit in southern Labrador. The seasonality of occupation at Snack Cove 1 and Snack Cove 3 is sought in order to determine whether or not the Inuit maintained "permanent" occupations in southern Labrador, or if they were purely of a seasonal nature.

Through analysis of ethnohistoric documents Martijn (1980a), Clermont (1980), and Trudel (1980) have presented research that shows the Inuit to be present in southern Labrador at all times of the year. Further, Jolliet (in Delanglez 1948) noted the presence of Inuit winter dwellings in the Strait of Belle Isle, and along the Atlantic coast; Jolliet also recorded the recollections of Recent Indians in the Mignan area regarding their previous attack of a small group of Inuit that had over wintered in the Strait of Belle Isle. Auger (1991b) presents an account of an Inuit family that had over wintered near the English York Fort in the 18th century; however, the occupation described by Auger is more recent than the Snack Cove occupations.

Archaeological evidence for Inuit occupations in southern Labrador has been less forthcoming. Auger (1991a, 1993) describes an Inuit occupation in the Strait of Belle

Isle during the latter part of the eighteenth century. Dumais and Poirier (1994) report Inuit sod houses located at Belles Amours Bay, on the Quebec north shore that date to the early eighteenth century. Archaeological data to support Inuit occupations in southern Labrador during all seasons of the year is not overly abundant. Stopp (2002) indicates the potential for more Inuit sites occupied during multiple seasons of the year; however, the majority of the sites still remain unexcavated. The Snack Cove 1 and Snack Cove 3 excavations display agreement with historic documentations, and the presence of Inuit in occupations in southern Labrador during multiple times of the year.

Snack Cove 1, located on the rocky outcrop of a small cove on Huntingdon Island, represents a summer occupation during the 17th century. The presence of a lead pendant under one of the dwellings hold down rocks shows that the Inuit who lived in the dwelling had access to European goods. The low level of artifact and faunal data recovered from Tent Ring A possibly indicates that the dwelling was occupied for a short time period.

Snack Cove 3, located in the centre of a small cove on Huntingdon Island, represents a fall occupation. Both House 1 and House 2 display an architectural form consistent with a qarmat, while the use of wood rafters reflects variability in architectural resources, perhaps a decision of the Inuit to exploit the abundant wood in southern Labrador. A fall season occupation is further supported by the results of faunal analysis, which shows an intensive use of typical fall season resources. The presence of a cold trap entrance in the Snack Cove 3 dwellings indicates that they may have planned to stay for the entire winter; however, the high percentage of seasonally available and secondary

resources suggest that the occupants of the dwelling may have undergone some degree of resource stress, which may have forced the inhabitants to move to another camp earlier than anticipated.

The low levels of artifacts and the absence of any substantial middens in association with House 1 and House 2 indicate that the dwellings were not reoccupied. Based upon radiocarbon analysis, pipe stem dating and datable artifacts from House 1 and House 2, an occupation period between AD 1625-1700, during the early Contact Period has been estimated for the occupation of Snack Cove 3.

5.2.2 What is the Social Composition and Organization of Settlements?

The social composition and organization of Inuit settlements in southern Labrador is of importance in understanding the nature of Inuit occupations in southern Labrador. Historical documentation is frequently relied upon to provide insight into Inuit settlements; however, descriptions of Inuit social composition and organization of the Inuit in southern Labrador were not frequently recorded. Excavations of Inuit dwellings in southern Labrador make it possible to illuminate the social composition and organization during the early Contact Period. In the summer of 1694 Jolliet made his second voyage to Labrador where he noted the presence of Inuit men and women, as well as girls and boys of varying ages living along the southern Labrador coast (in Delanglez 1948). Additionally, Jolliet noted that the villages he visited were headed by a chief. Jolliet visited the personal tent of the Inuit chief Quignac, and noted that he shared his tent with his wife, his daughter and her husband, and their ten month old baby. In 1743, when Fornel went to Hamilton Inlet, he also noticed that the Inuit lived in villages (in Clermont 1980). The ethnohistoric data, thus, points to a similar social organization to the Inuit living in northern Labrador.

At Snack Cove 1, Tent Ring A resembles the remains of a single room dwelling with a rear sleeping area, a hearth, and working area. Tent Ring A exhibits similarity to the tents described by Jolliet which were occupied by families, and to the Sculpin Island structures found in northern Labrador.

Fitzhugh (1989) recorded the presence of multiple tent ring features at Snack Cove 1. It is unclear if the tent structures were occupied at the same time. The carbon dates for the areas Locale A1 and Locale A3 show different ranges for time of occupation; however, the effects of bias inherent in carbon dating make it difficult to determine on that basis alone. There is potential for loose kin affiliation between the inhabitants of each dwelling; however, there is no archaeological evidence to support the suggestion, and ethnohistoric documents provide little detail as to the relationships between the inhabitants of Inuit settlements.

A similar social composition to that of Snack Cove 1 is implied at Snack Cove 3. House 1 and House 2 both represent single room dwellings, with a single sleeping platform. Based on the number of rooms and platforms in the houses, it is estimated that the dwellings were occupied by a small family units. House 1 is larger in floor area, and has a larger faunal collection than House 2, suggesting that there may have been more people living in House 1 than in House 2, and that it was occupied for a longer period of time. It is unclear if House 1 and House 2, or any of the other five dwellings at Snack Cove 3 were occupied contemporaneously, as there is no evidence to concretely connect them. Analysis of the faunal collection from Snack Cove 3 does not indicate any pattern as to side or portion of species represented that would suggest any sharing of resources between houses, which might indicate contemporaneous occupations. Nevertheless, the possibility for contemporaneous occupation of the dwellings is not ruled out. Historic descriptions of Inuit settlements in southern Labrador, such as those described by Jolliet and Fornel, refer to a number of dwellings occupied at the same time by numerous Inuit families. Therefore there remains a strong likelihood that at least some of the dwellings from Snack Cove 3 were occupied at the same time.

Through archaeological investigations at Snack Cove 1 and Snack Cove 3, a similar interpretation of Inuit social composition and organization to those described from ethnohistoric documents is made. Additionally, archaeological evidence of Thule villages in northern Labrador show that villages were comprised of three to five families living together in sod houses (Kaplan 1983). Further, house size and the presence of a single sleeping platform indicate the occupation of a single family (Kaplan 1983). The Inuit dwellings at Snack Cove 1 and Snack Cove 3 were one room and occupied by single family units similar to other Early Phase dwellings of Thule in northern Labrador of the same time period, implying continuity of composition and social organization of villages. 5.2.3 Do settlements represent permanent migrations or seasonal staging grounds?

With regard to the interpretation of archaeological data, and the recreation of the lives of past peoples, a great difficulty rests within attempting to discern and/or

understand the intentions behind the actions of past individuals. Stopp (2002) aptly points out that within the context of hunter-gatherer research, notions of permanence are not valid, as they are not sedentary populations. Nevertheless, the Inuit can still have defined territories and therefore maintain a permanent present in southern Labrador.

Due to the similarities in site sizes, social composition and seasonality between southern and northern Labrador, there is a strong likelihood that the nature of the settlements are the same. Thus the occupations of the Inuit in southern Labrador during the early Contact Period represent typical Inuit land use patterns. If compared to the nearest Inuit settlements in the 17th century, similarities in subsistence and settlement patterns can be noted. During the early Contact Period the most southerly extant of Inuit settlements was Hamilton Inlet. The 17th century dwellings excavated at Eskimo Island 3 exhibit similar dwelling construction, and faunal collections. The Eskimo Island 3 dwellings are small, single room structures with an entrance tunnel and rear sleeping platforms (Jordan 1978). They exhibit a reliance on ring, harp and harbour seals, with smaller amounts of bird, fish, otter, wolverine, fox, bear and wolf (Jordan 1978), all of which are species found at the Snack Cove 3 dwellings.

The architectural style of the single roomed, semi-subterranean dwelling in both Snack Cove 3 and Eskimo Island 3 are in accordance with typical constructions of the Early Period (AD 1350-1700) and represent continuation with pre-contact Thule patterns of subsistence and settlement. Though the Snack Cove 3 houses have been interpreted as fall occupations, the cold trap entrance passages offer a suggestion that at the time of the dwelling construction the intention of the inhabitants was to occupy the dwellings for the

entire winter. The faunal collection suggests resource stress which may have led the dwelling occupants to abandon Snack Cove 3 before the end of the winter.

Through examination of Snack Cove 1 and Snack Cove 3 it is clear that the sites were not occupied as a base camp for Inuit groups interested in obtaining European goods for trade, as key indicators for this scenario are missing. The Snack Cove sites are not located near to any places where the Inuit would have been able to easily obtain European goods during the 17th century. From Snack Cove the Inuit would have still had to undertake lengthy journeys to the Strait of Belle Isle to acquire European goods. Further, the low levels of materials recovered from Snack Cove 1 and Snack Cove 3 indicate that the site inhabitants were not traveling with a large amount of European goods. Thus, the Snack Cove sites were not occupied by Inuit middlemen or traders.

During the 16th and 17th century, the climatic conditions associated with the Little Ice Age may have lead to increased resource variability which in turn may have prompted Inuit families living in northern and central Labrador to seek wider hunting territories that included parts of southern Labrador. The possibility that the Inuit settlements in southern Labrador represent an extension of Inuit land use territories is expressed through the continuity with traditional subsistence and settlement patterns established in central and northern Labrador. Based upon the above mentioned evidence, it is most probable that the intentions of the Inuit living in southern Labrador were to occupy the land during multiple seasons of the year, exploiting a typical Inuit land use pattern. Therefore, the Inuit occupations of southern Labrador do in fact represent "permanent" migrations.

5.3 The Nature of the Relationship Between the Inuit and Europeans

Much is known about the European perspective of the nature of Inuit and European interaction during the Contact Period, predominantly from ethnohistoric texts. Yet, one of the goals of this research has been to provide an alternative perspective of the contact, and to address the reasons that may have prompted the Inuit to participate in interaction with Europeans. There are very few ethnohistoric texts that provide a large amount of useful data for presenting an Inuit perspective of contact and interactions with Europeans. The results of the excavations of Snack Cove 1 and Snack Cove 3 are useful here, in addressing the questions posed regarding the nature of Inuit and European relationships during the early Contact Period.

5.3.1 Was Contact direct or indirect?

In addressing the question of whether contact was direct or indirect, what is sought is whether or not contact between the Inuit and Europeans was face to face, or the result of Inuit scavenging unattended European fishing and whaling stations or shipwrecks. Ethnohistoric texts provide the major source of information regarding the forms of contact between the Inuit and Europeans, and describe some sporadic face to face contact, Inuit raids, and Inuit theft.

Archaeological data cannot tell us specifically what kind of contact occurred, but it can provide insight into the nature of the contact between the Inuit and Europeans. Cultural interactions not only include the exchange of materials but include ideas, beliefs, and information as well (Odess 1998). The European goods found at Snack Cove 1 and Snack Cove 3 can provide information regarding the interaction between the Inuit and Europeans. The European goods were analyzed based upon their style, to determine if there were similarities between them and the unaltered European forms. Similarities in artifact style are indicators of shared beliefs and ideas (Odess 1998). Through this it is possible to hypothesize as to whether the majority of contact between the Inuit and Europeans consisted of peaceful trade and exchange of materials, ideas, beliefs and information, or if instead the majority of interaction occurred resultant from scavenging, raiding or short trade encounters that provide the movement of material goods, but very limited exchange of ideas, information and beliefs.

The types of goods that were recovered from Snack Cove 1 and Snack Cove 3 are items that the Inuit could have acquired through scavenging abandoned sites, theft or trade. Additionally, there is a similarity between the European goods from Snack Cove 1 and Snack Cove 3 and the Eskimo Island 3 dwellings in Hamilton Inlet. European items from Eskimo Island 3 are primarily iron along with smaller quantities of other materials such as glass, porcelain, trade beads, musket balls, a single iron axe, and a single pair of scissors (Jordan 1978). Jordan (1977, 1978) notes that goods that might indicate peaceful trade encounters such as trade beads or kaolin pipes occur in large quantities. A similar pattern is found at Snack Cove 3, where iron is the predominant artifact category, and other objects that would indicate trade such as kaolin pipe stems are rare in House 2, and absent from House 1. The Inuit were also observed by Jolliet (in Delanglez 1948) to have many unlikely items of European origin, such as pages from a Spanish book, rags of linen cloth, and a sac; Jolliet was unable to find out how the Inuit came to acquire these goods, but mentioned his suspicion that they may have despoilt some fishermen to obtain them.

The largest category of material artifacts from Snack Cove is metal, most specifically iron nails. Nails are an item that was brought to the Labrador coast in large quantities as well the other iron objects found, such as the presence of the file, and the pin tip which could have been brought by whalers, fishermen and traders for use while in Labrador. The nails from Snack Cove have all been modified, and in most instances the tips have been removed. Two nail tips modified to resemble end blades were recovered from Snack Cove 3. The modification of the iron, and the stylistic similarities between the nail tips, and traditional Inuit end blades do not indicate a flow of ideas, beliefs or information. What it does show is the movement of materials, and the Inuit using a new raw material to make traditional Inuit tool forms.

Other European goods found such as the ceramics, pipe stem fragments and bottle glass provide less insight. The pieces are all fragmentary, and do not readily reflect stylistic similarity to Inuit tools, nor do they indicate that they retained their original form when they were utilized by the Inuit. Irrespective of the difficulty in determining the style of the additional artifacts, they do indicate moderate changes in Inuit artifact styles, and perhaps a flow of European information and ideas. The flow of European ideas into Inuit culture has been documented historically. At meeting many of the women in the Inuit village he visited in the summer of 1694, Jolliet noted that they all greeted him and embraced him according to French custom. He later described a "Spanish style" moustache worn by an Inuit chief (in Delanglez 1948). Jolliet also recorded an instance

where the women from an Inuit village he visited sang songs for him, after which he and several of his crew sang a sample of French hymns that the Inuit greatly enjoyed; however, such exchanges of cultural information appear to be the exception, and not the norm.

Through ethnohistoric documentation it is evident that the contact between the Inuit and Europeans occurred in multiple different ways, including scavenging, raiding, and small trade encounters fraught with hostility. Further, it is evident that the Inuit had knowledge of French social customs, which they may have utilized to facilitate trade. The incorporation of archaeological data shows that through stylistic analysis of artifacts, there was not an excessive flow of information, ideas or beliefs; instead the focus was on the exchange of material goods.

Though items of European origin are more abundant than more traditional materials, they occur in small quantities at Snack Cove compared to the large numbers of European goods described by Jordan (1978) found in association with the 18th century Inuit Communal House dwellings at Eskimo Island. Further, the majority of items of European origin found at Snack Cove are items that could have been scavenged from unattended fishing and whaling stations or shipwrecks, and do not necessarily represent face to face trade. Based upon the infrequent exchange of anything more than material goods, it is likely that contact between the Inuit and Europeans was often indirect. Instances of face to face contact were likely of short duration, and infrequent, with minimal cultural information exchanged. This pattern of interaction likely represents the

continuity of a pattern of Inuit contact with other populations through primarily indirect means.

5.3.2 What goods were the Inuit interested in acquiring from Europeans?

Through identification of the types of materials that the Inuit were interested in acquiring from Europeans it is possible to understand the nature of the relationship between Inuit and Europeans. Additionally, it is possible to postulate reasons why the Inuit sought contact with Europeans and went to the great lengths that they did to acquire European goods. By identifying the type of goods that the Inuit wanted to acquire, it then becomes possible to address the meaning and function of European goods into Inuit society.

Numerous historic documents point to the strong desire on the part of the Inuit to acquire iron and fishing boats from the Europeans. Jolliet observed the large number of iron and fishing boats in Inuit possession (in Delanglez 1948). From Snack Cove 1 and Snack Cove 3 it can be seen that iron is the European good most desired by the Inuit, nails being the desired form and type. The high percentage of iron that is modified by the Inuit shows that the iron objects they wanted to get were ones that could be modified and transformed into something else. The Inuit are known to have used iron to make arrows, knives and various other implements that they used in hunting (Odess, Loring and Fitzhugh 2000; Trudel 1980). The modified iron objects from Snack Cove 3 are an archaeological representation of this.

Another type of material that the Inuit were interested in acquiring was ceramic vessels. The archaeological findings from Snack Cove 3 indicate that the Inuit had in

their possession French stoneware bottles. In both instances, the stoneware containers represent food storage items. Cabak and Loring (2000) reported similar ceramic preferences among the Inuit living in the vicinity of the Nain mission during the 18th and 19th centuries. There is an absence of soapstone vessels, traditionally used in cooking and for lamps at Snack Cove 1 and Snack Cove 3. Yet at Snack Cove 3 French stoneware vessels that were recovered may have been utilized as substitutes for the more traditional soapstone vessels.

Other items that the Inuit were found to have at Snack Cove 3 include glass bottle fragments, and clay pipe stems. These items occur in smaller quantities, and likely do not represent objects that were of a high priority to obtain. Numerous historic documents (Clermont 1980; Martijn 1980a) indicate that the Inuit had a strong interest in the acquisition of fishing boats, and Jolliet (in Delanglez 1948) observed first hand a large number of European fishing boats in Inuit possession. Items of a less durable nature, such as cloth, paper etc. that were noted by Jolliet, could also have been in the possession of the Inuit who lived at Snack Cove; however, due to their nature they were not preserved.

5.3.3 How Were European Goods Integrated into Labrador Inuit Society?

Identifying how the Inuit integrated European goods is important to understanding their effects on Inuit society. The materials of European origin recovered from Snack Cove 1 and Snack Cove 3 are instructive in interpretation of Inuit uses for European goods. The presence of large numbers of modified iron indicate that European goods were not incorporated wholesale into Inuit culture. The removal of nail tips from nails and their use in place of typical Inuit end blades is an example of the use of European goods in Inuit culture (Odess, Loring and Fitzhugh 2000; Trudel 1980). At Snack Cove 3 a large number of nails with the tips removed, and two nail tips which are slightly flattened present an example of the use of nails as end blades. The higher portion of nail ends and shafts compared to the number of tips that are found, indicate that the Inuit may have been processing the nails to remove the tips, either to facilitate transport to northern Labrador or for more immediate use as a portion of hunting technology.

At Snack Cove 3 there is an absence of soapstone and other traditional Inuit food storage vessels. These vessels may simply not have been left behind, or the French stoneware vessels recovered might have been used in place of these more traditional objects. Cabak and Loring (2000) note that with regard to European ceramics, the Inuit had a preference for food storage vessels, and that broken pieces exhibited the same methodology for mending that soapstone vessel did. In the case of ceramics, the Inuit selected vessel forms that were similar to those they traditionally used. Thus, European ceramics were adopted by the Inuit to perform the same task that soapstone, or wooden cups and bowls may have served without altering traditional Inuit foodways (Cabak and Loring 2000).

From the archaeological evidence, it appears that Inuit did not necessarily use European goods in the same ways that European did. The frequent modification of European iron at Snack Cove 3 attests to this. In instances of ceramics and fishing boats, when European goods are used to perform similar tasks by the Inuit, they are typically the result of Inuit having substituted an Inuit items for a similar European one. The likely

reason for this may be indicated by differences in durability, performance, or the time required manufacturing or acquiring an object. Additionally, more abstract reasons may have been involved in the selection of European goods which could be associated with perceived perceptions of power, such as those recorded among many of the native populations along the Atlantic Coast when they first came into contact with Europeans (Trigger 1985). During the 18th century, European goods represented status objects in Inuit society. Small mounts of meteoric iron, and iron obtained through trade with the Norse were already integrated into Inuit trade and exchange networks at the time of European Contact. Given its scarcity, iron may have held the place of an exotic or prestige item. The regular availability of iron which occurred when Europeans began to frequent the Strait of Belle Isle would have represented a new source of a previously scarce resource. The perceptions that the Inuit had of European goods, particularly iron, is likely such that they were held in high enough esteem that would move people to undertake the journeys into the Strait of Belle Isle to acquire them.

5.4 The Inuit in Southern Labrador: A View from Snack Cove

Snack Cove 1 and Snack Cove 3 represent a series of short term occupations that provide insight into the activities of Inuit families during a season while they were living on Huntingdon Island in southern Labrador. The analyses at the short term level show there is continuity in the subsistence and settlement patterns, social organization, architecture, interaction patterns, and tool forms with the Inuit in northern Labrador, and the pre-contact Thule. Therefore, the Inuit maintained a similar adaptation in southern Labrador as they did in northern Labrador. What is different about Inuit sites in southern

Labrador is the increased access to European material culture and possible interaction with Europeans. Furthermore, the Snack Cove settlements are unique as they represent a southerly habitation by the Inuit not implicated for the 17th century.

The Inuit living in southern Labrador had contact to varying degrees with Europeans. Yet there is no real perspective of what life was like for Inuit living in southern Labrador beyond what ethnohistoric texts have yielded. The archaeological investigations of Snack Cove, coupled with insights from ethnohistoric texts from the early Contact Period can be used to examine the decisions and intentions of Inuit actors.

Archaeological evidence from Snack Cove and other areas of southern Labrador, coupled with ethnohistoric data indicate that the Inuit had extended their land use to include southern Labrador on a year round basis. Additionally, it is clear from archaeological investigations of Snack Cove 1 and Snack Cove 3 that the intentions behind the occupations in southern Labrador were to create a way of life similar to that expressed by Inuit families living in northern Labrador. Numerous reasons could have attracted the Inuit to the environs of southern Labrador, such as the proximity to the winter breeding grounds of the harp seal, an abundance of trees, the decreased resource availability of the Little Ice Age or the proximity to European goods, specifically iron. Families living in southern Labrador would have had greater access to iron, and may have utilized their access to this scarce resource as a way of obtaining power, or increasing their social status; however, the movement into southern Labrador would come with some serious risks as well. To live in this area the Inuit would be farther away from their people, and vulnerable to attack from other cultural groups such as the Recent

Indians and Europeans both of whom they are known to have had a hostile relationship with. This is a possible reason why Inuit populations in southern Labrador remained small during the early Contact Period, and why attempts to live in the Strait of Belle Isle were infrequent.

The high quantities of European goods on the Inuit sites from Snack Cove reflect the relative availability with which the Inuit were able to acquire European goods. From southern Labrador, trips to the Strait of Belle Isle could be made more easily and perhaps more frequently. During the 16th and 17th century, the winter may have represented an ideal time to travel to the Strait of Belle Isle. After the freeze up, the mobility of the Inuit would have increased, as travel could be undertaken by dogsled. As Europeans did not regularly overwinter in the Strait of Belle Isle during the 16th and 17th century, chances are that during the winter, the Inuit would have been able to travel to the Strait of Belle Isle, locate unattended fishing and whaling stations, and take what items they desired. As with many other subsistence and resource acquisition activities of the Inuit, trips to the Strait of Belle Isle to acquire European goods were likely done cooperatively.

The nature of the relationship between Inuit and Europeans during the early Contact Period thus consisted of scavenging and raiding by the Inuit, as well as sporadic face to face trade. The amount of contacts between the Inuit and Europeans indicate that there is a variety of methods of interaction; however, they appear to be primarily indirect during the early Contact Period. Long term analysis of Thule and Inuit contacts with other populations indicates a pattern of indirect contacts. The Inuit were certainly not afraid of contact and new technology, but used what resources were available to them, as

did the Thule. The propensity for the Inuit to practice contact with Europeans through indirect means reflect a continuity with pre-established social practices. The Inuit may have continued along with method of indirect contact had Europeans not begun to settle along the Atlantic coast of southern Labrador as far north as Hamilton Inlet. During the 18th century the French, and later the English began to develop permanent settlements along the coast which prevented the Inuit from continuing to pursue indirect contacts.

The permanent settlement of Europeans on the Atlantic coast co-occurs with the change in Inuit architecture to the larger Communal House, the abundance of European goods at Inuit sites in southern Labrador, and the emergence of the Inuit trader/middleman. This later period marks a departure from the subsistence and settlement patterns established by the Inuit during the 17th century, possibly resultant from the settlement of Europeans on the coast, and the necessity of the Inuit to adapt to this new, and possibly unforeseen development.

5.5 Conclusion

The movement of Inuit into southern Labrador marks the southern most frontier of their expansion. The exact timing of this movement and the size of populations in southern Labrador during the early Contact Period has yet to be resolved. Yet through excavations at Snack Cove it is clear that the Inuit occupied regions of southern Labrador on a year round basis during the latter half of the 17th century. This process no doubt began much earlier.

Inuit occupations in southern Labrador during the early Contact Period reflect a continuity with pre-established subsistence and settlement patterns, social organization,

architecture, interaction patterns, and tool forms developed during the early phase of Thule/Inuit prehistory. This is a pattern that does not appear to alter until the 18th century and the settlement of Europeans on the coast on a permanent basis. The fact that the Inuit maintained continuity with preexisting lifeways during the early Contact Period may indicate that initial forays into southern Labrador were not directly related to the appearance of Europeans in the Strait of Belle Isle. Instead, the initial movements into southern Labrador may represent a continuation of Inuit migrations along the coast, whereby the discovery of Europeans in the Strait of Belle Isle, and the relatively stable access to iron that this afforded, represents a fortuitous coincidence which the Inuit were quick to take advantage of.

Contacts between the Inuit and Europeans were highly variable and consisted of Inuit scavenging and raiding as well as impromptu trade. In initial contacts, the Inuit tended to opt for indirect contact, and scavenged European goods where possible in accordance with previous cultural contacts. The Inuit continued this method for obtaining European goods whenever possible. This pattern changed as Europeans began to settle along the coast during the latter half of the 18th century and impinge on Inuit settlements. Initially, the Inuit may have responded to this change by retreating northward along the coast (Trudel 1977; 1980); however, the year round occupation of the Europeans made it increasingly difficult to maintain a pattern of indirect contact. It is within this later context that the heretofore accepted interpretation of the Inuit in southern Labrador was developed, whereby the Inuit maintained sites away from European ones, and Inuit middlemen conducted trade with Europeans and redistributed goods north along

established Inuit trade routes. This accepted pattern of interaction developed at least a century after the Inuit had expanded their settlement system into southern Labrador.

From contact with Europeans, the Inuit gained frequent access to a variety of European goods, of which iron was the most desirable. Increased perceptions of power or increased social status may have motivated the Inuit to the lengths they went to in order to obtain European goods, specifically iron. Yet, the results of this research indicate that prior to the intense trading between Inuit middlemen and Europeans in the 18th century the Inuit settlements in southern Labrador were similar to those of the Thule/Inuit of the Early Phase of occupancy in Labrador. These occupations exhibit similar subsistence and settlement patterns, social organization, architecture, interaction patterns, and tool forms to the Inuit and Thule in northern Labrador. This research shows that prior to the pattern of contact and interaction observed for the 18th century, the Inuit maintained settlements in southern Labrador that were consistent with pre-existing Thule and Inuit adaptations in northern and central Labrador, and that the nature and history of Inuit occupations in southern Labrador is more complex than current scenarios account for.

This thesis has utilized data from both archaeological excavations, and from ethnohistoric texts to provide a perspective of the Inuit in southern Labrador that is situated within their long term cultural history. Through this methodology, it has become possible to provide a perspective of Inuit occupations in southern Labrador that positions Inuit at the centre of interpretations. The nature of Inuit occupations in southern Labrador has been further illuminated, and additional insight into the relationship

between the Inuit and Europeans obtained. Most importantly, the use of archaeological data in this research makes evident the intentions of Inuit actors, and the factors which may have motivated and influenced their actions during the early Contact Period.

Through excavations at Snack Cove 1 and Snack Cove 3 the integral role that archaeological data plays in understanding the experience of Native populations during the Contact Period comes into focus. Further investigations of the Inuit in southern Labrador can aid in developing a greater understanding of the nature of Inuit occupations in southern Labrador, and their relationships with Europeans. Through further investigations of the Inuit in southern Labrador during the Contact Period, a rich and textured history of this time period can be created, and the central and active role played by the Inuit in directing events of the time period can be revealed.

Bibliography

Ames, R

1977 Land use in the Postville Region. In *Our Footprints are Everywhere: Inuit Land Use and Occupancy in Labrador*, edited by C. Brice-Bennett, pp. 279-308. Labrador Inuit Association, Nain, Newfoundland and Labrador.

Amorosi T., J. Woollett, S Perdikaris, T.H. McGovern

1996 Regional Zooarchaeology and Global Change: Problems and Potentials. *World Archaeology* 28:126-157.

Auger, Reginald

- 1991a Labrador Inuit and Europeans in the Strait of Belle Isle: From the Written Sources to the Archaeological Evidence. Collection Nordicana No. 55. Laval, Université Laval.
- 1991b European and Inuit Contact: Evidence From a 1769 Labrador Inuit Dwelling. *Études/Inuit/Studies* 15(1): 131-138.
- 1993 Late-18th and Early-19th-Century Inuit and Europeans in Southern Labrador. *Arctic* 46(1): 27-34.

Bailey, GN

1983 Concepts of Time in Quaternary Prehistory. *Annual Review of Anthropology* 12: 165-192.

Barhkam, Selma de L.

- 1980 A Note on the Strait of Belle Isle During the Period of Basque Contact with Indians and Inuit. *Études/Inuit/Studies* 4(1-2): 51-58.
- 1984 The Basque Whaling Industry in Labrador, 1536-1613. Arctic 37(4): 515-519.

Barlow, LK

2001 The Time Period AD 1400-1980 in the Central Greenland Ice Cores in Relation to the North Atlantic Sector. *Climatic Change* 48: 101-119.

Beck, Brian

1983 *The Harbour Seal in Canada*. Underwater World Series. Department of Fisheries and Oceans, Ottawa.

Bielawski, E

1979 Contactual Transformation: The Dorset-Thule Succession. In *Thule Culture: an Anthropological Retrospective*, edited by A.P. McCartney, pp 100-109. National Museum of Man Mercury Series Paper No 88. Archaeological Survey of Canada, Ottawa.

Binford, Lewis

- 1978 Nunamuit Ethnoarchaeology. Academic Press, New York.
- 1980 Willow Smoke and Dogs Tails: Hunter-Gatherer Settlement Systems and Archaeolgoical Site Formation. *American Antiquity* 45(1): 1-17.

Bird, J

1945 Archaeology of the Hopedale Area, Labrador. *Anthropological Papers of the American Museum of Natural History* 39(2).

Bökönyi, S

1970 A New Method for the Determination of the Number of Individuals in Animal Bone Material. *American Journal of Archaeology* 74: 291-292.

Bowen, WD

1985 *The Harp Seal*. Underwater World Series. Department of Fisheries and Oceans, Ottawa.

Bowman, Sheridan

1990 Radiocarbon Dating. University of California Press, Berkeley.

Brassard, Michel and Myriam Leclerc

2001 Identifier La Ceramique et Le Verre Anciens au Québec: Guide à L'Usage des Amateurs et des Professionnels. Cahiers D'Archeologie du CELAT 12. CELAT, Laval.

Braudel, Fernand

1980 On History. University of Chicago Press, Chicago.

Brice-Bennett, C.

1977 Land use in the Nain and Hopedale Regions. In *Our Footprints are Everywhere: Inuit Land Use and Occupancy in Labrador*, edited by C. Brice-Bennett, pp. 97-203. Labrador Inuit Association, Nain, Newfoundland and Labrador.

Briffa, KR, PD Jones, JR Pilcher, and MK Hughes

1988 Reconstructing Summer Temperatures in Northern Fennoscandinavia Back To A.D. 1700 Using Tree-Ring Data from Scots Pine. Arctic and Alpine Research 20: 385-394. Briffa, KR, PD Jones, TS Bartholin, D Eckstein, FH Schweingruber, P Zetterberg, and M Eronen

1992 Fennoscandian Summers from A.D. 500: Temperature Changes on Short and Long Time Scales. *Climate Dynamics* 7: 111-119.

Burns, Bob

1991 Post-Medieval Normandy stonewares from Guernsey. In *Custom and Ceramics: Essays Presented to Kenneth Barton*, edited by Elizabeth Lewid. APE: Wickham.

Cabak, M and S Loring

2000 A Set of Very Fair Cups and Saucers: Stamped Ceramics as an Example of Inuit Incorporation. *International Journal of Historical Archaeology* 4(1): 1-34.

Cannon, D.Y.

1987 Marine Fish Osteology: A Manual for Archaeologists. Simon Fraser University Publication 18. Department of Anthropology, Burnaby, British Columbia.

Chaplin, R.E.

1971 The Study of Animal Bones from Archaeological Sites. Seminar Press, New York.

Chrestien, Jean-Pierre and Daniel Dufournier

1995 French Stoneware in North-Eastern North America. In *Trade and Discovery: The Scientific Study of Artefacts from Post-Medieval Europe and Beyond,* edited by Duncan R Hook and David RM Gaimster, pp. 91-103. British Museum Occasional Paper 109, London.

Clermont, N

1980 Les Inuit du Labrador Méridional Avant Cartwright. *Études/Inuit/Studies* 4(1-2): 147-163.

Cox, S

1978 Paleo-Eskimo Occupations of the North Labrador Coast. *Arctic Anthropology* 15(2): 96-118.

D'Arrigo, Rosanne D, Edward R Cook, Gordon C Jacoby

1996 Annual to Decadal-scale Variations in Northwest Atlantic Sector Temperatures Inferred from Tree Rings. *Canadian Journal of Forestry Research* 26: 143-148.

D'Arrigo, Rosanne and Gordon C Jacoby

1993 Secular Trends in High Northern Latitude Temperature Reconstructions Based on Tree Rings. *Climate Change* 25: 163-177.

1995 Dendroclimatic evidence from Northern North America. In *Climate Since AD* 1500, edited by Raymond S Bradley and Philip D Jones, pp. 296-311. Routledge, New York.

Delanglez, Jean

1948 Life and Voyages of Louis Jolliet. Chicago Institute of Jesuit History, Chicago.

- D.F.O. (Department of Fisheries and Oceans Canada)
- 2003 *Profile of the Blue Mussel (Mytilus edulis)*. Electronic document, <u>www.glf.dfo-mpo.gc.ca/pe-ep/es-se/mussel-moule-e.html#1_1</u>. Policy and Economics Branch, Gulf Region.

Dumais, Pierre and Jean Poirier

1994 Témoignage d'un Site Archéologique Inuit, Baie des Belles Amours, Basse-Côte-Nord. *Recherches Amérindiennes au Québec* 24(1-2): 18-30.

Fagan, Brian

2000 *The Little Ice Age: How Climate Made History, 1300-1850.* Basic Books, New York.

Fitzhugh, William

- 1972 Environmental Archaeology and Cultural Systems in Hamilton Inlet, Labrador: A Survey of the Central Labrador Coast from 3000 B.C. to the Present. Washington: Smithsonian Institution Press.
- 1977 Indian and Eskimo/Inuit Settlement History in Labrador: an Archaeological View. In *Our Footprints are Everywhere: Inuit Land Use and Occupancy in Labrador*, edited by C. Brice-Bennett, pp. 1-41. Labrador Inuit Association, Nain, Newfoundland and Labrador.
- 1980 Preliminary Report on the Torngat Archaeology Project. Arctic 33(3): 585-606.
- 1981 Smithsonian Archaeological Surveys in Central and Northern Labrador, 1980. In Archaeology in Newfoundland and Labrador, 1980, edited by J. Sproull Thomson and Callum Thomson, pp. 26-47. Annual Report No. 1. Historic Resources Division, Government of Newfoundland and Labrador, St. John's.
- 1985 Early Contacts North of Newfoundland Before AD 1600: A Review. In Cultures in Contact: The Impact of European Contacts on North American Cultural Institutions A.D. 1000-1800, edited by William Fitzhugh, pp. 23-45. Smithsonian Institution Press, Washington.

- 1989 Hamilton Inlet and Cartwright Reconnaissance. In *Archaeology in Newfoundland and Labrador, 1986*, edited by J Sproull and C Thomson, pp. 164-181. Annual Report No. 7. Government of Newfoundland and Labrador, St. John's.
- 1994 Staffe Island 1 and the Northern Labrador Dorset Thule Succession. In *Threads* Of Arctic Prehistory: Papers in Honour of William E. Taylor, Jr. edited by David Morrison and Jean-Luc Pilon, pp. 239-286. National Museum of Man Mercury Series Paper No. 149. Archaeological Survey of Canada, Ottawa.

Fletcher, Roland

1992 Time Perspectivism, Annales, and the Potential of Archaeology. In *Archaeology Annales and Ethnohistory*, edited by A Bernard Knapp, pp. 35-49. Cambridge University Press, Cambridge.

Ford, J

1959 Eskimo Prehistory in the Vicinity of Point Barrow, Alaska. *Anthropological Papers of the American Museum of Natural History* 47(1), New York.

Freeman, M.R.

 A Critical View of Thule Culture and Ecological Adaptation. In *Thule Culture:* An Anthropological Retrospective, edited by A.P. McCartney, pp 278-291.
National Museum of Man Mercury Series Paper No 88. Archaeological Survey of Canada, Ottawa.

Gilbert, B.M.

1990 Mammalian Osteology. Modern Printing Company, Laramie, Wyoming.

Gilbert, B.M., L.D. Martin, and H.G. Savage

1996 Avian Osteology. Modern Printing Company, Laramie, Wyoming.

Gosling, W.G.

1910 *Labrador: It's Discovery, Exploration, and Development.* The Musson Book Company Limited, Toronto.

Grayson, Donald K

- 1981 The Effects of Sample Size on Some Derived Measures in Vertebrate Faunal Analysis. *Journal of Archaeological Science* 8(1): 77-88.
- 1984 *Quantitative Zooarchaeology: Topics in the Analysis of Archaeological Faunas.* Academic Press, Orlando, Florida.
- Grier, Colin and James M Savelle
- 1994 Intrasite Spatial Patterning and Thule Eskimo Social Organization. *Arctic Anthropology* 31(2): 95-107.

Grove, JM

2001 The Initiation of the "Little Ice Age" in Regions Round the North Atlantic. *Climatic Change* 48: 53-82.

Harrington, J.C.

- 1951 Tobacco Pipes from Jamestown. Quarterly Bulletin of the Archaeological Society of Virginia 5(4):2-8.
- 1978 Dating Stem Fragments of Seventeenth and Eighteenth Century Clay Tobacco Pipes. In *Historical Archaeology: A Guide to Substantive and Theoretical contributions*. Edited by Robert L. Schuyles, pp.63-65. Brywood Publishing Co. Inc., New York.

Hawkes, E.W.

1916 *The Labrador Eskimo*. Geological Survey Memoir No. 91. Government Printing Bureau, Ottawa.

Helmer, James W

1992 Prehistoric Site Location Strategies in the North Devon Lowlands, High Arctic, Canada. Journal of Field Archaeology 19: 291-313.

Hesse, B. and D. Perkins Jr.

1974 Faunal remains from Karataş-Semayük in Southwest Anatolia: An Interim Report. Journal of Field Archaeology 1:149-160.

Hodgetts, L

1999 Animal Bones and Human Society in the Late Younger Stone Age of Arctic Norway. Unpublished PhD thesis, University of Durham, Durham.

Holly, Donald H.

2002 From Space to Place: An Archaeology and Historical Geography of the Recent Indian Period in Newfoundland. Unpublished PhD thesis, Brown University, Providence.

Hurst, John G, David S. Neal, HJE van Beuningen

1986 Pottery Produced and Traded in North-West Europe 1350-1650. Rotterdam Papers VI: A Contribution to Medieval Archaeology. Het Nederlandse Gebruiksvoorwerp, Rotterdam.

Jouzel, J, RB Alley, KM Cuffey, W Dansgaard, P Grootes, G Hoffmann, SJ Johnsen, RD Koster, D Peel, CA Shuman, M Stievenard, M Stuiver, J White

1997 Validity of the Temperature Reconstruction from Water Isotopes in Ice Cores. Journal of Geophysical Research 102(C12): 26,471-26,487.

Jordan, Richard

1977 Inuit Occupation of the Central Labrador Coast Since AD 1600. In *Our Footprints are Everywhere: Inuit Land Use and Occupancy in Labrador*, edited by Carol Brice-Bennett, pp. 43-48. Labrador Inuit Association, Nain, Newfoundland and Labrador.

Jordan, RH and SA Kaplan

1980 An Archaeological View of the Inuit/European Contact Period in Central Labrador. *Études/Inuit/Studies* 4(1-2): 35-46.

Kaplan, Susan

- 1980 Neo-Eskimo Occupations of the Northern Labrador Coast. *Arctic* 33(3): 646-658.
- 1983 *Economic and Social Change in Labrador Neo-Eskimo Culture*. Unpublished PhD. Thesis, Bryn Mawr College, Bryn Mawr.
- 1985 European Goods and Socio-economic Change in Early Labrador Inuit Society. In Cultures in Contact: The Impact of European Contacts on North American Cultural Institutions A.D. 1000-1800, edited by William Fitzhugh, pp. 45-69. Smithsonian Institution Press, Washington.

Kaplan, Susan and Jim Woollett

2000 "Challenges and Choices: Exploring the Interplay of Climate, History, and Culture on Canada's Labrador Coast". *Arctic, Antarctic and Alpine Research* 32(3): 351-359.

King, Judith E

1983 Seals of the World, 2nd ed. British Museum (Natural History), Oxford University Press.

Klein, R.G. and Cruz-Uribe, K

1984 *The Analysis of Animal Bones from Archaeological Sites*. University of Chicago Press, Chicago.

Knapp, A Bernard

1992 Archaeology and Annales: Time, Space and Change. In *Archaeology Annales and Ethnohistory*, edited by A Bernard Knapp, pp. 1-21. Cambridge University Press, Cambridge.

Krupp, Jan and Simon Hart

1976 The Dutch in the Strait of Davis and Labrador During the Seventeenth and Eighteenth Centuries. *Man in the Northeast* 11:3-20.

Kurlansky, Mark

1999 The Basque History of the World. Alfred Knopf, Toronto.

Lightfoot, Kent G

1995 Culture Contact Studies: Redefining the Relationship between Prehistoric and Historical Archaeology. *American Antiquity* 60(2): 199-217.

Lopoukhine, N, NA Prout and HE Hirvonen

1977 *The Ecological Land Classification of Labrador.* Lands Directorate (Atlantic Region), Environmental Management Service, Fisheries and Environment Canada, Halifax.

Loring, S.G.

- 1988 Keeping Things Whole: Nearly Two Thousand Years of Indian (Innu) Occupations in Northern Labrador. In *Boreal Forestand Sub-Arctic Archaeology*, edited by C.S. "Paddy" Reid. Ontario Archaeological Society, London.
- 1992 *Princes and Princesses of Ragged Fame: Innu Archaeology and Ethnohistory in Labrador.* Unpublished PhD thesis, University of Massachusetts.

Mansfield, A. W.

1967 Seals of Arctic and Eastern Canada. Fisheries Research Board of Canada, Ottawa.

Martijn, C.A.

- 1980a La Présence Inuit sur La Côte-nord du Golfe St-Laurent à L'Époque Historique. *Études/Inuit/Studies* 4(1-2): 105-125.
- 1980b The "Exquimaux" in the 17th and 18th Century Cartography of the Gulf of St. Lawrence: A Preliminary Discussion. *Études/Inuit/Studies* 4(1-2):77-83.

Martijn, C. A. and Clermont, N

- 1980a Les Structures de Pierre et la Mandibule du site EiBk-3, Basse-Côte-Nord, Québec. *Études/Inuit/Studies* 4(1-2): 127-134.
- 1980b The Land God Allotted to Caine. Études/Inuit/Studies 4(1-2):5-11.

Mathiassen, T.

1927 Archaeology of the Central Eskimo, the Thule Culture and its Position within the Eskimo Culture. Report of the Fifth Thule Expedition, 1921-1924. No. 4. Glydendalske Boghandel, Nordisk Forlag, Copenhagen.

Maxwell, M. S.

1985 Prehistory of the Eastern Arctic. Academic Press, New York.

McCullough, Karen M.

1989 *The Ruin Islanders: Early Thule Culture Pioneers in the Eastern High Arctic.* National Museum of Man Mercury Series Paper No. 141. Archaeological Survey of Canada, Ottawa.

McGhee, Robert

- 1970 Speculations on Climate Change and Thule Culture Development. *Folk* 11-12: 173-184.
- 1984 The Timing of the Thule Migration. *Polar-Forschung* 54(1): 1-7.
- Meetings Between Dorset Culture Palaeo-Eskimos and Thule Culture Inuit: Evidence from Brooman Point. In *Fifty Years of Arctic Research: Anthropological Studies from Greenland to Siberia*, edited by R. Gilberg and H.C. Gulløv, pp. 209-213. Ethnographical Series, Vol. 18. Department of Ethnography, National Museum of Denmark, Copenhagen.
- 2000 "Radiocarbon Dating and the Timing of the Thule Migration". In *Identities and Cultural Contacts in the Arctic*, edited by Martin Appelt, Joel Berglund and Hans Christian Gullov, pp. 181-191. Proceedings from a Conference at the Danish National Museum, Copenhagen.

Morrison, D

- 1989 Radiocarbon Dating the Thule Culture. *Arctic Anthropology* 26(2): 48-77.
- 1999 The Earliest Thule Migration. Canadian Journal of Archaeology 22(2): 139-156.

Noel-Hume, I

- 1969 A Guide to Artifacts of Colonial America. Alfred Knopf: New York.
- 2001 If these Pots Could Talk: 2,000 Years of British Household Pottery. Chipstone Foundation, Milwaukee.

O'Connor, Terry

2000 *The Archaeology of Animal Bones*. Texas A&M University Anthropology Series No 4. Texas A& M University Press, College Station.

Odess, Daniel

1998 The Archaeology of Interaction: Views From Artifact Style and Material Exchange in Dorset Society. *American Antiquity* 63(3): 417-435.

Odess, D, S Loring and W Fitzhugh

2000 Skraeling: First Peoples of Helluland, Markland and Vinland. In *Vikings the North Atlantic Saga*, edited by William Fitzhugh and Elisabeth I Ward, pp. 193-205. Smithsonian Institution Press, Washington.

Ogilvie, AEJ

1995 Documentary Evidence for Changes in the Climate of Iceland AD 1500 to 1800.
In *Climate Since AD 1500*, edited by Raymond S Bradley and Philip D Jones, pp. 92-117. Routledge, New York.

Ogilvie, AEJ and T Jonsson

2001 "Little Ice Age" Research: A Perspective from Iceland. *Climatic Change* 48: 9-52.

Pagden, Anthony

2002 America and the Changing European Notions of Time and Space. In *Early Modern History and the Social Sciences: Testing the Limits of Braudel's Mediterranean*, edited by John A. Marino, pp. 255-273. Truman State University Press, Kriksville.

Park, Robert

- 1993 The Dorset-Thule Succession in Arctic North America: Assessing Claims for Culture Contact. *American Antiquity* 58(2): 203-234.
- "Winter Houses" and Qarmat in Thule and Historic Inuit Settlement Patterns: Some Implications for Thule Studies" *Canadian Journal of Archaeology* 12: 163-175.
- 1997 Thule Winter Site Demography in the High Arctic. *American Antiquity* 62(2): 273-284.
- 2000 "The Dorset-Thule Succession Revisited". In *Identities and Cultural Contacts in the Arctic*, Martin Appelt, Joel Berglund and Hans Christian Gullov, pp. 192-205. Proceedings from a Conference at the Danish National Museum, Copenhagen.

Payette, S, L Filion, L Gautheir, and Y Boutin

1985 Secular Climate Change in Old-Growth Tree-Line Vegetation of Northern Quebec. *Nature* 315: 135-138.

Perkins, D

1973 A Critique on Some Methods of Quantifying Faunal Remains from Archaeological Sites. In *Domestikationsforschung und Geschichte der Haustiere*, pp 367-369. Akadémiai Kiadó, Budapest.

Peterson, Randolph L

1966 The Mammals of Eastern Canada. Oxford University Press, Toronto.

Piatt, John F

1981 Seabirds in Newfoundland and Labrador. Canadian Wildlife Service and Memorial University of Newfoundland, St. John's.

Plumet, Patrick

1979 Thuléens et Dorsétiens dans L'Ungava (Nouveau-Québec). In Thule Culture: an Anthropological Retrospective, edited by A.P. McCartney, pp 110-121. National Museum of Man Mercury Series Paper No 88. Archaeological Survey of Canada, Ottawa.

Rankin, Lisa K

2004 The Porcupine Strand Archaeology Project-Interim Report on the 2003 Field Season. On file Provincial Archaeology Office, Department of Tourism, Culture and Recreation. St. John's, NL.

Reitz, Elizabeth J. and Wing, Elizabeth S.

1999 Zooarchaeology. Cambridge Manuals in Archaeology. Cambridge University Press, Cambridge.

Ringrose, T.J.

1993 Bone Counts and Statistics: A Critique. Journal of Archaeological Science 20(2): 121-157.

Rowe, JS

1972 Forest Regions of Canada. Canadian Forestry Service Publication No. 1300. Department of Fisheries and the Environment, Ottawa.

Rowley-Conwy, P.A.

2001 Time, Change and the Archaeology of Hunter-gatherers: How Original is the 'Original Affluent Society'?. In Hunter-Gatherers: An Interdisciplinary Perspective, edited by Panter-Brick, C, Layton, R.H. and Rowley-Conwy, pp. 39-72, Cambridge University Press, Cambridge.

Sahlins, Marshall

1985 Islands of History. University of Chicago Press, Chicago.

Savelle, J.M. and A.P. McCartney

1988 Geographical and Termporal Variation in Thule Eskimo Subsistence Economies. Research in Economic Anthropology 10:21-72.

Schledermann, Peter

- 1971 *The Thule Tradition in Northern Labrador.* Unpublished Master's Thesis, Memorial University of Newfoundland, St. John's.
- 1976a The Effect of Climatic/Ecological Changes on the Style of Thule Culture Winter Dwellings. *Arctic and Alpine Research* 8(1): 37-47.
- 1976b Thule Culture Communal Houses in Labrador. Arctic 29(1): 27-37.

Shortwell, J.A.

1955 An Approach to the Paleoecology of Mammals. *Ecology* 36(2): 327-337.

Smith, Michael E.

1992 Braudel's Temporal Rhythms and Chronology Theory in Archaeology. In *Archaeology, Annales and Ethnohistory*, edited by A. Bernard Knapp, pp. 25-36. Cambridge University Press, Cambridge.

Speiss, Arthur

1993 Caribou, Walrus and Seals: Maritime Archaic Subsistence in Labrador and Newfoundland. In *Archaeology of Eastern North America: Papers in Honour of Stephen Williams*, edited by James B Stoltman, pp. 73-100. Archaeological Report 25: Department of Archives and History: Mississippi.

Stopp, Marianne P

- 1997 Long-Term Coastal Occupancy between Cape Charles and Trunmore Bay, Labrador. *Arctic* 50(2): 119-137.
- 2002 Reconsidering Inuit presence in southern Labrador. *Études/Inuit/Studies* 26(2): 71-106.

Sutherland, Patricia D

2000 The Norse and Native North Americans. In *Vikings the North Atlantic Saga*, edited by William Fitzhugh and Elisabeth I Ward, pp. 238-247. Smithsonian Institution Press, Washington.

Taylor, Garth J

- 1974 Labrador Eskimo Settlements of the Early Contact Period. Publications in Ethnology No. 9. Ottawa: National Museums of Canada.
- 1977 Traditional Inuit Land Use and Occupancy by the Labrador Inuit. In *Our Footprints Are Everywhere: Inuit Land Use and Occupancy in Labrador,* edited by C. Brice-Bennett, pp. 49-57. Labrador Inuit Association, Nain, Newfoundland and Labrador.

- 1979 Indian-Inuit Relations in Eastern Labrador 1600-1976. Arctic Anthropology 16(2): 58.
- 1980 The Inuit of Southern Québec-Labrador. Études/Inuit/Studies 4(1-2):185-193.
- Taylor, W.E. Jr., and R. McGhee
- 1979 Archaeological Material from Creswell Bay, N.W.T., Canada. National Museum of Man Mercury Series Paper No 85. Archaeological Survey of Canada, Ottawa.
- Todd, WE Clyde
- 1963 *Birds of the Labrador Peninsula and Adjacent Areas.* University of Tornoto Press, Toronto.

Trigger, Bruce

- 1985 Natives and Newcomers: Canada's Heroic Age Reconsidered. McGill-Queen's University Press, Kingston.
- Trudel, Francois
- 1977 The Inuit of Southern Labrador and the Development of the French Sedentary Fisheries (1700-1760). In *Papers from the Fourth Annual Congress*, edited by Richard J Preston, pp 99-120. Canadian Ethnology Service Paper No. 40. National Museum of Man Mercury Series, Ottawa.
- 1980 Les Relations Entre Les Francais et Les Inuit au Labrador Méridional, 1660-1760. *Études/Inuit/Studies* 4(1-2): 135-145.

Tuck, James A and Robert Grenier

1989 Red Bay, Labrador World Whaling Capital A.D. 1550~1600. Atlantic Archaeology Ltd., St. John's.

Vibe, C

1967 Arctic Animals in Relation to Climatic Fluctuations. *Meddelelser om Grønland* 170(5). Copenhagen.

White, T.E.

1953 A Method for Calculating the Dietary Percentages of Various Food Animals Utilized by Aboriginal Peoples. *American Antiquity* 18: 386-398.

Wicks, John

2003 *Identifying Glass Bottles*. NAHOP Artifact Studies 2. Archaeology Unit, Memorial University of Newfoundland, St. John's.

Wilson, Samuel M

1993 Structure and History: Combining Archaeology and Ethnohistory in the Contact Period Caribbean. In *Ethnohistory and Archaeology: Approaches to Post Contact Change in the Americas*. Edited by J Daniel Rogers and Samuel M Wilson, pp. 19-30. Plenum Press, New York.

Wilson, Samuel M and J Daniel Rogers

1993 Historical Dynamics in the Contact Era. In *Ethnohistory and Archaeology: Approaches to Post Contact Change in the Americas.* Edited by J Daniel Rogers and Samuel M Wilson, pp. 3-15. Plenum Press, New York.

Wolf, Eric R

1982 Europe and the People Without History. London: University of California Press.

Woollett, James

2003 An Historical Ecology of Labrador Inuit Culture Change. Unpublished PhD. Thesis, City University of New York, New York.

Yamaura, Kiyoshi

1979 On the Origins of Thule Culture as Seen From the Typological Studies of Toggle Harpoon Heads. In *Thule Eskimo Culture: An Anthropological Retrospective*, edited by Allen P. McCartney, pp. 474-484. National Museum of Man Mercury Series Paper No 88, Archaeological Survey of Canada, Ottawa.

Yesner, David R

1994 Seasonality and Resource "Stress" Among Hunter-Gatherers: Archaeological Signatures. In *Key Issues in Hunter-Gatherer Research*, edited by Ernest S Burch Jr. and Linda J Ellanna, pp. 151-167. Berg Publishers Inc, Oxford. Appendix A Plates



Plate 1 Snack Cove 1, Tent Ring A Artifacts



Plate 2 Snack Cove 3, Stone Artifacts



Plate 3 Snack Cove 3, Bone Artifacts



Plate 4 Snack Cove 3, Martin Camp Stoneware

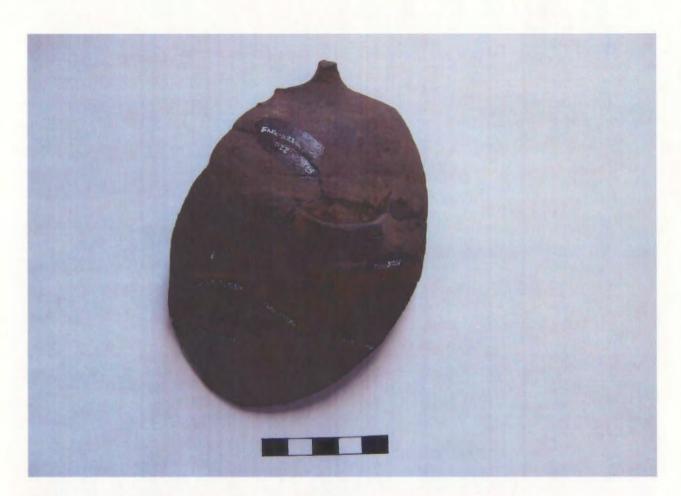


Plate 5 Snack Cove 3, Normandy Stoneware



Plate 6 Snack Cove 3, Glass and Wood Artifacts



Plate 7 Snack Cove 3, Ulu



Plate 8 Snack Cove 3, Knife Handle

Appendix B Artifacts From Fill Layers

Artifact Category	Quantity	
Metal		
Cast Iron Pot Fragment		2
Cast Iron Stove Vent		
Fragment		1
Iron Strapping		2
Iron Nail		30
Iron Spike		1
Iron Vessel Fragment		123
Iron Pot Rim		1
Tin Container		1
Wire Bucket Rim		1
Iron Flake		62
Unidentified Metal		1
Copper Rivet		1
Copper Ring		1
Wire Nail		1
Iron Kettle Fragment		1
Iron File (tang only)		1
Fragments of Iron Corrosion		7
Unidentified Iron Fragment		18
Ceramic		
Refined Earthenware		138
Refined Stoneware		1
Unidentified Ceramic		1
Glass		
Clear Bottle Glass		1
Green Bottle Glass		3
Window Glass		4
Wood Fragment		
Wood with Blue Paint		1
Bone (Modified)		
Cut Whale Bone		1

Table B1 Artifacts From House 1 Fill Layer

Table B2 Artifacts From House 2 Fill Layer

Artifact Category	Quantitiy
Metal	······································
Unidentified Iron Vessel	
Fragement	2
Wrought Iron Nail	38
Wrought Iron Spike	1
Iron Rivet Fragment	1
Wire Nail	6
Unidentified Iron Object	8
Iron Corrosion Fragement	3
Iron Strap	1
Unidentified Iron	2
Tin Plated Thimble	1
Unidentified Tin	1
Metal Can	1
Rubber	
Rubber Shoe	1
Other Materials	
Tar	1
Ceramic	
Refined Earthenware	145
Refined Stoneware	7
Wood	
Unidentified Wood	1
Composite	
Wood with Iron Nail	2
Leather	
Leather Shoe Fragment	4
Unidentified Leather	1

Table B3 Artifacts From House 3 Fill Layer

Category	Quantity	
Metal		
Tin Can Opener		1
Unidentified Iron Object		1
Ceramic		
Refined Earthenware Vessel		
Fragment		8

