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A RIVER RUNS THROUGH IT:

AN ARCHAEOLOGICAL SURVEY OF THE UPPER MERSEY RIVER AND ALLAINS RIVER IN SOUTHWEST NOVA SCOTIA

By

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ABSTRACT

New archaeological evidence from the Mersey and Allains Rivers in southwest Nova Scotia has enabled historic use of this traditional Mi'kmaq canoe-route to be extended back into the pre-Contact Period. The *2006 Upper Mersey/Allains River Corridor Archaeological Survey* has bridged a gap in the archaeological record by building on previous investigations from the southern half of the Mersey River, and limited work on the Allains River. A continuous line of pre-Contact sites now extends through the interior of southwest Nova Scotia, linking the Bay of Fundy and the Atlantic coast. The association of these sites with modern portage trails and the presence of imported Bay of Fundy lithics across the route confirm these waterways formed a travel corridor during the Middle-Late Woodland Period (ca 2,000-450 BP). Additional evidence also indicates most of the route has been used for at least 5,000 years. The results of this survey have provided the basis for more wide ranging discussions of land-use and seasonal settlement patterns of the Mi'kmaq and their ancestors in the region.

ACKNOWLEDGEMENTS

"*Ask, and it shall be given to you; seek, and you shall find; knock, and it shall be opened to you.*" Matt. 7:7

It has been a privilege to take the time to thoroughly examine the sites of the upper Mersey and Allains Rivers, and to include historic, ethno-historic, and oral historic evidence. The additional insight gathered from the people I met and worked with during the course of this project, coupled with my own personal experience, has increased the richness of the archaeological discussions presented in this research. This project is the first to be able to examine and discuss the landscape of the Mersey and Allains Rivers as a whole, and represents one of the few opportunities where an archaeologist had the luxury of investigative freedom to test the areas of highest archaeological potential across a broad study area, which was defined not by the confines of modern jurisdictions, property boundaries, or impact zones, but simply and perhaps more appropriately by the natural landscape.

Despite the many challenges and setbacks encountered throughout this research, it is with great pride and pleasure that I am able to present this manuscript. However, the success of this project is directly related to the many great people who supported my efforts – graciously opening doors when I knocked, generously granting me what I sought, and allowing me the opportunity to find what I was after.

First, I would like to thank my supervisor, Dr. Michael Deal, from the Archaeology Unit, at Memorial University of Newfoundland's Department of Anthropology. His direction throughout this project, as well as providing access to his comprehensive personal library on archaeology in the Maritimes, and his paleo-ethno-botanical expertise has been invaluable, helping me wade through the more challenging portions of this research where I found myself over my head. Additionally, I would sincerely like to thank Dr. Deal for providing financial support for the fieldwork portion of this project through the Minas Basin Archaeological Project, and his critical eye during the final compilation of this thesis.

Additionally, I wish to thank the federal Social Science and Humanities Research Council, and Memorial University of Newfoundland for providing additional financial support through a scholarship, which has supported much of the post-fieldwork portions of this research. Special thanks also to Dr. Stephen Davis, from the Department of Anthropology at Saint Mary's University, for his support, and especially for generously providing through the SMU Summer Student Employment Program, a full-time field assistant, Devin Fraser, for six weeks during fieldwork in July and August 2006.

I am most indebted to all those who participated in the 2006 fieldwork. Foremost, I wish to extend my thanks to Devin Fraser, who worked diligently and without complaint throughout the summer despite the challenges of the work, which no doubt included me. Without his daily-available assistance, this project would not have succeeded, and would have been forced to take a much different form. I would also like to acknowledge the valuable efforts and assistance of additional part-time crewmembers – Graham Lantz, Robby Marrotte, Chris McCarthy and Donna Morris (Kejimkujik National Park/National Historic Site), Chief Frank Meuse Jr. (Bear River First Nation), Don and Louise Pentz, and Stan Silbot.

I would like to thank both the Nova Scotia Museum, especially David Christianson, Robert Ogilvie, and Stephen Powell, and Parks Canada, notably Robert Ferguson, Chris McCarthy, Alan Melanson, and Janet Stoddard, for their supportive voice and contributions to this project, including providing access to collections and reference materials. Also thanks to Paul Lalonde of KNP/NHS for use of a Parks' canoe during this investigation. Mi'kmaq archaeologist Roger Lewis was an important ally and advisor during the more challenging periods of this research, and opened doors into the Mi'kmaq community on my behalf for which I am forever grateful. Thanks to Cultural Resource Management Group in Halifax for their willingness to share resources and information related to the study area. And thank you to Amanda Lavers and fellow staff at the Mersey Tobeatic Research Institute for providing affordable research accommodations during my time in the field.

I would like to thank Bowater Mersey Paper Company Ltd. and Nova Scotia Power Inc. for permission to investigate potential sites on their property, and to use their land and roads to access other portions of the study area. I would like to acknowledge that as a result of this study, the Bowater land on which the new archaeological sites (BeDi-16, BdDi-05, BdDi-06, BdDi-07, BdDh-02, BdDh-03) were identified has recently been sold by Bowater to the Province of Nova Scotia, protecting them as conservation areas. Thanks also to the private landowners for permission to use their roads and properties to access test locations throughout the study area - Tim Atkins at Mersey River Chalets, Mary Bishop, Don Brown, Milford House Wilderness Resort, Jim and Coleen Rowter, the Whalen's of Fisher Lake, and the owners of the little yellow cottage on Grand Lake.

The most rewarding aspect of this project has come from the wonderful people I had the privilege to meet. This includes local collectors, landowners, residents, back-country enthusiasts, and museum staff, all of whom have been overly generous with their time and willingness to share their knowledge. They have greatly added to the richness of this research, particularly since several of these folks are themselves the descendants of the Mi'kmaq whose culture and history I am documenting. I would like to acknowledge and thank the following people for their contribution to this project – Mary Bishop, Gary Corbett, Noel Dexter, Shirley and the late Max Francis, Victor Francis, Gerald Gloade Sr. (Confederation of Mainland Mi'kmaq), Jim Harding, Charlie Hearn, Todd Labrador (Acadia First Nation), Richard Laurin, Denise Leblanc-Rostas (Fort Point Museum), Jim McGinis, Chief Frank Meuse Jr. (Bear River First Nation), Jack Murphy, Doug Potter, Linda Rafuse (Queens County Museum), Dan Rowter, Jim Rowter, Arran Smith (Rossignol Cultural Centre), Hal Theriault (Bear River Cultural Centre), and Jim Todd.

The untimely passing of Mi'kmaq collector Max Francis was a sharp reminder of the importance and value of connecting archaeological investigations with the local community. The one evening we spent together discussing my project and Mi'kmaq history along the Mersey River was a true pleasure, and the information he shared about his collection represents a valuable addition to our understanding of the past. The loss of Max and others like him should provide a sense of urgency for those of us interested in preserving the past, inspiring us to actively record as much of their knowledge as we can while we can, for without the stories and memories attached to the artifacts in private collections, they are merely interesting curiosities without context or significant interpretative value.

Special thanks also to Doug Potter who gave me the chance to fly over the whole study area from the Annapolis Basin to as far south as the Lake Rossignol Reservoir. This opportunity provided a unique perspective of the Mersey/Allains canoe route, and gave me a new appreciation of the sites and landscape of this region as a whole.

I would also like to extend a collective thanks and congratulations on their success to my fellow classmates (Amy Fay, Jamie Brake, John Higdon, Kip Keen, Mary (Melnik) Penney, Sara Newstead, and Lindsay Swinarton) with whom I have struggled and triumphed. Thanks also to MUN PhD. Candidate Al Mounier, who assisted with lithic identification, as did Roberta Hicks from the MUN Department of Earth Sciences, and Dr. Martin Gibling from the Department of Earth Sciences, at Dalhousie University. And special thanks Dr. Cathy Mathias from the MUN conservation lab for her assistance with artifact conservation and storage.

Finally, I would like to thank my family, in particular my parents Don and Louise Pentz, who have given unwavering support through their love, time, and personal interest in this research and their desire to see it succeed. They not only kept this project alive by providing financial support when most other funding opportunities fell-through, but they also lent their advice and critical eye to the project, and provided the old family van for fieldwork transportation. In addition, they also shared in this study by assisting with portions of the reconnaissance canoe trip, museum visits, and field-testing. Your contribution is greatly appreciated and I dedicate this thesis to you.

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that turn empty space into an echoing place, reverberating with our past"

– Bob Henderson (2005:25)

CHAPTER 1: INTRODUCTION

"*A journey of 1,000 miles begins with a single step*" – Lao Tzu, Chinese philosopher (ca 600 BC)

Between May and September 2006, an archaeological survey was conducted along the upper Mersey River and the Allains River in western Annapolis County, Nova Scotia. The seventeenth-century journal of Jacques de Meulles indicates the Mersey and Allains Rivers formed a historic interior canoe route used by the Mi'kmaq to travel across southwest Nova Scotia between the Bay of Fundy and the Atlantic coast (Morse 1935:110-114). A significant number of pre-Contact sites have been identified along the southern half of this canoe route (Christianson 1985; Ferguson 2005; Myers 1973; Sanders and Stewart 2007), but only a handful of badly disturbed pre-Contact sites were known from the Allains River (Christianson 1984a, 1984b, 1984c; Duggan 2003; Lewis 2003). No sites had ever been identified along the upper Mersey River, north of Kejimkujik National Park/National Historic Site (KNP/NHS). As such, the *2006 Upper Mersey/Allains River Corridor Archaeological Survey* was organized with the primary goal of identifying new sites along the poorly studied northern half of the corridor in order to bridge this gap in the archaeological record, and establish a continuous line of pre-Contact sites across the whole Mersey/Allains Corridor. In doing so, this research sought to substantiate the historic record and further extend its reach into the more distant past. The recovery of pre-Contact archaeological materials would provide physical evidence of long-term use of the rivers, thereby demonstrating that these waterways served as a traditional Mi'kmaw travel corridor not only during the seventeenth-century, but in fact long before the arrival of Europeans on the shores of Nova Scotia.

The presence of stone tools made from Bay of Fundy chert recovered from existing sites along the southern half of the Mersey River suggested physical evidence of pre-Contact trade and travel across southwest Nova Scotia (Christianson 1985; Deal 1989:5; Deal et al. 1987; Ferguson 2005; Myers 1973; Sanders and Stewart 2007). It was hoped that newly identified sites along the northern half of the corridor would also feature Bay of Fundy chert, thus establishing a direct link between sites featuring this material from southern half of the Mersey River, with the Fundy shoreline in the north. As such, this new evidence would demonstrate the Mersey/Allains Corridor was at least one of the viable routes by which Bay of Fundy lithics were transported to sites along the lower portions of the Mersey River.

It was also hoped that newly identified sites along Upper Mersey/Allains River Corridor (UMARC) would feature datable artifacts that could reveal how long the Mi'kmaq and their ancestors have occupied the Allains and Mersey River area, and indicate how long these rivers had been used as inland water-highways for transporting people, goods, and information throughout southwest Nova Scotia.

During the course of the 2006 fieldwork, this survey succeeded in identifying sixteen new pre-Contact sites, or sites featuring Mi'kmaw technology (i.e., stone fish-weirs) along the UMARC, and compiled additional information about several existing sites within the study area. Having established a continuous line of sites across the Mersey/Allains River canoe corridor, we now have a substantial collection of regional data for studying pre-Contact aboriginal culture, land-use, and settlement patterns on large Atlantic flowing rivers and small Bay of Fundy drainages in southwest Nova Scotia.

Throughout the following chapters these research objectives will be explored in greater detail. In Chapter 2, a geographic and academic context for this project will be presented by describing the regional and environmental setting, and by reviewing the archaeological research previously conducted in the area. Also in Chapter 2, the historic context of the Mersey and Allains Rivers as a canoe route will be presented, and the theoretical approaches for this project will be outlined. Chapter 3 will describe the field methodology used to carry out this project, and will summarize the results of the 2006 fieldwork, including site descriptions. Chapter 4 examines the cultural material (ecofacts, artifacts, and features) newly recovered or identified during the course of this research, and Chapter 5 represents a collective discussion of the sites and their significance, both within the Upper Mersey/Allains River Corridor, and across the Mersey/Allains River canoe route as a whole. In closing, Chapter 6 will provide a brief summation and conclusion to the information presented in this investigation.

Throughout this thesis, references will be made to the Nova Scotia cultural sequence timetable outlined below (*Table 1.1*). This table shows the chronological order of pre-Contact, Contact and post-Contact cultural periods as understood and viewed by both archaeologists and the Mi'kmaq. The Confederacy of Mainland Mi'kmaq and the Nova Scotia Museum have recently adopted "*Mi'kmakik Teloltipnik L'nuk*" (How the People Lived in Mi'kma'ki) terminology, which was developed by working closely with community elders. This cultural terminology is based on they way the Mi'kmaq view ancestral descent and how that descent is reflected in their oral story-telling tradition, mythology, and cultural world-view. There are three pre-Contact periods referenced in Mi'kmaw oral history (*Saqiwe'k L'nuk* – the Ancient People; *Mu Awsami Saqiwe'k* – the Not so Ancient People; *Kejikawek L'nuk* – the Recent People). These traditional conceptions of past populations in Nova Scotia closely parallel the archaeological sequences, which are defined and further subdivided based on variability in the material culture and lifestyle patterns observable in the archaeological record. The Mi'kmaq conceptualize the Contact and post-Contact periods as a single cultural episode (*Kiskukewe'k L'nuk* – the Historic/Modern People), which relates to the introduction of European influences on their culture.

Archaeologically, the Contact and post-Contact periods of the last one thousand years are represented by very complex changes over brief periods of time. These periods are defined by significant historical events, including the arrival John Cabot to the Gulf of St Lawrence in 1497 marking the beginning of the "Contact Period"; the voyage of Pierre du Gua and Samuel de Champlain in 1604 with the intention of establishing permanent settlement in Acadia, marking the beginning of the "French Colonial Period"; the Royal Proclamation of 1763 in which France formally conceded British colonial authority in Canada; and the passing of the British North America Act in 1867, which created the Dominion of Canada, marking the beginning of the "Post-Confederation Period".

The pre-Contact Period time frames in this table are expressed in *years before present* (years before AD 1950), based on the results of C^{14} radiocarbon dating carried out on previous archaeological research in the Maine/Maritimes region. The *Anno Domini* (AD) system has been used for the Contact and post-Contact Periods for clarity in referencing historic events.

Table 1.1 – Nova Scotia Cultural Sequence Timetable

Mi'kmaw Chronology			Archaeological Chronology	
Period Dates	**Period Terminology**		**Period Terminology**	**Period Dates**
ca. 11,500 – 8,500 BP	***Saqiwe'k L'nuk*** (Ancient People)	Pre-Contact Period	**Palaeo Period** (Early) (Late)	**ca. 11,500 – 8,500 BP** ca. 11,500 – 10,000 BP ca. 10,000 – 8,500 BP
ca. 8,500 – 3,000 BP	***Mu Awsami Saqiwe'k*** (Not so Ancient People)	Pre-Contact Period	**Archaic Period** (Early / Middle) (Late) (Terminal)	**ca. 8,500 – 3,000 BP** ca. 8,500 – 5,000 BP ca. 5,000 – 3,500 BP ca. 4,000 – 3,000 BP
ca. 3,000 – 450 BP	***Kejikawek L'nuk*** (Recent People – Woodland Period and Contact Period traditions)	Pre-Contact Period	**Woodland Period** (Early) (Middle) (Late)	**ca. 3,000 – 450 BP** ca. 3,000 – 2,000 BP ca. 2,000 – 1,000 BP ca. 1,000 – 450 BP
ca. AD 1000 – Present	***Kiskukewe'k L'nuk*** (Historic / Modern Mi'kmaw People – Contact Period and Colonial Period traditions)	Contact Period	**Late Woodland / Proto-Contact Period**	**ca. AD (1000) 1450? – 1500**
		Contact Period	**Contact Period**	**ca. AD 1497 – 1604**
		Post-Contact Period	**Colonial Period** (Early / French) (Late / British)	**AD 1604 – 1867** AD 1604-1763 AD 1763-1867
		Post-Contact Period	**Post-Confederation Period**	**AD 1867 – Present**

This thesis has also attempted to use the words "Mi'kmaq" and "Mi'kmaw" appropriately. According to the Mi'kmaw Resource Guide (Bernard et al. 2007:2), the word "Mi'kmaq" refers to *the People* or *the Family* as a collective group, while "Mi'kmaw" represents either the singular form of *Mi'kmaq*, or it is an adjective in circumstances where it precedes a noun (e.g. Mi'kmaw people, Mi'kmaw treaties, Mi'kmaw person). I will attempt to follow these guidelines during the coarse of this thesis, and accept responsibility for any misuse of the terminology.

CHAPTER 2 – BACKGROUND & PREVIOUS RESEARCH

"We had to pass where no human being should venture;
yet in those places there is a regular pathway impressed or
rather indented on the very rocks by frequent travellings"
– Simon Fraser, while exploring the Fraser River, June 1808

This chapter will present an overview of the UMARC study area and establish a context for this research. The chapter will begin by describing the UMARC study area, and the geographic and environmental regions through which it passes. Following this, a review of previous archaeological studies along the Mersey and Allains Rivers will be presented, along with the historic references of these waterways being used as a canoe route. The final section of this chapter will outline the theoretical approach used in this investigation.

2.1 – Study Area

The Mersey and Allains Rivers form a near continuous ribbon of water across southwest Nova Scotia in the traditional Mi'kmaq territory of *Kespukwitk*, which means "Land's End" (*Figure 2.1.1*). The shorter Allains River flows north into the Annapolis Basin and Bay of Fundy over the course of 24 km through western Annapolis County. The Mersey River has the largest drainage area of any river in Nova Scotia (3030 km^2) (Davis and Brown 1996a:152). It begins in west-central Annapolis County, and flows 117 km southeast through Kejimkujik National Park/National Historic Site (KNP/NHS) and central Queens County to the Atlantic Ocean, at the town of Liverpool. The headwaters of these two rivers are 175 m above sea level, and are separated by as little as 600 m, with an elevation change between the drainages of only 5 m.

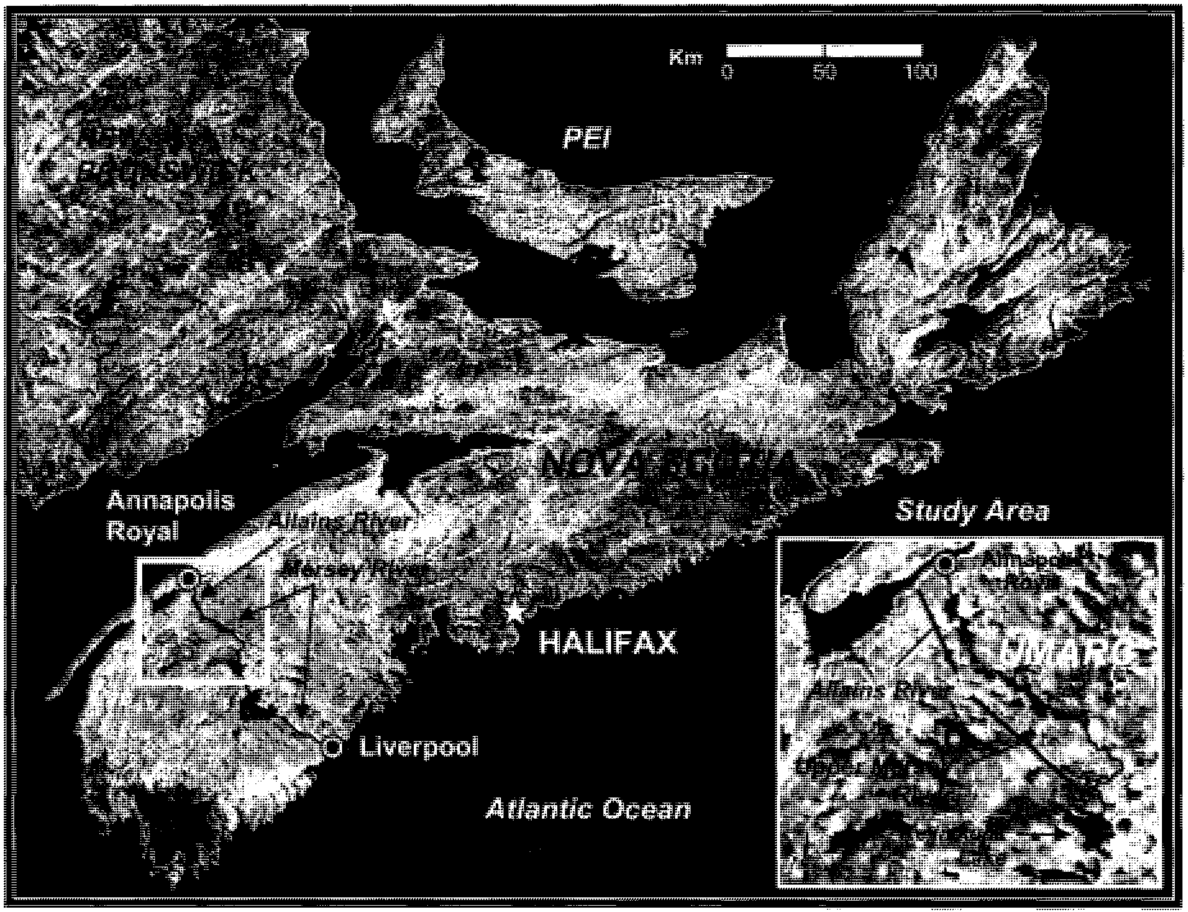


Figure 2.1.1: Map of the Maritime Provinces showing the Allains and Mersey Rivers crossing southwest Nova Scotia between Annapolis Royal and Liverpool. Detail inset shows the project study area of the Upper Mersey/Allains River Corridor (UMARC) along the northern half of the Mersey/Allains canoe route. Map source: King 2006.

The northern half of the Mersey/Allains River canoe route, which for this project has been identified as the Upper Mersey/Allains River Corridor (UMARC), defines the boundaries of the study area for this research. Beginning in the north (see *Figure 2.1.2*), the UMARC study area ranges from the head-of-tide on the Allains River, near Lequille (just south of Annapolis Royal), extending up-river along Grand Lake Flowage and Grand Lake, and continues south up Baillie Lake Brook to Springhill Mud Lake, before traversing the height-of-land and the drainage-divide along the South Mountain range near Milford, and entering into the headwaters of the Mersey River at Sandy Bottom

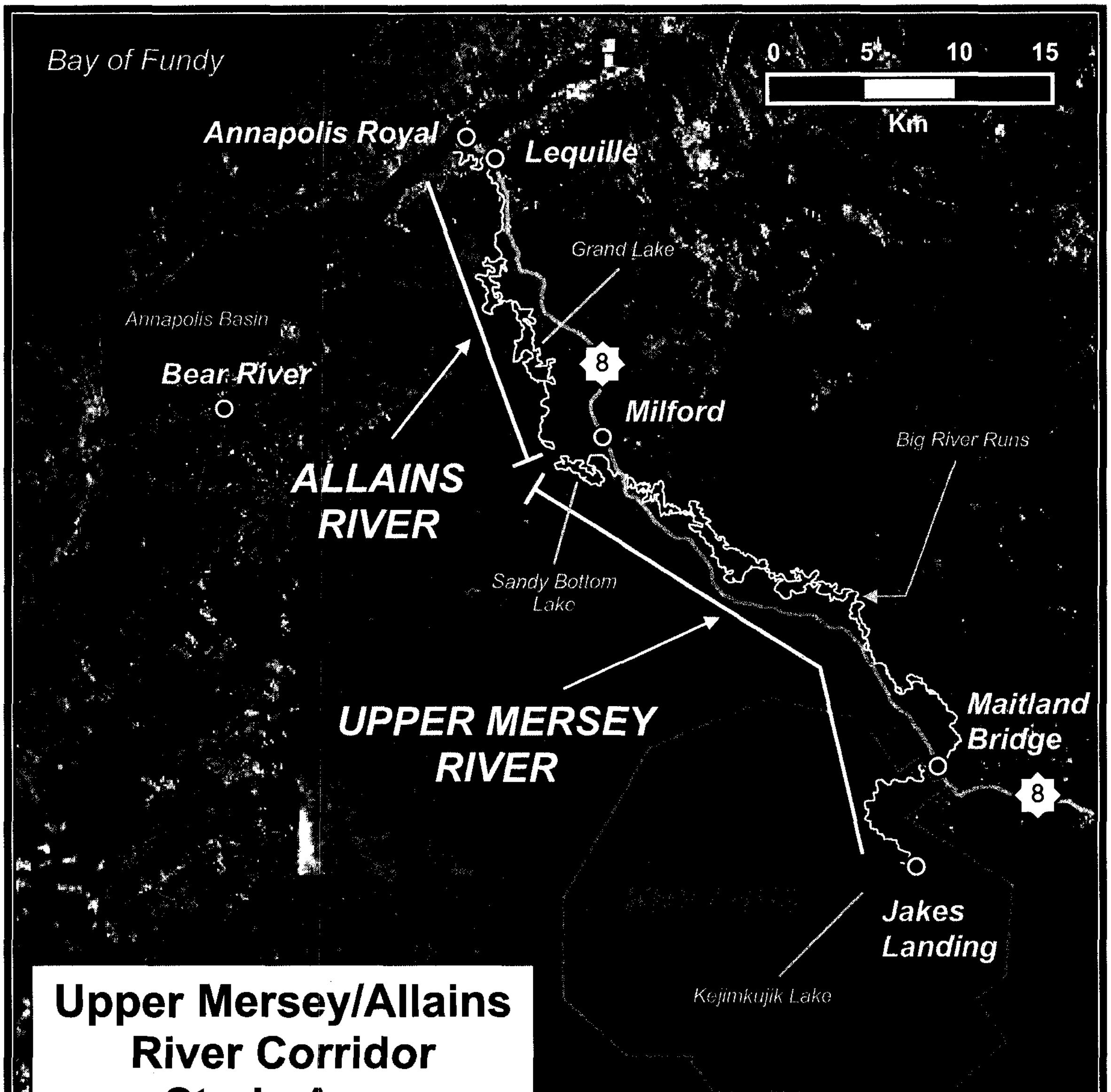


Figure 2.1.2: *Map showing the Upper Mersey/Allains River Corridor study area, paralleling Highway No. 8 between Annapolis Royal and Liverpool. The study area parallels Highway No. 8, and extends over 65 km of lakes and rivers, from the head-of-tide on the Allains River near Lequille in the north, to Jakes Landing at the head of Kejimkujik Lake in Kejimkujik National Park and National Historic Site (KNP/NHS). Map source: Google Earth 4.2*

Lake. From Sandy Bottom Lake the route heads southeast and downstream along Sandy Bottom Brook into Boot Lake, Fisher Lake, and Eleven Mile Lake, before meeting the north-south trending Allison/Rocky Lake branch of the upper Mersey, forming the main river at Big River Runs. From here the Mersey River continues to the south-southeast, past Harry Lake and Maitland Bridge, and enters KNP/NHS before terminating at the head of Kejimkujik Lake, near Jakes Landing. Beyond the UMARC study area, the Mersey continues southeast through Queens County, crossing KNP/NHS, the Lake Rossignol Reservoir, and flows along the lower Mersey River to the Atlantic coast at Liverpool. When travelled by canoe, the UMARC route between Lequille and Jakes Landing is approximately 65 km. Today, the historic Mersey/Allains Corridor is paralleled by the modern travel corridor of Highway No. 8, which links Annapolis Royal with Liverpool along 114 km of paved roads, and allows modern travellers the convenience of crossing southwest Nova Scotia in less than two hours, verses the five-six days of portaging and white water rapids faced by earlier expeditions.

2.2 – Geography & Environment

The peninsula of southwest Nova Scotia is defined by the high tides of the Bay of Fundy and Gulf of Maine to the north and west, and by the rocky coastline of the Atlantic Ocean to the south. Across this peninsula, the Mersey and Allains Rivers flow along a roughly northwest/southeast axis. The 2006 Upper Mersey/Allains River Corridor Archaeological Survey traversed the lakes and streams of the Allains River and the northern part of the Mersey River in Annapolis County, crossing the *Atlantic Interior* natural region of southwest Nova Scotia (*Figure 2.2.1*) (Davis and Brown 1996b).

The *Atlantic Interior* region is divided into three main geological groups, the *Meguma Group* (slate and greywacke), the *White Rock Formation* (lavas, ash, sandstone, and mudstone), and the *South Mountain Batholith* (granite) (Davis and Brown 1996b:44-45). The *Atlantic Interior* is bisected by the South Mountain range, which runs northeast to southwest across Kings, Annapolis, and Digby Counties, and forms a drainage divide between the Bay of Fundy to the northwest, and the Atlantic Ocean to the southeast.

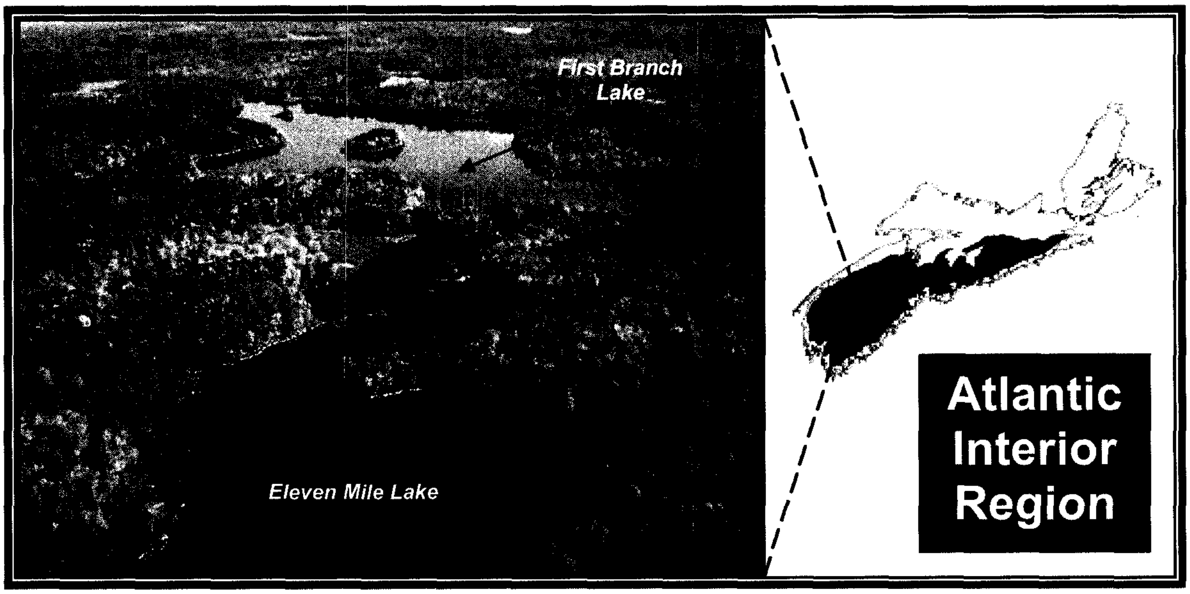


Figure 2.2.1: *Aerial view of the Atlantic Interior of southwest Nova Scotia, featuring numerous lakes, bogs and mixed forest. Pictured here is the confluence of the north and northwest branches of the upper Mersey River (view NE). First Branch Lake at top (from the Alison / Rocky Lake branch) and Eleven Mile Lake at bottom (from the Milford Chain-Lakes of the UMARC), flow together at this point and form Big River Runs, which is visible through the trees at right in the middle ground. The Big River Runs site (BdDh-03) is located at the foot of this rapid, just out of the picture to the right. Photo source: B. Pentz. Map source: Davis and Brown 1996b.*

The upper Mersey River and the Allains River pass through the western part of the *Atlantic Interior* in southwest Nova Scotia. The Allains River is a small, quick flowing river with shallow, boulder filled waters that empty into the Annapolis Basin from the high ground of South Mountain. Watersheds along the north-facing slope of South Mountain, including the Allains River and Bear River, have cut deep valleys back from the sedimentary low lands of the Annapolis Valley (Davis and Brown 1996b:59). The soils in this area are derived from shaly loam glacial tills, and support a productive mixed forest with White Pine (*Pinus strobes*), Eastern Hemlock (*Tsuga canadensis*), Aspen (*Populus tremuloides*), and various spruce and maple species (Davis and Brown 1996b:63). The Allains River has been heavily impacted by hydroelectric development. Grand Lake and Grand Lake Flowage are both dam-controlled lakes, and a canal has diverted the main flow of water from the natural lower river channel to supply a power plant at the head-of-tide, at Dugway Bridge near Lequille.

From the more gently sloping south-facing side of the South Mountain range, the Mersey River flows southeast to the Atlantic Ocean, parallel to the path of past glacial advance through the region. The Mersey follows a series of slow flowing chain-lakes and stillwaters strewn with boulders and exposed granite knolls, interrupted by shallow boulder-filled rapids and low waterfalls where the river cuts across slate ledges and the harder bedrock (Davis and Brown 1996b:47). The Mersey River is the largest river in Nova Scotia, and flows through generally uniform terrain with occasional low ridges and drumlins. Five natural regions make up the Mersey drainage. The *South Mountain Granite Uplands* (451a), the *Fisher Lake Annapolis Drumlins* (431a), the *Kejimkujik Drumlins* (433), and the *Granite Barrens* (440) form the upper half of the drainage, and the *Lake Rossignol Mersey Meadows* (412a) of the *Atlantic Interior Quartzite Plain* (410) cover most of the southern half of the river (Davis and Brown 1996b). The region has an "inland, lowland climate sheltered from direct marine influences…characterized by cold winters and warm summers"; this is particularly true of the basin area around Kejimkujik Lake (Davis and Brown 1996b:46-47). Most of the region is covered by thin bouldery till, with sandy loams in the granitic and quartzite areas, and permeable, leached, acidic soils in areas of slate and schist; while the soils of "drumlins are often better drained, finer textured, deeper and somewhat more fertile" (Davis and Brown 1996b:47). Dominant tree species throughout the Mersey watershed include, Red Spruce (*Picea rubens),* Eastern Hemlock, and White Pine; with Balsam Fir (*Abies balsamea*), Red Maple (*Acer rubrum*), and Red Oak (*Quercus rubra*); and scattered White Birch (*Betula papyrifera*), Yellow Birch (*Betula alleghaniensis*), Sugar Maple (*Acer saccharum*), White Ash (*Fraxinus americana*) and rarely Black Ash (*Fraxinus nigra*), Black Spruce (*Picea mariana*), and Larch (*Larix laricina*) (Davis and Brown 1996b:47-48).

Since the 1920s, hydro damming has significantly impacted the lower half of the Mersey River and has resulted in extensive shoreline flooding. The Lake Rossignol Reservoir was originally a cluster of six lakes before the installation of Dam 1 at Indian Gardens (see *Figure 2.2.2*). Five additional dams have since been constructed further down-stream along the lower Mersey. Fortunately, the upper half of the Mersey River has not been significantly altered, although most of the region has been heavily logged since the mid-nineteenth century. A large area around Kejimkujik Lake was designated a National Park in 1965, and in 2000 the Park was also recognized as a National Historic Site, resulting from the importance of this area to the Mi'kmaq as a cultural landscape (Myers 1973:9; Sheppard 2001:ix).

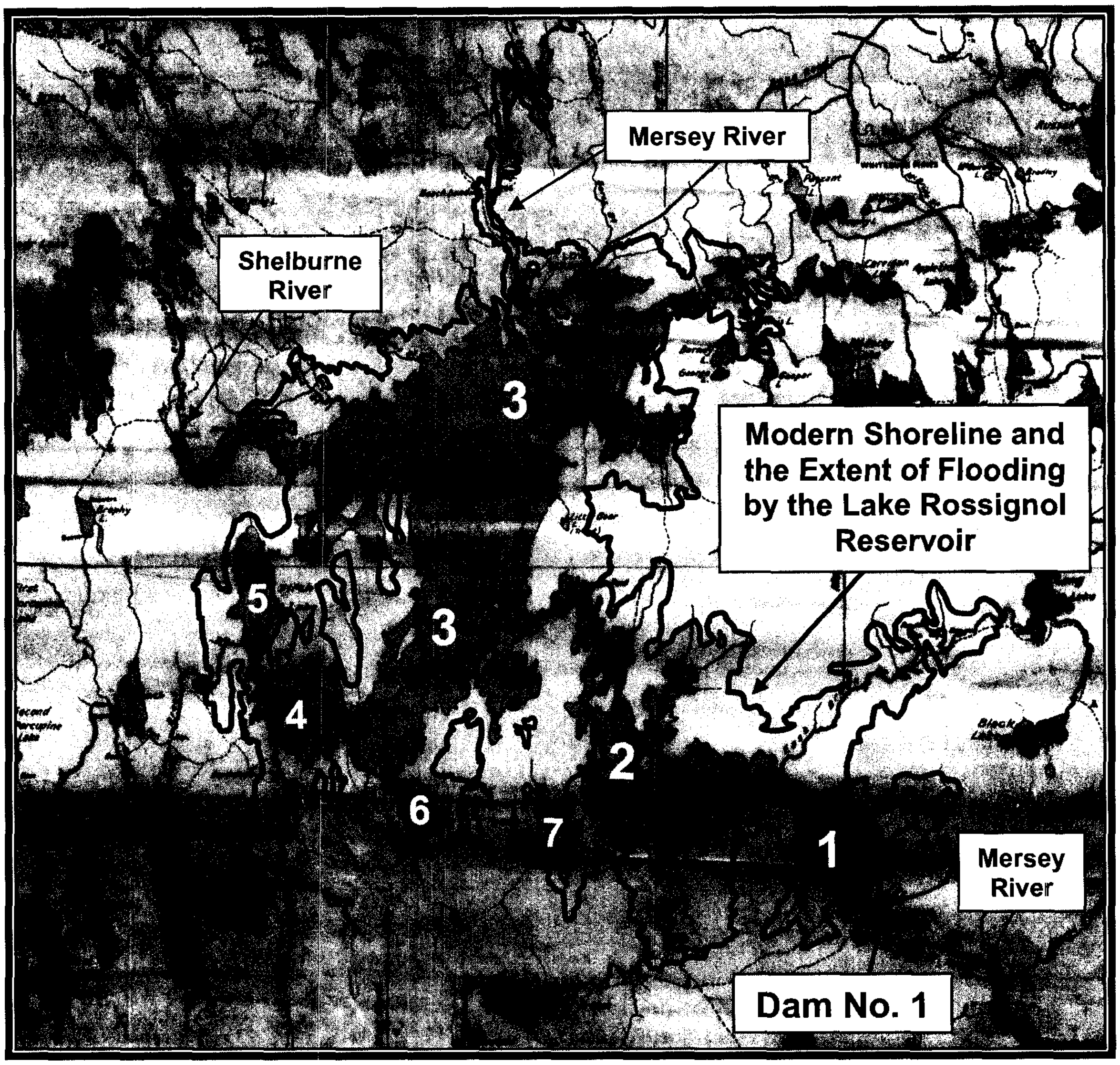


Figure 2.2.2: *In 1928, Nova Scotia Power built a hydro-electric power dam (Dam No. 1) near Indian Gardens at the foot of First Lake, which flooded an area of ~160km^2 (Sheppard 2001:10). Originally, the Lake Rossignol Reservoir was a network of seven lakes –* 1.) *First Lake,* 2.) *Second Lake,* 3.) *Lake Rossignol,* 4.) *Fourth Lake,* 5.) *Fifth Lake,* 6.) *Kempton Lake, and* 7.) *Yeadon Lake. Map source: Dominion Atlantic Railway Company 1919.*

2.3 – Previous Research

Archaeology in Nova Scotia has its roots in the bi-monthly meetings of the Nova Scotia Institute of Science during the mid-late nineteenth century. Members of the Institute carried out the first archaeological field investigations and collections analysis of pre-Contact material in the province (Davis 1998). The first Mi'kmaw site recorded in either Annapolis or Queens Counties was the Fairy Bay petroglyph site (BcDh-13) on Kejimkujik Lake, which is described in James More's 1873 *History of Queens County* as Mi'kmaq hieroglyphics (1972:213). Between 1887-1888, George Creed, the postmaster for South Rawdon, Nova Scotia, begin recording the petroglyphs at Fairy Bay and at nearby McGowan Lake on the Medway River. Colonel Garrick Mallery of the Smithsonian Institute in Washington, D.C., made occasional visits to the site during the course of Creed's fieldwork, which later resulted in the petroglyphs being included in Mallery's 1893 report called *Picture Writing of the American Indian* (Erskine 1998:84-85; Ferguson 2005:3).

According to Davis (1998:56), "by the end of the first decade of the 20th century interest in archaeology was declining in the Maritimes" (Davis 1998:156). He goes on say that with few exceptions, including the fieldwork at Mahone Bay and Merigomish Harbour sponsored in 1914 by the National Museum of Canada (Smith and Wintemberg 1929), and Frank Speck's (1924) short article on incised slate artifacts in Nova Scotia, that archaeological research in the province was ignored until the mid-1950s (Davis 1998:156).

Two additional exceptions come from the Mersey/Allains Corridor, although they involve the activities of non-professionals. The first would be Dr. Arthur and Mrs. Olive Kelsall, from Annapolis Royal, who undertook to photograph and make casts of the petroglyphs carved in the slate at Fairy Bay in 1945-1946 (Erskine 1998:84, Ferguson 2005:4). The second example is relates to the continued curiosity and activities of local private collectors during the early-mid twentieth century rather than academic research. Most notably was Thomas H. Raddall, who popularized hunting for "Indian relics" in the late 1920s, following the construction of hydro dams along the Mersey River, which washed out "a vast scatter of stone tools, arrowheads, bits of pottery and other primitive artifacts" (Christianson 1985:8; Sheppard 2001:10). A large portion of his collection came from the Indian Gardens Site Complex (BaDg-01–05, 07–09), at the foot of what is now the Lake Rossignol Reservoir (formerly First Lake). At one time this was a major pre-Contact and historic Mi'kmaw interior habitation site, and since these sites currently sit adjacent to the modern Ponhook Lake Reserve, it remains so today.

Despite being an amateur, John Erskine emerged in the late 1950s from the Nova Scotia Institute of Science to become honorific provincial archaeologist for Nova Scotia through his investigations and prolific writing on the pre-Contact Period (Davis 1998:157). In 1957, he visited several sites in southwest Nova Scotia, including BaDg-01 at Indian Gardens, and the Port Joli coastal shell-midden sites (AlDf-02, -03, -04, -07, -08, -09) in Queens County. In Annapolis County, Erskine excavated a midden-camp and Late Ceramic Period (ca 1000-450 BP) burial (BdDk-01) at the mouth of Bear River, as well as the Lequille site (BeDi-07) at the head-of-tide on the Allains River. Erskine continued to investigate these and other sites across the province throughout the late 1950s and 1960s. His pioneer research represents the first attempt to create a broad, research-based understanding of pre-Contact populations in Nova Scotia (Erskine 1960, 1998).

Following the establishment of Kejimkujik National Park in 1965, a resurgence of archaeology took place along the Mersey/Allains Corridor and continued into the early 1990s. This research focused on the lower half of the Mersey, and to a lesser extent on the lower Allains River. James White (1971) and H. Brad Myers (1972, 1973, 1976) from

Trent University conducted the first archaeological surveys in KNP/NHS, to identify the pre-Contact cultural significance of the landscape within the newly defined boundaries of the Park. In 1979, John Connolly tested a proposed parking lot near the Eel Weir Site Complex at the foot of Kejimkujik Lake, with negative results, but he noted disturbed material along the existing road (Ferguson 2005:2-3). The following summer, Saint Mary's University conducted a small field school to salvage the disturbed artifacts previously noted by Connolly (Hall 1981). In 1982, Douglas Ross (1983) carried out further salvage work during his re-survey of the Eel Weir Site Complex (BdDh-13, BdDh-06, BcDh-07), and Robert Ferguson continued excavation of the house pit features at Eel Weir VI (BdDh-06) in 1983 (Ferguson 2005:3). Between 1981 and 1984, Brian Molyneaux recorded and reported on three additional petroglyph sites on Kejimkujik Lake, at Mill Bay (BcDh-15), Peter Point (BcDh-16), and George Lake (BcDh-17), as well as Fairy Bay (BcDh-13), and McGowan/Dean Lake petroglyphs (BcDg-04, 07-09, 11) in the Medway River drainage (*Figure 2.3.1*) (Ferguson 2005:4).

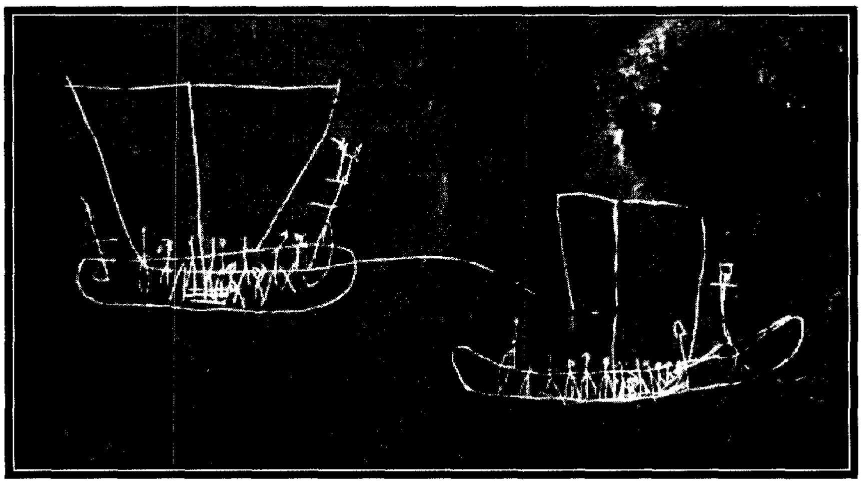


Figure 2.3.1: *Petroglyph image of two families in birch bark canoes with mounted with sails. In the stem of each canoe are male figures with a 19th Century top hats. The majority of petroglyphs on Kejimkujik and McGowan Lakes date to the 1800s, and many have been defaced by 20th Century graffiti. The McGowan/Dean Lake petroglyphs like this one are better preserved because they have been flooded by a hydro-dam since the 1940s. Photo source: Parks Canada.*

Outside of KNP/NHS, a number of additional projects relevant to the UMARC Survey were conducted during the 1970s and 1980s throughout Annapolis and Queens Counties. In 1975, Stephen Davis revisited Erskine's Bear River site (BdDk-04) as part of his doctoral thesis on pre-Contact aboriginal use of land and resources in the Maritimes (Davis 1986). In 1984, David Christianson conducted a survey of archaeological resources in the Annapolis Valley. This research included the identification of three pre-Contact sites (Vidito – BeDi-07; Nichol – BeDi-10; Lequille Hydro – BeDi-12) near the head-of-tide on the Allains River, near Lequille, which were revisited during this investigation (Christianson 1984a, 1984b, 1984c). A year later, Michael Deal organized a small field school at the Indian Gardens Site Complex (BaDg-02) for students from Saint Mary's University (Deal et al. 1987). This excavation resulted in the recovery of additional Middle-Late Ceramic Period (ca 2,000-450 BP), Contact Period (AD 1497-1604) and Early Colonial Period (AD 1604-1763) artifacts from the site.

In the summer of 1985, while Deal was conducting his field school, Nova Scotia Power drained the Lake Rossignol Reservoir to its natural water levels to carry out maintenance on the dam. As a result, the original shoreline of the flooded lakes were exposed for the first time since the construction of Dam 1 near Indian Gardens in 1928 (see *Figure 2.2.2* above). David Christianson from the Nova Scotia Museum conducted a selective survey of the immense area exposed by the receding waters (Christianson 1985). With the help of local collectors who had a prior knowledge of sites in the area, Christianson recorded 50 new sites around the reservoir, representing activities spanning the last 5000 years through to the historic logging era (Christianson 1985:8).

Unfortunately no final report has been produced from this research, leaving analysis and interpretation of these sites largely unfulfilled.

Between 1989 and 1992, Birgitta Wallace of Parks Canada excavated portions of the earthworks at Fort Anne National Historic Site in Annapolis Royal at the mouth of the Allains and Annapolis Rivers. These excavations revealed a pre-Contact component disturbed by the construction of the fort's defences in the eighteenth century (Duggan 2003:3). The pre-Contact artifacts recovered from Fort Anne (see *Figure 2.3.2*) at the mouth of the Allains River, include (**A**, **D**) Late Archaic (ca 5,000-3,500 BP) stemmed-bifaces, an Early Ceramic Period (ca. 3,000-2,000 BP) (**B**) Meadowood biface, and a (**C**) drilled stone pipe-bowl, as well as a Mid/Late Ceramic Period (ca 2,000-450 BP) (**G**) corner-notched, chert biface, and (**E**=CP6, **H**=CP2-6) a wide range of decorated native pottery fragments, and (**F**) two Contact/Early Colonial Period (ca. AD 1497-1763) trade-copper 'tinkling cones'. Unfortunately, many of the diagnostic lithics from this collection have been loaned out and are presently unaccounted for. Additionally, the artifact analysis for the site has placed little focus on the pre-Contact material (Duggan 2003).

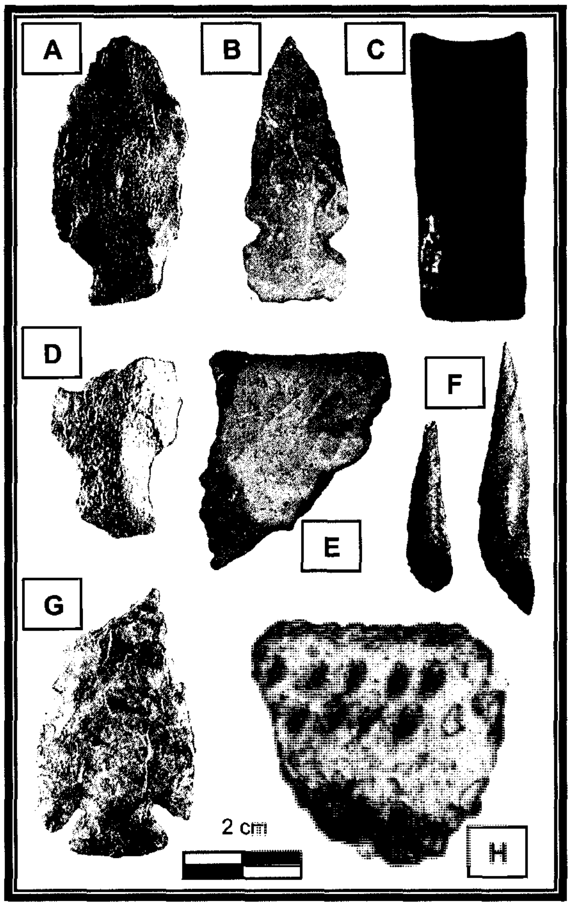


Figure 2.3.2: *Native artifacts from Fort Anne National Historic Site.*

During the early 1990s, Helen Kristmanson conducted important Master's research on pre-Contact ceramic collections from southwest Nova Scotia, and compared her results with the Peterson and Sanger ceramic typology model for the Maine/Maritimes Region (Kristmanson 1992; Peterson and Sanger 1991). As visitors to the Park, and backcountry wardens such as Charles Hearn identified new sites, limited site recording and surface inspection was carried out in Kejimkujik National Park (Ferguson 2005). To date, the artifacts recovered from the Kejimkujik area represent a continuous pre-Contact presence within Park for the last 4,500 years (Ferguson 2005); however, the recovery of full-channelled gouges from (**A**) Merrymakedge Beach (BcDh-05), and (**B**) Eel Weir VI (BbDh-06) suggests the Park has been occupied since the Middle Archaic Period (ca 7000-5000 BP) by *Mu Awsami Saqiwe'k* (*Figure 2.3.3*).

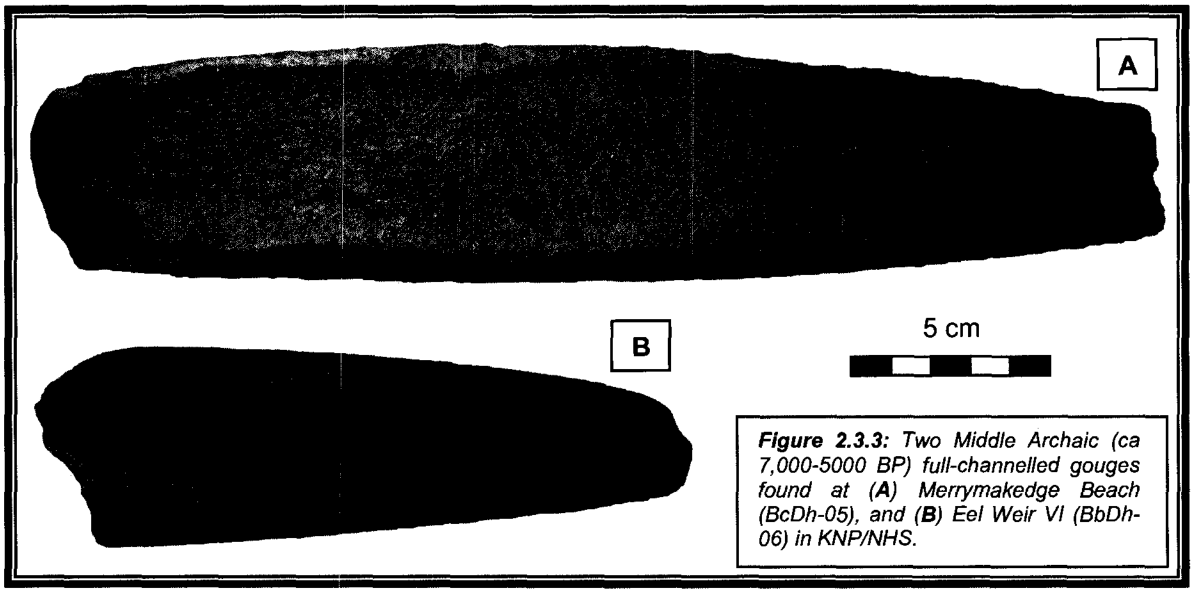


Figure 2.3.3: *Two Middle Archaic (ca 7,000-5000 BP) full-channelled gouges found at (**A**) Merrymakedge Beach (BcDh-05), and (**B**) Eel Weir VI (BbDh-06) in KNP/NHS.*

Outside of Annapolis and Queens Counties, the Minus Basin Archaeological Project is worthy of note for its relation to the 2006 UMARC Survey (Brady 2004; Deal n.d.; 1988, 2004, 2005). Since 1988, Michael Deal from Memorial University of Newfoundland has investigated and/or supervised the investigation of important sites around the Minus Basin, including the head-of-tide on the St Croix River (BfDa-01), along the Gaspereau River (BgBb-07), around Gaspereau Lake, the lower Cornwallis River (BgDc-04, BhDc-12), and the Scots Bay area (BhDc-05, BhDc-02) (Deal n.d.; Deal 1988; 1989a; 1989b; 1990; Deal and Butt 1991; Deal *et al.* 1994; Deal and Rutherford 2001; Godrey-Smith et al. 1997; Halwas 2006; Kristmanson 1992; Kristmanson and Deal 1992; Laybolt 1999; Murphy 1998). The investigation of these sites has helped shape current understandings of pre-Contact land-use in southwest Nova Scotia through *central place theory* (see Nash, *et al.* 1991). Furthermore, the unique geological resources of the Minus Basin, particularly Scots Bay chert and White Rock quartzite, have been recovered from sites beyond the inner Bay of Fundy, including along the Mersey/Allains Corridor, suggesting extensive mobility and/or trade networks throughout the region during the pre-Contact Period (Deal 1989:4-5). The presence of artifacts made from these imported lithic materials and found outside their natural geologic areas, such as along the Mersey/Allains Corridor, represents physical evidence of these areas as travel routes. Further discussion of the significance of Minas Basin geology and landscape theory will take place in *Chapter 4.4 - Lithics*.

In the last four years, two important archaeological projects have also taken place on the lower Mersey drainage. During the summer of 2004, Nova Scotia Power Inc. (NSPI) conducted a draw-down of the flooded head-ponds behind five dams on the lower Mersey River between Indian Gardens and Milford (head-of-tide on the Mersey). This draw-down exposed the natural shoreline along twenty kilometres of the lower river. At the request of the local Mi'kmaw community and NSPI, the archaeology consulting firm Cultural Resource Management Group Ltd. was contracted to conduct a surface survey of the exposed shoreline, which resulted in the recording of 125 sites, including 110 new pre-Contact sites, and over 20,000 artifacts (Sanders and Stewart 2007:6-7). The artifacts recovered from this survey extend from the logging era of the nineteenth and twentieth century, to as far back as 5,000-10,000 years ago, including several stone artifacts typical of the Late Palaeo-Indian (ca 8,500-10,000 BP) tool-kit, including **(A)** a spurred end-scraper (BaDe-13), **(B-E)** rhyolite Hi-Lo points (BaDf-68, 69, 71), and **(F)** a quartz biface (BaDf-44) with bi-lateral flaking and possible fluting on one side (*Figure 2.3.4*).

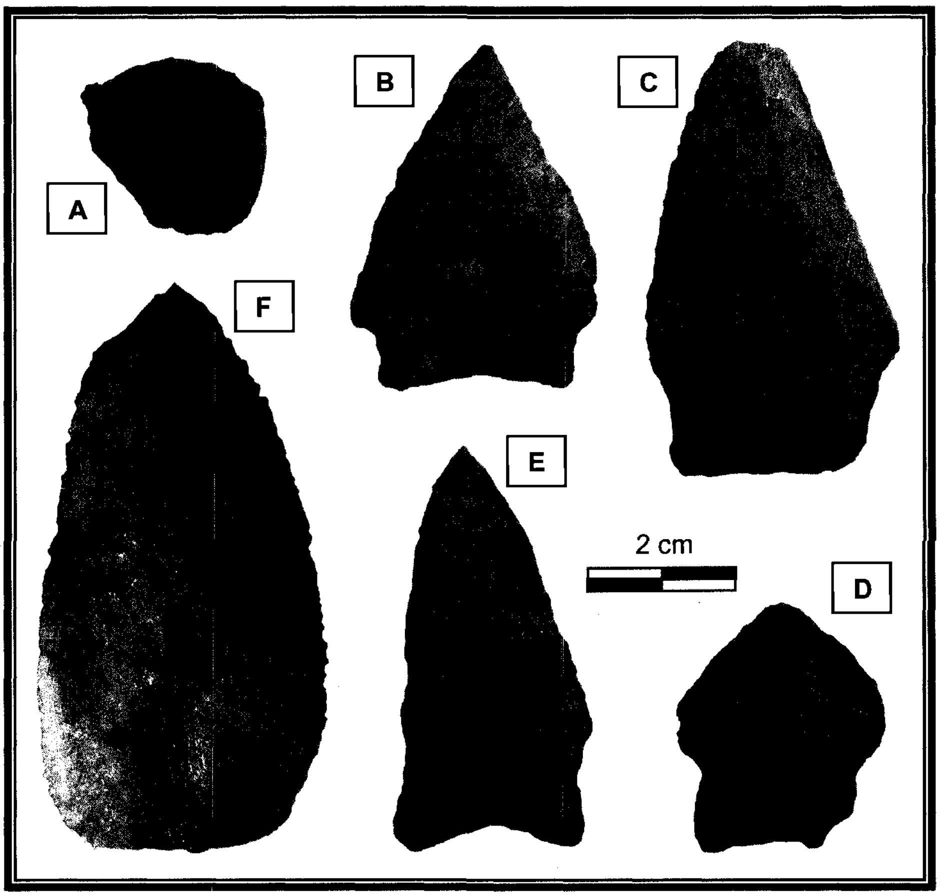


Figure 2.3.4: *Late Palaeo-Indian (ca 10,000-8,500 BP) artifacts from the lower Mersey River (Stewart and Sanders 2007).* ***(A)*** *Chert, spurred end-scraper;* ***(B-E)*** *Rhyolite bifaces similar to Hi-Lo types from Late Palaeo-Indian sites in southern Ontario (see Ellis 1981, 2004a, 2004b);* ***(F)*** *Quartz biface with bi-lateral flaking and a possible fluting scar.*

The second significant project carried out in 2004, was Roger Lewis' Masters research on pre-Contact fish weirs in southwest Nova Scotia (Lewis 2007). He examined the use of weir technology for targeting specific fish species along various portions of river systems in southwest Nova Scotia. Lewis also participated in the NSPI Survey along the lower Mersey, which featured thirty-three stone fish-weirs (Sanders and Stewart 2007). The presence of these weirs demonstrates the importance of fishing along the Mersey River, and provides evidence of pre-Contact land-use and seasonal subsistence patterns (see *Chapter 5.4 – Settlement & Subsistence Analysis*).

This review of previous archaeological research conducted in Annapolis and Queens Counties has demonstrated that a large body of work has already been conducted, but that it has predominantly focused on the lower half of the Mersey River. As a result of this previous work, 203 pre-Contact Mi'kmaq sites have been identified between KNP/NHS and Liverpool, representing a quarter of all the pre-Contact sites in Nova Scotia, and reflecting a human presence on the Mersey River for the last 10,000 years (Sanders and Stewart 2007:6). Archaeologists have given very little attention to the Allains River system, and the upper Mersey River north of KNP/NHS has been completely overlooked. In order to interpret these rivers as a possible ancient travel corridor, our body of knowledge must represent the whole route. The 2006 Upper Mersey/Allains River Corridor Archaeological Survey is a continuation of the existing body of research from the Mersey and Allains Rivers, and represents an attempt to bridge a significant gap in the inventory of archaeological resources in southwest Nova Scotia (*Figure 2.3.5*). Furthermore, this research aims to broaden our ability to interpret the lifestyle and behavior of the pre-Contact native populations in the region.

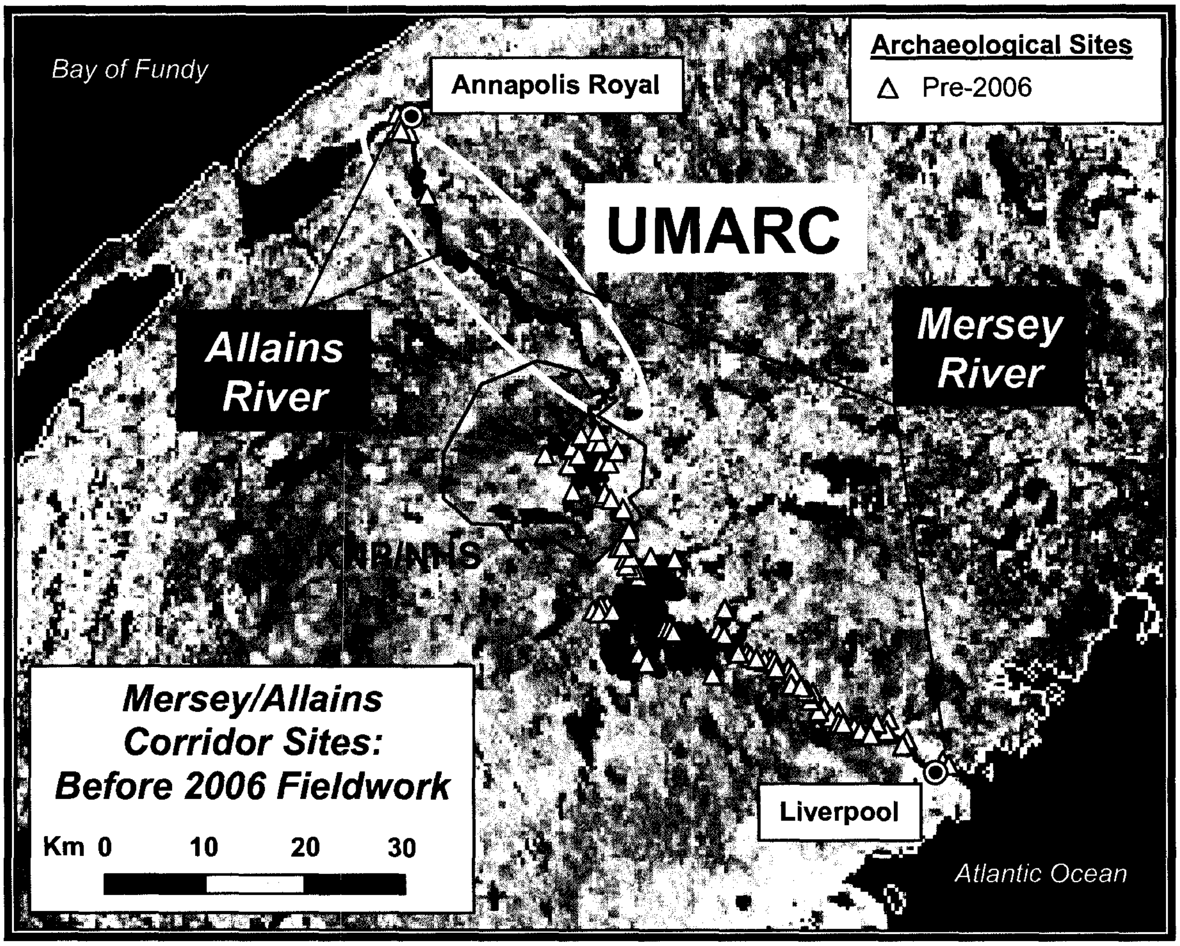


Figure 2.3.5: Map of southwest Nova Scotia showing the extent of previous archaeological research conducted along the Mersey/Allains Corridor prior to the 2006 UMARC Survey. Note the near absence of sites along the UMARC between Annapolis Royal and KNP/NHS. Map source: King 2006.

2.4 – Historic References

The preceding section represents an archaeological foundation for interpreting the importance of the Mersey and Allains Rivers to the Mi'kmaq and their ancestors, and for exploring whether or not these two rivers formed a pre-Contact travel corridor across southwestern Nova Scotia. The following section provides an overview of historic accounts that reference early canoe travel through the interior of the Annapolis and Queens County region.

Throughout the early seventeenth century, scant and indirect evidence of travel along the interior waterways of southwest Nova Scotia has been recorded by various French colonial expeditions. In early May 1604, Samuel de Champlain arrived at the mouth of the Mersey River (*Figure 2.4.1*). He records having arrested a ship's master named Captain Rossignol for illegally fur-trading with the local Mi'kmaq, despite Pierre du Gua, the Sieur de Monts, having a monopoly on such activities in the region (Biggar et al. 1971:230, 237; Grant and Biggar 1911a:210-216, 229). Impressively, a more detailed Mi'kmaw account of this event also exists indicating that Rossignol and his men were caught coming back down the Mersey River in canoes loaded with furs, after having traded with the Mi'kmaq further upstream (Parker 1990:95). This indicates that the Mersey River not only played a role in early fur-trading in the region, but it also establishes that the Mersey was used by the Mi'kmaq and early French entrepreneurs to access the interior of southwest Nova Scotia.

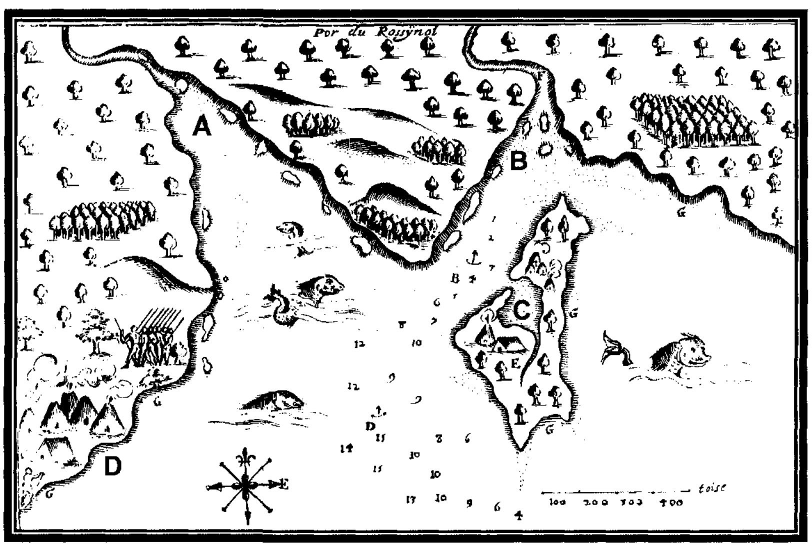


Figure 2.4.1: *Champlain's map of Port Rossignol (now Liverpool Harbour), showing **(A)** the Mersey River, and **(B)** Beach Meadows Brook. Mi'kmaq spring encampments are recorded at **(C)** Coffin Island, and **(D)** between what is now Moose Harbour and Western Head. The name Port Rossignol was give to this area by Champlain following the arrest of Captain Rossignol who was caught illegally trading for furs with the Mi'kmaq. This name survives today through the Lake Rossignol Reservoir further up the Mersey River.*

Extensive use of native guides by early explorers helped facilitate European mapping and understanding of the New World, both its coastline and its interior (Grant and Biggar 1911b:8). Du Gua used Mi'kmaw guides in 1604 when sailing around the coast of southwest Nova Scotia (Biggar et al. 1971:238, 254; Grant and Biggar 1911a:231, 332) and they, along with Basque and French fisherman and traders who were already familiar with these shores, directed him and other early explorers to important harbours, landmarks (copper and mineral mines), and resources (fishing grounds, seals, moose) available in this uncharted land (Biggar et al. 1971:242, 246-248, 260-262; Grant and Biggar 1911a:330). In addition, Mi'kmaq encountered by the French would have been knowledgeable about the interior waterways and less accessible parts of the region, which were later recorded on Champlain's maps, although often by as little as a wavy line (see *Figure 2.4.2*). Both Champlain and Lescarbot record exploring the lower Annapolis River in shallops (small, open decked vessel with shallow draft, suitable for rowing or sailing), probably as far as 70-80 km upstream, at least to Middleton and the Nictaux River (Biggar et al. 1971:258; Grant and Biggar 1911a:234, 314-316). Although not mentioned in either text, it is likely these exploration voyages would have included Mi'kmaw guides, and/or crew, since the Mi'kmaq in the early seventeenth century are recorded as being very adept with sailing shallops (Grant and Biggar 1911a:309).

Investigating historic maps of southwest Nova Scotia has shown that as early as 1632, the French had a fair understanding of the interior waterways of Acadia, particularly those around Port Royal, as well as the Mersey River (see *Figure 2.4.2*). Arguably, much of this information was derived from communications with the local Mi'kmaq who were familiar with the terrain, and does not necessarily represent

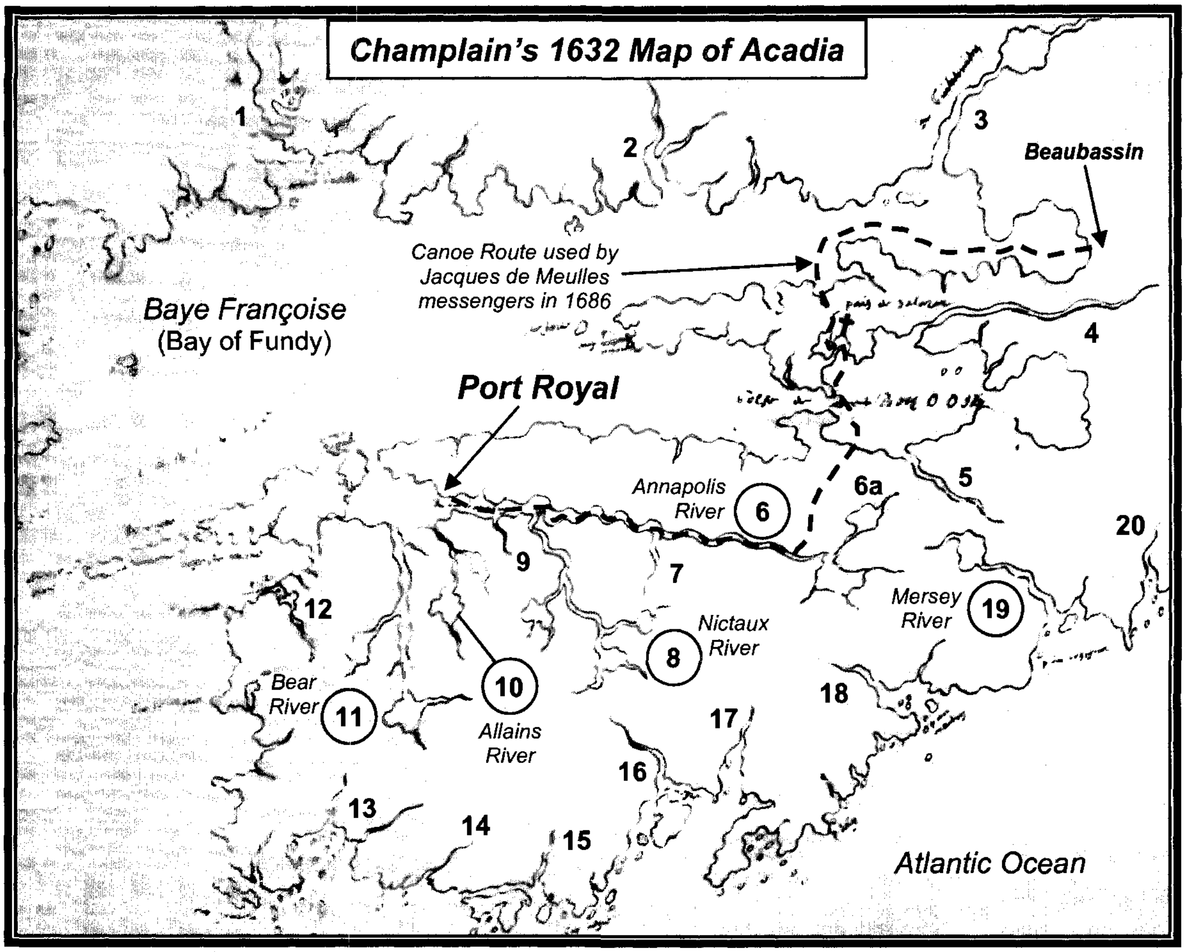


Figure 2.4.2: *Detail of Champlain's 1632 map of Acadia used by Isaac de Razilly. The map shows the extent to which early French colonizers understood the interior of Acadia. The fairly accurate representation of the rivers around Port Royal (**8** Nictaux, **10** Allains, **11** Bear) suggests Champlain, Lescarbot and others explored these rivers directly during unrecorded excursions, undoubtedly with the assistance of Mi'kmaw guides. However, the accuracy and detail of this knowledge dramatically deteriorates beyond the area around Port Royal. This is particularly obvious along the Atlantic coastline, where the Mersey River (**19**) is at least 200 km east of its expected location in relation to the Allains River (**10**). Note the cross overlooking what is now Parrsboro Harbour, marked as "Pais de Salvador". Also illustrated is the canoe route used by Jacques de Meulles' French and Mi'kmaw messengers in the spring of 1686 (see page 29).*

*The rivers are as follows: **(1)** St. John R; **(2)** Big Salmon R; **(3)** Petitcodiac R; **(4)** Economy R; **(5)** Avon/St. Croix R's; **(6)** Annapolis R; **(6a)** Gaspereau L (inaccurate – should be part of Gasp. R, flowing NE to Minas Basin); **(7)** Black R; (8) Nictaux R (with Trout L., Waterloo L, & Scrag L); **(9)** Paradise Bk or Bloody Ck?; **(10)** Allains R (with Grand L, & Lambs L); **(11)** Bear R (with Lake Joli & Lake Mulgrave); **(12)** Sissiboo R; **(13)** Tusket R and Argyle R; **(14)** Barrington R?; **(15)** Clyde R; **(16)** Roseway R; **(17)** Jordan R; **(18)** Broad R; **(19)** Mersey R (with L Rossignol); **(20)** Medway R.*

knowledge acquired as a result of direct visitation by the French (see Biggar et al. 1971:262). However, it is also quite possible some of these crude depictions of inland rivers represent unrecorded French expeditions to explore the interior, similar to that of Captain Rossignol and his men, although even these trips undoubtedly featured Mi'kmaw guides. Incorporating the local inhabitants' knowledge of the landscape would certainly increase the efficiency of exploring an unknown land.

However, as far as canoe travel through the interior of southwest Nova Scotia is concerned, the first direct evidence and the best documented account of such a trip by a European comes from the journal of Jacques de Meulles, the Intendant of New France. As part of his duties as emissary to King Louis' XIV, de Meulles left Quebec City in the fall of 1685 to conduct a tour of Acadia, in order to carry out a census, settle matters of dispute, and report his findings on the conditions of the colony back to the King (Morse 1935:91,109). Following a shipwreck along the east coast of New Brunswick, de Meulles spent the winter of 1686 in Beaubassin, near the border of what is now New Brunswick and Nova Scotia. In the spring of 1686, following a brief visit to the mouth of the Saint John River, de Meulles arrived at Port Royal (Annapolis Royal). From Port Royal he wished to continue his tour of the region by visiting Port Rossignol (Liverpool) and Lahaive (Lahave) on the Atlantic coast, but found himself without a ship for transport. Determined to continue his journey, he bought three birch bark canoes, and with two Mi'kmaq and a French Acadian acting as guides, he and his party of four other Frenchmen journeyed through the interior wilderness of southwest Nova Scotia, reaching Port Rossignol after five days of paddling, before continuing northeast by canoe along the foggy coast to Lahaive (Morse 1935:110-116).

De Meulles devoted a significant portion of his journal to this canoe trip, describing the landscape and the hardships of the journey, including running a narrow rapid with his skilful Mi'kmaw and Acadian guides (Morse 1935:111,113). "Once I wanted to go between two rocks which seemed far enough apart, but unfortunately my canoe struck on a hidden stone which made it take in a lot of water...the man in the bow of my canoe jumped out on to a rock which was near with such dexterity that he also kept the canoe from upsetting, and got it of in no time" (Morse 1935:113). For those familiar with the Mersey, this may actually be a description of "The Dump", located at the foot of Eel Weir Run between Kejimkujik/George Lake and Loon Lake in KNP/NHS (Biard 2007:156; D. Pentz 2007). Interestingly, if indeed de Meulles is describing a close-call at "The Dump", the rocks that nearly tipped his canoe are part of the pre-Contact eel-weir feature associated with the Eel Weir Site Complex, and in particular site Eel Weir VI (BcDh-06).

Earlier in the journal, during his "boring" winter spent at Beaubassin, de Meulles also mentions having sent two Frenchmen and a Mi'kmaq to Governor Francis Perrot at Port Royal to request the first available ship be sent to pick him up in the spring of 1686 (Morse 1935:106). Acting as messengers, these three men travelled along two historic Nova Scotia interior canoe routes. Morse points out their route from Beaubassin to Port Royal would have taken them from the Cumberland Basin, across western Cumberland County along the River Hebert/Farrell's River canoe route to Parrsboro, then across the Minas Basin, and up the Cornwallis River in Kings County, to a portage leading to the Annapolis River which flows along the valley between North and South Mountain in northern Annapolis County to Port Royal (see *Figures 2.4.2* above, and *4.4.1*) (Morse 1935:106). In addition to being a historic canoe route, the Cornwallis/Annapolis River corridor probably played an important role in the transportation of lithic material from the Minus Basin area into southwest Nova Scotia. This will be discussed further in *Chapter 4.4.1.2 Lithics – Chipped-Stone Artifacts: Analysis*.

Also featured in de Meulles journal is a detailed map of his tour of Acadia produced by Jean-Baptiste-Louis Franquelin, the royal cartographer back in Quebec City. The map includes de Meulles' route across the peninsula of southwest Nova Scotia between Port Royal to Port Rossignol (*Figure 2.4.3*). Port Royal is clearly marked on the map and a linear chain of lakes lead directly south to Port Rossignol, indicating his route through the interior was clearly along the Allains and Mersey Rivers, and not by other viable canoe routes across southwest Nova Scotia, such as through the Bear River system, which is also accessible from the Annapolis Basin.

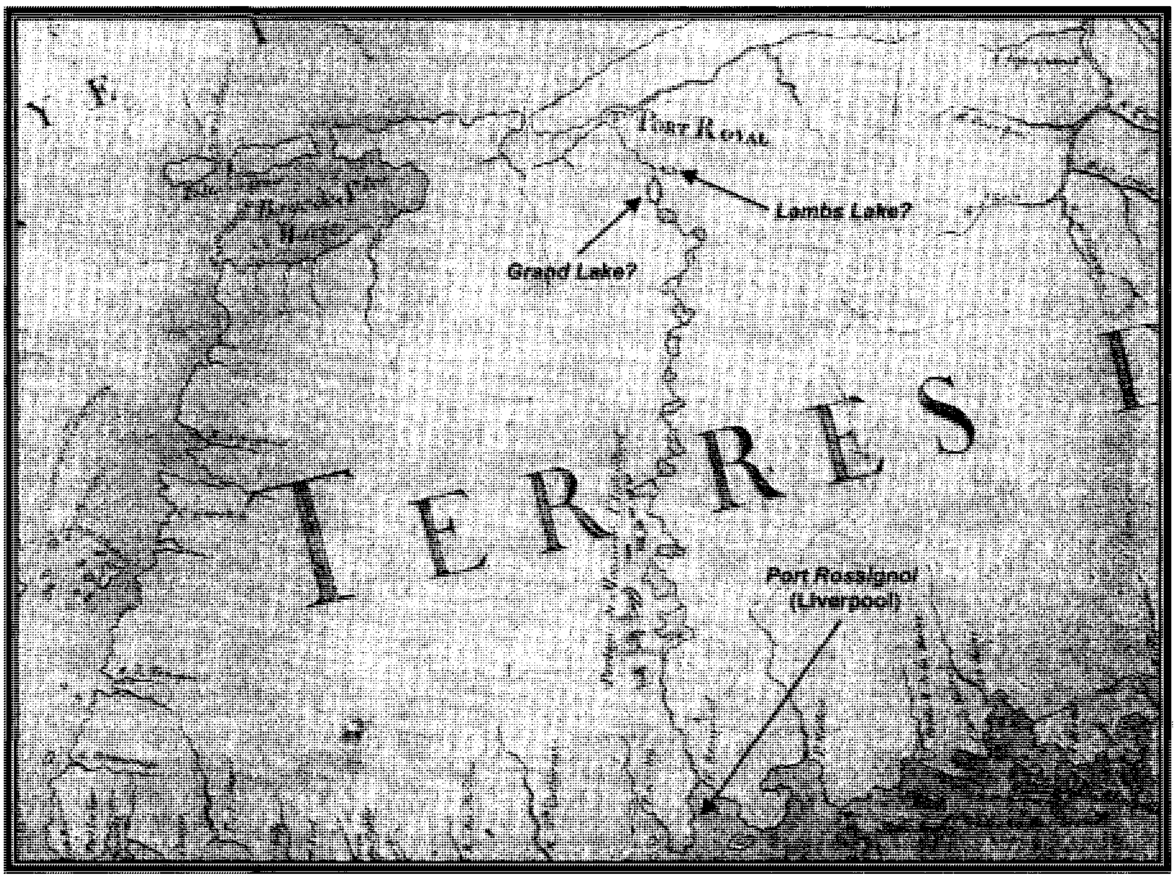


Figure 2.4.3: *Detail of Franquelin's map of Jacques de Meulles voyage to Acadia in 1685-86, showing the canoe-route de Meulles' Mi'kmaw and Acadian guides lead he and his five companions (at centre) through the interior of southwest Nova Scotia from Port Royal (top) to Port Rossignol (bottom), and then on to Lahaive (three canoes paddling along the coast, at lower right). Unfortunately the sequence of lakes illustrated on this map are not easily identifiable on the modern maps of the region, with the possible exception of Lambs Lake branching off to the east of what is probably Grand Lake, near Port Royal.*

Unfortunately, the sixteen lakes illustrated on Franquelin's map do not easily correspond with the lakes featured on modern topographic maps of the Allains and Mersey Rivers, as there are either too few lakes or too many depending on what resolution and level of detail you choose to consider the route. De Meulles' description of twenty-four portages during his trip is also difficult to interpret on the modern map, particularly with the major alterations to the natural flow of water along the lower Mersey River caused by the construction of hydro dams (Morse 1935:112).

However, one feature of the route on Franquelin's map that seems to correspond with the modern map of the Mersey/Allains Corridor is the junction of Lambs Lake Brook/Ten Mile River and Lambs Lake with the Allains, which enters the north end of Grand Lake (see *Figure 2.4.3*). Grand Lake is probably where de Meulles had his Mi'kmaw and Acadian guides carry the canoes three leagues (~15 km) upstream from Port Royal the day before he "set out on a large lake" (Morse 1935:111). Since the lower Allains is fast, narrow, and therefore un-navigable by canoe, a portage trail would have traversed the roughly 11 km between Port Royal and Grand Lake. This trail probably followed close to the modern route of Highway #8, and ended where Lambs Lake Brook/Ten Mile River emptied into Grand Lake. This indicates that de Meulles may have had some hand in this illustration, and that Franquelin's representation of the route is more than an arbitrary chain of puddles. Conversely, it is also possible the detail of Lambs Lake was simply copied from previous maps (see *10 Allains River* in *Figure 2.4.2*) and earlier trips made up the Allains River, while the remaining sequence of lakes is the artistic creation of Franquelin.

Unfortunately, for the purposes of this research, documented history and recorded Mi'kmaw oral traditions speak little of Allains drainage, particularly as a canoe route, but instead focuses to a greater extent on the Bear River system (Parker 1990; Ricker 1998). In the 1820s, the Bear River Reserve was established above the head-of-tide on that river, and by the late nineteenth and early twentieth centuries this area formed a major centre for Mi'kmaw hunting and fishing guides, who were sought after by British officers stationed in Halifax, and later by American sportsmen (Butler 1837-38; Canoeing in Nova Scotia 1880; Hardy 1855, 1869; Parker 1990, 1995; Ricker 1998:82-84, 150-161). As commercial enterprise of the guiding industry grew in the nineteenth and twentieth centuries, Bear River offered greater opportunities for Mi'kmaq looking to make their livelihood from ever-depleting fish and game resources. Bear River provided access to a wider network of pristine waterways and more remote fish and game habitat than the Allains River, which by the 1830s was being heavily exploited by lumbering, and was bordered by roads through the interior that connected it with Halifax and Liverpool. The Bear River system seems to dominate the historic record because it was of greater importance to the Mi'kmaq than the Allains River during the more recent past, and therefore it has become more prominent in remembered and recorded history.

However, in the seventeenth and eighteenth centuries, the Allains River was better situated than Bear River for conducting trade with French and English settlers who established themselves at the mouth of the Allains River and head of the Annapolis Basin. Therefore, in the early historic period the Allains River was probably more significant to the Mi'kmaq than is currently indicated by the historic record. Champlain's 1613 map of the Annapolis Basin (*Figure 3.5.2*), shows the Mi'kmaq used a weir for fishing gaspereau at the head-of-tide on the Allains River, and the presence of two adjunct reserve properties of the Bear River First Nation found at Grand Lake (BR 6A), and at General's Bridge (BR 6B) on the lower Allains River (*Figure 2.4.4*), speaks to the continued historic and modern importance of the Allains River to the Mi'kmaq.

Figure 2.4.4: *Watercolour of the Mi'kmaq community at General's Bridge near Lequille (1838). In the foreground two Mi'kmaq women stand on the west bank of the Allains River valley, overlooking the encampment and river below. General's Bridge is visible further up stream, and in the distance are the South Mountain highlands. Photo source: Nova Scotia Museum 1838.*

The purpose of this discussion is not to weigh the significance of one route against the other. The Mersey/Allains Corridor simply represents one of several major canoe routes that formed a network of water highways in southwest Nova Scotia used by the Mi'kmaq during the post-Contact period. Historic evidence of interior fur-trading and guiding by the Mi'kmaq, as well as early cartographic representations of interior river systems based to a large extent on local traditional knowledge, indicate the Mi'kmaq were fully familiar with and utilized the interior waterways of southwest Nova Scotia during the seventeenth century. If it can be substantiated that the Mersey/Allains Corridor formed a pre-Contact travel route, there is a strong basis for arguing this knowledge of the interior was passed down to seventeenth century Mi'kmaq, including de Meulles' guides, by their forefathers and ancestors. Using both lines of evidence – existing archaeological research, and the historic accounts – the goal of this research is to establish that the Mersey and Allains Rivers formed a pre-Contact travel corridor used by the Mi'kmaq for not just centuries, but millennia.

2.5 – Theoretical Approach

Having demonstrated that historic records from the seventeenth century indicate the Mi'kmaq were both familiar with and used the Mersey/Allains travel corridor, the following question arises – was the Mersey/Allains Corridor used by the Mi'kmaq prior to the establishment of French settlements at either end of the route? Put another way, does the record of Jacques de Meulles journey represent a continuation of pre-Contact knowledge and use of the interior landscape, or did this route only become important to the Mi'kmaq because it formed the most direct route for overland trade and travel between Port Royal and Port Rossignol?

Archaeological evidence from the lower half of the Mersey River, as well as the head-of-tide area on the Allains River, indicate significant pre-Contact occupation in this region. As well, chert lithic material from the Bay of Fundy is commonly found at pre-Contact sites along the central lakes and lower reaches of the Mersey River, indicating that human traffic and trade goods were moving across the interior of southwest Nova Scotia, if not by the Mersey/Allains corridor, then by some other route. Very little archaeological evidence is available from the Allains River above the head-of-tide, and no investigations have ever focused on the upper Mersey River, upstream of Kejimkujik Lake, so our ability to examine these two river systems as a water-highway through the interior is incomplete.

In order to answer whether or not the Mersey and Allains Rivers formed a pre-Contact travel route, both ethnohistoric and archaeological lines of evidence and analysis must be used. The theoretic approach applied to the 2006 Upper Mersey/Allains River Corridor Archaeological Survey has utilized both the *synthesized cultural descriptions* of Alanson Skinner, and the *direct historical approach* of Julian Steward (Baerreis 1961; Steward 1942; Wissler 1909).

Skinner's *synthesized cultural description approach* uses documentary materials to supplement and reinforce the archaeological data, with the objective of forming a well-rounded cultural description (Baerreis 1961:51). This method uses the "combined resources of archaeological, ethnological, and historical data...to construct a composite and hence more complete cultural description than could be formed on the basis of a single body of data" (Baerreis 1961:55).

Steward's *direct historic approach* suggests that the historic record can provide an intermediate reference point between archaeological interpretations in the present and cultural practices in the past, "where sites may be identified with those enumerated in written records" (Baerreis 1961:55). In the words of Steward himself, "methodologically, the direct historical approach involves the elementary logic of working from the known to the unknown. First sites of the historic period are located.... [and] Second, the cultural complexes are carried backward in time to protohistoric and prehistoric periods and cultures" (Baerreis 1961:51).

With both approaches, though particularly Steward's, it is important to recognize the 'cultural complexes' described in the historic record must be critically examined and not injudiciously accepted as accurately reflecting native culture. Politics, prejudice, and ignorance are common influences in historic descriptions of unfamiliar cultures, and in attempting to understand the past, we must not let these constructions over-influence or out-weigh other lines of evidence.

In the 2006 Upper Mersey/Allains River Corridor Archaeological Survey, both of these approaches have been combined and utilized to locate archaeological sites, and to present a more holistic interpretation of the past, using a wide range of evidence – archaeological, historic, ethnohistoric, and oral traditions. Since this research is also focused on examining human movements across the landscape, both a *landscape approach* to understanding how the land and its resources were used in the past, and concepts of *group mobility/settlement patterns* across that landscape are also discussed (Ames 2002; Binford 1983, 1990; Davis 1986, 1991; Hamilton and Spray 1977; Kelly 1983, 1992; Lewis 2007; Nash *et. al.* 1992). The following chapters will discuss the methodology and results of the 2006 field season, and demonstrate how this research has expanded our understanding of pre-Contact aboriginal life-ways in southwest Nova Scotia.

CHAPTER 3 – METHODOLOGY & FIELD RESULTS

"*Then scan your map, and search your plans,*
And ponder the hunter's guess –
While the silver track of the brook leads back
Into the wilderness." – Albert Bigelow Paine (1967:38), The Tent Dwellers

Having outlined the background research and the theoretical context for this project in the preceding chapter, the following chapter will present the fieldwork component. Part I of this chapter will review the fieldwork methodology applied to the 2006 Upper Mersey/Allains River Corridor Archaeological Survey, and Part II will describe the field results of this investigation.

PART I: METHODOLOGY

3.1 – Survey Approach

The field methodology of the 2006 UMARC Archaeological Survey utilized the successful approaches of previous surveys conducted in southwest Nova Scotia, and applied them to separate components of this project. For this project it was necessary to use multiple field strategies because of varying environmental conditions resulting from both natural and man-made limiting factors, including fluctuating seasonal water levels and developmental impacts. Modern and historic development across the 65 km of this linear project area range from intact remote wilderness, to areas of moderate and high disturbance resulting from road and bridge construction, cottages, houses and waterfront development, agriculture and timber harvest, mills, dams, and even a canal that diverts the main flow of water from the natural valley of the Allains River to a power station near Lequille.

Initially when developing a field strategy for the UMARC Survey, it was expected there would be a heavy reliance on visual surface inspection of shoreline exposures and disturbances, as had been the case for the other major archaeological surveys in the region. Nearly all of the 160 pre-Contact archaeological sites identified from previous surveys around the Lake Rossignol Reservoir and along the lower Mersey River were identified as surface finds, in areas of erosion caused by hydro-dam flooding of the natural shoreline (Christianson 1985; Lewis 2007; Sanders and Stewart 2007). Even in KNP/NHS, which is not affected by dams, many of the 38 pre-Contact sites have been identified because of natural erosion processes along riverbanks and lakeshores (Ferguson 2005; Myers 1973). On the Allains River, pre-Contact sites have also been identified on the surface in areas of erosion caused by hydro development and natural processes, as well as turning up gardens (Christianson 1984a, 1984b, 1984c; Lewis 2003).

However, during the 2006 field season, unusually high water levels throughout the spring and most of the summer prevented surface inspections along the river and lakeshores of the study area from being worthwhile, and an expected draw-down of the dam controlled waters of Grand Lake on the Allains River did not occur. As such, surface inspection methodologies used in previous surveys could not be widely applied to this project.

Instead, subsurface testing became the dominant means of locating sites during the 2006 UMARC Survey. W. F. Ganong's classic monograph, *Pre-historic New Brunswick: The Indian Period*, describes some of the landscape and environmental characteristics that influence the position of native campsites, including "a level place, an intervale or low terrace, near the water, for their wigwams, a good gravel beach for their canoes and a spring" (Hamilton and Spray 1977:4).

Landscape features that produced pre-Contact sites during previous archaeological investigations in southwest Nova Scotia were targeted as high potential test locations during the 2006 UMARC Survey (Christianson 1984a, 1984b, 1984c, 1985; Ferguson 2005; Lewis 2007; Myers 1973; Sanders and Stewart 2007). These features included beaches, prominent points, rapids and portages – particularly the head and foot of each, stream mouths, river forks, and areas featuring native place-names. Since these landscape features are often large, the archaeological potential of an area, and where to test is also influenced by micro-topography and micro-environmental conditions. These characteristics include level or gently sloping terrain, well-drained soils, an area generally free of obstacles such as boulders, or hummocks for a camp, and a southward or westerly exposure for long daylight hours and fair breezes. When an area features several of these characteristics together, the potential for encountering archaeological material generally increases.

In short, aboriginal populations chose their campsites and portage routes for many of the same reasons that attract the modern tent camper or canoeist to a certain location – a level and dry rest area, access to clean drinking water, a breeze to keep the bugs away, a pleasant view, near good fishing or hunting areas, the shortest and/or most easily traversed route between two points (Hamilton and Spray 1977:3-4). This correlation between the past and present use of the landscape is well represented in KNP/NHS, where many of the modern portage trails and backcountry campsites in the Park feature pre-Contact sites (Ferguson 2005).

3.2 – Field Reconnaissance

In order to identify high potential landscape features along the Upper Mersey/Allains River Corridor, a reconnaissance canoe trip of the study area was organized in the spring of 2006, with the help of Graham Lantz and Don Pentz (*Figure 3.2.1*). This reconnaissance provided a first-hand perspective of the landscape and an appreciation of the challenges of this canoe route, as well as an opportunity to either confirm or dismiss areas of archaeological potential that appeared promising on the map. During the six days and five nights of the canoe reconnaissance, high potential landscape features throughout the study area were observed and recorded for later ranking and prioritizing as possible test locations to be investigated later in the summer.

Figure 3.2.1: *Images from the 2006 UMARC Reconnaissance Survey. At left, the author and Graham Lantz prepare to set out on Grand Lake Flowage. At right, Graham Lantz inspects a pile of cleared fieldstones at the Grand Lake Flowage Homestead Site (BeDi-16). Photos: D. Pentz, B. Pentz.*

The Nova Scotia Museum provided access to a draft version of a newly developed archaeological-potential computer modelling program that gave values to landscape features based on their proximity to freshwater, water intersections, the coast, known archaeological sites, and land with less than 9% slope (*Figure 3.2.2*). Field-truthing of this model during the reconnaissance demonstrated that further work was required before the program could be applied with confidence as a tool for archaeological surveying or resource management. Many of the areas marked as high potential in the computer model were only of moderate or low potential when examined in the field, and several landscape features noted during the reconnaissance canoe trip as having very high archaeological potential, and which later proved to be sites, were not recognizable as significant areas by this program. Unfortunately, the results of the model could not be trusted, and therefore it was not used beyond the initial reconnaissance portion of this project.

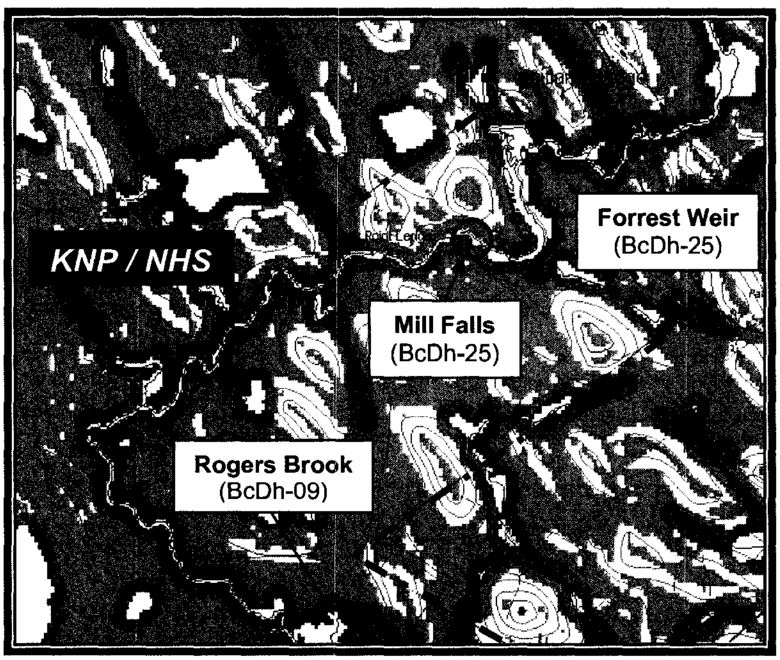


Figure 3.2.2: *Detail of the Nova Scotia Museum's draft Nova Scotia Pre-European Contact Model for predicting archaeological potential used during the reconnaissance survey. This image shows the Mersey River in KNP/NHS, from Maitland Bridge (upper right) and Rogers Brook (bottom centre). The darker orange and red patches represent the areas of presumed highest potential. However, note the absence of any highlighted orange areas around Mill Falls (BcDh-25), which is the dominant feature along this portion of the Mersey River, and where quartz flakes were recovered in 2006. The area around the Forrest Weir (BcDh-26) is also only moderate potential. The dark orange and red around Rogers Brook (BcDh-09) is self-fulfilling since proximity to known sites is one of the models attributes, and this site was recorded before the model was created.*

In addition, several collectors from Annapolis, Digby, Lunenburg, and Queens Counties were approached during the early stages of fieldwork, to inquire whether local residents were familiar with any pre-Contact sites along the upper Mersey and Allains Rivers. In at least four cases (BdDi-02, 03, 09; BcDh-24), information shared by these collectors led directly to the identification of sites that otherwise would have not been recorded by this survey. This information resulted in increased efficiency and thoroughness of the project, and enriched the overall study through the contribution of their friendship, support, and personnel perspectives. Although the majority of their collections came from lower half of the Mersey River, which falls outside the main study of this project, the willingness of these gentlemen to share their time and knowledge greatly enhanced the scope of this research and helped fill in important gaps in the culture-history of the study area, which was not represented by the artifact material recovered during the 2006 fieldwork.

The 2006 UMARC Survey provided the unique research freedom to investigate a broad study area defined by the natural landscape of the waterways, and not by the arbitrary boundaries of a development. By attempting to link previous research from the Allains River with archaeological work conducted around the central lakes and lower reaches of the Mersey River, the UMARC survey has enabled the landscape of the Mersey/Allains canoe route to be interpreted as a whole for the first time.

Although no archaeological research had ever been conducted along the upper Mersey River north of KNP/NHS, and only brief investigations had ever touched on the Allains River system, this lack of previous work was not a limiting factor during the 2006 survey. In fact, the research goals of this project were accomplished simply by following the path of previous archaeological successes in other portions of the Mersey/Allains Corridor, as well as having a personal knowledge of the whole study area from the reconnaissance trip, and the freedom to investigate the most promising locations along the UMARC. In areas where most of the choice test locations were inaccessible because of development, such as the cottages around Sandy Bottom Lake at the headwaters of the Mersey, or the hydropower projects along most of the Allains River, it was necessary to settle for investigating secondary locations of lesser archaeological potential, and place a greater reliance on information and artifacts held in private collections.

3.3 – Field Organization

Following the reconnaissance canoe trip, the UMARC study area was divided into six geographic regions, based on landscape features such as lake-chains, linear river portions, or drainage divides, with the goal of identifying at least one new pre-Contact archaeological site in each region, (see *Figure 3.3.1*). Accomplishing this goal would physically bridge the gap between known sites around the central lakes and lower reaches of the Mersey River with those from the Allains River system. By extending a continuous line of sites along the whole corridor, these new sites would represent evidence of pre-Contact aboriginal land-use across the entire Mersey/Allains canoe route.

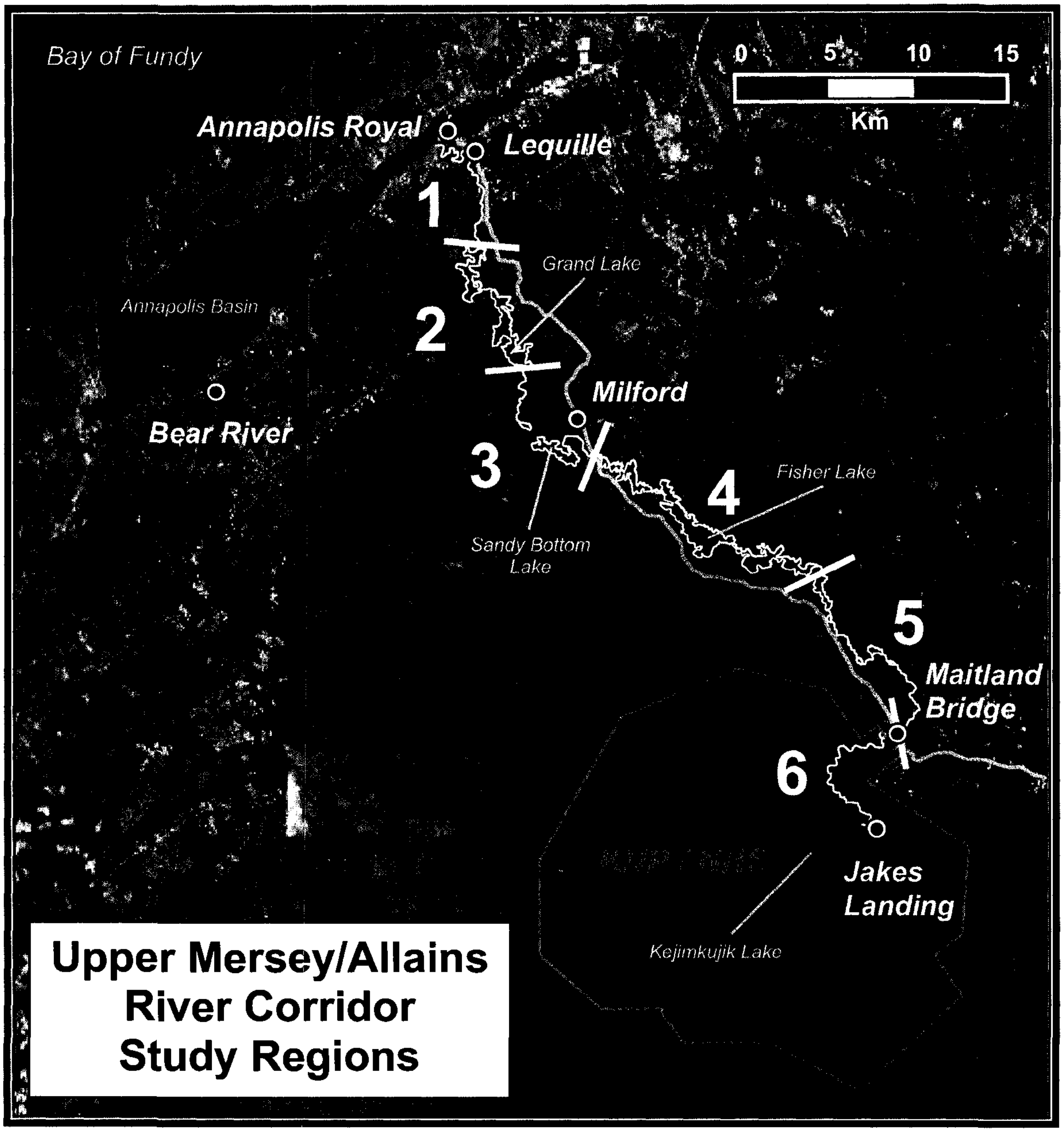


Figure 3.3.1: *Map showing the Upper Mersey/Allains River Corridor study area, and the six project study regions paralleling Highway No. 8 between Annapolis Royal and Liverpool. The area covers over 65 km of lakes and rivers, from the head-of-tide on the Allains River near Lequille in the north, to Jakes Landing at the head of Kejimkujik Lake in Kejimkujik National Park and National Historic Site. The six study regions of the project are:* (**1**) *Allains River;* (**2**) *Grand Lake;* (**3**) *Height-of-Land;* (**4**) *Milford Lakes;* (**5**) *Upper Mersey River;* (**6**) *Park. Map source: Google Earth 4.2*

Within each of the six study regions, areas of high archaeological potential noted during the reconnaissance trip and from discussions with local collectors were listed and prioritized for investigation during the 2006 field season. Since most of these locations are remote and can only be reached by canoe, access routes for these test locations were explored prior to beginning fieldwork. In late June, private and commercial landowners, including Bowater Mersey Paper Company Ltd., and Nova Scotia Power Inc., were approached for permission to conduct archaeological investigations on their property, and/or to use private roadways and waterfronts to access the various test locations of this project. Research permits for the 2006 UMARC Survey were also acquired from the Nova Scotia Museum, and from Parks Canada, for the portion of research to be conducted in Kejimkujik National Park and National Historic Site (KNP/NHS).

Active field-testing was carried out between July 1st and August 18th, 2006, with limited follow-up work conducted in late September, representing a total of 36 days in the field. Devin Fraser, a summer student from the Department of Anthropology at Saint Mary's University, was the only full-time crewmember for the 2006 UMARC Survey. Additional part-time volunteers included Robby Marrotte, Chris McCarthy and Donna Morris (KNP/NHS), Chief Frank Meuse Jr. (Bear River First Nation), Don and Louise Pentz, and Stan Silbot.

During the 2006 fieldwork, shovel-tests were judgementally placed in level, relatively flat and well-drained areas, approximately 2-4 m apart, in order to effectively cover the area of moderate- to high-archaeological potential on each topographic feature. On larger features, such as the low beach terrace at McKibbin's Beach (BdDi-07), shovel-tests were laid out in rows. The depths of the tests varied between 25-45 cm. Cultural deposits generally ranged between 10-20 cm DBS, but a few artifacts at McKibbin's Beach (BdDi-07), Stedman's Beach (BdDh-02), Big River Runs (BdDh-03) continued to be uncovered between 30-45 cm DBS. It is not clear if these artifacts may have drifted naturally in the sandy soil, or if these are deep or stratified sites.

Where time permitted at the end of the field season, evaluative units were placed at three of the more productive sites identified during the 2006 survey. Two isolated 1 x 1 m units were placed at McKibbin's Beach and Stedman's Beach, and a 0.5 x 3 m trench was excavated at Big River Runs. These units were excavated to recover additional artifact material for interpreting the age and function of each site. They also provided the opportunity to identify possible site stratigraphy, and enabled the collection of sediment samples for interpreting geological soil development at these site and conducting paleo-ethno-botanical analysis (see *Chapters 4.1 – Sedimentology*, and *4.2 – Organics*).

Figure 3.3.2: *Field crewmembers (from left to right) Louise Pentz, Don Pentz, and Devin Fraser excavate a 0.5 x 3 m evaluative trench at Big River Runs (BbDh-03).*

As a personal note, I was amazed at how quickly a day in the field goes by when there is much to be done. Field days were limited to 8-9 hours, which seemed like plenty of time, but when factoring in 1-2 hours of travel each way to access these remote test locations – including driving rough gravel roads, unloading and loading the canoe, plus as much as 2 km of paddling to reach some of the test locations – days in the field burned up quickly. On average only 5-6 hours per day in the field was allotted to actually shovel-testing, taking notes, photography, or mapping a site, as well as setting up, excavating, and backfilling shovel-tests and evaluative units. With a typical crew of only two people, usually Devin and myself, I had to adjust my initial expectations of what could be realistically accomplished in a single day, and for the project as a whole. However, despite the challenges of tackling a large study area, our efforts were rewarded through the identification of sixteen new pre-Contact sites or sites featuring Mi'kmaq technology (stone fish-weirs) throughout the whole project area.

This survey of the Allains and upper Mersey Rivers represents a primary level investigation into the archaeological significance of this region, and an attempt to improve our understanding of how the Mi'kmaq and their ancestors utilized the interior waterways of southwest Nova Scotia. In no way is it to be considered a complete assessment of the archaeological resources in this portion of Annapolis County. Undoubtedly additional archaeological sites are present along this corridor. However, the intent of this research was simply to raise the profile of this under appreciated area, and provide a foothold for future research.

Complete coverage of all 65 km of this route was not possible with the limited resources of a small crew, and short field-season. A ~2.8 km portion of the Allains River was not visited at all during this survey – between Generals Bridge in Lequille to a point ~ 620 m north of the Highway 101 crossing. Furthermore, although the reconnaissance canoe trip provided the opportunity to observe the whole Upper Mersey/Allains River Corridor between the Highway 101 crossing on the Allains River in the north, to the head of Kejimkujik Lake in the south, only a few specific areas of high archaeological potential were actually revisited and investigated later in the field-season. The potential for additional sites along these waterways, including fish-weirs, which would have been obscured by high water during the reconnaissance trip, should be considered high. Despite lower water conditions experienced at the end of the allotted field season, the remote nature of most of the study area made revisiting additional high-potential locations an impractical and inefficient use of remaining time and resources. Finally, water conditions on Grand Lake and Grand Lake Flowage on the Allains River were kept artificially high late in the field-season to accommodate cottage owners and their watercraft. As such, the known sites flooded by these bodies of water could not be accessed, nor was it possible to examine the shorelines of these lakes to identify any new cultural deposits.

However, following the conclusion of fieldwork activities in late September 2006, an opportunity to fly over the entire study area was made available by local resident and collector Doug Potter from Pitts Lake, who had a float-plane based on Sandy Bottom Lake (*Figure 3.3.3*). This over-flight of the region provided a unique perspective on sites we visited throughout the summer, and the landscape of the route as a whole. Aerial photographs have aided in the description and recording of the sites, and during the course of the flight fish-weirs were identified along the route which had been obscured by high-water levels earlier in the field season along the UMARC, as well as several weirs along the Mersey between KNP/NHS and Lake Rossignol.

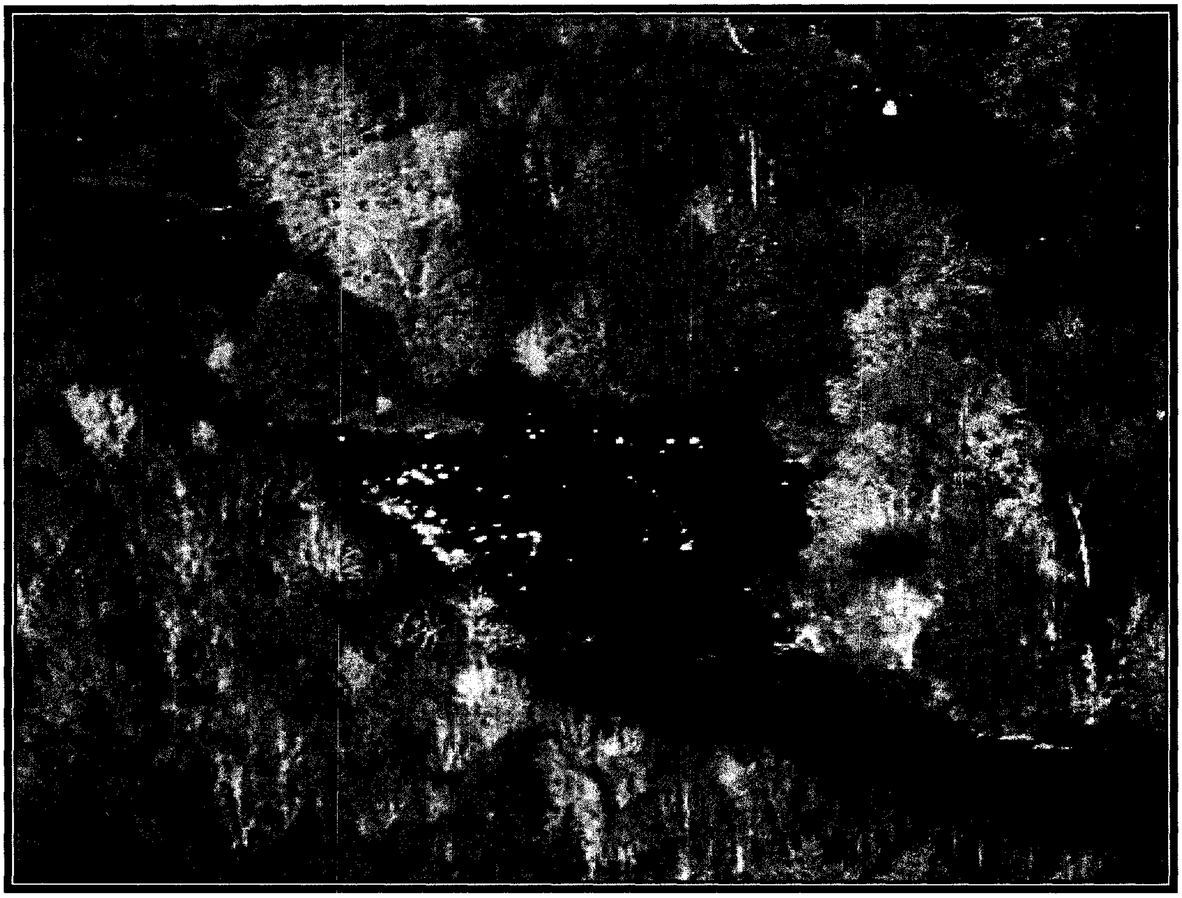


Figure 3.3.3: *Aerial photo of the Forrest Weir site (BcDh-26) in the* Upper Mersey River Study Region, *(looking downstream, facing NW). This weir was identified as a result of having the opportunity to participate in a fly-over of the UMARC Survey Area, courtesy of local resident Doug Potter, from Pitts Lake, Annapolis County. Photo: B. Pentz.*

PART II: FIELD RESULTS

3.4 – Fieldwork

From July 1 – September 31, 2006, eighteen new archaeological sites were identified and recorded (14 pre-Contact Period, 1 Contact Period, and 3 Post-Contact Period), and four existing sites were revisited (Vidito, Nichol, Lequille Hydro, Rogers

Brook), totalling twenty-one sites as part of the 2006 Upper Mersey/Allains River Corridor Archaeological Survey. In doing so, the goal of identifying pre-Contact sites in each of the six study regions of the UMARC was also successfully accomplished, and a continuous line of pre-Contact sites now extends across the whole Mersey/Allains canoe route.

Seven of the thirteen test locations investigated along the UMARC proved positive for cultural material, and 66 (17%) of the total 385 shovel-tests placed throughout the project area proved positive for cultural material. Subsurface testing took place on eighteen micro-topography features at thirteen different test locations throughout the study area. Nine (50%) of these tested features produced archaeological material, resulting in the identification of eight new pre-Contact sites; six of which were identified by the first shovel-test. All four of the 1 x 1 m, and all three 0.5 x 1 m evaluative units excavated at three sites (BdDi-07, BdDh-02, BdDh-03) within the UMARC study area proved positive for additional cultural material.

One pre-Contact lithic scatter (Upper Dukeshire's Falls - BcDh-23), four fish weirs (Dugway Bridge Weir - BeDi-15; Grand Lake Stream Weir 1 - BdDi-02; Grand Lake Stream Weir 2 - BdDi-03; Forrest Weir - BcDh-26), and two historic sites (Grand Lake Flowage Homestead - BeDi-16; Thomas Mill - BdDi-11), were identified through visual surface inspection during the 2006 fieldwork. Additionally, the artifacts held in private collections by local residents from the Grand Lake Dam (BdDi-01), Meuse (BdDi-08), Lambs Lake Brook (BdDi-09), and the McGinis (BdDi-10) sites were originally found exposed on the surface in areas from previous disturbance.

Below is a brief description of the six geographic study regions and the twenty-six test areas examined during the course of the 2006 Upper Mersey/Allains River Corridor Survey. Discussions of the study regions have been arranged in order from north to south.

3.5 – UMARC Study Regions

3.5.1 – Allains River Study Region: (*Dugway Bridge* to *Grand Lake Flowage Dams* – 5.3 km)

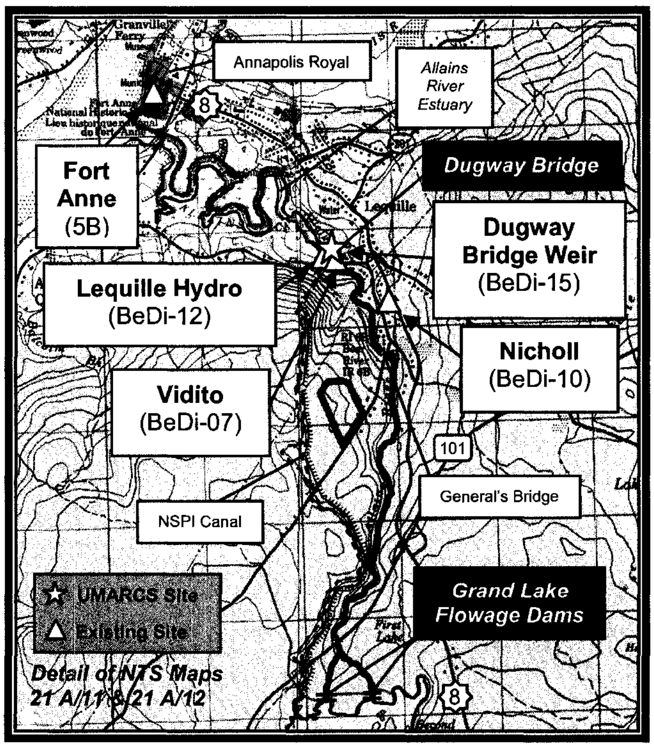


Figure 3.5.1: *Map of the Allains River Study Region (represented by bold black line) along the lower Allains River, between the head-of-tide at Dugway Bridge in Lequille, and the foot of the Grand Lake Flowage dams.*

The *Allains River Study Region* extends from the head-of-tide on the Allains River, up-stream (south) along the natural course of the river to the foot of the dams at the north end of Grand Lake Flowage (*Figure 3.5.1*). The river is bouldery, and quickly descends the steep slope of South Mountain, often through narrow, shallow channels. It is unlikely this lower portion of the river could have ever been travelled by canoe.

Several roads and highways cross or parallel the flow of the river providing multiple points of access. Long-term residential development, land clearing, and small scale agriculture has taken place on the terraces that overlook the lower portions of the river, especially around the village of Lequille on the east bank. A small parcel of Reserve Land (Bear River First Nation 6B) is located on the west side of the river near Generals Bridge. A canal has diverted the natural flow of the river along the upper ridge of the west side of the lower river valley, as it descends South Mountain. As such, much of the riverbed is dry and exposed, or in some cases is overgrown with alders. Unfortunately, this lack of water did not result in the identification pre-Contact archaeological sites. Several historic features, including stone foundations, and dams were noted along this portion of the river, but being beyond the scope of this research they were not recorded. However, they do speak to the long history of development in this area, extending as far back as 1607, with the construction of the Sieur de Poutrincourt's gristmill near the head-of-tide.

The following sections will describe the pre-Contact sites identified within the *Allains River Study Region.*

3.5.1.1 – Vidito Site (BeDi-07)

This site was originally recorded in 1984 (Christianson 1984a). The Vidito Site is located on the west bank of the Allains River, near the first set of rapids and the head-of-tide. No testing was conducted at this site during the 2006 UMARC Survey.

The 1984 MARI site-form indicates artifacts, such as corner-notched chert and quartz points were collected from what is now the Laurin (Vidito) property. Unfortunately, the whereabouts of Mr. Vidito's collection of artifacts from the site remain unknown, however the Vidito Site appears to be the same as the "Lequille Site", excavated by John Erskine in 1957 (Erskine 1998:57). The collection of artifacts recovered by Erskine feature 15 bifaces, including stemmed quartzite and felsite Late Archaic Period (ca 5,000-3,500 BP) projectile points (see *Figure 4.4.4a,b* below), and a grey chert Late Ceramic Period (1,00-450 BP) Levanna-like triangular point (see *Figure 4.4.4g* below), as well as a celt, a hammerstone, and 112 fragments of native pottery (see *Figure 4.3.6* below). No new artifacts were identified at the site in 2006.

The area around BeDi-07 has been significantly disturbed by house foundations, road and bridge construction, and ploughing. The close proximity of the Dugway Bridge Weir site (BeDi-15), suggests the Vidito Site may have served as the camping area for people tending this weir.

3.5.1.2 – Nichol Site (BeDi-10)

This site was originally recorded in 1984 (Christianson 1984b). The Nichol Site is located on a flat, well-drained upper terrace of the east bank of the Allains River, with a well-defined western slope. No shovel tests were placed at this site during the 2006 UMARC Survey, and examination of all surface exposures proved negative for cultural material.

The original 1984 MARI site-form indicates artifacts have been collected from several areas of what is now the Brown (Nichol) property. During the 1984 Annapolis

Survey, carried out by David Christianson from the Nova Scotia Museum, Mr. Nichol donated a Late Archaic Period (ca 5,000-3,500 BP) stemmed, pink quartzite point to the Nova Scotia Museum, which came from the garden south of his house (see *Figure 4.4.4c*). The original MARI site-form also indicates that Mr. Nichol had collected a variety of other pre-Contact artifacts and clay pipe fragments over the years but that most of this collection had been given away.

A conversation in 2006, with the late Mr. Nichol's neighbour Mr. Victor Francis (2006), indicated that he had also recovered artifacts in the garden area behind his house. Mr. Francis said he had a few artifacts in his possession, but they were not available for viewing on the day of my visit.

3.5.1.3 – Lequille Hydro Site (BeDi-12)

This site was originally recorded in 1984 (Christianson 1984c). The Lequille Hydro Site is located on the north side of the Dugway Road, on the west bank of the Allains River, between the Lequille Hydro facility and the Vidito site (BeDi-07).

No shovel testing was conducted at the site in 2006, and no new artifacts were recovered. The original 1984 MARI site-form indicates that two chert flakes were collected from the surface of a gravel parking lot. The 1984 site-form also indicates Fred Vidito and Raymond Nicholl reported finding artifacts in this area, but specific information about what kinds of artifacts, and what volume of material was collected was not recorded (Christianson 1984c). Lequille Hydro site is ~115 m west of the Vidito site. These two sites may in fact represent a single, large activity area that unfortunately has been extensively disturbed by road, bridge, and hydro-power plant developments in the area, as well as agricultural activities and over 400 years of mill operations near this location beginning with the construction of the first grist mill in North America, built by Poutrincourt in 1607 (*Figure 3.5.2*).

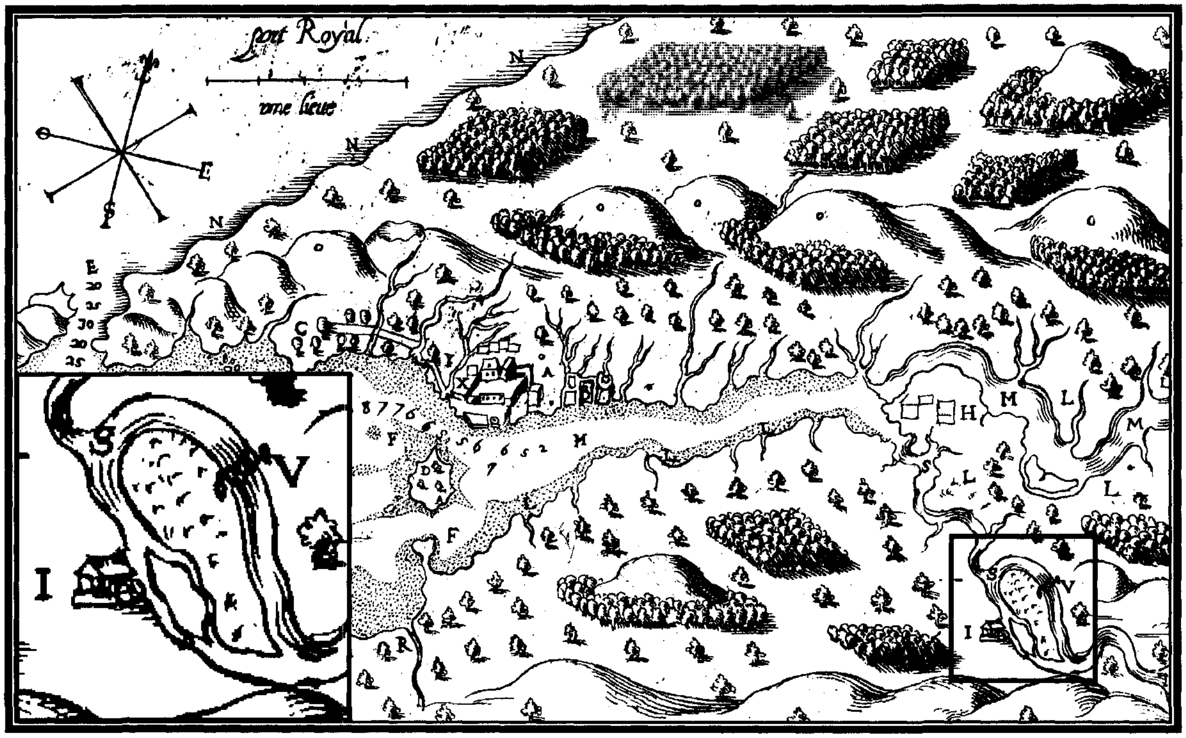


Figure 3.5.2: *Champlain's 1613 map of Port Royal* (A), *showing the Annapolis Basin* (F) *and River* (M), *and the lower portion of the Allains River (" S " – bottom right). At " V " on the lower Allains River (see inset), Champlain has identified what appears to be a weir in the main flow of the river, and has labelled this feature as "the place where the Mi'kmaq gather gaspereau in season". The fact the Dugway Bridge Weir (BeDi-15) was identified at this same location is strong indication that Champlain would have witnessed this very weir being used by the Mi'kmaq during the early seventeenth century. Also featured at this location is Poutrincourt's gristmill* (I), *which was built in 1607.*

3.5.1.4 – Dugway Bridge Weir Site (BeDi-15)

This site was recorded during the 2006 UMARC Survey. The Dugway Bridge Weir is located at the head-of-tide on the Allains River, ~ 50 m north of the Dugway Road bridge, near the village of Lequille (the name 'Dugway' has evolved from that of Pierre *du Gua*, Sieur de Monts). The site consists of a small, downstream oriented, shallow 'V'-shaped weir structure, constructed from large and small river cobbles. The arms of the feature are ~ 3 m (west side) and ~ 2 m (east side) in length, with a narrow spillway ~ 0.5 m wide. No shovel tests were placed at the site, and no artifacts were identified during surface inspections. The weir (*V*) appears to be illustrated in Champlain's 1613 map of Port Royal, and is labeled as *the place where the savages* (Mi'kmaq) *caught herring* (gaspereau) *in the season* (Biggar et al. 1971:plate LXVII) (see *Figure 3.5.2*).

Two unusual rock features were also noted in close proximity to the weir (B. Pentz 2007d). The first was a rough (~ 1.5 x 1.5 m) ring of medium to small river cobbles (see *Figure 4.5.5* below). The area inside the feature was cleared of stones and may have been associated with the weir as a pen for de-sliming or smoking eels (Labrador 2005), or possibly for holding/smoking gaspereau. A larger rectangular stone feature (~ 4 x 4 m), was identified with an interior cleared of larger stones. This appears to be a historic feature of undetermined age, and likely represents a rough foundation of one of the many mills that have been constructed along the lower Allains River over the past four centuries. Both stone features are very subtle. No artifacts were found in association with either feature, and no subsurface testing was conducted in the area.

3.5.2 – Grand Lake Study Region: (*Grand Lake Flowage Dams* to *Mouth of Baillie Brook* – 8.2 km)

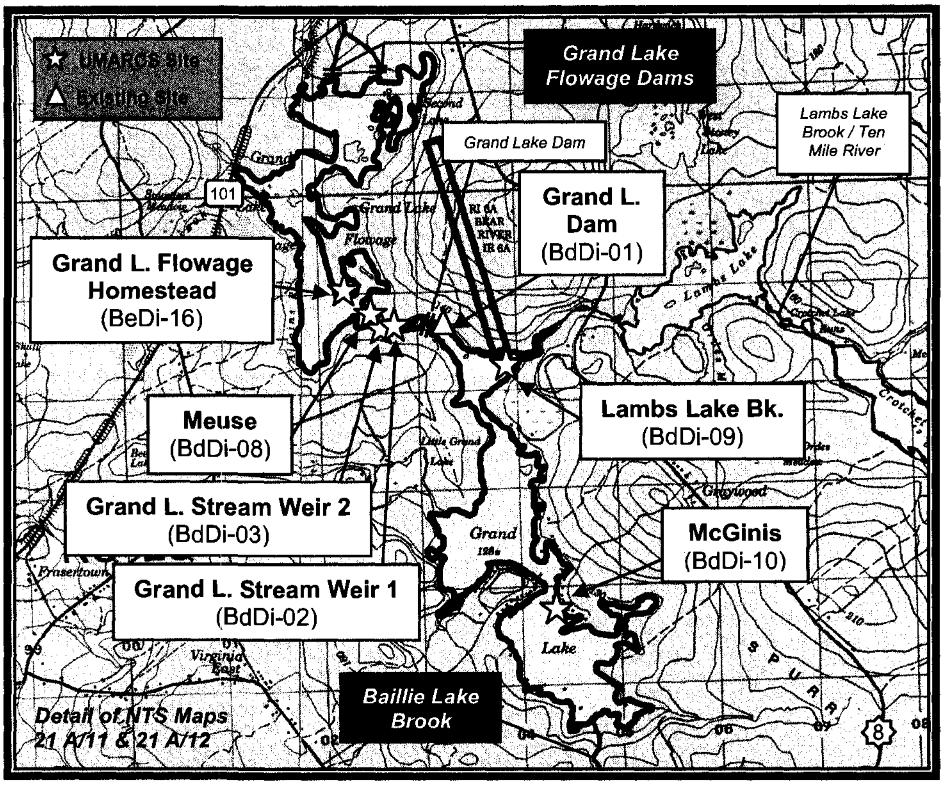


Figure 3.5.3: *Map of the Grand Lake Study Region (represented by bold black line) along the central lakes of the Allains River. The study region extends from the foot of the Grand Lake Flowage dams to the mouth of Baillie Lake Brook.*

The *Grand Lake Study Region* extends from the dams at the north end of Grand Lake Flowage to the mouth of Baillie Lake Brook at the south end of Grand Lake. Grand Lake Flowage and Grand Lake are connected by an unnamed portion of the Allains River, referred to during the course of this project as Grand Lake Stream.

Both lakes have been affected by hydro-development, which began in the 1960s. On Ambrose F. Church's 1876 map of Annapolis County, the area now covered by Grand Lake Flowage is represented as a narrow stillwater pond (*Figure 3.5.4*). Currently, two dams constructed in the 1960s divert the natural flow of water in Grand Lake Flowage away from the valley carved by the Allains River, and toward a canal that leads to the

Lequille Power Plant. A hydro-control dam at the north end of Grand Lake has raised the water table of what was a naturally large lake. This dam has flooded the original shoreline and the lower reaches of tributary streams that enter the lake, most notably Lambs Lake Brook/Ten Mile River.

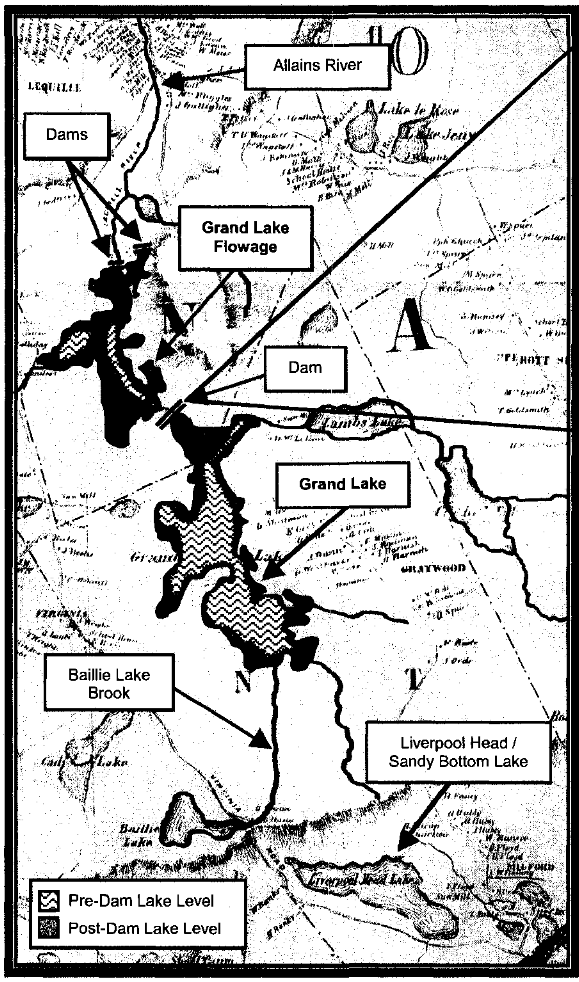


Figure 3.5.4: *At left, detail of A. F. Church's 1876 map of Annapolis County showing the extent to which hydro-dams have altered this portion of the UMARC landscape. The wavy areas represent the original bodies of water now flooded by dams (see dark areas) at the north ends of both Grand Lake and Grand Lake Flowage. Originally, the area now flooded by Grand Lake Flowage was a long narrow stillwater and a small adjacent lake. Today, the two dams at the north end of Grand Lake Flowage have created a body of water nearly equal in size to Grand Lake. The shores of Grand Lake have not been affected as dramatically by the construction of a retaining dam at its north end (photo above). However, the dam has engulfed the mouth of Ten Mile River / Lambs Lake Brook, which enters from the east. Note at the bottom of Church's map that Sandy Bottom Lake was originally called "Liverpool Head Lake" – a name now given to one of the Milford chain-lakes further downstream. Also, Springhill Mud Lake is absent from Church's map, although Baillie Lake and Brook are shown.*

A historic homestead site (Grand Lake Flowage Homestead - BeDi-16) was recorded in this study region on southeast shore of Grand Lake Flowage. The site was identified and briefly explored during the reconnaissance canoe trip. The site includes stonewalls and more than a dozen rock piles from clearing fieldstones. A 6 x 6 m stone foundation was also noted at the site, near an abandoned laneway. No archival information was collected for this site, but its size warranted designation as a site. No shovel-testing was conducted at the site, and no artifacts were identified or collected.

The following sections will describe of the sites identified within the *Grand Lake Study Region*.

3.5.2.1 – Grand Lake Dam Site (BdDi-01)

This site was originally recorded in 2003 (Lewis 2003). The Grand Lake Dam Site is located at the north end of Grand Lake, straddling the east and west banks of the lake outflow into Grand Lake Stream. A hydro-control dam has raised the water levels of Grand Lake and flooded the site.

The 2003 MARI site-form indicates that a short-channelled gouge, chert and quartzite biface fragments, cores, chert unifacial and utilized flakes, and a clay pipe stem were recovered from the west bank. The east bank produced two cores and three grit tempered pottery fragments. Flake debitage of quartz, tan quartzite, chert, dark-grey banded rhyolite, felsite, and sedimentary stone were also found on both the east and west sides of the Grand Lake Dam Site (Lewis 2003).

In 2006, Nova Scotia Power Inc. did not conduct a late season draw down of the Grand Lake Reservoir as planned. This prevented direct access to the flooded site area, which was originally identified in low water conditions (Lewis 2003). Instead, terraces back from the modern shoreline with moderate archaeological potential were briefly tested to identify any possible undisturbed, dry land components of the site. Ten shovel tests were placed on the east side of the river, ~ 95 m east of the dam control house, and four were placed on the west bank, ~ 55 m south of the dam on the west bank. All subsurface testing on both the east and west terraces, and all surface inspections of the shoreline and disturbed gravel access roads proved negative for cultural material.

Lewis reports on the 2003 site-form that local collectors have visited the site, and that original construction of the Nova Scotia Power Inc. control-dam may have obliterated a possible weir feature at the Grand Lake Dam site. Charles Hearn (2007) said he recovered a large pecked adze pre-form (now part of the Frank Meuse Jr. collection at the Bear River Cultural Centre), and a crudely pecked 'bird-stone' from the east side of the outflow (formerly part of the Todd Labrador (2007) private collection), which represents a continuous occupation by the *Mu Awsami Saqiwe'k* on both banks of the Grand Lake Dam Site since at least the Late Archaic Period (ca 5,000-3,500 BP).

3.5.2.2 – Grand Lake Stream Weir 1 Site (BdDi-02)

This site was recorded during the 2006 UMARC Survey. The Grand Lake Stream Weir 1 Site is located in the connecting stream between Grand Lake and Grand Lake Flowage, ~ 75 m downstream from the foot of a stillwater pond on Grand Lake Stream. The site consists of a downstream-oriented, shallow 'V'-shaped weir, constructed from medium sized river cobbles. The north arm of the weir is ~ 3.5 m, and the south arm of the weir is ~ 4.0 m. The gap at the apex of the structure is ~ 0.75 m wide and ~ 1.5 m long. The south arm of the weir has incorporated a large boulder as part of its construction (see *Figure 4.5.2a* below). The small size, and deteriorated appearance of this feature, and the fact the arms of this weir extend from one riverbank to the other – without a 'conservation gap', suggests this weir has a pre-Contact origin.

Doug Potter (2006) of Pits Lake, Annapolis County, suggested the potential of a weir in the area of Grand Lake Stream. The feature was not evident until low water conditions in the fall exposed the weir. No additional surface material was identified. No subsurface testing was conducted in the area.

3.5.2.3 – Grand Lake Stream Weir 2 Site (BdDi-03)

This site was recorded during the 2006 UMARC Survey. Grand Lake Stream Weir 2 Site is located in the connecting stream between Grand Lake and Grand Lake Flowage, ~ 175 m downstream from the foot of a stillwater pond on Grand Lake Stream. The site consists of a downstream-oriented, deep 'V'-shaped weir, constructed from medium sized river cobbles. The north arm of the weir is ~ 7 m, and the south arm of the weir is ~ 9.5 m. The gap at the apex of the structure is ~ 1.25 m wide and ~ 2.5 m long.

Grand Lake Stream Weir 2 is significant because it demonstrates the continued use, or at least a historic re-use of pre-Contact native weir technology. A milled plank (~5 x 20 x 175 cm) has been incorporated into the construction of the apex of the weir (see *Figure 4.5.2b*, and *4.5.6b*). Its placement perpendicular to the flow of the water would have likely served as a 'toe-board' for anchoring a fish trap. It is unclear if this is a pre-Contact weir, because of the inclusion of the milled plank, and the fairly intact nature of the stone guide arms, however, the weir does not feature any 'conservation gap' (see *Figure 4.5.6a*). The proximity of this weir to other pre-Contact sites, and the limited development of the area by settlers, suggests in either case that it origins are aboriginal.

Doug Potter (2006) of Pits Lake, Annapolis County, suggested the potential of a weir in the area of Grand Lake Stream. The feature was not evident until low water conditions exposed the weir. No additional surface material was identified. No subsurface testing was conducted in the area.

3.5.2.4 – Meuse Site (BdDi-08)

This site was recorded during the 2006 UMARC Survey. The Meuse Site is located at the south end of Grand Lake Flowage, along the northeast shore, ~ 250 m northwest of where Grand Lake Stream enters the flowage. Raised water levels from the dams on Grand Lake Flowage have flooded most of the site. Examination of the site area in 2006 was restricted to 1-2 m of exposed shoreline along Grand Lake Flowage. No shovel tests were placed at the site.

Chief Frank Meuse Jr., from Bear River First Nation, originally identified the site when he collected two chert scrapers from the surface of the lakeshore during low water conditions. A flat, tin eighteenth- to mid-nineteenth century jacket button (see *Figure 4.3.7a*) was identified near the same area when I visited the site with Chief Meuse in the fall. The Meuse Site may have been a campsite or task-site associated with the weirs on Grand Lake Stream (BdDi-02; BdDi-03), located ~ 250-350 m upstream.

3.5.2.5 – Lambs Lake Brook Site (BdDi-09)

This site was recorded during the 2006 UMARC Survey. Lambs Lake Brook Site is located near the original mouth of Lambs Lake Brook/Ten Mile River on an east-west trending sand and gravel bar. The raised waters of the Grand Lake Reservoir now flood this area. High water levels prevented direct visitation of the site during the 2006 field season. No shovel tests were placed near the site.

Artifacts from this site are currently held in two private collections. Chief Frank Meuse Jr. from Bear River First Nation has a shallow, full-channeled gouge (*Figure 4.4.6a*), a celt, a large mottled chert corner notched biface (*Figure 4.4.4f*), and a large red chert retouched biface fragment. These artifacts are on display at the Bear River Cultural Centre. Doug Potter from Pits Lake has a shallow, short-channeled gouge from the site (*Figure 4.4.6c*), made from a weathered, light tan coloured meta-sedimentary material.

The fact that artifacts from two separate private collections have now been linked to a specific site location is very important for accurately interpreting the significance of this site, and the culture-history of the area. By recognizing that these artifacts are part of the same assemblage, it is possible to piece together a more accurate and complete cultural history of the site. The gouges represent a *Mu Awsami Saqiwe'k*/Middle-Late Archaic (ca 7,000-3,500 BP) component at this site, and the corner notched chert biface indicates a *Kejikawek L'nuk*/Middle Ceramic Period (ca 2,000-1,000 BP) occupation. The Lambs Lake Brook Site is therefore the oldest and longest occupied site identified during the 2006 UMARC Survey. These diagnostic artifacts serve as evidence that the Mi'kmaq and their ancestors repeatedly inhabited the Lambs Lake Brook Site between 7,000-1,000 years ago.

3.5.2.6 – McGinis Site (BdDi-10)

This site was recorded during the 2006 UMARC Survey. The McGinis Site is located on a sandy beach area in front of Jim McGinis's cabin, between the mainland and a small island on the eastern shore of Grand Lake. The hydro control dam at the north end of Grand Lake usually floods the site area.

Between 1986-87, Mr. McGinis (2007) found a complete, pink-tan side-notched quartzite point, which is the only known artifact from this site but unfortunately he was unable to locate the point, although it is still believed to be in his possession. McGinis's description of the point suggests it is from the Late Ceramic Period (ca 1,000-450 BP). Access to the site was not possible during the UMARC survey, because high water levels on Grand Lake were maintained throughout the 2006 field season. No shovel tests were placed near the site.

<u>3.5.3 – Height-of-Land Study Region</u>: (*Mouth of Baillie Lake Brook* to *Lily Lake* – 11.6 km)

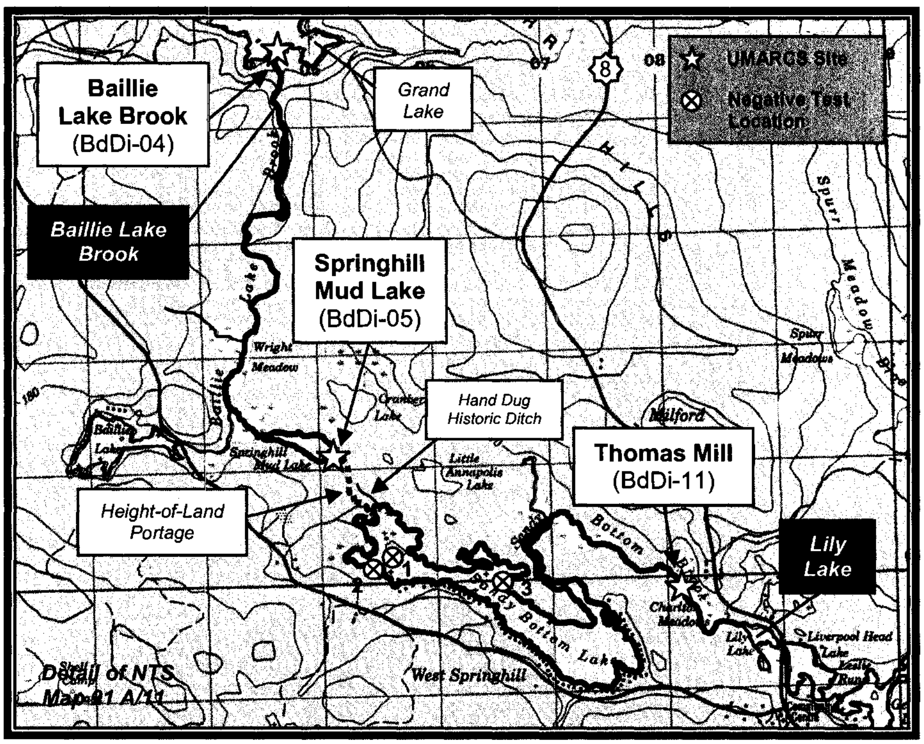


Figure 3.5.5: *Map of the <u>Height-of-Land Study Region</u> (represented by bold black line) straddling the headwaters of the Allains River and the Mersey River. The study region extends from the mouth of Baillie Lake Brook to the head of Lily Lake.*

The *Height-of-Land Study Region* extends from the mouth of Baillie Lake Brook at the south end of Grand Lake, up-stream to Springhill Mud Lake, across the drainage divide from the headwaters of Allains River and into the Mersey River, at Sandy Bottom Lake. From Sandy Bottom Lake, the study area extends downstream along Sandy Bottom Brook, through Charlton Meadows, to the head of Lily Lake.

Baillie Brook is a small stream, with fast, un-navigable waters in the north, and stillwater bog and meadow wetland further upstream. From the east end of Springhill Mud Lake it is necessary to portage over the height-of-land between the Allains and Mersey drainages (*Figure 3.5.5*). The terrain between Springhill Mud Lake and Sandy Bottom Lake is rough with boulders, and is poorly drained in many areas. However, very little elevation, and only 600 m separate these two bodies of water. In fact, local history describes a ditch dug up to 1 m deep, by hand in the nineteenth century to carry water from Sandy Bottom Lake into Springhill Mud Lake, in order to increase water-levels for log drives and mills on the Allains River (*Figure 3.5.6*) (Bell et al. 2005:14).

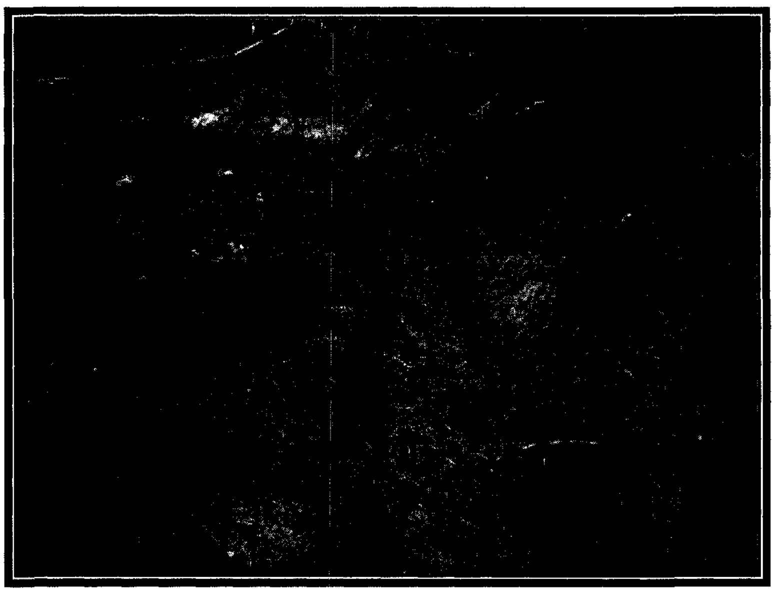


Figure 3.5.6: *Photo of hand-dug ditch heading north from the headwaters of the Mersey River at Sandy Bottom Lake, across the height-of-land toward Springhill Mud Lake and the Allains River drainage in order to provide more water for log drives and the saw mills in Lequille. This trench is nearly 1 m deep in some places, but did not connect the two lakes. Instead, it simply provided a channel for water to flow overland and seep into the Allains River water table. Photo: B. Pentz.*

Historically referred to as Liverpool Head Lake (see *Figure 3.5.5* above), Sandy Bottom Lake is long and narrow, and empties into the stillwaters and meadows of Sandy Bottom Brook. Unlike the Baillie Brook portion of the *Height-of-Land Study Region*, which is generally undeveloped, except for some recent timber clearing along the south side of Springhill Mud Lake, and the remains of an impressive stone dam at the foot of Wright Meadow, Sandy Bottom Lake features cottages and permanent homes all along its south and western shores. The development around Sandy Bottom Lake represented a significant limiting factor in surveying this area, especially since three cottages currently occupy the likely end point for the portage between Springhill Mud Lake and Sandy Bottom Lake, and permission to test a possible undisturbed area between them was not granted. Instead, three secondary test locations were investigated around the north half of Sandy Bottom Lake. Test Location (TL) 1 featured sixteen shovel-tests in a 25 x 8 m area, TL 2 featured eight shovel-tests in a 3 x 10 m area, and at TL 3 twenty-three tests were placed in a 20 x 7 m area. Testing at all three locations on Sandy Bottom Lake proved negative for cultural remains (see *Figure 3.5.5*) (B. Pentz 2007a).

A historic mill site (Thomas Mill - BdDi-11) was also identified in this study region at the head of Charlton Meadows, on Sandy Bottom Brook (*Figure 3.5.7*). The site features a substantial granite boulder foundation at the foot of a small rapid, and likely represents the site of the Thomas Brothers water-wheel sawmill, built ca. 1825 (Bell et al. 2005:10-12). Immediately up-stream of the mill site, stones appear to have been placed to create pools for maintaining water levels. Large stone barriers further up-stream, closer to Sandy Bottom Lake, may also be associated with the operation of this mill.

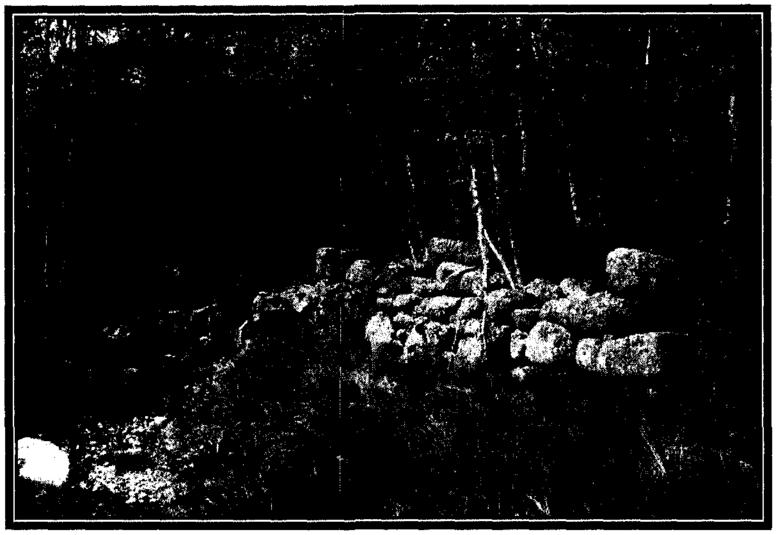


Figure 3.5.7: *Photo of the rugged granite foundation of the Thomas Brothers Mill (BdDi-11) built on Sandy Bottom Brook (visible at left), at the head of Charlton Meadows, in the Height-of-Land Study Region of the upper Mersey River. Joseph and Alexander Wesley Thomas built this mill ca. 1825, which produced lumber for export, ship building, and provided the materials used to build many of the first houses in the Milford area (Bell et al. 2005:11-12). Photo: B. Pentz.*

Below is a description of the pre-Contact sites identified within the *Height-of-Land Study Region.*

3.5.3.1 – Baillie Lake Brook Site (BdDi-04)

This site was recorded during the 2006 UMARC Survey. The Baillie Lake Brook Site is located on a bench terrace ~ 10 m from the present shoreline of Grand Lake. The site is ~ 85 m northeast of the mouth of Baillie Lake Brook, and is located at the foot of a portage trail that parallels the east side of the brook.

Twenty-four shovel tests were placed at this site in roughly a 14 x 10 m area, with only three positive tests. Two quartz flakes (1 retouched), and a potato-sized piece of very fine red siltstone, were found in a 1 x 2 m area of the site.

During the UMARC reconnaissance trip, the Baillie Lake Brook area was identified as a high potential location because of the well drained, and flat nature of the terrace, its close proximity to Grand Lake, and the fresh running water of Baillie Lake Brook. The site also featured evidence of modern camping including rough benches around a stone ringed hearth. Additionally, the presence of pre-Contact material found in direct association with a trail leading up Baillie Brook toward the headwaters of the Allains River suggests this trail has a long history as a portage route, and supports the use of the UMARC as a Mi'kmaw travel corridor.

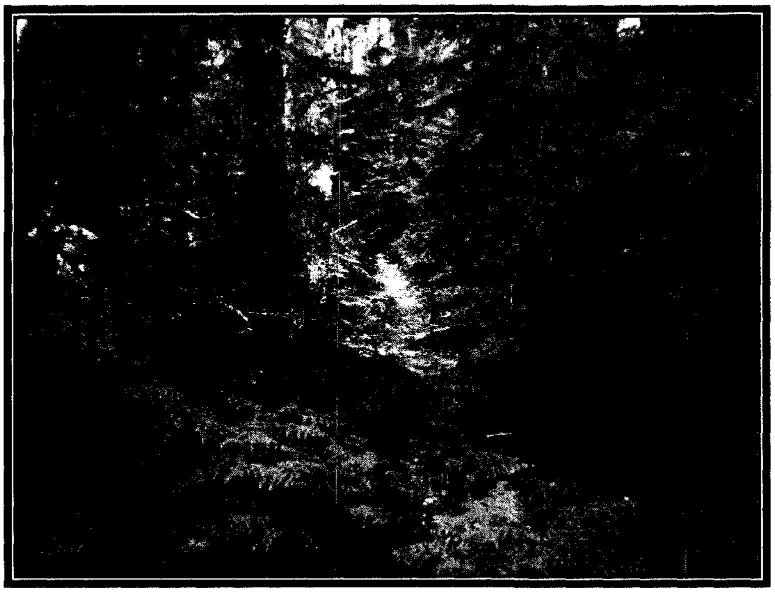


Figure 3.5.8: *View of the portage trail which heads up Baillie Lake Brook from a modern campsite at the south end of Grand Lake where the Baillie Lake Brook site (BdDi-04) was discovered. The direct association of this portage trail with pre-Contact quartz flakes suggests the route of this portage trail has a long history, and supports the use of the Allains and upper Mersey River as an ancient travel corridor and canoe route. Photo: B. Pentz.*

3.5.3.2 – Springhill Mud Lake Site (BdDi-05)

This site was recorded during the 2006 UMARC Survey. The Springhill Mud Lake Site is located on a finger of granite bedrock that extends into the east end of Springhill Mud Lake. The upper-most spine of this granite finger is covered with glacial till deposit. The feature is generally flat and well drained, with well-defined slopes to the northeast and southwest. Twenty shovel tests were placed in a 28 x 6 m area along the top of this feature. Four shovel tests proved positive. The site consists of a thin lithic scatter of quartz, tan-gray quartzite, cream coloured weathered/dehydrated chert, and small tan quartzite cobble hammerstone with minor use-wear (see *Figure 4.4.8*).

The proximity of the Springhill Mud Lake Site to the drainage divide between the Allains and Mersey watersheds suggests that it may have served as a temporary campsite for travelers moving along this interior canoe route. The finger of land on which the site is located is the only area on Springhill Mud Lake with relatively level terrain that is reasonably free of granite boulders for setting up a camp. It also features moderately well drained soils, and an easy canoe landing. As such, it is a logical rest-stop area, and served as one of our campsites during the 2006 UMARC Survey reconnaissance canoe trip.

The site is only 600 m from Sandy Bottom Lake, and it is likely that early Mi'kmaq travelers from the Bay of Fundy and the Allains River system would have begun their portage into the Mersey River drainage from this site. Recently, a group of canoeists have reestablished a portage route between Springhill Mud Lake and Sandy Bottom Lake that begins only 100 m from the site, providing independent validation of the logical placement of BdDi-05 as a portage camp for traveling between the Allains and Mersey Rivers.

3.5.4 – Milford Lakes Study Region: (*Lily Lake* to *Big River Runs* – 15.2 km)

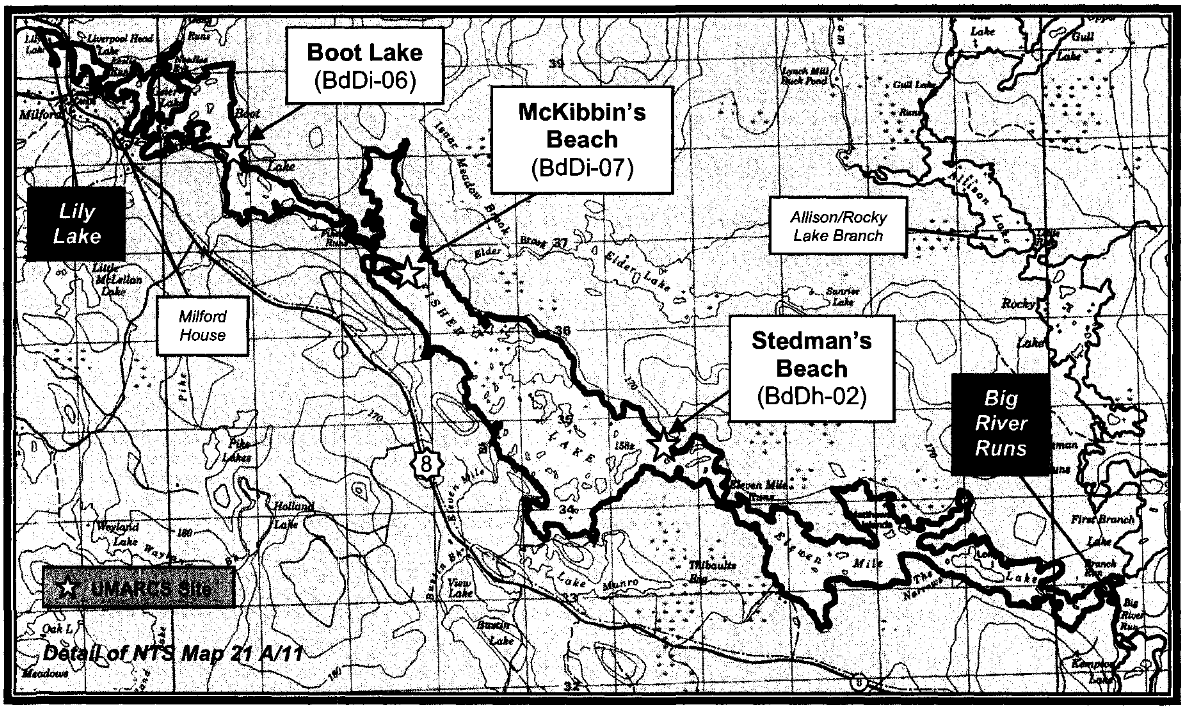


Figure 3.5.9: *Map of the* *Milford Lakes Study Region* *(represented by bold black line) extending from the head of Lily Lake to the head of Big River Runs, at the confluence of the Milford chain-of-lakes and the Allison/Rocky Lake branch of the upper Mersey River.*

The *Milford Lakes Study Region* extends southeast from the head of Lily Lake, through what is now known as Liverpool Head Lake (name formerly given to Sandy Bottom Lake, see *Figure 3.5.4*), Boot Lake, Fisher Lake, and Eleven Mile Lake to the head of Big River Runs. A second northern branch of the Mersey River meets the main river at Big River Runs, from First Branch Lake, Rocky Lake and Allison Lake. This branch of the Mersey was excluded from this study because it was not part of the travel route between Annapolis Royal and Liverpool. The Milford Lakes portion of the UMARC follows a very gentle slope and is easily travelled by canoe. The narrow runs that connect the lakes are navigable, or represent only brief portages or wading during low water. This area is historically referred to as the Liverpool Chain of Lakes.

For its size, the *Milford Lakes Study Region* is relatively undeveloped, with most of the settlement concentrated around South Milford in the north, and scattered cottages along the southwest shore of Fisher Lake and Eleven Mile Lake. Highway No. 8 crosses the Mersey drainage between Lily Lake and Liverpool Head Lake, and parallels the southwest shore of the Milford Lakes. Bowater Mersey Paper Company Ltd. owns private timberland along most of the northeast shore of the Milford Lakes. All of this area has been cut at least once in the past, as is testified by historic postcards from the Milford House Wilderness Resort (ca. 1908) which show clear-cutting along the northeast side of Boot Lake (see *Figure 3.5.10*). Local resident Dan Rowter (2006) indicated his relatives operated numerous portable mills throughout this area in the early twentieth century, and during the canoe reconnaissance trip, the rusted boiler of the portable steam-powered sawmill pictured below was found at "Big Sandy" Beach on Boot Lake.

The Milford House Wilderness Resort, located at the north end of Boot Lake began accommodating travellers, merchants, and messengers moving between Annapolis Royal and Liverpool in the 1860s and 1870s (Bell et al. 2005:63-65; Parker 1990:20). By the turn of the century, the Milford House was providing the services of Mi'kmaq and non-native hunting and fishing guides to take guests into the backcountry, which included all of the upper Mersey, from the Milford Lakes (as well as the Allison/Rocky Lake Branch) through to Kejimkujik Lake and Lake Rossignol (Bell et al. 2005:65-77; Paine 1967 [1908]; Parker 1990:20-22; 1995:46-55).

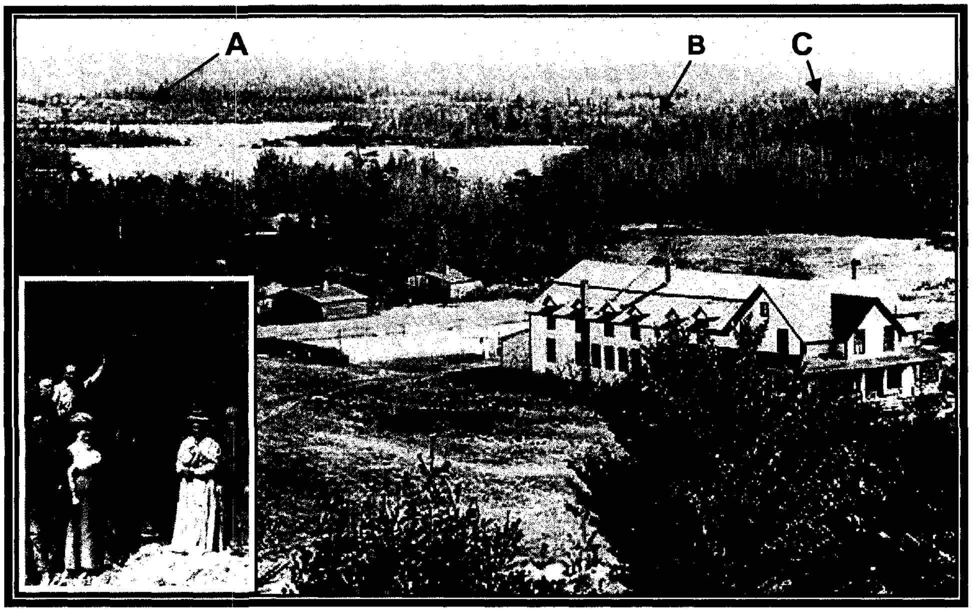


Figure 3.5.10: Milford House Wilderness Resort post card (ca. 1908), showing the Milford House and guest cabins in foreground, and Boot Lake in the distance. The far (west) shore of Boot Lake (A) shows evidence of recent clear-cutting. Both "Big Sandy" beach (B), where the portable sawmill boiler pictured here was found still at the beach, and the Boot Lake site (C) are obscured by treed ridge in the middle-distance. Sources: post card – Nova Scotia Museum 1908; inset – Bell et al. 2005:89.

3.5.4.1 – Boot Lake Site (BdDi-06)

This site was recorded during the 2006 UMARC Survey. The Boot Lake Site is located at the tip of a small point on the eastern shore of Boot Lake, southwest of what is locally called "Big Sandy" Beach. The site sits on a low knoll at the end of the point, with moderately well drained soils, and a gentle north trending slope. A total of 127 shovel tests were placed at three areas around "Big Sandy" (B. Pentz 2007c). Forty-five shovel tests were placed at *Area A*, on stepped terraces north of the beach, and twenty-three tests were concentrated in *Area B*, around the picnic site behind the beach. Both test areas proved negative for pre-Contact cultural remains. Fifty-nine shovel tests were placed southwest of "Big Sandy" Beach, at the tip of a small point in the next cove (*Area C*). A small, quartz lithic scatter was recovered from five positive shovel tests in a 2 x 2 m area.

Unfortunately, the mere twenty-eight quartz flakes recovered from this site poorly reflect the considerable efforts of five days of field-testing spent investigating three high potential areas around "Big Sandy". However, the white sand beach, with a flat western exposure, and the presence of a small cold-water creek at "Big Sandy" make this area an attractive campsite, as is supported by the numerous accounts from the Milford House resort (see *Figure 5.4.1*) (Bell et al. 2005; Parker 1990, 1995). In fact, "Big Sandy" was where Graham Lantz and I made camp at the end of our third day during the reconnaissance canoe trip.

3.5.4.2 – McKibbin's Beach Site (BdDi-07)

This site was recorded during the 2006 UMARC Survey. The McKibbin's Beach site stands out on the landscape as an area of high archaeological potential. The site is located at the south end of a prominent point that extends well into the north end of Fisher Lake. The white sand beach is sheltered by a small cove, and McKibbin's Beach provides an excellent view of the north end of Fisher Lake (see *Figure 5.2.1*). The site area consists of a series of gently stepped raised beaches now overgrown with white pine, red oak, and huckleberry. The area is well drained and slopes gently to the southeast. This was the largest site identified during the UMARC Survey with an area of ~ 30 x 8 m, and it produced the second largest assemblage of artifacts (302). More in-situ material likely remains further inland and west of the tested area. A total of 36 shovel tests were placed at the McKibbin's Beach Site, with thirteen proving positive for cultural material. Two positive 1 x 1m evaluative units were also excavated.

The site consists of quartz, chert, and quartzite flake scatters; as well as scrapers, utilized flakes, the base of a side-notched pink-quartzite point, and the butt-end of a pecked-stone tool fragment. No pottery was recovered from this site; however, the presence of a diagnostic side-notched point base (*Figure 4.4.5a*) indicates the location was occupied during the Late Ceramic Period (ca 1,000-450 BP). It is likely that further investigation of this site would result in ceramic material, as well as older artifacts, particularly on some of the higher beach terraces back from the water. A pecked-stone tool fragment, possibly the butt end of an adze, was recovered from ~ 20 cm DBS in Evaluative Unit 2, and is probably datable to the late Ceramic Period (ca 1,000-500 BP) artifacts also found at this depth.

Soil samples collected from both evaluative units produced charred acorns. Although no hearth features were identified at the site, the association of the acorns with a cultural deposit is suggestive evidence that they were burnt as a result of human activity, rather than a forest fire (Deal 2002:323-324; Keepax 1977:226; Minnis 1981:147; Nash et al. 1991:218).

3.5.4.3 – Stedman's Beach Site (BdDh-02)

This site was recorded during the 2006 UMARC Survey. The Stedman's Beach Site is located on the lower northeast shore of Fisher Lake, at the base of Stedman's Point, behind a small white sand beach. The terrain behind the beach is generally uneven, and moderately well drained, except for some low areas. To the east rises a high north-south trending terrace overlooking the beach, and the whole area sits under a mature stand of Eastern hemlock, white pine, red maple, and red oak. The sheltered beach provides a gentle landing area for canoes, and the western exposure allows for long sunlight hours into the evening. This attractive location resembles a smaller version of “Big Sandy” Beach on Boot Lake further to the north, and served as our lunch stop on Day 4 of the 2006 UMARC Survey reconnaissance trip.

Thirty-two shovel tests were placed behind the beach, and eight more were placed on the edge of the high terrace overlooking the beach. All eight tests on the terrace were negative, while 13 of the tests placed behind the beach proved positive for cultural material. Two positive 1 x 1 m evaluative units were also excavated at the beach.

The site consists of quartz, quartzite, and chert debitage, and "cord-wrapped stick" decorated pottery sherds (ca Ceramic Periods 4-6: 1,350-400 BP; see *Figure 4.3.1*) (Petersen and Sanger 1991). A dense quartz lithic scatter, including an abandoned biface, and several biface fragments were uncovered in Evaluative Unit 1, at the base of a granite “sitting rock”. Evidence of continued Historic Period use of the site was established when an eighteenth- to early nineteenth-century British clay pipe-bowl fragment was found in the humus layer of Evaluative Unit 2 (*Figure 4.3.7b*). A flattened inside-out roll of birch bark was also found at the same level in Evaluative Unit 2 (*Figure 2.2.1*). Closer examination of the delicate birch bark under laboratory conditions did not reveal any stitching or decoration on the barks surface. However, the absence of birch trees at the site would suggests this is a cultural ecofact, possibly an expedient moose call (see *Chapter 4.2.2: Organics – Birch Bark*).

3.5.5 – Upper Mersey River Study Region: (*Big River Runs* to *Maitland Bridge* – 14.0 km)

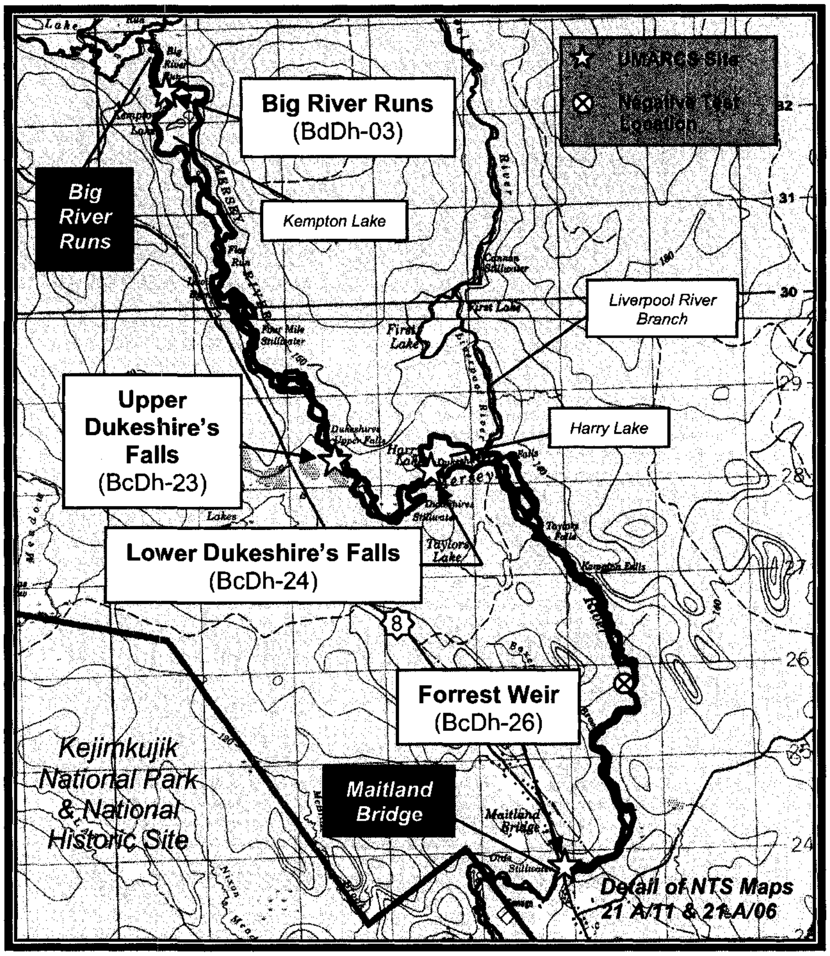


Figure 3.5.11: *Map of the Upper Mersey River Study Region (represented by bold black line) extending from the head of Big River Runs to the Highway No. 8 crossing at Maitland Bridge.*

The *Upper Mersey River Study Region* extends south from Big River Runs, through Kempton Lake, and a series of quick runs and stillwater pools, leading into Harry Lake. At Harry Lake, the Liverpool River (historically this was the name for the whole Mersey River) branch of the upper Mersey merges with the main river. Below Harry Lake, the Mersey continues through another succession of rapids and stillwaters. The *Upper Mersey River Study Region* terminates where Highway No. 8 crosses the Mersey at Maitland Bridge.

The *Upper Mersey Study Region* is the least developed and most remote part of the UMARC. Only a few private roads along Highway No. 8 provide access anywhere near this portion of the river, which prevented the opportunity to return to many of the areas of high potential noted along this stretch of the route during the reconnaissance canoe trip. Modern and historic forestry activities have taken place near Big River Runs and Kempton Lake, but only a handful other developments were noted throughout this study region, including the Mersey River Chalets at Harry Lake, a few other cabins, a gravel pit, and the transmission lines which cross the river near Maitland Bridge.

One area of testing in the *Upper Mersey River Study Region* at Lambs Falls proved negative for cultural material. Six subsurface tests were placed on a prominent bluff on the west side of the river. This feature was located in an existing forestry cut-block that was littered with thick slash, which made testing the feature difficult. All shovel tests proved negative for cultural material, as did the visual surface inspections of the gravel access road, and graded turning area near the river.

Below is a description of the sites identified within the *Upper Mersey River Study Region*.

3.5.5.1 – Big River Runs Site (BdDh-03)

This site was recorded during the 2006 UMARC Survey. The site is located on a terrace along the east side of the Mersey River, where Big River Runs flows into Kempton Lake. The elevated terrace is well drained and relatively flat, with a well-defined southeast slope, and gently stepped southwest slope. The modern portage trail around Big River Runs passes between the site and the river. The proximity of the trail to the site suggests the Mi'kmaq and their ancestors also would have used this portage.

At the head of Big River Runs two branches of the Mersey drainage come together (Milford Lakes branch, Allison/Rocky Lake branch), making the site strategically located for accessing a large geographic area, both upstream to the north and northwest along these upper branches of the Mersey, and down river to the southeast toward Kejimkujik Lake (see *Figure 3.5.11*).

Twenty shovel tests were placed in a 10 x 20 m area, with ten tests producing positive results. Three 0.5 x 1 m evaluative units were excavated as a trench across the site with positive results. The Big River Runs Site featured the most diverse and largest (365) collection of artifacts recovered during the 2006 UMARC Survey. Most notable was the recovery of 131 *Kejikawek L'nuk*/Middle-Late Ceramic Period (ca 2,000-450 BP) pottery fragments, several of which can be mended (see *Figures 4.3.2-5*). The decorative styles of the pottery are dominated by cord-wrapped stick motifs (CP 4-5, ca.1,350-400 BP), and Big River Runs produced the only fragments of dentate decorated pottery found in the field during the survey (CP 3, ca.1,650-1,350 BP). A mixed lithic assemblage of quartz, chert, quartzite, and banded gray rhyolite is represented at the site. Artifacts include a fragmented rhyolite biface (*Figure 4.4.3*), a rhyolite biface tip, five scrapers, a quartz unifacial tool fragment, and several retouched and utilized flakes.

3.5.5.2 – Upper Dukeshire's Falls Site (BcDh-23)

This site was recorded during the 2006 UMARC Survey. The Upper Dukeshire's Falls site is located on the west shore of the upper Mersey River, at the edge of a stillwater pond below the falls. During the UMARC reconnaissance canoe trip Graham Lantz found three quartz thinning-flakes eroding out of the bank at the foot of a portage trail around Dukeshire's Upper Falls. No shovel testing was conducted at the site. The association of this site with a modern portage trail around Dukeshire's Upper Falls supports the use of the UMARC as a travel corridor.

3.5.5.3 – Lower Dukeshire's Falls Site (BcDh-24)

This site was identified during the 2006 UMARC Survey. The Lower Dukeshire's Falls site is located downstream of the falls, along the northwest shore, at the head of Harry Lake. This flood plain area is moderately drained, with a gentle northeast slope, and features a stand of Eastern hemlock and red maple. The site lies within a modern portage trail right-of-way that parallels the rapids and connects Dukeshire's Stillwater with Harry Lake (see *Figure 3.5.12*). Fifteen subsurface tests were placed in an 11 x 8 m area at the foot of this trail, with thirteen proving positive for cultural material.

The site consists of a large quartz lithic scatter, dominated by flake fragments, cores and reduction fragments, some of which appear to be heat-treated. Lithic artifacts include a weathered pale-purple chert biface tip retouched into a scraper, and a felsite adze preform (*Figure 4.4.7a*). Local collector and woodsman Charles Hearn originally identified the site when he found several quartz flakes at the base of a good "sitting-rock" at the site (Hearn 2006). The two pieces of quartz reduction fragments (shatter) recovered from shovel-test #8 are likely from the base of the same rock (B. Pentz 2007e).

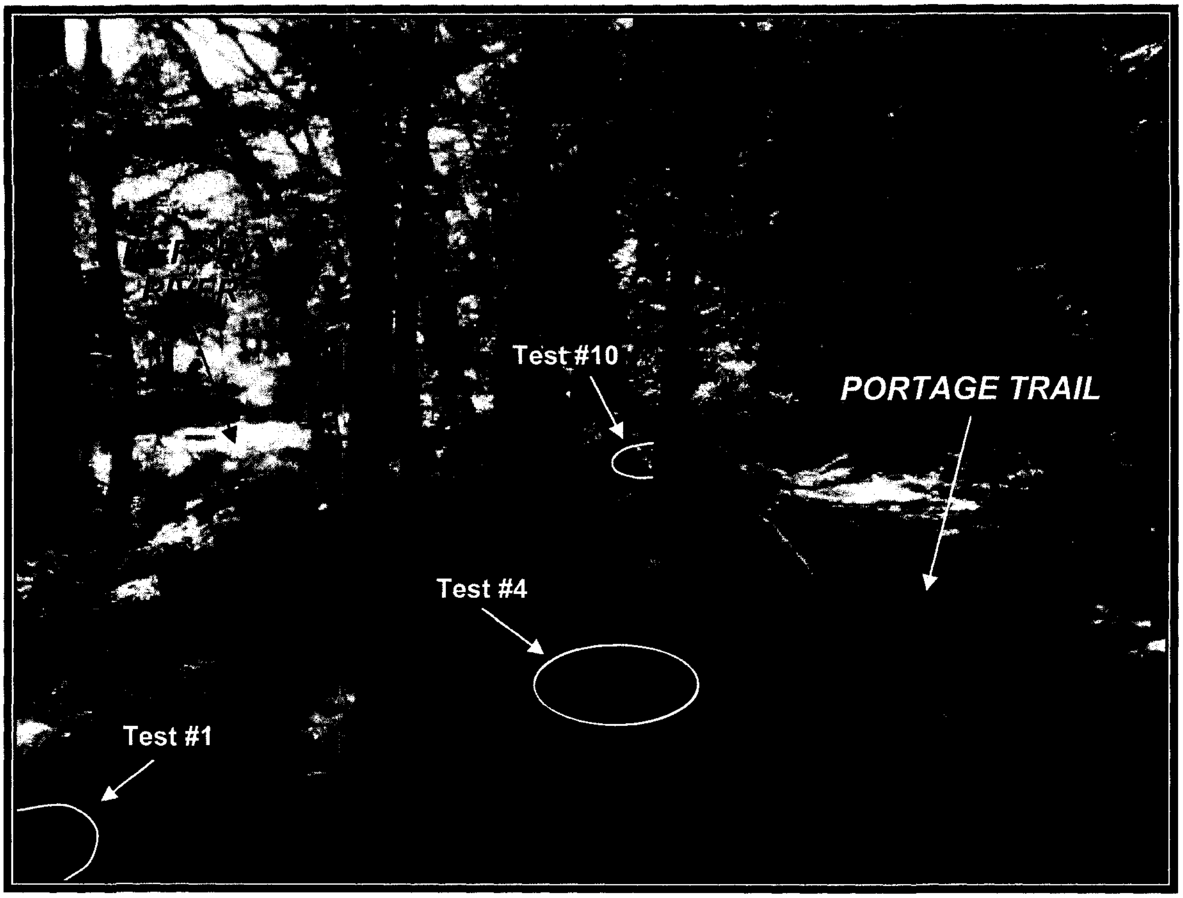


Figure 3.5.12: *Upstream view of the Lower Dukeshire's Falls site (BcDh-24). In the foreground and at right is the modern portage trail around the falls (background at left). Quartz flakes and a felsite adze pre-form recovered from positive shovel-tests within the trail right-of-way suggest the trail has a very long history. Photo: B. Pentz.*

Creamware sherds, clear bottle glass, a brass fishing spinner-blade, and monofilament fishing line were also uncovered, indicating a recent historic component at Lower Dukeshire's Falls. Charcoal was noted at shallow depths in some of the shovel tests at the foot of the trail. The presence of fishing tackle and bottle glass also found at shallow depths suggests the charcoal is from a modern hearth; however pre-Contact hearths may also be present.

The direct association of stone artifacts with a modern portage trail suggests this path is in fact an ancient feature that continues to be used in the modern period, and serves as important evidence of the UMARC as a traditional Mi'kmaq travel route.

A brief surface inspection was conducted on the south side of the river opposite the site, where the Mersey River Chalets have set up tipi platforms. Despite being a high potential area, no cultural material was identified during this visual inspection, and no archaeological material has been reported from this area. No subsurface testing was conducted on the south side of the river. However, a possible stone weir feature was noted at the foot of the falls into Harry Lake (*Figure 3.5.13*).

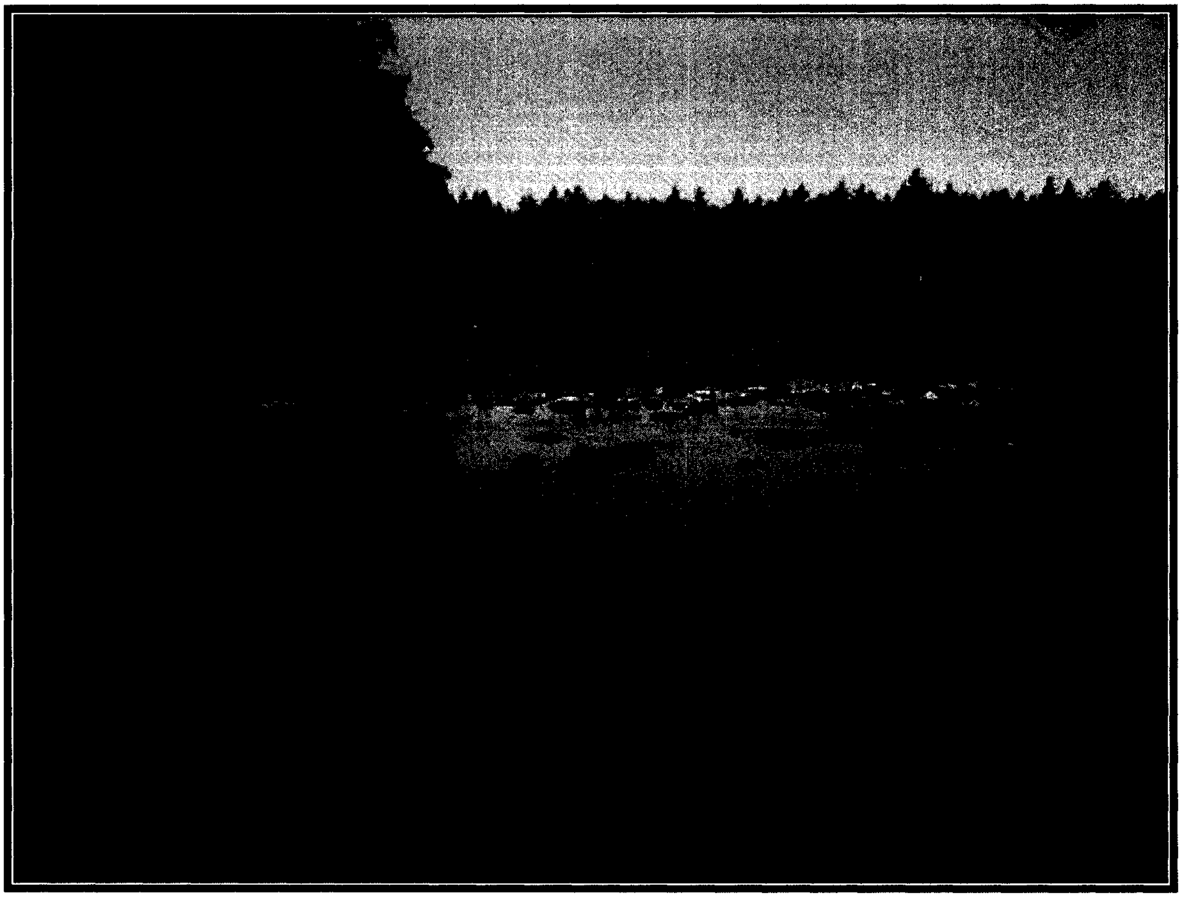


Figure 3.5.13: *Possible stone weir at the foot of Lower Dukeshire's Falls, where they enter Harry Lake. Barely visible at far left is the foot of the portage trail around the falls where the Lower Dukeshire's Falls site (BcDh-24) was identified. Photo: B. Pentz.*

3.5.5.4 – Forrest Weir Site (BcDh-26)

This site was recorded during the 2006 UMARC Survey. The Forrest Weir site is located in the Mersey River, ~110 m upstream from where Highway No. 8 crosses the Mersey at Maitland Bridge (see *Figure 3.3.3* and *4.5.6a*). The weir is situated in the middle of the river, below a ledge rapid and above two braided islands. The weir is a historic, downstream 'V'-shaped weir, made from a singular alignment of large river cobbles. From the apex of the weir, the south arm is ~ 22 m long, and the north arm is ~ 15 m.

Local resident Dan Rowter indicated that Willis Forrest owned the weir just above Maitland Bridge, which was maintained and operated by Roderick Ford (Rowter 2006). He also indicated that a relative of his, William Rowter, had a lumber mill at that location at the turn of the twentieth-century, on the south bank of the river 30-60m inland from the weir. The remains of William Rowter's mill and a stone wall, possibly part of a retaining dam, were also noted in this area.

No pre-Contact material was recovered at the weir, nor is there direct evidence of pre-Contact use of this location as a fishing site. Any earlier weir features that may have existed at this location probably would have been destroyed by the construction of the mill infrastructure, or the existing weir. However, the presence of a historic weir at Maitland Bridge demonstrates this point on the river is suitable for weir fishing and therefore it may have functioned as such during the Pre-Contact Period. Although no evidence of a pre-Contact occupation has been identified, the potential for a future discovery should not be dismissed, particularly with the site's close proximity to the former Fairy Lake Reserve, which is now part of KNP/NHS. Subsurface testing at this site along the north and south riverbanks, and on the braided islands may yet result in the identification of a pre-Contact component at the Forrest Weir site.

3.5.6 – Park Study Region: (*Maitland Bridge* to *Jakes Landing* – 11.1 km)

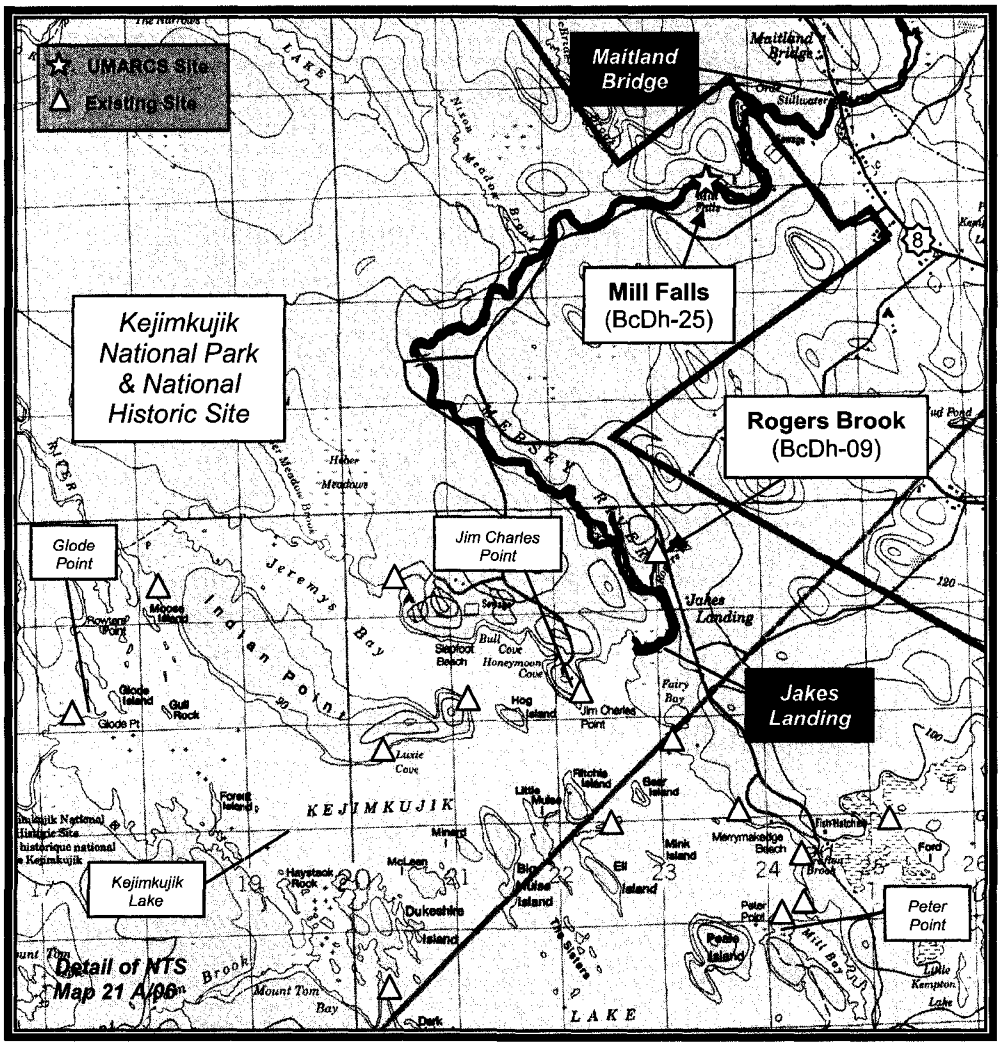


Figure 3.5.14: *Map of the Park Study Region (represented by bold black line) extending from the Highway No. 8 crossing at Maitland Bridge to Jakes Landing at the head of Kejimkujik Lake.*

For simplicity of description, the *Park Study Region* begins from Maitland Bridge, despite the bridge being roughly 1 km upstream of the KNP/NHS boundary. Below

Maitland Bridge, the Mersey River moves slowly through Orde Stillwater, but quickens in pace as it approaches the rapids at Mill Falls and further downstream at Oak Ledges. Below Oak Ledges, the river passes through a few short runs, but is generally a gently flowing stillwater, especially at the lower end around Roger's Brook and Jakes Landing, where the upper Mersey River enters Kejimkujik Lake.

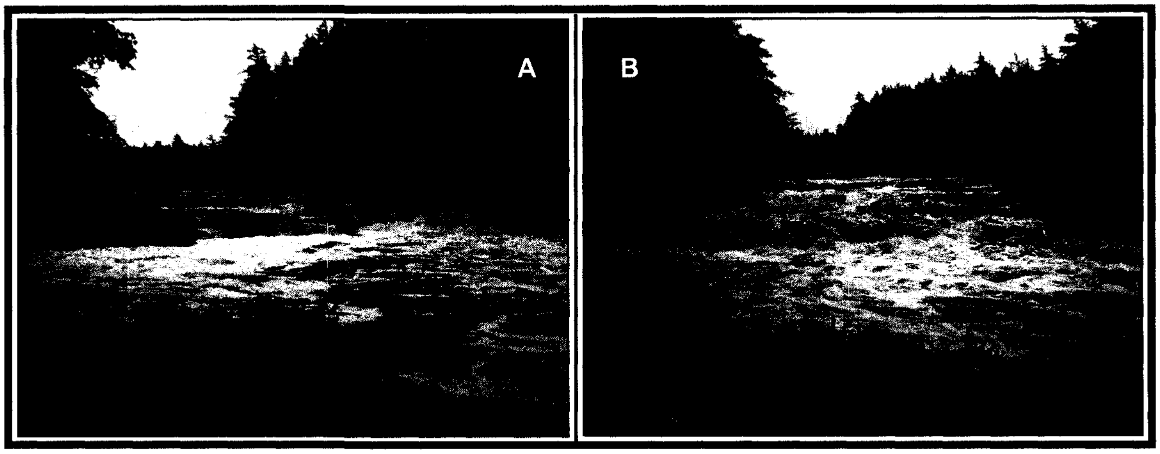


Figure 3.5.15: *Mill Falls is the dominant landscape feature of the Park Study Region, along the Mersey River in KNP/NHS. These photos show upstream views of the (A) upper falls, and (B) lower falls (with upper falls in the distance), during high water conditions in late June 2006. The Mill Falls site (BcDh-25) was located in two clusters along the shoreline (right) at the foot of both sets of rapids. Photos: B. Pentz.*

Within the Park, a paved road flanks the Mersey River to the south and east, and hiking trails parallel much of the river providing easy access to many areas of archaeological potential along the water. Nearly all of KNP/NHS has been harvested for timber over the past two centuries, and historically at least two mills have operated in the vicinity of the site at Orde Stillwater and the aptly named Mill Falls. In the nineteenth century the Fairy Lake Reserve was located near the head of Kejimkujik Lake, along the north and eastern shores.

Below is a description of the pre-Contact sites within the *Park Study Region.*

3.5.6.1 – Mill Falls Site (BcDh-25)

This site was identified during the 2006 UMARC Survey. The Mill Falls Site is located on the south bank of the Mersey River, in two clusters at the foot of both the upper and lower falls. Both site areas are located on moderately well drained shale beaches that slope gently toward the water, and sit under stands of Eastern hemlock and sparse red maple.

Ten shovel tests were placed in a 5 x 25 m area along the beach below the upper falls (*Area A* – see B. Pentz 2007b, 2007f), on the south side of the river. All ten tests proved negative. Quartz collected from the surface of the beach in *Area A* was initially considered fire-cracked rock, was later identified as three quartz thinning flakes, seven flake fragments, and fifty-four pieces of reduction fragments (shatter). The quantity of shatter suggests a possible quarry site in the area, possibly from an as yet unidentified quartz vein in the surrounding slate bedrock.

Twenty shovel tests were placed in a 13 x 8 m area along the shale beach below the lower falls (Area C – see Pentz 2007b, 2007f), on the south side of the river. A single quartz primary flake was identified on the surface. Five positive shovel tests produced one quartz core, two quartz late-stage flakes, three quartz flake fragments, and four quartz reduction fragments.

The iron head of a log drivers pike (*Figure 3.5.16*) was also found by Devin Fraser washed up on shore at foot of the lower falls (*Area B* – see Pentz 2007b, 2007f). Six shovel tests were also placed on a small, low terrace in *Area B*. All six shovel tests proved negative.

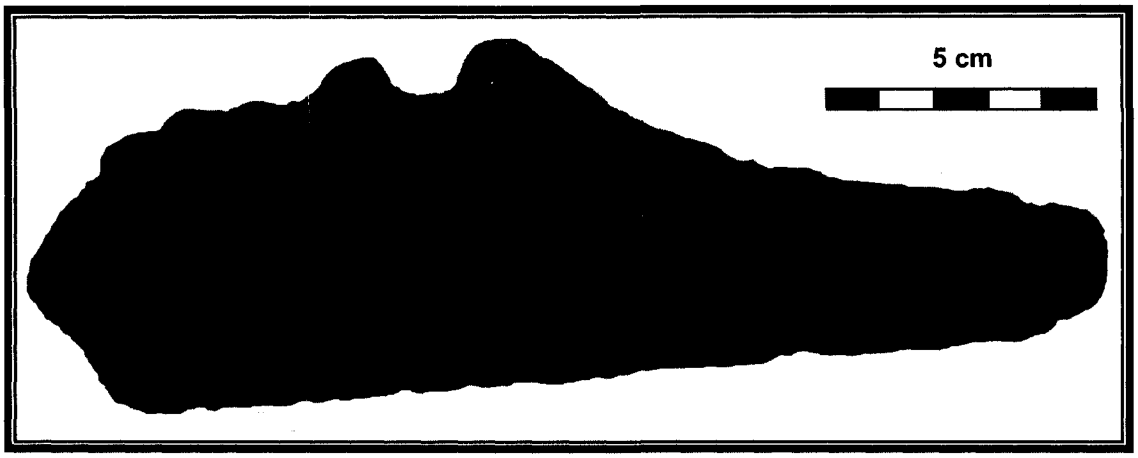


Figure 3.5.16: *Log-driver's pike-head found at the foot of the lower rapids (Area B) at Mill Falls. Much of the iron sleeve that formed the pike-head has weathered away, leaving only part of the barb (top) intact, however, portions of the wooden pike-pole encased by the iron (visible at left) has survived. Photo: B. Pentz.*

Both the upper and lower falls exhibit blasting and drilling scars in the slate ledges that form the falls. This is a result of lumbering activities in the area such as a water-wheel sawmill at the upper falls, and log drives (Corbett 2006).

<u>3.5.6.2 – Rogers Brook (BcDh-09)</u>

The Rogers Brook site was only briefly visited during the spring reconnaissance canoe trip. The site consists of an isolated broad stemmed quartz projectile point found on the surface near the mouth of Rogers Brook (see *Figure 4.4.5b*), tentatively assigned the Late-Terminal Archaic Period (ca. 5,000-3,000 BP) or Early Woodland Period (ca 3,000-2,000 BP) (Ferguson 2005:41-42). A limited surface inspection was carried out around the footbridge that crosses Rogers Brook, but high water conditions had flooded much of the low-lying shore. No areas of exposure were noted at this time, and no new cultural material was recovered from this site.

The preceding overview of the results of the UMARC Survey has set the stage for analyzing and discussing the evidence of pre-Contact use of the UMARC by the Mi'kmaq and their ancestors, and the Mersey/Allains canoe route as a whole in the following chapters.

CHAPTER 4 – CULTURAL MATERIAL ANALYSIS

"*With the loss of cultural history, we have no choice but to learn from technological history*" – I. S. MacLaren (2001:179)

The following chapter will analyse and briefly interpret the data recovered from the UMARC sites described in Chapter 3. This examination will include discussions on cultural sediments, botanical and faunal remains, ceramic, lithic, and historic artifacts, and fish-weir features. Afterward, Chapter 5 will provide a regional interpretation of the pre-Contact sites from the UMARC study area, and the Mersey/Allains Corridor as a whole, through the lenses of culture-history, geographic- and cultural-landscape, and settlement and subsistence patterns in southwest Nova Scotia.

4.1 – Sedimentology

Sediment samples were collected from two sites (McKibbin's Beach - BdDi-07; Stedman's Beach - BdDh-02), in the *Milford Lakes Study Region* of the upper Mersey River to provide an accurate understanding of the geological soil development at these sites, and the impact of human occupation as represented in the soil stratigraphy (see *Table 4.1*). Additionally, these samples were collected for paleoethnobotanical analysis to identify plant remains that could provide additional insight into the occupation and environmental history of these sites and the region (see *Table 4.2*). The soil samples were collected from evaluative units excavated in arbitrary 5 cm levels, and sediment samples were taken from the dominant cultural levels (10-20 cm, depth below surface – DBS).

Limited sampling was also carried out at deeper levels to reflect the lower strata of sediments at the sites. Sediment samples were only collected from McKibbin's Beach and Stedman's Beach, and not from the limited excavation at Big River Runs (BdDh-03), nor any other site, because of constraints in field-time, and a deliberate focus during this preliminary survey toward broad site identification rather than detailed site evaluation.

Table 4.1 - Soil Horizons and Sediments of BdDi-07 and BdDh-02

Table 4.1a – Sediment Analysis of McKibbin's Beach (BdDi-07), Evaluative Unit 2

Level	Depth (cm)	Horizon	Munsell Colour	Description	Composition	Shape	Spherosity / (Roundness)
2	5-10	A	7.5YR 3/1 Very dark grey	Sandy clay	60% Quartz 25% Organic 10% Siltstone 5% Charcoal	Subangular-blocky to granular	0.69 - 0.83 (0.1 – 0.4)
3	10-15	A	10YR 4/1 Dark grey	Sandy clay	60% Quartz 20% Organic 15% Limestone 5% Charcoal	Subangular-blocky to granular	0.75 – 0.85 (0.1 – 0.4)
4	15-20	A-B	10YR 6/2 Light brownish grey	Sandy clay	85% Quartz 11% Limestone 3% Organic 1% Charcoal	Subangular-blocky to granular	0.73 – 0.87 (0.1 – 0.5)
5	20-25	B	10YR 5/2 Greyish brown	Sandy clay loam	80% Quartz 10% Limestone 5% Organic 5% Charcoal	Angular-sub-blocky to granular	0.69 – 0.83 (0.1 – 0.3)
8	35-40	B	10YR 5/4 Yellowish brown	Sandy clay loam	70% Quartz 20% Limestone 10% Organic	Granular	0.67 – 0.85 (0.1 – 0.5)

Table 4.1b – Sediment Analysis of Stedman's Beach (BdDh-02), Evaluative Unit 2

Level	Depth (cm)	Horizon	Munsell Colour	Description	Composition	Shape	Spherosity / (Roundness)
3	10-15	O	7.5YR 2.5/1 Black	Sandy clay	60% Quartz 25% Charcoal 15% Organic	Granular	0.77 – 0.87 (0.2 – 0.6)
4	15-20	A	2.5Y 3/2 Very dark greyish brown	Sandy clay	95% Quartz 3% Charcoal 2% Organic	Granular	0.75 – 0.83 (0.2 – 0.4)
5	20-25	A-B	10YR 5/2 Greyish brown	Sandy clay	95% Quartz 2% Limestone 2% Siltstone 1% Charcoal	Granular	0.87 – 0.93 (0.4 – 0.5)
6	25-30	B	10YR 4/3 Brown	Sandy clay	98% Quartz 1% Limestone 1% Organic	Granular	0.73 – 0.85 (0.1 – 0.6)
9	40-45	B	10YR 3/4 Dark yellowish brown	Sandy clay loam	96% Quartz 2% Limestone 1% Charcoal 1% Organic	Granular	0.81 – 0.91 0.1 – 0.8)

The above tables (*Table 4.1a, 4.1b*) outline the soil horizons and sediments from McKibbin's Beach and Stedman's Beach, which are characteristic of the sediments from the northern three-quarters of the UMARC study area. These soils correspond with soils from the Gibraltar Group, as described in the *Soil Survey of Annapolis County, Nova Scotia* (MacDougall et al. 1969). Gibraltar Group soils cover most of the southern half of Annapolis County, and have developed from a pale yellowish-brown, gravely sandy loam till (MacDougall et al. 1969:46). These well drained, Ortho Humo-Ferric Podzol soils are derived from Devonian porphyritic granite material of the South Mountain batholith (MacDougall et al. 1969:13-15, 25).

The samples collected from McKibbin's Beach and Stedman's Beach are similar to the soils described for the Gibraltar Group. However the sediments from these sites have a higher clay content, and are darker in overall appearance than the Gibraltar soils. The direct relation of these two beach sites to water may be an influencing factor on the greater percentage of clay at McKibbin's Beach and Stedman's Beach. The human component of these sites, such as charcoal and increased organic components throughout the sediment matrix, may also account for the darker soil profiles.

Additionally, descriptions in the *Soil Survey of Annapolis County, Nova Scotia* are of 'virgin soils', and therefore, the cultural and natural disturbance at McKibbin's Beach may be significant enough to skew direct comparison between the soil colours of these samples. Furthermore, UMARC samples were collected from arbitrary levels during the excavation, not natural horizons; therefore the colour descriptions represent a mixed blend of sediment horizons from within the arbitrary 5 cm excavation level.

Soils in the southern quarter of the UMARC, including the southern half of the *Upper Mersey River Study Region* and the *Park Study Region*, are derived from Ordovician Halifax Formation slate and quartzite. The Halifax Series is a highly acidic, olive coloured, stony sandy loam till (MacDougall et al. 1969: 44-45). No soil samples were collected from these Study Regions. Shovel-testing at Lambs Falls in the *Upper Mersey River Study Region* revealed sediments that were similar to the Gibraltar Soils described above. The only subsurface testing in the *Park Study Region* was in gravely slate river deposits around Mill Falls (BcDh-25), which do not correspond to the typical Halifax Series soils described by MacDougall.

4.2 – Organics

4.2.1 – Organics – Botanical

In addition to the sedimentology analysis discussed above, the sediment samples collected from McKibbin's Beach and Stedman's Beach also enabled paleoethnobotanical analysis to be conducted at these sites. Samples were collected from the dominant cultural horizons at each site (5-30 cm DBS), along with a representative sample of deeper B-horizon sediments. An 80 ml portion of each sample was examined under a microscope (2X and 4X) to identify macro plant remains, such as seeds, seed cases, and other identifiable plant structures. These remains provide representative evidence of the plant species that were present at this site in the past, and shed light on traditional use of specific plants by the Mi'kmaq.

Table 4.2 – Paleoethnobotanical Analysis of Sediment Samples from McKibbin's Beach (BdDi-07) & Stedman's Beach (BdDh-02)

Table 4.2a – McKibbin's Beach (BdDi-07)

Evaluative Unit 1		Evaluative Unit 2	
Level 2: (5-10 cm)	**13** – fungal fruiting body **2** – charred Acorns **2** – Acorn shell fragments **1** – *Lathyrus* (beach pea?) **1** – charred Balsam fir needle **1** – *Pineacea* needle fragment (White Pine?) **1** – deciduous bud	**Level 3:** (10-15 cm)	**50** – fungal fruiting bodies **5** – deciduous bud clusters (Red Oak?) **2** – deciduous stipules **2** – coniferous cone fragments **2** – *Polygonaceae* seedcoat fragments **2** – *Pineaceae* needle fragments **1** – *Pineaceae* seedcoat fragment **1** – charred Blueberry seed
Level 3: (10-15 cm)	**20** – fungal fruiting bodies **4** – *Pineacea* needles **1** – charred, reniform-shaped *Chenopodiaceae* seed (Goosefoot family – Lambs quarter?)	**Level 4:** (15-20 cm)	**2** – charred Acorn fragments
Level 5: (20-25 cm)	**6** – fungal fruiting bodies **1** – *Pineacea* needle fragment	**Level 5:** (20-25 cm)	**14** – fungal fruiting bodies **2** – deciduous bud clusters
Level 8: (35-40 cm)	**1** – fungal fruiting body		

Table 4.2b – Stedman's Beach (BdDh-02)

Evaluative Unit 1		Evaluative Unit 2	
Level 9: (40-45 cm)	**1** – deciduous stipule	**Level 3:** (10-15 cm)	**16** – fungal fruiting bodies **4** – Balsam fir needle fragments **3** – deciduous bud clusters
		Level 4: (15-20 cm)	**2** – fungal fruiting bodies **1** – insect egg case
		Level 5: (20-25 cm)	**6** – fungal fruiting bodies **1** – Balsam fir needle
		Level 6: (25-30 cm)	**1** – fungal fruiting body

Table 4.2 outlines the plant material identified in the 80 ml sediment samples examined from McKibbin's Beach and Stedman's Beach. Care was taken during the excavations to prevent plant and sediment material in the upper soil levels from mixing with the underlying soil horizons. Despite the small sample volume examined in this analysis, the above table features a historic range of species present at these sites during

the Middle-Late Ceramic Period (ca 2,000-450 BP), based on their association with datable artifacts recovered from the same soil horizons. Most of the modern tree species (fir, maple, birch, pine, hemlock and oak) currently found within the *Red Spruce-Hemlock-White Pine Zone* of the interior of Annapolis County are represented in the examined soil samples from Fisher Lake, suggesting a generally stable forest ecology and environment conditions over the last 2,000 years. (Davis and Brown 1996b:63; Loucks 1962; MacDougall et al. 1969:17).

Following the practice of previous paleoethnobotanical research, charred plant remains found associated with cultural artifacts are presumed charred as a result of cultural, not natural processes (Deal 2002:323-324; Keepax 1977:226; Minnis 1981:147; Nash et al.1991:218). The charred blueberry seed (*Vaccinium angustifolium*), *Chenopodiaceae* (Goosefoot – possibly Lamb's quarter's?) seed, and burnt acorns (*Quercus borealis*) recovered from McKibbin's Beach (BdDi-07) in soils associated with Late Ceramic Period (ca 1,000-450 BP) cultural material suggest these ecological artifacts (ecofacts) are related to the dietary practices of the pre-Contact *Kejikawek L'nuk* who occupied this site. Acorns, blueberries, and goosefoot (both leaves and seeds) are recorded as traditional aboriginal foods in the Maine/Maritimes Region (Asch Sidell 1999:204,207,212; Lacey 1993:48, 1999:73; MacLeod and MacDonald 1977:40-41; Nash et al. 1991:219; Petruso and Wickens 1984; Ricker 1998:7).

Additionally, the beach pea (*lathyrus* genus) is also an edible legume probably used as a food source by the Mi'kmaq (Creighton 1982:29; Robertson 1969:7), and the charred fir needle may have been used for a tea, or represent the use of fir kindling or accidental burning in the hearth (Lacey 1993:54; Nash et al. 1991:219; Wallis 1922:115).

The association of these edible plant remains with artifacts from the Middle-Late Ceramic Period (ca 2,000-450 BP) suggests they formed part of the traditional Mi'kmaq diet.

Not only do these fragile charred remains represent ancient food practices of the Mi'kmaq, but they also provide evidence as to what time of year interior campsites like McKibbin's Beach were inhabited. The *Chenopodiaceae* (Goosefoot – Lamb's quarters?) is edible throughout the summer; *lathyrus* (Beach pea) ripen in August, and blueberries usually reach their peak ripeness in late July and August, although they are edible both before and after this period (Creighton 1982:29; MacLeod and MacDonald 1977:40-41; Asch Sidell 1999:204,207). Red Oak acorns become ripe and drop from the branches in the autumn and early winter (Lacey 1999:73; Petruso and Wickens 1984). This botanical evidence suggests McKibbin's Beach, and by extension many of the other interior campsites along the UMARC were occupied by the *Kejikawek L'nuk* at least during the mid-late summer and autumn.

4.2.2 – Organics – Birch Bark

A roll of birch bark was recovered in the lower humus layer (16-18 cm DBS) of Evaluative Unit #2 at Stedman's Beach (BdDh-02) (see *Figure 4.2.1*), and was found associated with a historic clay pipe-bowl fragment (ca 1720-1820, see *Figure 4.3.7b*). The modern day absence of birch on Stedman's Point, as well as the association of this piece of bark with historic artifacts and a layer of charcoal, suggests the bark is cultural material rather than natural, and that it was intentionally brought to the site. The rolled nature of the birch bark, and its flattened-conical shape initially suggested it might be a moose call. The bark roll was only ~18 cm long, which is small compared to the moose calls preserved in ethnographic collections, however these collections are from the late nineteenth and early twentieth centuries and may not accurately reflect earlier traditions. Unfortunately, careful inspection of the bark under laboratory conditions did not reveal any cultural modifications, such as stitching or decoration.

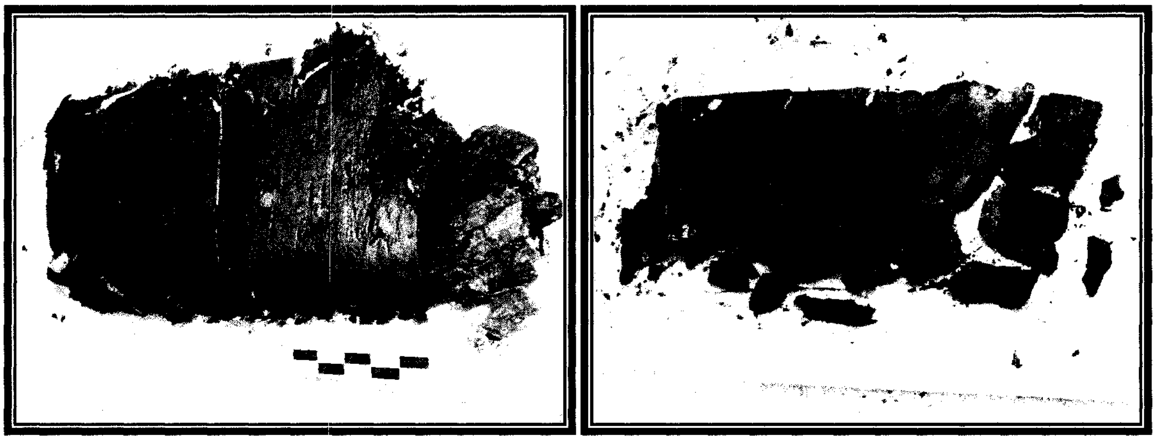


Figure 4.2.1: *Before and after photos of birch bark roll recovered from Stedman's Beach (BbDh-02) during laboratory cleaning. Although no stitching or decoration was identified on the bark, the association of this object with charcoal from a possible hearth, a 18th Century clay pipe-bowl fragment (see Figure 4.3.6b), and the absence of birch trees at the site today, suggests the bark was a cultural object, and may have served as an expedient cone-shaped moose call. Photos: Kathy Matthias.*

Despite the fact the moose call hypothesis cannot be confirmed through identifiable modifications, the bark may have been used opportunistically, as a temporary or expedient call, before being abandoned at the site. The idea of the birch bark as a crude moose call is not unfounded, since historically, the interior of Annapolis County was considered prime territory for hunting moose (Parker 1990, 1995).

Figure 4.2.2: *Woodcut image of a Mi'kmaw guide (left) using a birch bark moose-call to lure a moose for his sportsman client. Photo source: Nova Scotia Museum 1878.*

It is also important to note that even though the Late Colonial Period (ca AD 1758-1867) component identified at Stedman's Beach features a clay pipe fragment of European origin, its was likely brought to the site by a Mi'kmaw man or woman. Other possibilities include Acadian or British settlers traveling through the interior with Mi'kmaw guides, as was the case with Jacques de Meulles in the seventeenth century, and later British officers and American sportsmen on hunting expeditions throughout the province during the nineteenth and early twentieth centuries (Butler 1837-38; Hardy 1855, 1869; Canoeing in Nova Scotia 1880:125-126; Parker 1990, 1995:56-89).

The interior of Annapolis County was not largely exploited by Euro-Canadians until the 1820s, when the lumber industry began moving further inland to harvest timber (Bell et al. 2005:12). As such, to find a pipe-bowl from the pre-Victorian era in a remote location like Fisher Lake suggests this artifact represents a continued use of pre-Contact campsite by descendant Mi'kmaq during the eighteenth or early nineteenth century.

If the birch bark from Stedman's Point represents moose hunting activities around Fisher Lake in the mid-late Colonial Period (ca AD 1720-1867) by the *Kiskukewe'k L'nuk*, then the fact they returned to a pre-Contact campsite used by their ancestors during the Late Ceramic Period (ca 1,000-450 BP) suggests earlier generations of *Kejikawek L'nuk* may have also hunted moose from this site. An interior occupation of Stedman's Beach for the autumn rut is further supported by the paleoethnobotanical evidence from McKibbin's Beach at the north end of Fisher Lake discussed above, and the presence of eel weirs at interior sites along both the Mersey and Allains Rivers (see also *Chapter 4.5: Weirs*, and *Chapter 5.4 – Settlement & Subsistence Analysis*).

4.2.3 – Organics – Faunal

The faunal material collected during the UMARC Survey is of limited interpretative value. One tiny charred bone fragment was recovered from McKibbin's Beach, and four small calcined bone fragments were identified in a shovel-test at Big River Runs. All of the bone fragments have been identified as mammal (Swinarton 2007). The faunal materials from Big River Runs appear to be from a medium to small rodent. The bone fragment from McKibbin's Beach is too small and indistinct for further identification.

4.3 – Ceramics

The following sections will focus on pre-Contact ceramics recovered from two of the newly identified UMARC sites (Stedman's Beach - BdDh-02, and Big River Runs - BdDh-03), and two previously identified sites within the study area (Vidito - BeDi-07, and Grand Lake Dam - BdDi-01). A brief discussion of European ceramics and historic artifacts is also included at the end of this section.

4.3.1 – Ceramics – Stedman's Beach (BdDh-02)

Fifteen grit-tempered ceramic fragments were recovered from a single shovel-test at Stedman's Beach, on Fisher Lake. These sherds are from the same thick-walled (~10mm) vessel, including several co-joining fragments (*Figure 4.3.1*). The vessel walls feature smoothed exterior and wiped interior surface treatments. All of the ceramics from Stedman's Beach are shoulder/body fragments, and seven pieces feature *cord-wrapped stick* (CWS) decoration in what appears to be a chevron or rocker pattern. When the ceramic material from this site is applied to the Petersen and Sanger ceramic model for the Maine/Maritimes Region, the vessel fragments from Stedman's Beach correspond with Ceramic Periods 4-5 (ca 1,350-650 BP), and indicate a *Kejikawek L'nuk* occupation of this site during the Middle-Late Ceramic Period (ca 2,000-450 BP) (Petersen and Sanger 1991).

Figure 4.3.1: *Three mended fragments of a grit tempered ceramic vessel from Stedman's Beach (BdDh-02). Note the wavy cord-wrapped stick impressions. Photo: B. Pentz.*

4.3.2 – Ceramics – Big River Runs (BdDh-03)

One hundred thirty-one ceramic fragments were recovered from the Big River Runs site on the upper Mersey River. Five of the twenty shovel-tests, and two of the three evaluative units placed at the site produced pottery, spanning a ~ 3 x 8 m^2 area of the site. The sherds consisted of 16 rim/neck fragments, 114 shoulder/body fragments, and one base fragment. Observed variation in the decorative styles, the clay fabric, and the distribution of the pottery sherds across the site suggests there is a minimum of ten different vessels represented by these sherds.

Nearly all of the decorated ceramics at Big River Runs featured various CWS motifs, including horizontal rows of CWS, horizontal- and oblique/chevron-CWS, rocker-CWS, oblique-CWS separated by triangular or rectangular punctates, and horizontal-CWS with triangular and pinhole punctuates on the rim (*Figure 4.3.2*). Decorative variation was also noted in the space separating the wraps of cordage and in the thickness of the cordage material used with the CWS decorative tools. These decorative styles are all associated with exterior surface smoothing, and either wiped or smoothed interior surface treatment. The vessels from Big River Runs that feature CWS decoration correspond with Petersen and Sanger's description of ceramics from Ceramic Periods 4-6 (ca 1,350-400 BP).

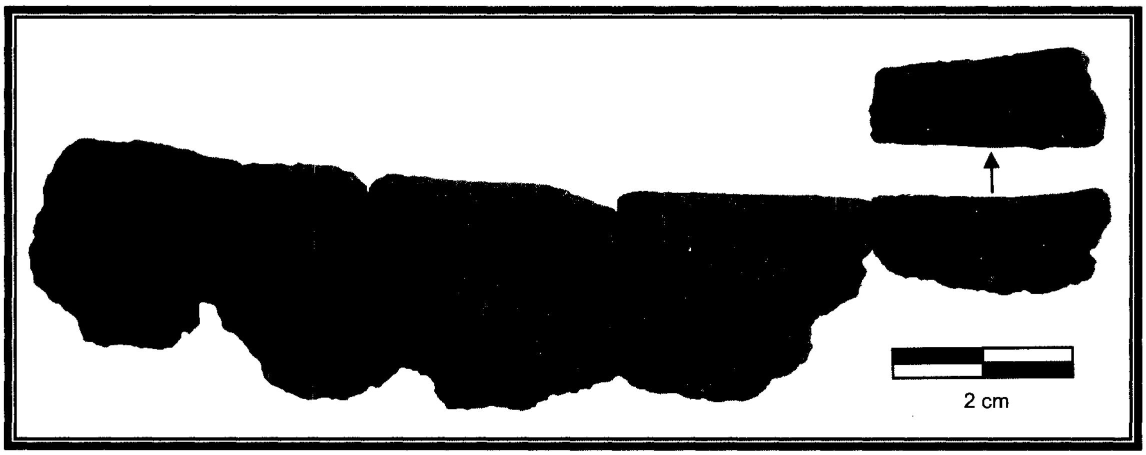


Figure 4.3.2: *Five co-joining, grit tempered, cord-wrapped stick (S-twist) decorated rim fragments recovered from excavations at Big River Runs (BdDh-03). Note at right, the top of the rim has been decorated with elongated triangular and pinhole punctates. Photo: B. Pentz.*

Rim/neck fragments (BdDh-03:124a-d – see *Figure 4.3.3*) of a vessel with dentate impressions and incised oblique lines were recovered from Big River Runs, in the lower strata of Evaluative Unit #3. These sherds feature interior and exterior surface smoothing, with two rows of large-tooth dentate-stamping near the rim, and incised oblique lines lower down on the neck. The rim appears to have a thin folded over interior lip.

Petersen and Sanger place dentate-stamp decorated vessels from the Maine/Maritimes Region into Ceramic Period 3 (ca 1,650-1,350 BP), and indicate that this decorative style disappears by the early part of Ceramic Period 4 (ca 1,350-950 BP). However, Helen Kristmanson's refinement of the Petersen/Sanger model for the ceramic sequence of southwest Nova Scotia, suggests dentate-stamp decoration may continue to be used as recently as Ceramic Periods 5 or 6 (ca 950-400 BP) (Kristmanson 1992). Several vessels from the Eel Weir Site Complex (BbDh-06), at the foot of Kejimkujik Lake, have been found in direct association with dates as recent as 480 +/- 50 BP (Kristmanson 1992:62).

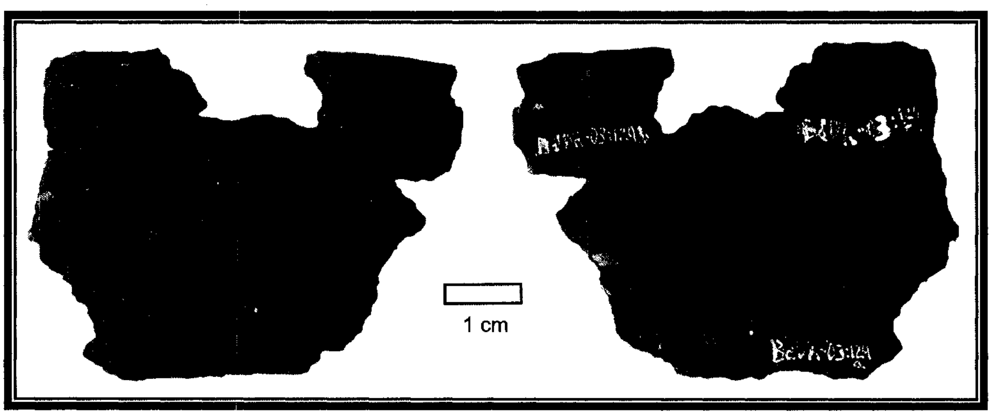


Figure 4.3.3: *Exterior (left) and interior (right) views of three mended rim fragments of a vessel recovered from Big River Runs (BdDh-02), decorated with large-tooth dentate impressions and oblique linear incisions. Photo: B. Pentz.*

It is not clear from Kristmanson's report how she defines the "direct association" of the ceramics with the datable material, nor does she expand on the confidence level of the associated dates or possible contaminating factors. However, using both the Petersen/Sanger and the Kristmanson ceramic models, the dentate and the CWS decorated pottery from Big River Runs confidently falls within Ceramic Periods 3-6 (ca 1,650-400 BP). The presence of later CWS pottery also found at the site suggests the *Kejikawek L'nuk* occupation of this site spans much of the Middle-Late Woodland Period (ca 2,000-450 BP).

No examples of exterior wiping or paddled surface treatments were found at either Stedman's Beach or Big River Runs. The exterior surfaces of all vessels were smoothed, using either wet hands, grass bundle, leather, or burnishing stones (Kristmanson and Deal 1991:78-79).

Of the seven vessels featuring CWS decoration at Big River Runs, two vessels feature impressions from CWS tools with Z-wrapped cordage, the others exhibit S-wrapped CWS, or are indeterminate. The CWS decorated vessel from Stedman's Beach features S-wrapped cordage. In some examples it was possible to establish the cordage weft (twist of the thread), which for binding purposes was logically opposite to the direction of wrap around the stick (ex. Z-wrap decorative tool = S-weft thread, see *Figure 4.3.4*). Petersen and Sanger indicate that Z-wrapped CWS pottery is typically associated with shell-tempered clay, whether it is found on the coast or the interior of New England and southern Nova Scotia (1991:140). This is pattern is not reflected in the interior at Big River Runs in the *Upper Mersey River Study Region*, where all the Z-

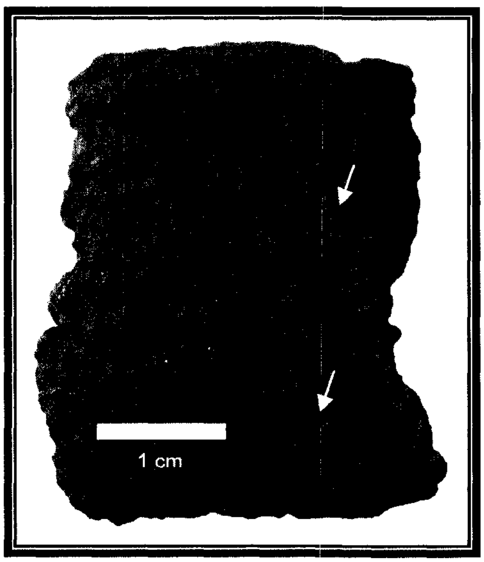


Figure 4.3.4: *Mended rim fragment from Big River Runs (BdDh-02), decorated with S-twist cord-wrapped stick. The cordage impressions are also visible, showing Z-weft (arrows). Photo: B. Pentz*

wrapped CWS decorated vessels featured grit temper. Additionally, Kristmanson indicates that grit tempered, Z-twist decorative styles are represented on 10 of the 18 CWS vessels (CP 4-5) from the Eel Weir Site Complex (BdDh-06) at the foot of Kejimkujik Lake (1992:69). This evidence does not support the 'typical' relationship of Z-wrapped CWS styles with shell temper suggested by Petersen and Sanger for southwest Nova Scotia.

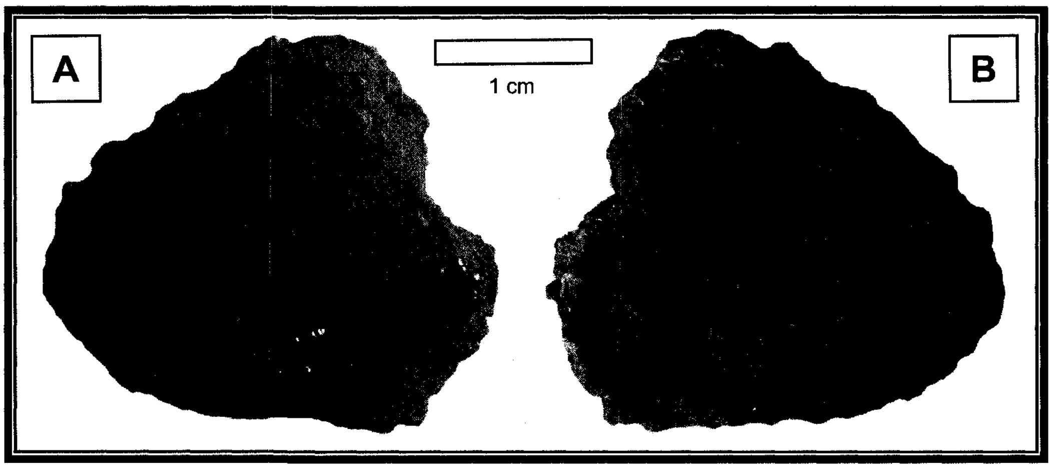


Figure 4.3.5: *Exterior **(A)** and interior **(B)** views of a sherd recovered from Big River Runs (BdDh-02). The reddish tone of the clay suggests this vessel was manufactured from a Bay of Fundy clay source, and is evidence of the UMARC having served as a pre-Contact travel corridor. Note the cubic cavities in the clay resulting from the use of organic/shell temper, and the woven impressions visible on the interior of the vessel. Photo: B. Pentz.*

Most of the vessels from Stedman's Beach and Big River Runs are made from grey-brown, or grey-tan clay. However, two sherds representing a single vessel from the Big River Runs site stand out (*Figure 4.3.5*). These ceramic fragments have greyish-pink coloured clay fabric, suggesting a Bay of Fundy source for this material. These sherds also feature cubic cavities, typical of organic and/or shell-temper that has burned or leached out of the clay. The clay is very dense and the interior surface of both sherds has been wiped or impressed with perpendicular strokes, giving the appearance of a woven impression. The discovery of a vessel on the upper Mersey River, likely manufactured from a Fundy clay source, is solid archaeological evidence of the Mersey/Allains Corridor being used during the pre-Contact Period as a travel corridor and trade route through the interior of southwest Nova Scotia.

4.3.3 – Ceramics – Vidito (BeDi-07) & Grand Lake Dam (BdDi-01)

Two existing sites within the Allains River drainage also produced aboriginal pottery. The Vidito site, which the UMARC Survey has determined corresponds to Erskine's *Lequille Site* at the head-of-tide on the Allains, produced ceramic sherds during Erskine's excavation in 1957 (Erskine 1998). A brief examination of these sherds suggests there are seven vessels represented in this collection. The decorative styles of these pots include exterior dentate stamping, S-wrapped CWS, and undecorated surface treatment. One of the two dentate vessels featured rim castellations (*Figure 4.3.6*), which is an attribute common to Maritime ceramics from Ceramic Periods 2-3 (ca 2,150-1,350 BP) (Petersen and Sanger 1991:125). The other decorative designs represent pottery from Ceramic Periods 4-6 (ca 1,350-400 BP). The fabric of these ceramics vessels varies from light grey-tan, to light grey-brown, which is interesting since clays of the Annapolis Valley and the Bay of Fundy are typically redder in colour. This may indicate these vessels were brought to this site

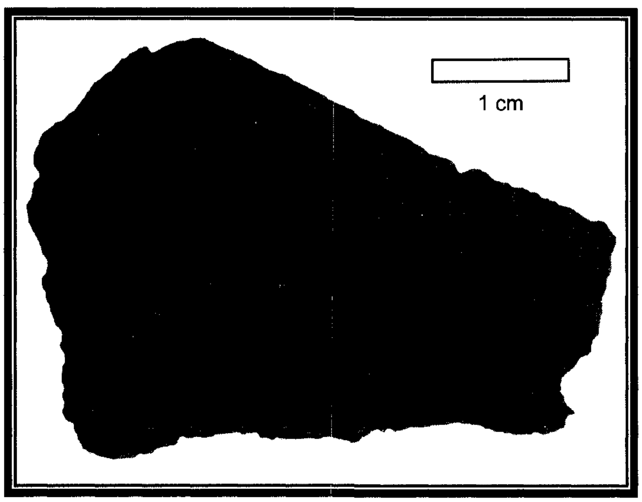


Figure 4.3.6: *Castellated rim sherd recovered from the Vidito site (BeDi-07), with exterior dentate decoration.*

from an interior clay source, possibly along the UMARC. Only one of the vessels from the Vidito site, represented by three undecorated sherds, features organic and/or shell-temper, as suggested by the leached cavities in the clay. The remaining vessels feature quartz-rich grit-temper.

Additionally, three badly weathered grit-tempered pottery sherds were surface collected from the east bank of the Grand Lake Dam site, at the foot of Grand Lake (Lewis 2003). However, their eroded condition prevents any discussion on decorative styles for these ceramics, or comment on the affiliation of these ceramics to a particular ceramic period.

4.3.4 – Ceramics – European Ceramics & Historic Artifacts

Non-native ceramics were also recovered from several sites during the 2006 UMARC Survey, including the two clay pipe-bowl fragments mentioned above from Stedman's Beach (*Figure 4.3.7b*). Hume's typology for British pipes, indicate this style (*Type 18*) was produced between 1720-1820 (Hume 1970:303). A clay pipe-stem was also recovered from the east side of the Grand Lake Dam site (Lewis 2003).

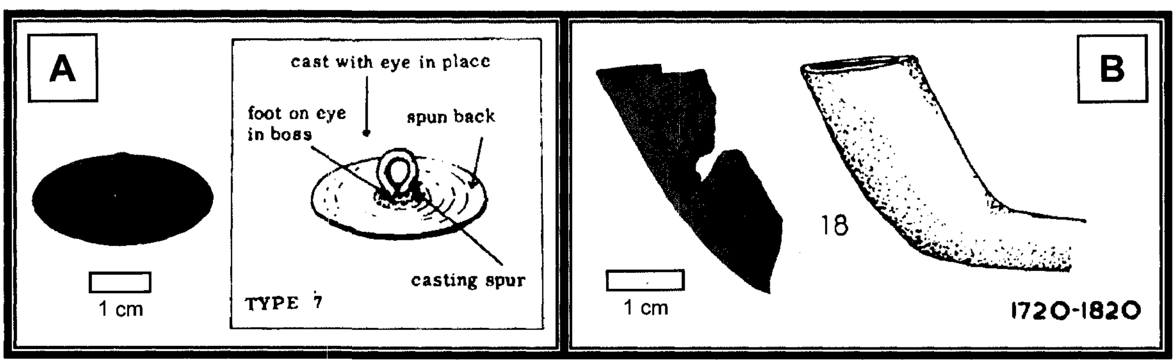


Figure 4.3.7: *At left (**A**) is a tin jacket button surface collected from the Meuse site (BdDi-08), matching Hume's Type 7 button (ca 1720s-1860s). At right (**B**) is a mended pipe-bowl fragment from Stedman's Beach (BdDh-02) matching Hume's Type 18 clay pipes (ca 1720-1820).*

Also on the Allains River, a flat tin coat button (*Figure 4.3.7a*) was recovered from the Meuse site (BdDi-08) at the head of Grand Lake Flowage; a site that also featured two isolated chert scrapers (Meuse 2007). This button is similar to *Type-7* in a typology of Anglo-American buttons recovered from two sites in North Carolina, at Brunswick Town (1726-76, 1800-30), and Fort Fisher (1837-65) (Hume 1970:90-91). Type-7 buttons span the full range of occupation at both sites from the 1720s to the 1860s. The tin button from the Meuse site, along with clay pipe-stems from Grand Lake Dam and a historic weir feature Grand Lake Stream Weir 1 (BdDi-02) located between these two sites on the Allains River, along with the clay pipe-bowl fragments at Stedman's Beach on the upper Mersey, suggest a historic *Kiskukewe'k L'nuk* occupation of the interior on both rivers, and demonstrates mid-late Colonial Period (ca 1700-1867) re-use of pre-Contact sites along the UMARC.

Late nineteenth and early twentieth century Euro-Canadian artifacts were also recovered from McKibbin's Beach (BdDi-07), Lower Dukeshire's Falls (BcDh-24), and Mill Falls (BcDh-25) during the UMARC Archaeological Survey, including clear bottle glass, scrap iron and nails, a pack-strap or harness buckle, cream-ware ceramic sherds, fishing tackle, and a log-drivers pike (*Figure 3.5.16*). These artifacts represent a continued re-occupation of traditional Mi'kmaw sites as suitable camping areas in the modern historic era by both natives and non-natives.

4.4 – Lithics

The 2006 UMARC Survey resulted in the field recovery of 1,013 stone artifacts from eight of the newly identified sites (Baillie Lake Brook; Springhill Mud Lake; Boot

Lake; McKibbin's Beach; Stedman's Beach; Big River Runs; Upper and Lower Dukeshire's Falls; and Mill Falls). Also included in this analysis are 75 additional chipped-stone artifacts from nine other sites within the Allains River of upper Mersey drainage areas (Vidito; Nicholls; Lequille Hydro; Grand Lake Dam; Meuse; Lambs Lake Brook; McGinis; Dargie Lake – BdDh-01; and Rogers Brook). These additional sites were recorded during previous research, or from material held in local private collections. In this chapter, the analysis of these lithic artifacts has been divided into three main categories: *chipped-stone*, *ground-stone*, and *unmodified*. The following sections will examine the geological and archaeological significance of these artifacts for interpreting the past life-ways of the Mi'kmaq and their ancestors along the upper Mersey and Allains Rivers.

4.4.1.1 – Lithics – Chipped-Stone Artifacts: Materials

Chipped-stone material was the most frequently encountered artifact-type, either in the field (1,004) or in existing collections (67), and represents the bulk of this lithic analysis. Before discussing the chipped-stone artifact assemblage, it is important to understand how the variability in raw material used to make these tools can inform us about pre-Contact traditions.

Quartz (silicon-dioxide – SiO_2) was the most common artifact material encountered during this survey. Macro-crystalline quartz is an intrusive material that would have been acquired from veins running through outcrops of slate bedrock, or in cobble form along the rivers and coastline of southwest Nova Scotia, associated with the *Halifax* and *Goldenville Formations* of the *Meguma Group* (Donohoe et al. 2005). The quartz artifacts from this survey have a large crystal (macro-crystalline) structure, and range from translucent to opaque, with a typically milky-white appearance, although pink and smokey-grey material was also observed.

Chert was frequently encountered at sites and in private collections during the 2006 UMARC Survey. The natural distribution of chert in Nova Scotia is restricted to the *Scots Bay* and *North Mountain Formations* along the south shore of the Bay of Fundy between Digby Neck and Cape Blomidon, and along the north shore of the Cobequid Bay and Minas Basin from Cape d'Or to Bass River (see *Figure 4.4.2* below) (Donohoe et al. 2005). Cherts are another form of silicon dioxide, but unlike the larger crystals found in *quartz*, cherts have a fine micro- or crypto-crystalline structure. In this thesis, *chert* is used as a blanket term for other fine-grained silicate-based stones commonly referred to as agate, chalcedony, chert, jasper, and more colloquially as flint. The differences between these terms generally refer to the observed variability in the stones such as colour, colour pattern (including banding, mottling, and translucence), texture, chemical impurities, parent formation, lustre, and light refraction, as well as crystal structure, alignment, size, and water content (Berry and Manson 1959:478-479; Blatt et al. 1972:531; Deer et al. 1992:468; Hammer 1976:40-44; Thompson 1974:151-152). However despite this supposed variability, 'cherts' are all formed through the precipitation of silicon dioxide in water (Berry and Manson 1959:478-479; Blatt et al. 1972:531-541; Boggs 2006:206-216; Thompson 1974:1).

The subjective nature of most of these attributes can make field identification and compatibility with other lithic analysis data a real challenge, especially since these arguably distinct materials can occur within the same geological feature, and not uncommonly within a single artifact (i.e.: patches of red opaque 'jasper' found within a translucent 'chalcedony' flake), which only further complicates matters of identification and nomenclature. It would seem that identification of fine-grained silicates by the supposedly more 'refined' terms of jasper, chalcedony, etc., are descriptions that take lithic analysis beyond the realm of field archaeology and into an unnecessary level of detail only available, or at least only replicable in the geophysics laboratory. The geological and archaeological literature has also compounded the problem of lithic description and identification by using the same word as both a general and specific term (i.e.: *Cherts* include both chalcedony and *chert* – Hammer 1976:42), or as a both noun and an adjective (*chalcedony* and *chalcedonic* quartz – Thompson 1974:151).

However, for this research I have settled on *chert* as a general term for fine-grained siliceous material, following personal discussions with several geologists in Atlantic Canada, who were also split on appropriate generalized terminology (3 for 'chert' : 2 for 'chalcedony'), and a literature review which supports this decision (Blatt et al. 1972:531-541; Boggs 2006:206-216; Hammer 1976:41-42; Thompson 1974:151). Where further description is warranted or possible, the term chert is preceded by basic adjectives such as 'mottled', 'translucent', or 'red', to distinguish or provide more detail, without adding a unique set of terms for subcategories that are not easily defined or comparable. Without getting too far off topic, *chert* appears to be an acceptable general term for knappable, fine-grained siliceous material, because it is frequently referenced and commonly understood, if not always accepted, as an appropriate broad descriptive term for this material in both geology and archaeology, and as such, *chert* will be used throughout the course of this thesis.

Quartzite was also commonly used for making chipped-stone tools in southwest Nova Scotia. Quartzite is a metamorphic stone formed when the grains of deeply buried quartz-rich sandstone melt and fuse together as a result of heat and pressure from the weight of the overlying sediments. In southwest Nova Scotia, bedrock outcrops of quartzite are found along the South Mountain range, in the *New Canaan*, *Kentville* and *White Rock Formations*, and the *Torbrook Formation* (see *Figure 4.4.2* below). These formations are located near Yarmouth, the Sissiboo River, Bear River, Nictaux Falls, and the Gaspereau River (Donohoe et al. 2005).

Other chipped-stone materials that were less frequently encountered in this analysis include: *rhyolite* (light coloured, very fine-grained, silicate-rich volcanics, with larger crystals [phenocrysts] and flow-texture [ribbons or banding]); *felsite* (light coloured, fine-grained [aphanitic], silicate-rich volcanics, with or without larger crystals [phenocrysts]); *andesite* (medium-dark coloured, fine-grained, feldspar- and sodium-rich volcanics); and *pyroclasts* (consolidated fragments of silicate-rich, explosive-volcanic rocks).

4.4.1.2 – Lithics – Chipped-Stone Artifacts: Analysis

Having reviewed the types of chipped-stone lithic materials recovered from sites along the Allains and upper Mersey Rivers during the 2006 Survey, the following discussion will present the artifact data, and briefly interpret how these artifacts represent lithic practices of pre-Contact aboriginal populations in southwest Nova Scotia.

Table 4.3 – UMARC Chipped-Stone Artifact Materials
(Sites listed North to South, Percentages rounded to nearest whole integer)

* *No subsurface testing, lithic material surface-collected from disturbed context*

Table 4.3a – Allains River

	Quartz	Chert	Quartzite	Other	Total
Leq Hydro*	-	2 *(100%)*	-	-	**2 ***
Vidito	2 *(14%)*	3 *(20%)*	5 *(33%)*	5 *(33%)*	**15**
Nicholls *	-	-	1 *(100%)*	-	**1 ***
Meuse *	-	2 *(100%)*	-	-	**2 ***
Grd L Dam *	6 *(15%)*	16 *(39%)*	7 *(17%)*	12 *(29%)*	**41 ***
Lambs Bk *	-	2 *(100%)*	-	-	**2 ***
Dargie L *	-	1 (50%)	1 (50%)	-	**2 ***
McGinis *	-	-	1 *(100%)*	-	**1 ***
Baillie L Bk	2 *(100%)*	-	-	-	**2**
Springhill L	4 *(50%)*	3 *(38%)*	1 *(12%)*	-	**8**
TOTAL	**14 *(19%)***	**29 *(38%)***	**16 *(21%)***	**17 (22%)**	**76**

Table 4.3b – Upper Mersey River

	Quartz	Chert	Quartzite	Other	Total
Boot Lake	28 *(100%)*	-	-	-	**28**
McKibbin B	219 *(83%)*	34 *(13%)*	9 *(3%)*	1 *(1%)*	**263**
Stedman B	293 *(90%)*	9 *(3%)*	6 *(2%)*	16 *(5%)*	**324**
Big R Runs	175 *(76%)*	26 *(11%)*	24 *(10%)*	6 *(3%)*	**231**
U Duke Fall*	3 *(100%)*	-	-	-	**3 ***
Lr Duke Fall	69 *(97%)*	1 *(3%)*	-	-	**70**
Mill Falls	75 *(100%)*	-	-	-	**75**
Rogers Bk *	1 *(100%)*	-	-	-	**1 ***
TOTAL	**863 *(87%)***	**70 (7%)**	**39 *(4%)***	**23 (2%)**	**995**

Table's 4.3a and *4.3b* present the available information on chipped-stone lithic assemblages from both the Allains and the upper Mersey drainages. Unfortunately, there are some significant imbalances between the two data sets that need mentioning. Firstly, comparing dramatically different sample sizes (AR = 76; UM = 995) leads to biases when analysing the raw numbers from both drainages.

Secondly, the difference in sample size is accentuated because both sets of data were not collected in the same manner. Only two of the eight sites from the upper Mersey were identified by surface exposures, the remaining six sites were found through intensive subsurface shovel-testing, and at three sites (McKibbin's Beach, Stedman's Beach, Big River Runs), this was accompanied by the excavation of several evaluative units. Comparatively, subsurface shovel-testing was only conducted at two sites (Baillie Lake Brook, Springhill Mud Lake) on the Allains River during the UMARC survey, and the artifact recovery from these sites was very low. The only excavations on the Allains River were carried out by Erskine in 1957 at the Vidito site (BeDi-07), which included the recovery of fifteen bifaces and chipped-stone pre-forms, but unfortunately, as a rule, Erskine discarded the flakes he unearthed during his investigations. (Connolly 1977:38; Erskine 1998:57).

Finally, the major issue affecting sample sizes is the fact that local private collectors and landowners originally identified seven (Vidito; Nicholls; Meuse; Grand Lake Dam; Lambs Lake Brook; Dargie Lake; and McGinis) of the nine lithic sites along the Allains River, while this only occurred at Lower Dukeshire's Falls (BcDh-24) on the upper Mersey. Their focus was on identifiable artifacts, not 'total recovery'; therefore waste material like flakes and cores would have been ignored, if not completely overlooked. Since the Allains River sites are also located in areas affected by road and bridge construction, or have been flooded by hydro-dam developments, further investigation and additional artifact recovery from these sites was not possible during the 2006 field-season.

However, despite their shortcomings, the initial numbers in *Table's 4.3a* and *4.3b* suggest the Allains and upper Mersey Rivers feature different patterns of behavior around the use of lithic raw material. Looking at the total percentages for each chipped-stone artifact material type, quartz is by far the most common material at sites along the upper Mersey (87%). Comparatively, on the Allains River quartz is only moderately represented (19%), and instead cherts form the dominant group (38%). On the Allains River artifact recovery has been the greatest at the Vidito site (BeDi-07) and the Grand Lake Dam site (BdDi-01). These sites feature a higher level of the raw material diversity than the sites along the upper Mersey River. However, the recovery of intact lithic scatters, such as the quartz material found around the 'sitting rock' at Stedman's Beach (BdDh-02), may have over-influenced the data when compared to the single digit total artifact counts for most of the Allains River sites.

In order to verify the significance of the chipped-stone tool data, a less biased sample set should be examined. *Table 4.4* below shows only the biface artifacts recovered from sites along the UMARC, plus Dargie Lake (BdDh-01), which is located at the headwaters of the Lambs Lake Brook/Ten Mile River branch of the Allains drainage.

The bifacial artifacts (bifaces, biface fragments, or biface preforms) from the Allains River (23) and the upper Mersey River (9) assemblages included in *Table 4.4*, feature a total of thirty-two artifacts that can be classified by identifiable material type. Even to the untrained observer, biface artifacts are usually quite recognizable, unlike the less obvious waste flake material. By this reasoning, the isolated bifaces found on the surface by collectors are equally significant when compared to the bifaces recovered from more rigorously investigated sites.

Table 4.4 – UMARC Chipped-Stone Biface Materials
(Sites listed North to South, Percentages rounded to nearest whole integer)

* *No subsurface testing, lithic material surface-collected from disturbed context*

Table 4.4a – Allains River

	Quartz	Chert	Quartzite	Other	Total
Leq Hydro *	-	-	-	-	-
Vidito	2 *(14%)*	3 *(20%)*	5 *(33%)*	5 *(33%)*	**15**
Nicholls *	-	-	1 *(100%)*	-	**1 ***
Meuse *	-	-	-	-	-
Grd L Dam *	-	2 *(67%)*	1 *(33%)*	-	**3 ***
Lambs Bk *	-	1 *(100%)*	-	-	**1 ***
Dargie L *	-	1 (50%)	1 (50%)	-	**2 ***
McGinis *	-	-	1 *(100%)*	-	**1 ***
Baillie L Bk	-	-	-	-	-
Springhill L	-	-	-	-	-
TOTAL	**2 *(9%)***	**7 *(30%)***	**9 *(39%)***	**5 *(22%)***	**23**

Table 4.4b – Upper Mersey River

	Quartz	Chert	Quartzite	Other	Total
Boot Lake	-	-	-	-	-
McKibbin B	1 *(50%)*	-	1 *(50%)*	-	**2**
Stedman B	3 *(100%)*	-	-	-	**3**
Big R Runs	-	-	-	2 *(100%)*	**2**
U Duke Fall*	-	-	-	-	-
Lr Duke Fall	-	1 *(100%)*	-	-	**1**
Mill Falls	-	-	-	-	-
Rogers Bk *	1 *(100%)*	-	-	-	**1 ***
TOTAL	**5 *(56%)***	**1 *(11%)***	**1 *(11%)***	**2 *(22%)***	**9**

When comparing the total percentages of the biface data (*Table 4.4*) with the numbers from the total chipped-stone artifact data (*Table 4.3*), the pattern observed in the latter is reflected in the former. Quartz remains the dominant material on the upper Mersey River at 56% (*Table 4.4b*), while on the Allains River, chert (30%) and quartzite (39%) bifaces are most common (*Table 4.4a*), and quartz (9%) is poorly represented. On the Mersey River, the *Other* lithic category (2%) in *Table 4.3b*, which features mostly rhyolite, appears to be under-represented when compared to the results of *Table 4.4b* (22%), where it matches favourably with the *Other* categories (both also 22%) from the Allains River (*Tables 4.3a* & *4.4a*). Lithic use on the Allains River suggests greater balance and less dependence on a single material, whereas the Mersey sites seem highly dependent on quartz.

It would appear pre-Contact groups living along the Allains and upper Mersey Rivers frequently exploited the locally available lithic materials. Along the Mersey this was quartz, while on the Allains it appears chert and quartzite were most commonly used, although perhaps 'non-quartz' would be more accurate. These patterns probably stem from the lithic diversity available in the local geology. The area around the Annapolis Basin features a greater diversity of knappable lithics than is available in the *Atlantic Interior* of southwest Nova Scotia. To the east and west of the Allains River are outcrops of the *Torbrook* and the *New Canaan/Kentville/White Rock Formations*, near Nictaux and Bear River, which feature quartzite and rhyolite, and nearby *North Mountain Formation* chert seams at Digby Gut may also have been exploited (Donohue et al. 2005; Sabina 1972:43) (see *Figure 4.4.2*). Additionally, the Annapolis River, of which the Allains River is a tributary, would have provided direct access to the Minas Basin, via a portage into the Cornwallis River, either for first-hand acquisition of Scots Bay Chert or for indirect trade with communities from the Minas Basin area.

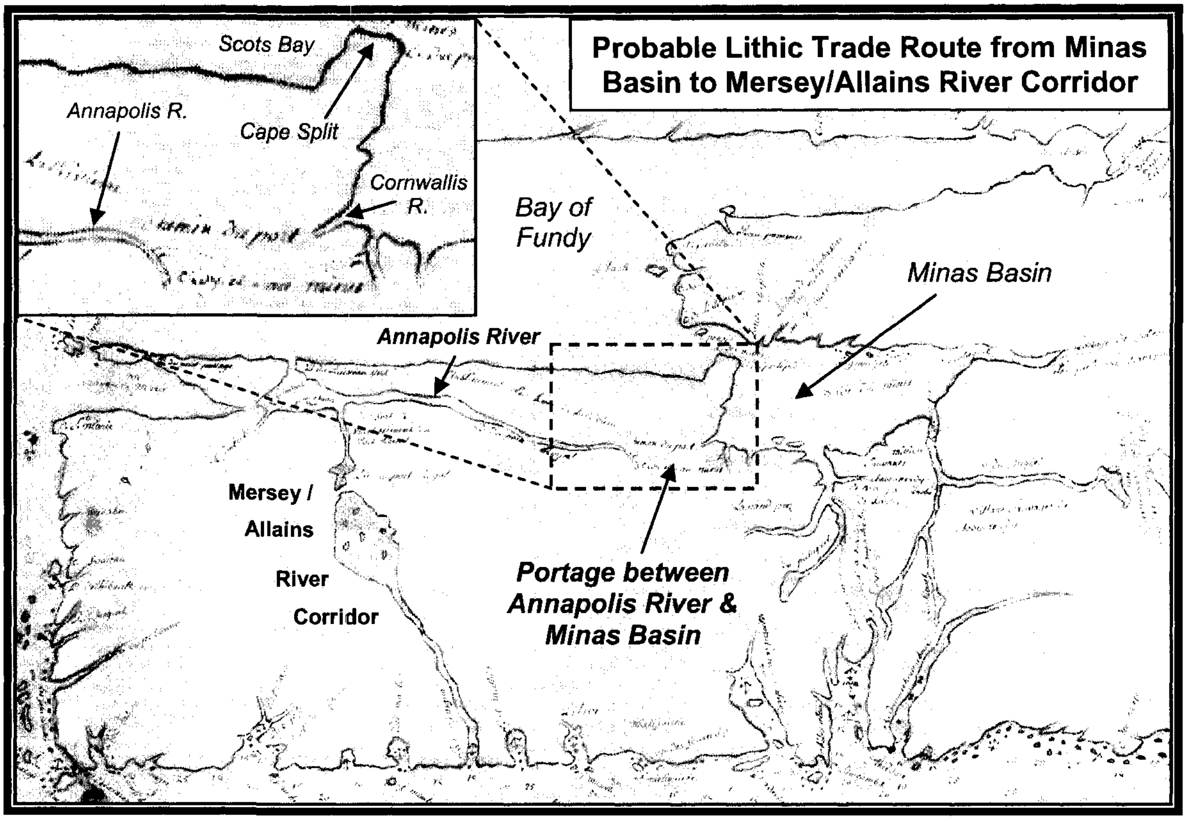


Figure 4.4.1: *Anonymous 1740 French map of Acadia showing major interior river travel routes, including the Allains/Mersey River corridor, and several routes radiating from the Minas Basin area. Detail inset shows a pathway between the headwater of the Annapolis River and the Minas Basin ("Chemin du Port Royal au Minas"). The Mi'kmaq probably would have used a similar route (perhaps utilizing the Cornwallis River) for transporting chert from Scots Bay/Cape Split to the Annapolis Basin and into the interior of southwest Nova Scotia. Map source: Dawson 1987:134.*

In the Minas Basin area, the Melanson (BgBb-07) and St Croix (BfDa-01) sites also feature largely 'non-quartz' chipped-stone lithic assemblages (Deal and Butt 1991; Deal et al. 1994; Nash et al. 1991:219). When compared with the evidence from the Allains River, it is possible this represents a distinct pattern of lithic exploitation, where sites along Bay of Fundy drainages show a preference for non-quartz, while Atlantic draining rivers in southwest Nova Scotia are dominated by quartz (Erskine 1998:80; Sanders and Stewart 2007).

4.1.1.3 – Lithics – Chipped-Stone Artifacts: Material Discussion

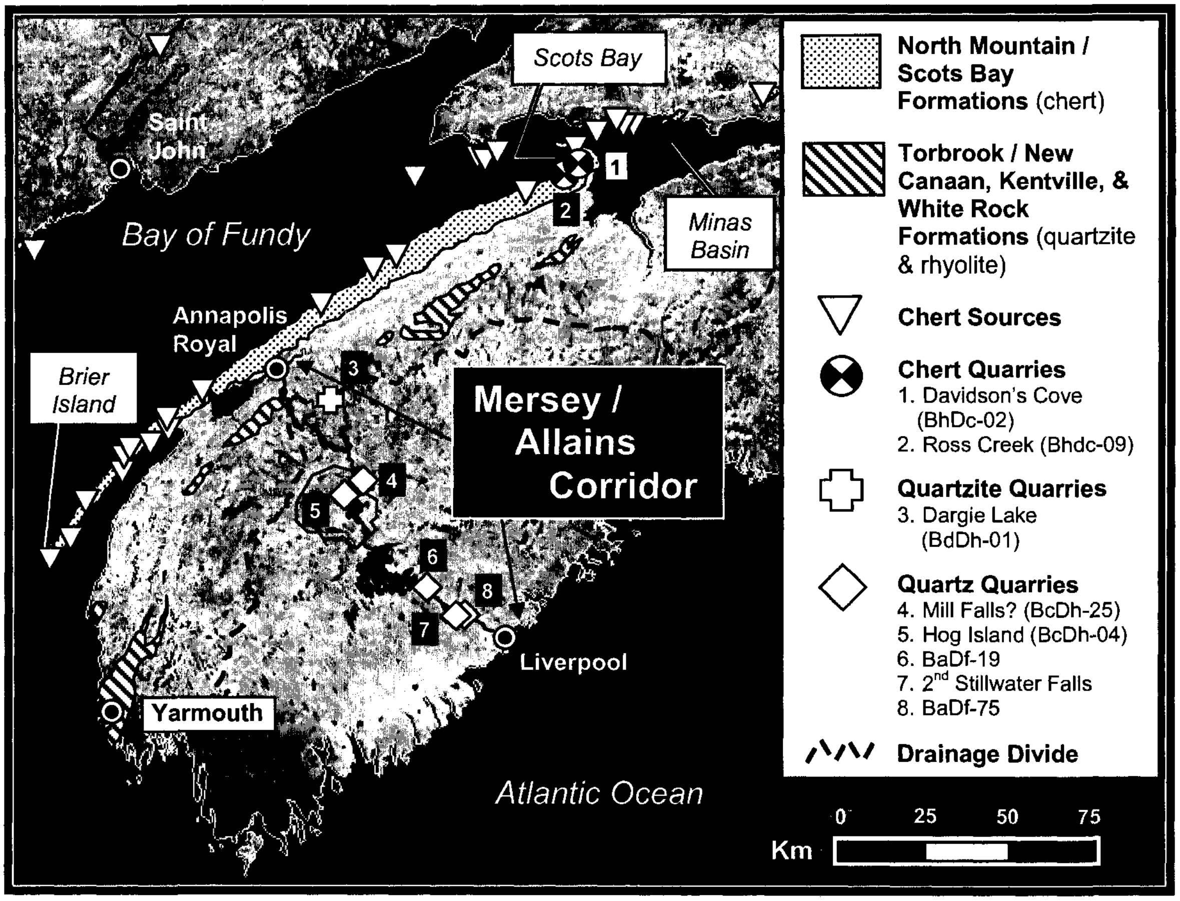


Figure 4.4.2: *Geological map of southwest Nova Scotia, showing in particular how the distribution of local chert and quartzite is largely restricted to the Bay of Fundy region. This appears to explain the observation that pre-Contact aboriginal groups in Kespukwitk typically exploited locally available lithic material. As such, sites within the Bay of Fundy drainage-area usually feature chert and quartzite lithics, while assemblages along Atlantic draining rivers are usually dominated by quartz material. Several pre-Contact quarry sites identified along the Mersey River further support this observation. (For chert sources see Sabina 1972).*

Cherts have a limited distribution within the Maritimes (*Figure 4.4.2*), and in southwest Nova Scotia this is restricted to the North Mountain and Scots Bay Formations, along the south coast of the Bay of Fundy (Donohoe et al. 2005). Geologists and rock collectors have identified several chert outcrops between Brier Island in the southwest and Scots Bay in the northeast. Additional chert deposits are present along the north shore of the Minas Basin and Cobequid Bay between Isle Haute, Cap D'Or and Bass River.

This is particularly valuable information from an archaeological perspective, because the recovery of chert artifacts beyond these restricted geographic areas of availability represents evidence of past cultural mobility and trade. And for the purposes of this thesis, the presence of chert along the Upper Mersey/Allains River Corridor provides valuable physical evidence that these rivers were used as a pre-Contact travel route across the traditional *Kespukwitk* territory of southwest Nova Scotia.

Chert is most commonly encountered on Woodland Period (ca 3,000-450 BP) sites. As such, archaeologists in Nova Scotia frequently attribute the presence of chert as a *Kejikawek L'nuk*/Woodland Period (ca 3,000-450 BP) cultural identifier (Christianson 1984c, 1985:9; Erskine 1998; Ferguson 2005, Myers 1973; Sanders and Stewart 2007; Sheldon 1988:139). However, chert material has also been recovered from *Saqiwe'k L'nuk*/Palaeo-Indian contexts at the Debert-Belmont Site Complex (BiCu-01, 06-10) (Buchanan 2007), and at BaDe-13 on the lower Mersey River (see *Figure 2.3.4a*), indicating that cultural generalizations regarding the use of chert in the Woodland Period may not always be accurate.

Interestingly, Deal indicates chert from Scots Bay is rarely encountered east of the Shubenacadie River (1989:4). Ethnographic records indicate the Shubenacadie and Musquodoboit Rivers of central Nova Scotia formed the western boundary of the *Kespukwitk* (Lands End, or Last Flow) territory (Anderson 1919:45; Biard 1959:89; Speck 1922:93-105). More recent representations of traditional Mi'kmaw territories in Nova Scotia suggest the *Kespukwitk* boundary is further west in Lunenburg County (Bernard et al. 2007; NCNS 1994). However, the traditional Mi'kmaw territories of *Sikepne'katik* or *Sipekni'katik* (Wild Potato Area) and *Eski'kewag* or *Eskikewa'kik* (Skin

Dressers Territory) may roughly correspond with the Shubenacadie/Musquodoboit River line (Bernard et al. 2007). Despite the apparent ambiguity between which of the traditional Mi'kmaw territories are involved, it appears the use and trade of Scots Bay chert may have followed traditional Mi'kmaw socio-political or geographical boundaries. However, the lack of recorded sites in eastern Halifax and Guysborough Counties may represent a false-negative result for Scots Bay chert in this area. Further analysis of lithic material from sites east of the Shubenacadie and Musquodoboit Rivers is necessary to substantiate this observation.

Chert sources are also frequently referenced in Mi'kmaw legends as important geographic and geologic landmarks, such as Cape Split in Scots Bay, the home of *Kluskap*/Glooscap (hero-god), or Partridge Island near Parrsboro, the home of *Kluskap's* mother (Donohoe et al. 2005; Gloade 2007; Robertson 1969; Spicer 1991). In fact, according to Mi'kmaw researcher Gerald Gloade Sr. (2007) amethyst and other gemstones found at Partridge Island are said to have fallen out of *Kluskap's* mother's jewellery box. As such, it is clear that lithic resources played a very important role in the daily life of the Mi'kmaq not only as tools, but also in regional economies, oral traditions, and cultural mythology.

In addition to chert, rhyolite may also be a culturally informative lithic material, as it is more commonly related to *Mu Awsami Saqiwe'k L'nuk*/Archaic Period site assemblages (see BcDi-03, Ferguson 2005:57), particularly in private collections. However, using rhyolite as an indicator of pre-ceramic site occupation is not completely reliable since Stedman's Beach (BdDh-02) and Big River Runs (BdDh-03) both featured small quantities of rhyolite, including the biface in *Figure 4.4.3*, and once again it has

Figure 4.4.3: *Mended rhyolite biface recovered from a shovel-test at Big River Runs (BdDh-03). Note the oblique angle of the banding in relation to the tool's long-axis. Photo: B. Pentz.*

turned up in *Saqiwe'k L'nuk*/Late Palaeo-Indian contexts on the lower Mersey River (see *Figure 2.3.4b-e*). At this time both sites are only considered *Kejikawek L'nuk*/Woodland Period sites. Further research is necessary to support wide use of rhyolite as a cultural marker for *Mu Awsami Saqiwe'k L'nuk*/Archaic Period occupations. However when examining the rhyolite bifaces in collections from southwest Nova Scotia, it was interesting to note they were all crafted with the phenocryst alignment and flow-texture banding of the rhyolite running parallel or slightly oblique (0-45 degrees) to the long-axis of the tool (see *Figure 2.3.4b-e,* and *Figure 4.4.3*). This may represent a regional or perhaps widely used manufacturing technique for working with rhyolite, possibly as an intentional response to a recognized weakness in the material. Future lithic analysis may be able to shed additional light on this apparent trend.

<u>4.4.1.4 – Lithics – Chipped-Stone Artifacts: Culture-History</u>

Many of the chipped-stone biface artifacts recovered from sites along the Allains River and upper Mersey River are useful for dating the occupation of these sites. The basal styles of bifaces, along with other morphological characteristics change through time, and are viewed as cultural and chronological identifiers. Seven sites within the study area featured datable bifaces.

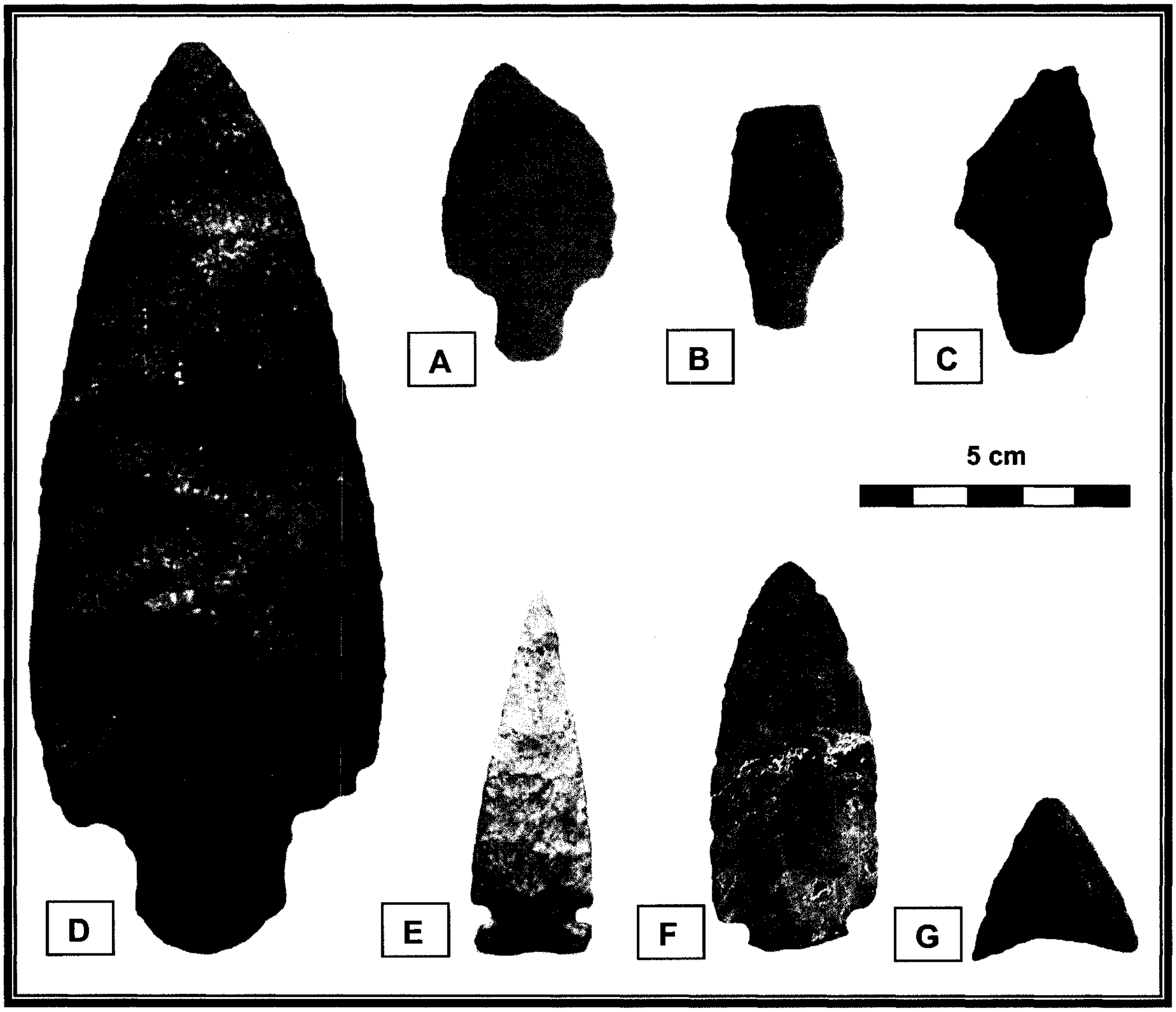


Figure 4.4.4: *Culturally definable bifaces from the Allains River. (**A,B**) Late Archaic, stemmed quartzite bifaces from the Vidito site (BeDi-07), and (**C**) from the Nichol site (BeDi-10). (**D**) Early Woodland quartzite Adena-style biface, and (**E**) Meadowood-style chert biface, both from Dargie Lake (BdDh-01). (**F**) Middle Woodland Period corner-notched, Scots Bay (Davidson's Cove) chert biface from the Grand Lake Dam site (BdDi-01). (**G**) Late Woodland Lavanna-style chert biface from the Vidito site. No photo is available for the Late Woodland side-notched pink quartzite biface from the McGinis site (BdDi-10), on Grand Lake. Photos: B. Pentz (A-C, F, G); Callum Thomson (D, E).*

On the Allains River, these bifaces range from the Late Archaic Period (ca 5,000-3,500 BP) to the Middle-Late Ceramic Period (ca 2,000-450 BP) (*Figure 4.4.4*). Dargie Lake (BdDh-01), at the headwaters of the Lambs Lake Brook/Ten Mile River eastern branch of the Allains River features two bifaces from the Early Ceramic Period (ca 3,000-2,000 BP) (*Figure 4.4.4d,e*) one is a light coloured chert or felsite, Meadowood-style (box-based, side-notched) biface, and the other is a large quartzite, Adena-style (laterally bi-convex, stemmed base) biface. This supports an Early Ceramic Period/Adena-culture presence on the Allains River, which was also recognized by the recovery of a birdstone preform collected from Grand Lake (see *Figure 4.4.6d*) (McEachen 2004:247). When combined, these bifacial artifacts demonstrate the Allains River has been used continuously for the last 3,000-5,000 years.

The lack of bifacial material from the upper Mersey River has resulted in a less definitive culture-history overview. However, the presence of a quartzite, side-notched biface base from McKibbin's Beach (BdDi-07) at the north end of Fisher Lake is lithic evidence that the upper Mersey was used during the Late Ceramic Period (ca 1,000-450 BP) (*Figure 4.4.5a*). The recovery of similarly aged pottery from Stedman's Beach (BdDh-02) and Big River Runs (BdDh-03) confirms the Milford Lakes area was used significantly by the *Kejikawek L'nuk* and *Kiskukewe'k L'nuk* during the late pre-Contact Period.

Figure 4.4.5: *Culturally definable bifaces from the upper Mersey River. At left (A), is the base of a Late Woodland Period (ca 1,000-450 BP) pink quartzite side-notched biface from McKibbin's Beach (BdDi-07), on Fishers Lake. At right (B), is a Late-Terminal Archaic (ca 5,000-3,000 BP) quartz stemmed biface from Rogers Brook (BcDh-09) in KNP/NHS. Photos: B. Pentz.*

This information confirms at the very least that the whole Upper Mersey/Allains River Corridor was occupied during the last 1,000 years. The tantalizing discoveries of a Late-Terminal Archaic Period (ca 5,000-3,000 BP) quartz stemmed biface at Rogers Brook (BcDh-09, see *Figure 4.4.5b*) near Jakes Landing in KNP/NHS, and a rhyolite biface from Big River Runs (*Figure 4.4.3*) serves as initial evidence of earlier pre-ceramic *Mu Awsami Saqiwe'k L'nuk* (Archaic) occupations along the rest of the upper Mersey. Further research in this under-studied region should provide evidence of a similarly long history to that which has already been established for the Allains River.

4.4.2 – Lithics – Ground-Stone Artifacts

Only five sites along the Upper Mersey/Allains River Corridor are known to have produced ground-stone artifacts – three on the Allains River (Vidito - BeDi-07; Grand Lake Dam - BdDi-01, Lambs Lake Brook - BdDi-09), and two on the Mersey (McKibbin's Beach - BdDi-07, Lower Dukeshire's Falls - BcDh-24). It is possible that additional ground-stone artifacts were recovered by collectors at Vidito, the Nicholl site (BeDi-10), and at sites on Grand Lake. In the case of both Vidito and Nichol, the original collections have become lost or were given away over the years, and with them any clues to the past they held (Christianson 1984a, 1984b). Other local artifact collections such as the artifacts held at Fort Anne National Historic Site, in Annapolis Royal may represent important components of known sites or new cultural deposits in the area, but unfortunately no provenience remains to indicate the origin of this material, making it inadmissible for this analysis.

A wide range of material appears to have been suitable for the manufacture of ground-stone tools, including felsite and a variety of other igneous stones, siltstone, and slate. The availability of these materials throughout southwest Nova Scotia is fairly common, so establishing information on specific quarry sites is not yet possible. Unfortunately, confident identification of the artifact material was not always possible in this analysis, due to a lack of existing archaeological analysis on ground-stone tool materials in the region, and in some cases the inability to handle the artifacts on display in museums, or because the source was a secondary photograph of variable quality.

Groundstone artifacts often provide valuable information regarding the cultural background of a site and when it was occupied. The oldest artifact identified during this research is the shallow full-channelled gouge from Grand Lake Dam (*Figure 4.4.6a*), which represents a Middle Archaic Period (ca 7,000-5,000 BP) occupation of this site, and is similar in form to a gouge recovered from Merrymakedge Beach in KNP/NHS (see *Figure 2.3.3a*). Two Late Archaic Period (ca 5,000-3,500 BP) gouges were also recovered from Grand Lake – a well-defined, short-channelled gouge with a narrow bit from Grand Lake Dam, and a broad, short-channelled gouge with a shallow channel and tapered butt from the Lambs Lake Brook site (Suttie 2005:23). Celts were recovered from both Vidito and Lambs Lake Brook, but unfortunately celts are common to both the Archaic and Woodland Periods, and are not usually diagnostic of a particular cultural period.

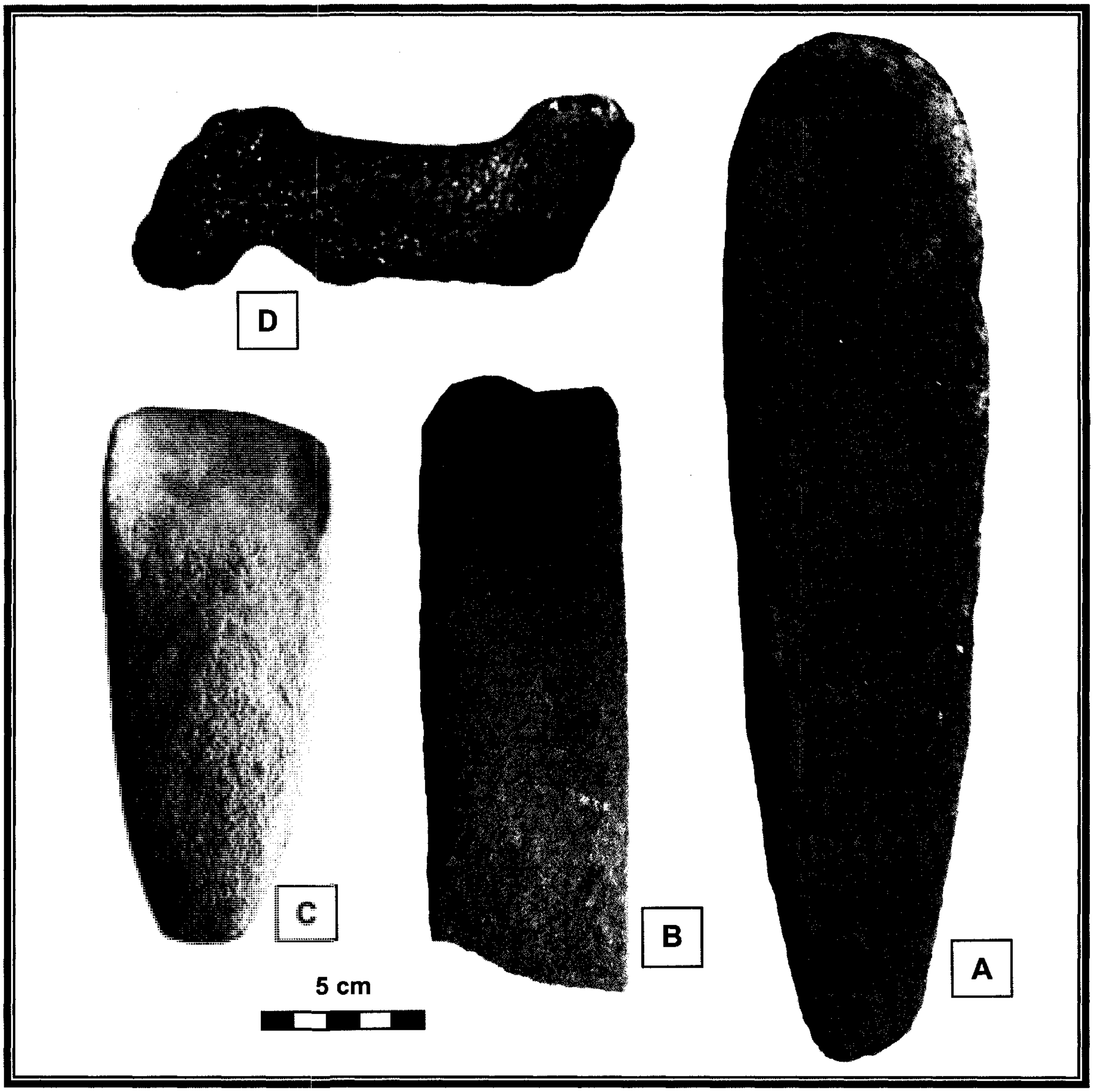


Figure 4.4.6: *Culturally definable groundstone artifacts from the Allains River. (**A**) Full-channelled gouge, and a (**B**) short-channelled gouge from the Grand Lake Dam site (BdDi-01); (**C**) Short-channelled gouge from Lambs Lake Brook (BdDi-09); and (**D**) a pecked 'birdstone' preform from also from the Grand Lake Dam site. Photos: B. Pentz (A-C); Todd Labrador (D).*

The Grand Lake Dam site (BdDi-01), has also produced a pecked (slate?) birdstone perform, which is associated with the Early Ceramic Period/Adena cultural tradition (ca. 3,000-2,000 BP) (McEachan 1996:116, 2004:247). These artifacts are rare in Nova Scotia. Upon completion the birdstone would have formed part of an *atlatl* (spear thrower). The presence of an Adena culture occupation along the Allains River is further supported by the recovery of Early Ceramic Period chipped-stone bifaces from the Dargie Lake Site (BdDh-01, see *Figure 4.4.4d,e*). Interestingly, Dargie Lake is the headwaters of the eastern branch of the Allains River, which enters the main river at the foot of Grand Lake, near where the birdstone was found on the east shore of the Grand Lake Dam site (BdDi-01).

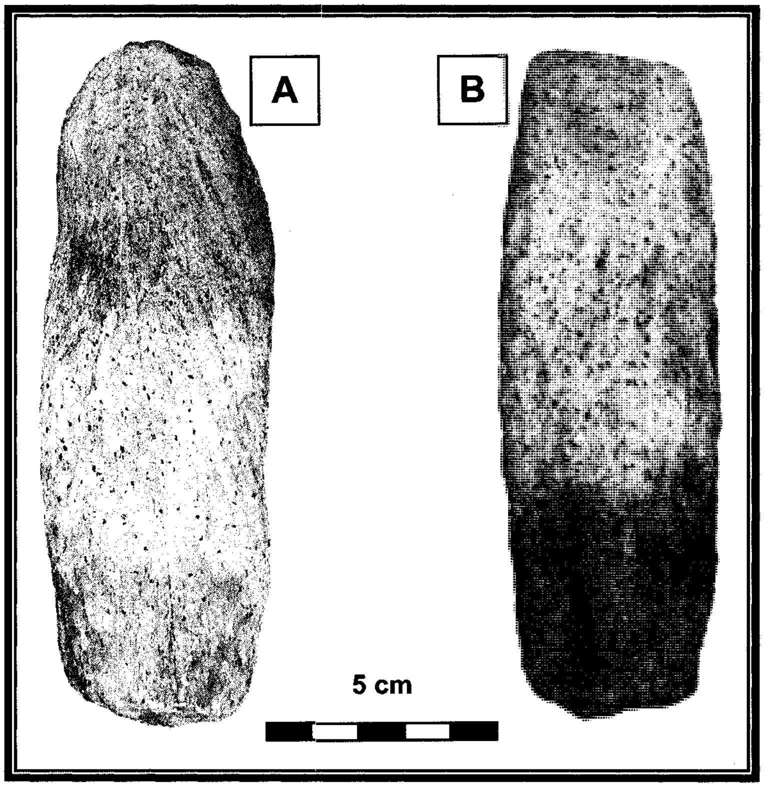


Figure 4.4.7: *At left (**A**) is the felsite adze preform recovered from Lower Dukeshire's Falls (BcDh-24). At right (**B**) is a celt made from similar material, collected from the lower Mersey River, at a site Middle- and Late-Archaic artifacts, and possibly even Late Palaeo-Indian material. The similarity of these artifacts, is tentative evidence that Lower Dukeshire's Falls may represent a pre-ceramic occupation presence on the upper Mersey River. Photos: B. Pentz.*

An adze preform made of blue-grey felsite with phenocrysts was uncovered in association with an extensive quartz lithic scatter at the Lower Dukeshire's Falls site (BcDh-24) (*Figure 4.4.7a*). Although the adze itself is not culturally diagnostic, Noel Dexter from Liverpool has collected adze/celt tools made from a similar phenocryst felsite material at Second Stillwater Falls, approximately 1 km upstream from the original mouth of Lower Great Brook, on the eastern shore of the lower Mersey River (Dexter

2006). At the same site Mr. Dexter has also recovered full-channelled gouge fragments, stemmed points, and a slate ulu fragment from the Middle-Late Archaic Periods (ca 7,000-3,000 BP). The idea that blue-grey phenocryst felsite may serve as Archaic Period culture-historic identifier is only tentative, but it may represent suggestive evidence of a pre-ceramic *Mu Awsami Saqiwe'k* occupation on the upper Mersey River. Perhaps future investigations at the Lower Dukeshire's Falls site can confirm the presence of a pre-Woodland Period (+3,000 BP) occupation to support this hypothesis.

Unfortunately, the butt-end of an adze preform from McKibbin's Beach (BdDi-07), and a possible ground-stone fragment from Stedman's Beach (BdDh-02) are not diagnostic enough to indicate a particular cultural period in the past, since adzes, like celts are tool-types common to both the Archaic and Woodland Periods. As such, it is not yet possible to confirm a pre-ceramic (+3,000 BP) occupation along the upper Mersey River, north of KNP/NHS. However, not all the sites along the upper Mersey have been dated, and examination of the sites is only at the initial stages, therefore earlier components may yet be uncovered. Further work at these sites, including Lower Dukeshire's Falls, may yet demonstrate the upper Mersey River has a similar long history to that of the Allains River. The presence of many *Mu Awsami Saqiwe'k L'nuk*/Archaic Period (ca 7,000-3,000 BP) sites along the central lakes and lower reaches of the Mersey River would seem to indicate this is indeed the case.

4.4.3 – Lithics – Unmodified-Stone Artifacts

Several artifacts recovered during the UMARC Survey do not fit into the above categories of chipped-stone or ground-stone artifacts. For the purposes of this analysis they have been categorized as unmodified-stone artifacts. This term includes natural stones that did not require physical reshaping or improvements to carry out their function, such as a small quartzite hammerstone, a possible sandstone digging-tool, and a large red siltstone nodule recovered during 2006 fieldwork. Unmodified stone artifacts also include rocks that show the affects of cultural processes, such as the fire-cracked and heat-altered (reddened) rocks recovered from McKibbin's Beach (BdDi-07) and Stedman's Beach (BdDh-02).

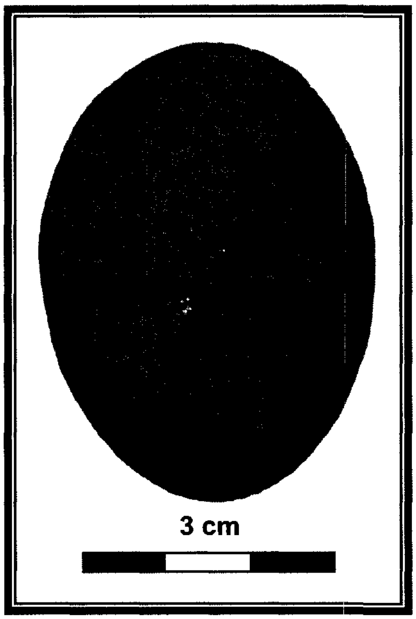


Figure 4.4.8: *Quartzite hammerstone from the Springhill Mud Lake site (BdDi-05). Note pecking scars at top. Photo: B. Pentz.*

These artifacts cannot indicate the age or cultural occupation of a site, but they do provide evidence of past activities and possible site function. The hammerstone from the Springhill Mud Lake site (BdDi-05), exhibits minor pecking on one end, and suggests that lithic reduction was carried out at this site. However, the fact that only eight additional flakes were recovered from Springhill Mud Lake, suggests stone knapping was not a major activity. The location of Springhill Mud Lake (BdDi-05) near the height-of-land between the Allains and Mersey River drainages suggests this served as a temporary campsite for travellers moving between the two river systems. Also, it must be considered that much of the landform where the site is located is eroding, and important components of the site, including larger lithic scatters may have become lost to the surrounding bog.

The function of the possible sandstone digger and the red siltstone nodule are more speculative. The digging tool has a shovel-like shape, and appears to feature use-wear along one edge, and may have been used for gathering roots, or for carrying out other subterranean endeavours. The siltstone nodule was recovered in a shovel-test at Baillie Lake Brook (BdDi-04), about 15 cm DBS, on top of several larger granite cobbles. Two nearby quartz artifacts (1 small thinning flake; 1 retouched flake) are all that was found at the site. The soil around the nodule was stained pink from the weathering of the stone. Unfortunately, the field visitation of Baillie Lake Brook was limited to a single afternoon, so further investigation was not possible. The function of the red siltstone remains unclear (possibly pigment?), but the site appears to be related to the nearby portage trail along Baillie Lake Brook.

4.5 – Weirs

Weirs are obstructions in the water, which have been built or modified by humans using stones or stakes and interwoven branches, for the purpose of impeding or impounding fish for consumption (Lewis 2007:1; Lutins 1992). In some cases, weirs also include a trap at the apex of the feature, toward which the outstretched arms of the weir guide the fish (Rostalund 1952:101). Other methods of capture without the use of a trap include spearing and using nets (Lewis 2007:44). Weir-fishing provides an efficient means of harvesting large quantities of fish, and it can be carried out with a limited number of people and necessary maintenance to the weir structure itself; however, adaptations in strategy, form, and construction materials may be necessary for using weirs in different aquatic-zones or for particular aquatic species (Lewis 2007).

Lewis' study of pre-Contact fish-weirs in southwest Nova Scotia has resulted in the identification of four types of weirs – *Type 1* (tidal-zone, fence-stake weirs); *Type 2* (estuary-head, up- or downstream oriented, linear- or V-shaped stone weirs – these may have also featured fence-stake components); *Type 3* (freshwater – lower-river, up- or downstream oriented, ovate- or rectangular-shaped, stone weirs/pens); and *Type 4* (freshwater – interior, downstream oriented, V-shaped stone weirs) (Lewis 2007).

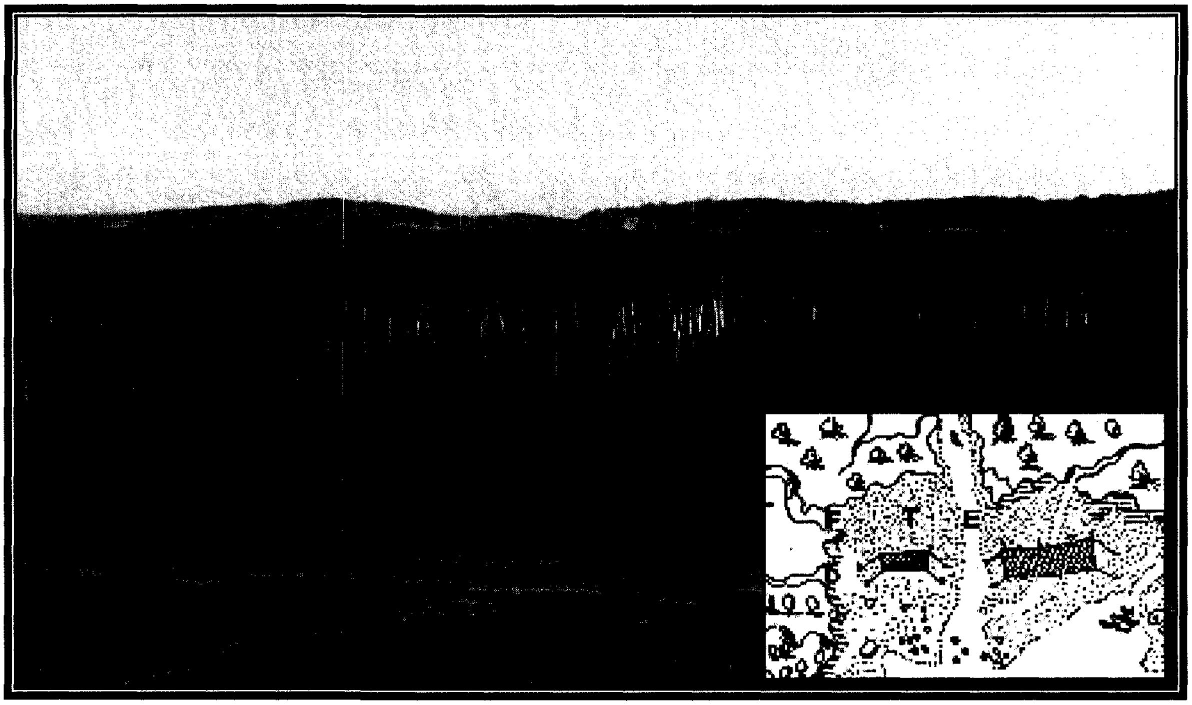


Figure 4.5.1: *Although no pre-Contact Type 1 weirs have been identified in Nova Scotia, they probably would have appeared similar to modern tidal-stake herring weirs, which remain in use around the Bay of Fundy. Traditional Type 1 weirs may have featured nets, like above, or a lattice of horizontal branches woven between the stakes to trap fish during the falling tide. Inset at right shows detail of Champlain's map of Quebec and two tidal weirs at the mouth of the Jacques Cartier River in 1608. Photo Source: iVillage Garden Web 2006; Inset source: Laverdière 2005.*

Lewis' typology is based on the geographic location of weirs within a river system and on the fish species they targeted, and only to a lesser extent on the architectural design of the weir, which is more variable. The exception to this is *Type 1* fence-stake weirs, which are defined by their wooden construction materials, as well as their location within the tidal zone (*Figure 4.5.1*). *Type 1* weirs were largely opportunistic in their harvest of various fish that passed through the tidal zone; however they were well suited for impounding schooling fish such as herring and mackerel. *Type 2* weirs at the estuary-heads of rivers primarily focused on spring run, up-stream migrating gaspereau, and to a lesser extent salmon, sturgeon, and striped bass. *Type 3* weirs on the lower main rivers were designed to trap salmon and possibly sturgeon in a pen-like structure from which they were speared, or netted (either gill-net or dip-net). *Type 4* weirs are located throughout the freshwater portions of rivers, and targeted the downstream fall migration of eels, which were caught in a box-trap or wicker creel. The species mentioned above represent the only primary targeted species, bi-catches of other species would have occurred, and the opportunity for exploiting multiple species at different times of the year from a single weir structure or complex of weirs is most probable. (Lewis 2007:36,52)

Four stone fish-weir features were identified during the 2006 UMARC Survey – three on the Allains River system (Dugway Bridge Weir - BeDi-15; Grand Lake Stream Weir 1 - BdDi-02; Grand Lake Stream Weir 2 - BdDi-03), and one along the upper Mersey (Forrest Weir - BcDh-26).

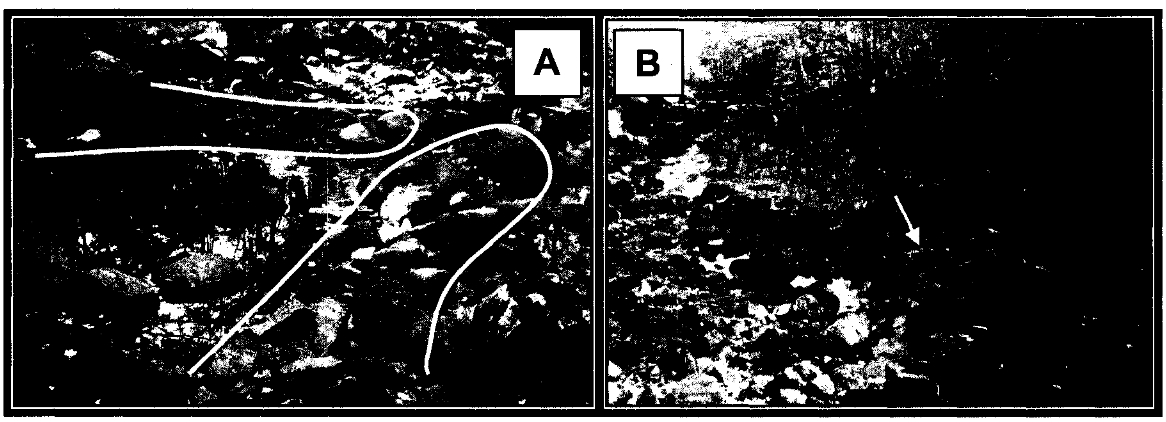


Figure 4.5.2: *Photos of **(A)** Grand Lake Stream Weir 1 (BdDi-02, view downstream), and **(B)** Grand Lake Stream Weir 2 (BdDi-03, view upstream). Grand Lake Stream Weir 1 is a small, crudely built, V-shaped weir, which has incorporated a large natural boulder in its construction (upper left). Grand Lake Stream Weir 2 has long straight arms, which span the width of the river. A historic milled plank (arrow) has also been incorporated into this structure indicating its continued use into the post-Contact Period. Photos: B. Pentz.*

Three of the weir features identified during the UMARC Survey appear to be *Type 4*, interior, downstream oriented, V-shaped stone weirs (Grand Lake Stream Weirs 1 and 2; and Forrest Weir). These types of weirs were constructed along narrow portions of a river where natural bottlenecks occur, often associated with rapids or runs between riverine stillwaters and lakes (Lewis 2007:51). Natural obstructions such as bedrock ledges or large boulders are often incorporated into the weir architecture (Lewis 2007:48-49) (see *Figure 4.5.2a*). The arms of these interior weirs, as well as *Type 2* and *Type 3* weirs, are constructed from piled river cobbles, held in place by gravity and the force of the water current; any gaps in the rocks would be filled with hemlock boughs (Lewis 2007:49). These arms guide the fish toward a box-trap, or wicker creel at the apex of the weir, or in some cases the fish would be collected with a dip-net or by spearing.

The Dugway Bridge Weir (BeDi-15) was the fourth weir identified during the 2006 survey, just above the historic head-of-tide at the first set of rapids on the lower Allains River (*Figure 4.5.3*). According to Lewis (2007), this location within the Allains watershed seems to correspond with what he considers a *Type 2* weir. However, the positioning of the Dugway Bridge Weir on the lower Allains River (similar to *Type 3* weirs), would have also facilitated the spearing or dipping salmon, which were more common in the Allains River than the larger Annapolis River (Erskine 1998:57), and its downstream orientation may have been suitable for catching eels in the fall (similar to *Type 4* weirs). The suitability of this weir for targeting multiple species suggests it may have been operated on a year round basis.

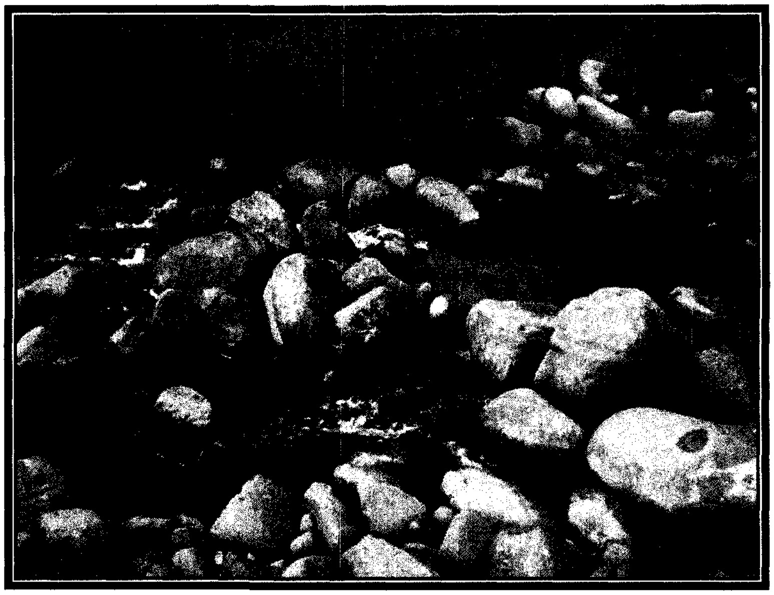


Figure 4.5.3: *Profile view of the Dugway Bridge Weir (BeDi-15), showing the short piled-stone arms of the weir, which is located at the first set of rapids on the lower Allains River. Using Lewis' (2007) weir typology for southwest Nova Scotia, as well as historic and ethno-historic evidence, it appears this weir was primarily used for catching gaspereau (Type 2 weir), but may have functioned to target other species such as salmon and eels at other times of the year, similar to interior Type 3 and 4 weirs. Photo: B. Pentz.*

Examining the ethno-historic record seems to shed further light on how the Dugway Bridge Weir was used in the past. On Champlain's 1607 map of the Annapolis Basin (*Figure 4.5.4*; also *Figure 3.5.2*), the symbol (*V*) has been placed at the first rapid on the Mill (Allains) River, marking "the place where the Indians gather herring in season" (Biggar et al. 1971:Plate LXVII). This feature matches the location of the Dugway Bridge Weir. The '*herring*' in Champlain's notation refers to gaspereau, which migrate upstream to spawn in April and May.

A historic reference from Lescarbot may provide further evidence that weir BeDi-15 was used for gaspereau fishing. He records hunting and fishing around the Annapolis Basin was poor in the spring of 1610, and the people were hungry. Having been recently baptized, the *Sakmow* (Grand Chief) Membertou prayed to God to meet the needs of his people, "and sent his daughter to the *mill-stream*. He had been but a short time at this duty when up she came running and crying ... *'Father, the herring has come, the herring has come'*: and there was an abundance of provision" (Grant and Biggar 1911b:45-46, Ricker 1998:30-31) [italics mine]. Once again, '*herring*' in this case are gaspereau, and the '*mill-stream*' refers to Champlain's Mill (Allains) River (see '*S*', *Figure 4.5.4*), after Poutrincourt's gristmill (see '*I* ', *Figure 4.5.4*) built near the weir in 1607.

Figure 4.5.4: *Detail of Champlain's 1607 map of the lower Allains (Mill) River ('S'). On the east side of a gravel bar, he has illustrated a weir ('V') in the exact location of where the Dugway Bridge Weir (BeDi-15) was identified. Champlain has labelled 'V ', as "the place where the Indians gather herring (gaspereau) in season". Additionally, Lescarbot records in 1610 that Sakmow/Grand Chief Membertou sent his daughter up the "Mill River" to see if the gaspereau run had started. Since women were usually involved in gaspereau and weir fishing, and since a weir has been identified at the location where Champlain indicates gaspereau fishing took place on the Allains (Mill) River, there is strong evidence that the Dugway Bridge Weir depicted on Champlain's map is in fact where Membertou's daughter discovered that the gaspereau had returned. This provides strong support for Lewis' model describing Type 2 weirs near the head-of-tide being used for fishing gaspereau. (Map source: Dawson 1987:101).*

Although Lescarbot does not specifically mention a weir, he does indicate gaspereau fishing was a task carried out by *women* and old men (Christianson 1979:98; Thwaites 1959:185). According to Lewis, gaspereau were fished with weirs (2007:40). If women fished gaspereau using weirs, then the fact that Membertou sent his *daughter* and not one of his sons to the millstream to see if the gaspereau run had started supports the idea that Membertou expected his daughter to check on a weir. This is further reinforced by the historic record through Champlain's 1607 depiction of a weir ('*V*') on the Allains (Mill) River ('*S*') at "*the place where Indians gather herring* [gaspereau] *in season*". Finally, the identification of the Dugway Bridge Weir at this exact location seems to tie all these lines of evidence together, and supports the assertion that the Dugway Bridge Weir was used for gaspereau fishing, and it was at this very weir in the harsh spring of AD 1610, that Membertou's daughter marked the belated run of gaspereau to the Allains River.

Figure 4.5.5: *Photo of Feature 1 at the Dugway Bridge Weir site (BeDi-15). A ring of river cobbles ~1.5m wide was identified on the gravel bar adjacent to the weir. Although the contemporary relationship between this feature and the weir has not been confirmed, circular features between 1 and 3 metres wide have been identified at other weirs along the lower Mersey River. These features have been identified as possible eel de-sliming pits. Although the Dugway Bridge Weir seems to have primarily targeted anadromous species such as gaspereau, this circular feature may indicate that multiple species, including eels, were harvested at this weir. Photo: B. Pentz.*

Further examination of the shoreline around the Dugway Bridge Weir site revealed evidence that supports the weir being used to target other species, perhaps in addition to gaspereau. A ~1.5 m wide, circular ring of small cobbles was identified on the riverbank near the weir (*Figure 4.5.5*), and may correspond with similar features found at *Type 4* weirs (BbDh-06; BbDh-33) on the lower Mersey River, which have been identified as smoking or de-sliming pits for eels (Christianson 1986; Ferguson

2005:25,27; Labrador 2005; Lewis 2007:47). Although the circular stone feature (Feature 1, see B. Pentz 2007d) at the Dugway Bridge Weir may have served as a de-sliming pit for eels, it is equally feasible that this feature, if indeed of Mi'kmaq origin, was a small holding pen or smoking pit for the gaspereau caught at the weir.

The greater evidence of gaspereau fishing at the Dugway Bridge Weir lends strength to Lewis' description that gaspereau were targeted at the head-of-tide in *Type 2* weirs on rivers in southwest Nova Scotia. As for the weir itself, the evidence suggests it may have targeted multiple species, either concurrently or at different times of the year, and that it combines the characteristics of both Lewis' *Type 2* and *Type 4* weirs

On the Allains River, the Dugway Bridge Weir (BeDi-15) and the Grand Lake Stream Weir 1 (BdDi-02) feature downstream V-shaped structures with short (>5m) arms, which open to form a wide angle from the apex (<75°). The Grand Lake Stream Weir 2 (BdDi-03) and the Forrest Weir (BcDh-26), from the Allains and Mersey Rivers respectively, have longer and semi-parallel arms (7-22 m), and are more narrowly angled (>75°) at the apex. It is not clear however, whether these differences in arm length and angle are simply the result of variability in river width or water-flow, or if these characteristics represent more significant differences in weir design related to age (traditional/pre-Contact vs. modern historic/commercial) or fishing techniques (trap fishing vs. spearing/dip-netting).

On the Allains River, Grand Lake Stream Weir 2 features a milled plank incorporated into the upstream portion of the apex channel of the weir (*Figure 4.5.6b*). This is likely a toe-board for mounting a historic/modern eel box-trap (Lewis 2006). Local resident Dan Rowter (2006) indicated the Forrest Weir near Maitland Bridge

(*Figure 4.5.6a*; also *Figure 3.3.3*) was actively fished during the 20th Century, as part of the commercial eel harvest. The photo below (*Figure 4.5.6a*) shows that the upper arm of this weir does not fully extend across the river from bank to bank. This represents a conservation measure often featured in historic/modern weir construction (Lewis 2007:55), although this characteristic is absent from the Grand Lake Stream Weir 2, which was also used during the historic period.

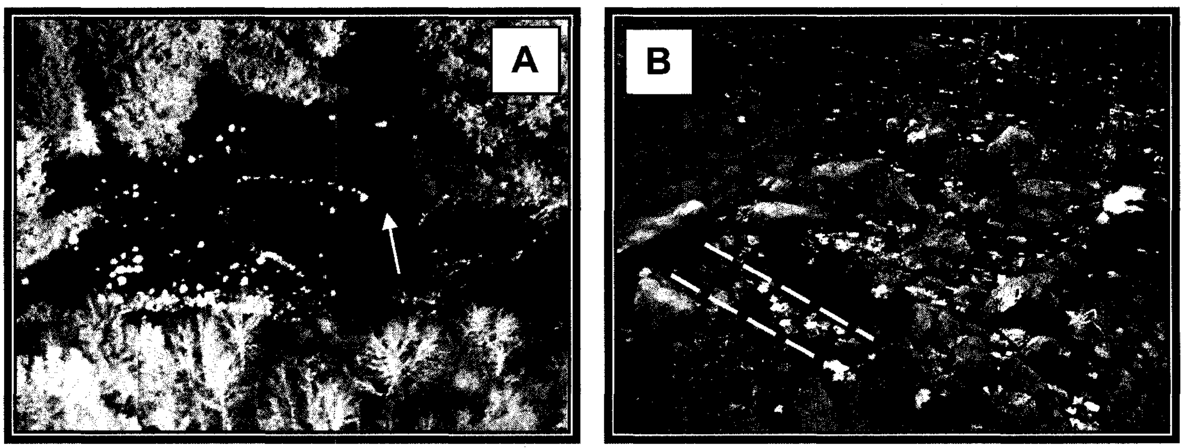


Figure 4.5.6: *(**A**) Aerial view of Forrest Weir (BcDh-26) showing gap (arrow) between the top weir arm and the shoreline, which was a historic 'conservation' feature that is typically absent from pre-Contact weirs. (**B**) Grand Lake Stream Weir 2 (BdDi-03) is a downstream, V-shaped weir with arms that span the whole width of the river – typical of pre-Contact weirs – however, this weir features a milled plank (denoted by white lines) built into the upstream portion of the weir apex, perpendicular to the flow of the water (see also Figure 4.5.2b). This is probably a 'toe-board ' for anchoring a box trap for eels. This historic/modern component seems to represent evidence of historic re-use of a pre-Contact weir structure, or perhaps continued use by the Mi'kmaq, but with adopted modern material. Photos: B. Pentz.*

Most of the rivers in southwest Nova Scotia flow across bedrock and are not subject to significant down cutting and erosion, and their course has remained largely unaltered through time (Lewis 2007, 37-38). As such, areas suitable for modern weir fishing were probably able to support a traditional weir fishery. Unfortunately it was not possible to conduct any subsurface testing near either of these weirs to determine whether they simply represent a modern/historic fishing activities, or whether these current stone features are only the most recent incarnation of extensive long-term weir fishing at these locations, extending back perhaps centuries or millennia.

However, archaeological evidence of long-term continuity has been established at the Eel Weir Site Complex, at the foot of Kejimkujik Lake, and along the lower Mersey River (Ferguson 2005; Sanders and Stewart 2007). Camps and activity sites at Kejimkujik Lake (BdDh-06, BcDh-07), which are directly associated with stone fish-weirs, exhibit a continuous occupation by the *Mu Awsami Saqiwe'k*/ Archaic populations (ca. 7,000-3,000 BP – see *Figure 2.3.3b*) through to the *Kiskukewe'k L'nuk* of the early 20th Century (Ferguson 2005).

Successive pre-Contact and post-Contact occupation of the areas around the foot of Grand Lake (BdDi-01, BdDi-08, BdDi-09) may represent a similar scenario of continuity and long-term use of the Grand Lake Stream Weirs 1 and 2 (BdDi-02, BdDi-03), and perhaps for a third weir destroyed by the construction of the Grand Lake control dam (Lewis 2003). When combined, these sites exhibit between 5,000 and 7,000 years of repeat occupation on the Allains River at Grand Lake, from the *Mu Awsami Saqiwe'k*/Middle Archaic Period through to the modern era, as represented by the presence of Bear River Reserve 6A property near the foot of the lake.

In all probability, many of the historic/modern weirs in the region have an aboriginal connection, even those from the 20th Century. Euro-Canadian settlement of the interior of southwest Nova Scotia only started in the 1790s and did not grow significantly until the timber-boom of the 1820s (Bell et al. 2005:12, 63, 91; Sheppard 2001:xvii-xxii, 21, 74, 95). Until that time, the interior wilderness remained largely the domain of the Mi'kmaq. Interestingly, each of the UMARC weirs are also located near nineteenth-century aboriginal land-grants (at Lequille/General's Bridge on the lower Allains River, at the foot of Grand Lake, and historically around Kejimkujik Lake), providing additional evidence that these stone structures have a Mi'kmaq connection, even if they feature non-traditional components or historic artifacts. The traditional techniques of the past continued to be an affective means of providing food for native and non-native alike, and so they were passed on or adopted by those who lived in the region. The fact that there are modern weirs along the lower Mersey River and throughout Nova Scotia, that continue to be owned and actively operated by local Mi'kmaq (i.e.: Danny Francis, Ponhook First Nation), demonstrates the knowledge of this traditional lifestyle lives on today (Soosaar 2005).

Since stone weirs could be maintained for annual re-use over successive generations, attempting to establish the age of a specific weir may not be a realistic endeavour, especially in the absence of diagnostic artifacts or organic weir components such as wooden stakes for radiocarbon dating. Once constructed stone weirs require only a minimal amount of effort to maintain, such as replacing fallen stones (Lewis 2007:48), or making adjustments for changing water conditions. Gradual shifts in water-flow or channel in-filling might dictate the construction of a new weir. However, through time, stones from older abandoned weirs might be scavenged or even incorporated into the building or repairing of active weirs. Therefore, perhaps a more accurate approach would be to suggest a date for how long the river-feature (i.e.: set of rapids) was used for weir fishing, instead of attempting to date the fluid conglomeration of stones that form the actual weir.

The presence of additional weirs within the UMARC, especially along the upper Mersey River is almost certain. At Lower Dukeshire's Falls (BcDh-24), a V-shaped stone formation was noted at the foot of the falls where it enters Harry Lake (*Figure 3.5.13*). However, it was unclear whether this was the remains of a heavily damaged Type 4 stone weir, or simply a V-shaped formed naturally by the falls. Several additional locations along the upper Mersey River were noted as possible weir structures during the reconnaissance canoe trip, however the high-water conditions obscured these features, and the remoteness of most of these areas prevented follow-up visits later in the field-season. Recent unconfirmed reports of additional stone weirs in KNP/NHS have also been suggested on waterways flowing into Kejimkujik Lake (D. Pentz 2007), which further supports the notion of additional weirs along the upper Mersey River.

CHAPTER 5 – SITE & REGIONAL DISCUSSION

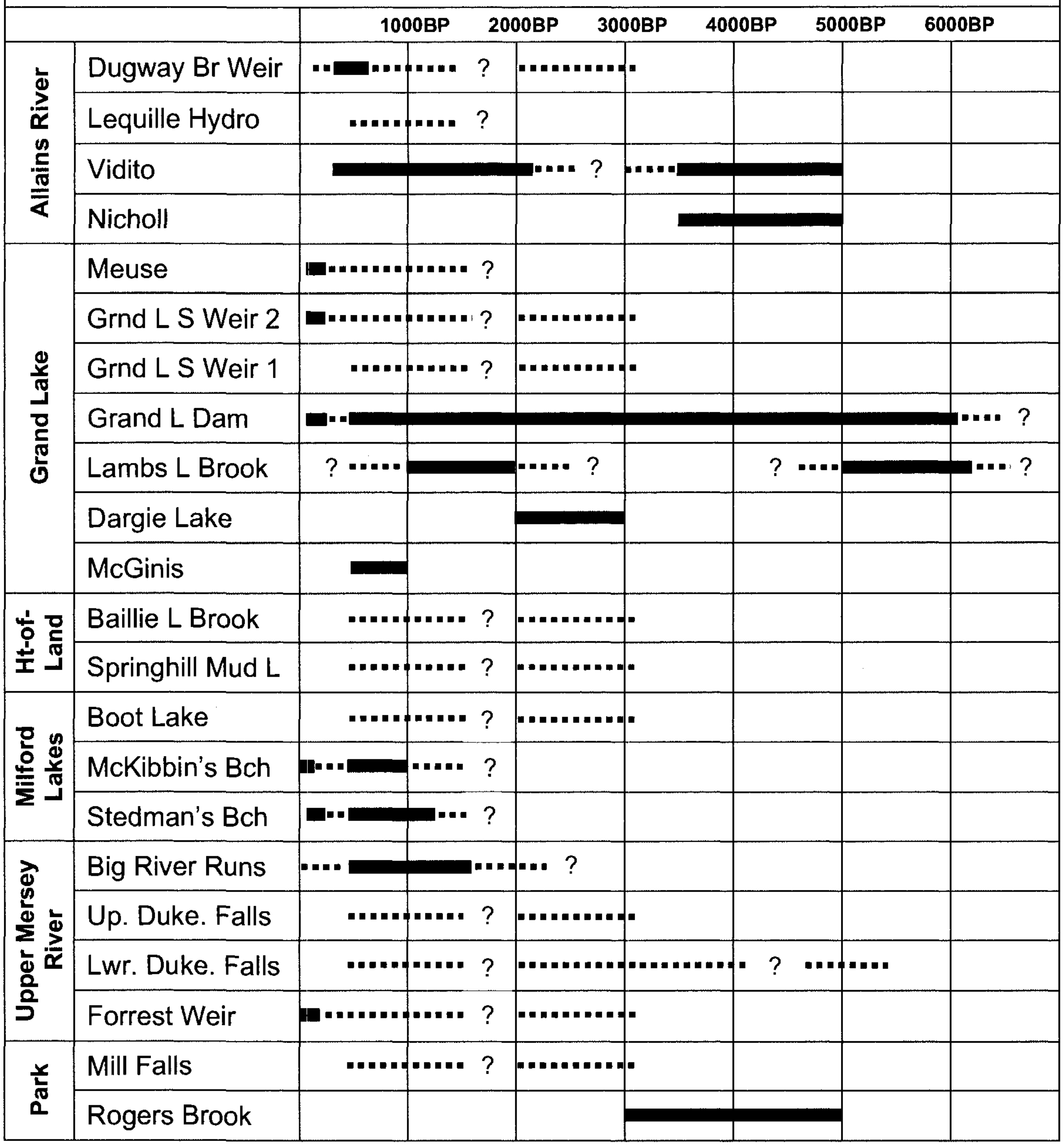
"The real voyage of discovery consists not in seeking new landscapes but in having new eyes." – Marcel Proust, French writer (ca 1871-1922)

The preceding chapter presented the ecofacts, artifacts, and features identified at sites along the upper Mersey and Allains Rivers during the 2006 survey. The following discussion will examine the cultural-historic sequence represented by these materials, as well as the geographic and human aspects of the sites within the local and regional landscape. The second half of this chapter will demonstrate how all this information helps expand our interpretations of pre-Contact settlement and subsistence patterns along the Mersey and Allains Rivers, and at a general level across the traditional Mi'kmaw territory of *Kespukwitk* in southwest Nova Scotia.

5.1 – Culture-History

The ceramic and lithic artifacts, and stone fish-weirs identified during the 2006 Upper Mersey/Allains River Corridor Archaeological Survey discussed in *Chapter 4* provide important evidence toward determining when and for how long these sites were occupied by the Mi'kmaq and their ancestors before the arrival of Europeans. The following table summarizes the datable evidence from the UMARC sites.

Table 5.1 – UMARC Occupation Sequence



The sites in *Table 5.1* have been arranged geographically from north to south, and have been further divided into the six UMARC Study Regions. The date-ranges for the culturally definable material identified at these sites are represented by solid lines, and correspond with similar artifacts recovered from dated contexts throughout the

Maine/Maritimes region. The dotted lines and question marks represent speculative occupation periods, as suggested by less diagnostic evidence. In many cases, only one or two datable artifacts were recovered from these sites. These few artifacts reflect human events and activities that occurred at these sites at some point during the date-range indicated in the table. Continual re-use of the sites throughout these periods represented by the artifacts from these sites cannot be fully proven due to the preliminary nature of this study, but it is nonetheless suggested.

Table 5.1 clearly shows the majority of datable material (represented by bold lines) has been recovered from the Allains River. This is due to the more extensive disturbance factors within this portion of the study area, which has lead to greater levels of success and interest by local collectors in their search for relics. The absence of hydro-dams on the upper Mersey River, as well as the absence of previously known sites in the area has largely deterred collectors, leaving the majority of sites along this portion of the UMARC fully intact. The same cannot be said of the Lake Rossignol Reservoir and the lower Mersey where hydro-dam flooding and erosion has facilitated the identification of nearly all of the 165 recorded sites on these bodies of water. Periodic seasonal exposure of some of the areas flooded by the dams has left them vulnerable to extensive surface collecting and looting throughout most of the twentieth century.

In examining the cultural-history of the UMARC, the sites at the north end of Grand Lake are of particular note because they feature artifact material spanning the last 5,000-7,000 years. As mentioned in *Chapter 4*, the artifacts from these sites include full- and short-channelled gouges, a birdstone preform (see *Figure 4.4.6a-d*), a corner-notched chert biface (*Figure 4.4.4f*), native pottery sherds, Scots Bay chert bifaces and scrapers, pre- and post-Contact weirs (*Figure 4.5.2, 4.5.6b*), European clay pipe-stems, and a tin-button (*Figure 4.3.7b*), in addition to less diagnostic tool forms including a celt and flake-debitage. The recovery of a Late Woodland Period (ca 1,000-450 BP) quartzite biface from the southern part of Grand Lake at the McGinis site (BdDi-10), and the Early Woodland Period (ca 3,000-2,000 BP) bifaces from a tributary of Grand Lake (Dargie Lake - BdDh-01, *Figure 4.4.4d,e*), provide additional evidence of an enduring pre-Contact presence on the upper Allains River. Pottery sherds at the Vidito site (BeDi-07) on the lower Allains River from Ceramic Period 3 (ca 2,200-1,650 BP, *Figure 4.3.6*) provide evidence of a Middle Woodland Period (ca 2,000-1,000 BP) presence, solidifying a continuous occupation of the Allains watershed for more than 5,000 years.

Datable artifact material from the upper Mersey is concentrated around the *Milford Lakes Study Region*, and includes a Late Woodland Period (ca 1,000-450 BP) quartzite biface base from McKibbin's Beach (BdDi-07) (*Figure 4.4.5a*), and ceramic material from Ceramic Periods 4-5 (ca 1,650-650 BP) recovered from Stedman's Beach (BdDh-02, *Figure 4.3.1*) and Big River Runs (BdDh-03, *Figure 4.3.2-5*). Outside this area, an isolated quartz biface was recovered at Rogers Brook (BcDh-09, *Figure 4.4.5b*) in the *Park Study Region*, indicating a Late-Terminal Archaic Period (ca 5,000-3,000 BP) presence at the southern limits of the upper Mersey River.

Evidence from the *Upper Mersey River Study Region* is more suggestive. A large rhyolite biface (*Figure 4.4.3*) recovered from Big River Runs (BdDh-03) is suggestive of a pre-ceramic (+3,000 BP) occupation at this site. At Lower Dukeshire's Falls (BcDh-24), an extensive quartz lithic scatter also featured a single weathered chert scraper, which might suggest a *Kejikawek L'nuk*/Woodland Period (ca 3,000-450 BP) occupation of the site, either associated with or separate from the quartz material. Additionally however, a felsite adze preform resembling similar artifacts collected from a site on the lower Mersey River that produced Middle-Late Archaic (ca 7,000-3,000 BP) artifacts (see *Figure 4.4.7*), suggests this site, and perhaps other sites on the upper Mersey River will eventually reveal older artifacts, and establish a similar extensive history matching that of the Allains River (5,000+ years), and the central and lower portions of the Mersey River (5,000-10,000+ years).

5.2 – Geographic & Cultural Landscape

The 2006 UMARC Archaeological Survey resulted in the recording of sixteen new sites directly or indirectly relating to Mi'kmaw occupation and land-use across the six study regions of the project area. These new sites have bridged the gap between archaeological sites at the mouth of the Allains River and those on the lower half of the Mersey River. A total of 202 recorded sites featuring Mi'kmaw occupation and technology now extend across the Mersey/Allains Corridor in southwest Nova Scotia from Annapolis Royal to Liverpool. Collectors have identified at least 17 additional sites between KNP/NHS and Liverpool, and many more sites undoubtedly exist along the whole corridor making this geographic region an extremely rich cultural landscape.

Identifying potential test locations along the UMARC was accomplished through a reconnaissance canoe trip, and discussions with local canoeists and collectors who were familiar with the route. Prominent landscape features such as beaches, points, portages, rapids, and stream confluences, which have yielded archaeological remains during previous investigations along the Mersey River were examined during the 2006 study, and produced similar positive results (Christianson 1985; Ferguson 2005; Myers 1973; Sanders and Stewart 2007).

In Ganong's classic monograph on *Pre-Historic New Brunswick: The Indian Period,* he examines the inter-relationships and characteristics of landscape features in order to explain the rational behind why the aboriginals would establish a camp at a specific location (Hamilton and Spray 1977:2-16). Ganong lists the following as important considerations in choosing a good campsite: level and well-drained terrain, a commanding view of the surrounding area, and close proximity to rivers, potable water sources – particularly springs, a suitable canoe landing area, and portage trails. Additionally, Ganong also describes easy access to predictable resource areas (such as shellfish beds, lithic deposits), and landscape features that provide good seasonal fishing (waterfalls, the mouths of small rivers, and the head-of-tide) as valuable landscape features to the pre-Contact populations of New Brunswick, and by extension the Maritime Region (Hamilton and Spray 1977: 3-4).

Throughout the UMARC, all land-based (non-weir) sites are situated on relatively level and moderate- to well-drained terrain, and many sites across the Mersey/Allains Corridor feature broad vistas, which allowed approaches to the site and nearby resources to be easily monitored.

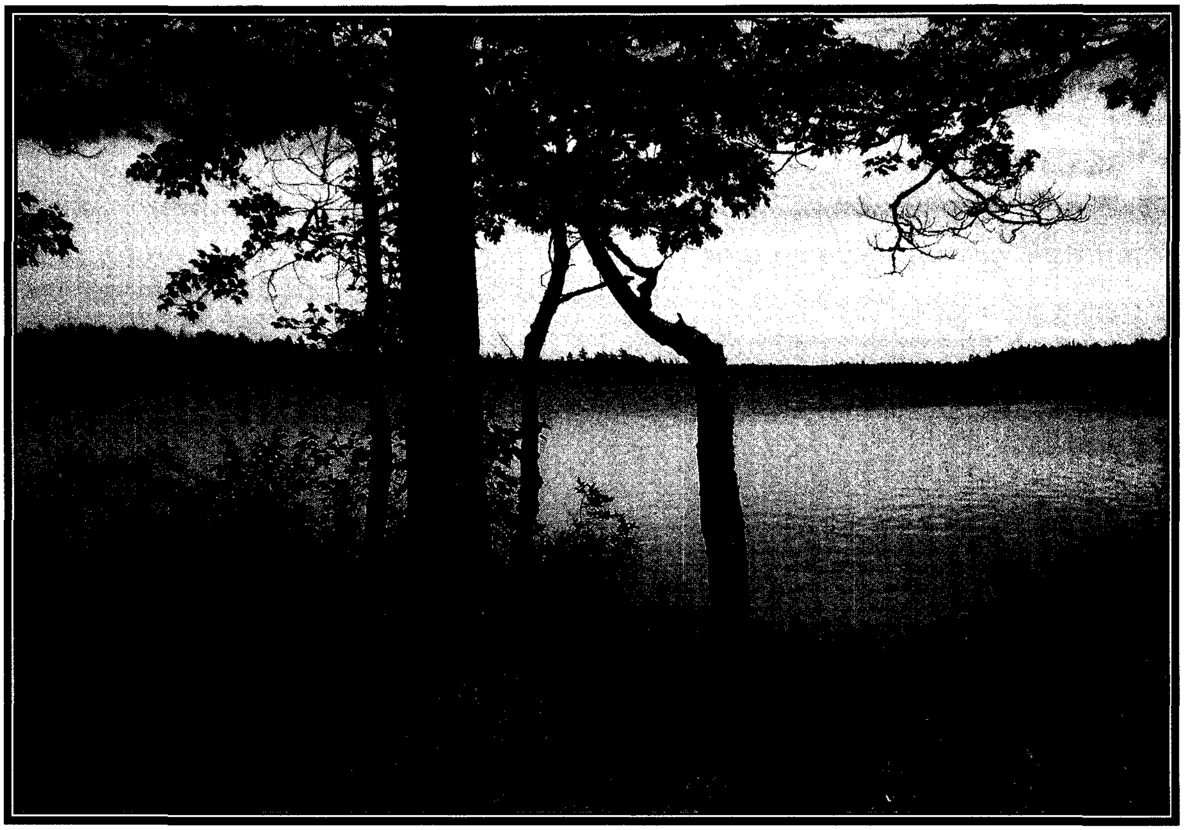


Figure 5.2.1: *View from McKibbin's Beach (BdDi-07), looking southeast across the north end of Fisher Lake. Photo: B. Pentz*

All of the sites included in the 2006 survey were found close to water, with the exception of the Nichol site (BeDi-10), which is located on an upper terrace of the lower Allains River. Unfortunately, *proximity to water* becomes a self-fulfilling attribute when conducting a river survey, and more assessments of landscape features not closely associated with bodies of water are needed to validate the significance of this relationship. However, the volume of sites along the Mersey/Allains Corridor suggests nearness to water was indeed important to the aboriginal populations of the region.

The proximity of sites to potable water sources, specifically from tributaries and springs, was not actively considered or investigated during this study as the direct relation of these sites to rivers and lakes was assumed to have fulfilled this basic need. However, Jim Harding, a collector from Milford (near Liverpool), indicated that nearly every stream that flows into the lower Mersey, no matter how small, has a site nearby (Harding 2006). Concentrations of sites along the lower Mersey River near the confluences of George's Brook, Kempton Brook, Morton's Brook, Upper Great Brook, Bon Mature Brook, Allen's Brook, Lower Great Brook, Deep Brook, and West Deep Brook seem to confirm Mr. Harding's observation. Future surveys throughout the region might consider concentrating testing activities around natural springs and flowing tributary creeks to further verify the usefulness of this landscape feature as an indicator of increased archaeological potential.

Tentative evidence from three sites along the UMARC supports this relationship of native encampments being situated near tributary brooks. On the Allains River, Lambs Lake Brook (BdDi-09) and Baillie Lake Brook (BdDi-04) are associated with tributaries that enter Grand Lake, and the Boot Lake site (BdDi-06) in the *Milford Lakes Study Region* is located near a spring-fed creek at Big Sandy Beach. In all three cases, the identified site area is removed (~50-200 m) from the water source. This may represent an intentional buffer between clean drinking water and the accumulated mess (human and food waste, charcoal, etc.) associated with a campsite, or it may simply be the result of typically poorer drained terrain often found near tributaries, making these areas less suitable for a camp.

On the upper Mersey River, all land-based sites feature good canoe landings, including four located at sand or gravel beaches. The Springhill Mud Lake Site (BdDi-05) is the only site on the Allains River for which a good canoe landing area can be confirmed. All other sites around Grand Lake and the lower Allains River have been dramatically affected by shoreline flooding, or road/bridge construction, making commentary on the canoe-landings at these sites speculative; however suitable landing areas were likely present. Sites along the central and lower Mersey also appear to share this characteristic (Myers 1973, Ferguson 2005, Sanders and Stewart 2007).

A significant correlation between the landscape of the past and present was recognized when many of the modern portage trails along the upper Mersey and Allains River were found to be directly associated with pre-Contact archaeological sites. This relationship suggests that the modern portages found along the corridor actually represent ancient trails used by the Mi'kmaq and their ancestors for thousands of years. Ganong describes the fluidity of these trails over time.

> "The path is but wide enough to allow a man and canoe to pass. Where it is crossed by newly fallen trees the first passer either cuts them out, steps over them, or goes around, as may be easiest, and his example is followed by the next. In this way the exact line of the path is constantly changing, though in the main its course is kept. No doubt some of these paths are of great antiquity" (Hamilton and Spray 1977:14).

Four of the sites on the upper Mersey (Big River Runs [BdDh-03], Upper Dukeshire's Falls [BcDh-23], Lower Dukeshire's Falls [BcDh-24], Mill Falls [BcDh-25]), and both sites in the *Height-of-Land Study Region* (Baillie Lake Brook [BdDi-04], Springhill Mud Lake [BdDi-05]) are directly associated with modern portage trails. Unfortunately, Big River Runs was the only portage site featuring datable artifacts. Pottery sherds recovered from this site are representative of Ceramic Periods 4-5 (1,650-650 BP) (Petersen and Sanger, 1991). The sites provide archaeological evidence of the antiquity of these pathways, suggesting the trails themselves should be considered important features of the Mi'kmaw cultural landscape of *Kespukwitk*.

Figure 5.2.2: *Detail of Franquelin's 1686 map showing part of the Allains and Mersey River canoe route between Port Royal and Port Rossignol (Dawson 1987:131). The "Portage de Monsieur l"Intentant" also features Jacques de Meulles (fourth from bottom in triangular hat) and his party of seven, including three Mi'kmaq and Acadian guides (carrying the canoes on their heads). The remaining five members of his party are shown carrying the provisions, including Monsieur de Peiras, Councillor of the Sovereign Council of Quebec, who accompanied de Meulles throughout the whole trip to Acadia (Morse 1935:86).*

The sites at the foot of Grand Lake, and those located near the head-of-tide on the lower Allains River, may also represent either end of a long portage route around much of the lower Allains River. Even before the dams on Grand Lake Flowage diverted the lower portion of the Allains River from its natural course, it is unlikely the original shallow and bouldery channel of this fast flowing river would ever have been navigable by canoe. This is supported by the journal of Jacques de Meulles, which indicates on May 22, 1686, his canoe trip through the interior of southwest Nova Scotia began from what is now Annapolis Royal with a portage of three leagues (~15 km), before setting out on a large lake (Morse 1935:111, see also *Figure 2.4.3*). The distance between the Annapolis Royal waterfront and the original foot of Grand Lake is just over 11 km. De Meulles' reckoning of the distance was possibly over-estimated because of the significant incline of the terrain, or perhaps rounding-up the distance made for a more dramatic hardship in his tale. However, Grand Lake is the logical departure point for de Meulles' canoe trip into the wilderness of *Kespukwitk*, because it represents the start of navigable water on the freshwater portion of the Allains River.

The Springhill Mud Lake Site (BdDi-05) in the *Height-of-Land Study Region* serves as crucial archaeological evidence of the Mersey and Allains Rivers as a travel corridor. The site is located at the eastern end of Springhill Mud Lake, at the only area on the lake with a decent canoe landing, and which features relatively flat ground that is boulder-free and well-drained, and therefore suitable for a campsite. This site is also located at the shortest point between Springhill Mud Lake (Allains headwater) and Sandy Bottom Lake (Mersey headwater), making it a logical rest-stop before crossing the drainage divide and descending the Mersey River. In 2005, a group of canoeists reinacted de Meulles journey of nearly 320 years earlier, and blazed their own portage trail across the densely wooded, height-of-land area only 100m from the Springhill Mud Lake site, further supporting, and independently validating the logical location of this site as a portage camp (Todd 2006).

It is interesting to note however, that although de Meulles recorded making twenty-four portages during their trip, he indicates there were no portage trails along the route he travelled in 1686 (Morse 1935:112). He also makes no reference to any Mi'kmaw presence that they may have encountered along the route, such as other people or existing camps at which they might have stayed. As such, these clues *may* reflect the extent to which European contact changed and affected Mi'kmaw lifestyle by the late seventeenth century, including settlement and subsistence patterns, so that by the time de Meulles ventured into the interior, it may have become a region largely in disuse (see Nash and Miller 1987).

Conversely, de Meulles made his canoe trip through the interior wilderness of southwest Nova Scotia in late May. Models of Mi'kmaw subsistence, both before and after Contact, suggest a focus toward coastal resources in the spring and therefore de Meulles' failure to record any Mi'kmaq presence along the interior waterways of *Kespukwitk* during his trip may simply be a result of the time of year he was travelling (Christianson 1979; Hoffman 1955; Davis 1986; Lewis 2007). One must also consider that as Intendant, Jacques de Meulles was an aristocratic Frenchman focused on reporting to the King of France the status of French settlements in New France. Mi'kmaw encampments may not have stood out in his mind as particularly noteworthy.

Furthermore, it is common for historical authors to embellish details of their adventures, as may be the case below.

> "This trip may be considered as one of the hardest one could make in a lifetime, for in addition to all the difficulty we had in carrying all our food and belongings through the woods where there were no trails, and when we were often obliged to go up and down mountains with heavy loads, we also found some very dangerous rapids, full of great boulders and rocks, and of extraordinary length" (Morse 1935:112).

This comment follows de Meulles own admission that he only travelled each portage once, while the remaining seven members of his party made a total of three trips to transport the remainder of their gear across each portage (Morse 1935:112). Despite the challenges of the trip, it would seem that de Meulles was hardly suffering the most, nor in a position to complain.

Although Graham Lantz, my bowman on the 2006 spring reconnaissance canoe trip, might agree with Jacques' description of the route mentioned above, it seems more likely these portrayals represent aspects of drama and hardship inserted into the account for the benefit of de Meulles audience, namely King Louis XIV. However, if the absence of portage trails recorded by de Meulles is indeed accurate, this observation may also indicate the abandonment of this interior route as a frequently travelled corridor by the late seventeenth century.

Nevertheless, the association of modern portage trails with pre-Contact sites on both the Mersey and Allains Rivers is significant evidence toward establishing the long-term use of these waterways as avenues for native travel, trade, communication, and resource acquisition throughout the interior of southwest Nova Scotia long before the arrival of Europeans on these shores.

The most intriguing correlation between Ganong's landscape analysis introduced in the preceding section and the results of the UMARC Survey was the correlation of pre-Contact sites with evidence of modern camping. Ganong explains, "the same motives that attracted the Indians to certain sites [also] attracted the early settlers", or in this case modern canoe-campers (Hamilton and Spray 1977:3). In fact, six of the sites along the upper Mersey River (BdDi-06, -07; BdDh-02, -03; BcDh-24, -25), as well as Baillie Lake Brook (BdDi-04) on Grand Lake, were all located within a stones throw of modern or historic campsites. The shared history of these sites between the past and the present demonstrates the interior landscape of southwest Nova Scotia has remained largely unchanged for at least the last 1,500 years.

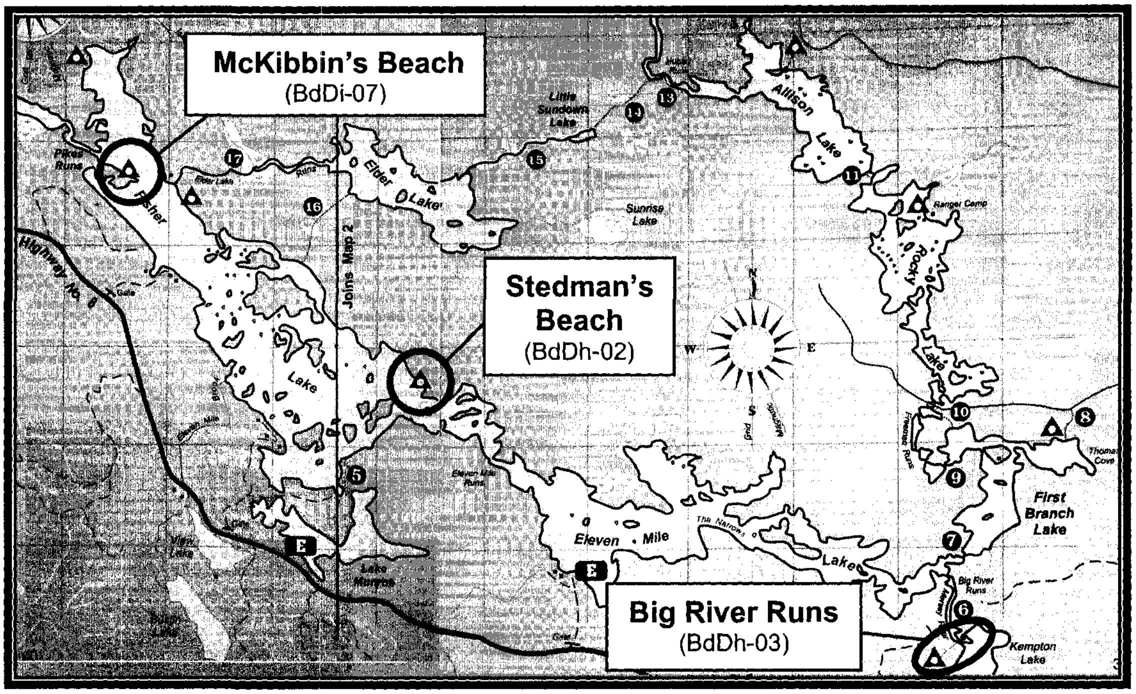


Figure 5.2.3: *Detail of a guide-map showing canoe routes for the Milford Lakes, and Allison / Rocky Lake area of the upper Mersey River. Black triangles on the map represent good campsites for modern canoe campers; however, the UMARC Survey has revealed that the Mi'kmaq have used some of these locations for centuries. This continuity in land-use is also repeated at many of the back-country campsites in KNP/NHS, and on the 1919 Dominion Atlantic Railway guide-map to the Lake Rossignol area (see Figure 2.2.2), suggesting the other camps marked on this map may also be pre-Contact sites. Map Source – Todd 2003:36-37.*

This continuity was further demonstrated when three of the five camps used during the UMARC spring reconnaissance canoe trip at the start of this project later proved to be pre-Contact campsites. This provided a strong personal sense of continuity with the early travellers of this route, and raised tantalizing questions about the history of this landscape such as whether Jacques de Meulles and his Mi'kmaw guides may have camped at this site, or how many campfire stories have been heard by the rocks upon which we now sit?

Unfortunately, beyond the seventeenth century account of Jacque de Meulles, historic records of the UMARC as a canoe route are noticeably lacking, and Mi'kmaw oral history specifically describing canoe travel along the upper Mersey and Allains

Rivers was not uncovered during the course of this research. Instead, descriptions of interior canoe routes from the Annapolis Basin tend to focus on travel via the Bear River system, and beyond into the Sissiboo and Shelburne River drainages in order to access the lower Mersey. This may result from Bear River (the community), and the lakes of Kejimkujik and Rossignol having figured more prominently as areas for guiding in the late nineteenth and early twentieth centuries than the more developed and easily accessible area around Annapolis Royal (Parker 1990; Ricker 1998). Sadly, it also indicates a loss of remembered Mi'kmaw history.

The Allains River and upper Mersey River were probably used less frequently as a canoe route following the establishment of the New Liverpool Road (what is now Highway No. 8), linking Liverpool and Annapolis Royal in the early nineteenth century (Bell et al. 2005:63). The new road allowed sportsman and their guides to avoid the uphill slog of the Allains River, and the frequent portaging along the Mersey River between the foot of the Milford Lakes at Big River Runs, and Kejimkujik Lake (Bell et al. 2005:67; Butler 1837-38; Canoeing in Nova Scotia 1880:126; Paine 1967:31). For those looking to go beyond the easily accessible Milford chain-of-lakes and venture into the true interior wilderness of central southwest Nova Scotia, or "Keji Country", the road to Liverpool provided the convenience of by-passing the more challenging portions of the traditional UMARC route, and enabled sportsmen and their guides to begin their journey from the relative ease of Jakes Landing, on Kejimkujik Lake. Classic canoe tripping through the Mersey system chronicled by Albert Bigelow Paine in "The Tent Dwellers", and an anonymous article in Harpers Weekly titled "Canoeing in Nova Scotia" (1880:126), describe such adventures beginning with a long bumpy ride along the New Liverpool

Road in wagons that hauled canoes, gear, and men from Annapolis Royal to Jakes Landing (also Paine 1967:31, 33). In essence, these American tourists and sportsmen did retrace de Meulles' route, but instead of following in the hardships of frequent portaging along the waterways of the Allains River and upper Mersey River to access the interior of southwest Nova Scotia, they exploited the more expedient convenience of the roadway that paralleled this traditional canoe route.

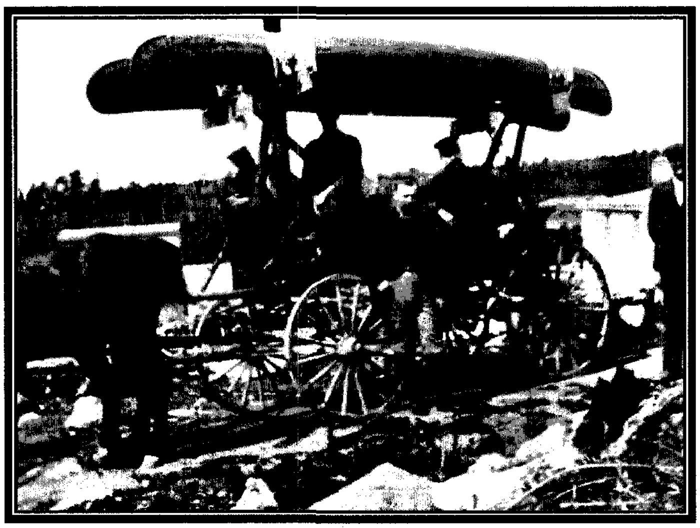


Figure 5.2.4: *Canoe wagons similar to this would have hauled canoes, gear, sportsmen such as Albert Bigelow Paine along the New Liverpool Road to Jakes Landing and the gateway to "Keji Country". The road between Annapolis Royal and Liverpool allowed nineteenth and twentieth century sportsmen to avoid the more challenging portions and frequent portaging of the Mersey/Allains canoe route faced by Jacques de Meulles in the late seventeenth century. Photo source: Parker 1995:153.*

Although oral histories for the UMARC appear to be lacking, traditional Mi'kmaw place-names along the Mersey/Allains Corridor have been recorded and provide an aboriginal perspective of this landscape (*Table 5.2*). The following table outlines the geographic areas, Mi'kmaw terms, and where possible, the translated meanings of the Mi'kmaw place-names from the Mersey and Allains Rivers. The place-names are ordered north to south.

Most of these Mi'kmaw words are from Father R. P. Pacifique's (**F**) (1934) study of the Mi'kmaq and their homeland. Additional place-names have been compiled in

Reverend Silas T. Rand's (**S**) 1875 book of Mi'kmaw grammar (Rand 1999), as well as a list of place-names from Digby and Annapolis Counties recorded by Rand in his 1888 Mi'kmaw dictionary, as reproduced by Diane Ricker (**D**) (1998:203-207). James More's (**M**) original 1873 *History of Queens County* (1972:204-218), also provides place-names for the Lake Rossignol area, and further place-names and meanings have been sourced from Mike Parker (**P**) (1990:26), Thomas Raddall (**T**) (1977:121,131,171), Marion Robertson (**R**) (1973:2), and a Mi'kmaw display at the Queens County Museum (**QCM**) in Liverpool, Nova Scotia

Table 5.2 – Mi'kmaw Place-names along the Mersey and Allains Rivers

Modern Place-names	Mi'kmaw Place-names	English Translations
Annapolis River/Basin/Settlement	*Tāooōpskek* (D) *Taooopskik* (D) (F) *Tawopskitk* (D) (F) *Tawopskw* (D) (F) *Teoopsig* (D) (F)	"*Flows(-ing)/Running/Pushing between/along high rocks*" (referencing N. and S. Mountains of Annapolis Valley and/or Basin outflow at Digby Gut)
Bear River	*Elesetgog* (D) (F) *L'sitkuk* (D)	Same meaning as *Annapolis*
General's Bridge (near Lequille)	*Esŭnŭskĕk* (D) *Eisuneskwek* (D) *Esunuskek* (D)	"*Ground is hard and grassy*" Also, the "*Eason's Place* (property)", located near the Allains River at General's Bridge
Grand Lake	*Gepiamgiag* (F) *Sgetesemosoagig* (F) *Tŭlŭgadĭk* (S)	"*Obstructed by sand*"; may also apply to the Allains River, Pacifique 1934:309 "*Ghost country*", Pacifique has (?) after Grand Lake for this name (1934:306) "*Camping Ground*" - unclear if reference is for Grand L. in Annapolis Co. or Halifax Co.?
Bear River Reserve (6A) on Grand Lake	*Pôgômotjigetjg* (F)	?? – No translation listed
Height-of-Land between Allains River / Mersey River	*Ola tet onigen* (F)	"*Portage to Lequille*" (from Sandy Bottom Lake, headwater of Mersey)
Sandy Bottom Lake (historically Liverpool Head Lake)	*Nasonigegitjg* (F)	?? – No translation listed
Tuskopeake Brook (Headwater of Allison / Rocky Lake Branch of upper Mersey River)	*Tuskopeake (modern map)*	?? – Meaning was not found
Fisher Lake (or "Milford Chain Lakes")	*Pagemotjigeg* (F)	?? – No translation listed

Kejimkujik Lake	*Cegemecega* (M) *Kedgemakooge* (P) *Kejimkujik* (P) *Kĕjĭmkoojĭk* (S) (R) *Getjimgotjig / Kojimkoojik* (F)	"*Fairy Lake* " – Place-name survives as *Fairy Bay* on Kejimkujik Lake. "*Swelled parts* "
Big Muise, Little Muise, Ritchie and/or Ell Islands (in Kejimkujik L.)	*Nosogotjiag (*F)	?? – No translation listed; "references Three Islands, In line, at county boundary in Kejimkujik Lake", Pacifique 1934:297
Peskawa Lake	*Peskawa (modern map)* *Pesquwar* (M)	?? – Meaning was not found
Peskowesk Lake	*Pesgôoesg* (F) *Peskowesk (modern map)* *Pescahrwas* (M)	"*Fishing place*" ?? – No translation listed
Hilchemakaar Lake (also "Fifth L."? – (F))	*Elmetgag* (F)	"*Leading straight on*"
Loon Lake	*Oapiegatig* (F)	"*Swan place*"
Kidney Lake? (modern name unknown)	*Pogoloamgeg* (F)	?? – No translation listed
Murphy Lake	*Agtenigantjitjg* (F)	?? – No translation listed
Carrigan Lake	*Gamigtjenigantjitjg* (F)	?? – No translation listed
Northeast Bay, Lake Rossignol	*Mesioalneg (etog mesgig)* (F)	?? – No translation listed
Siskech Lake	*Siskech (modern map)*	?? – Meaning was not found
Tobeatic Lake (also "Sixth Lake"? – (F))	*Toobeadoogook* (S) *Topiatog* (F) *Tobigadic* (M)	"*Lined with alders* " ?? – No Translation listed
Shelburne River / Sand Lake	*Ninmocah* (M) *Inmŭtkaak* (S)	"A lake (Sand Lake) with a river running through it / widening for a long distance", More 1972:122 [1873] "*Leading straight on* "
"Long Point" (West? shore L. Ross.)	*Elgoagang (goesaoei)* (F)	?? – No translation listed
Forth, Fifth, Sixth, Seventh, Eighth Lake Branch, Mersey River (extending southwest from Lake Rossignol toward Jordan Lake/River)	*Cadoscah* (M) *Cadooscake* (M)	?? – No translation listed; Area place-name survives as *Caduesky* (former Seventh L.) *L./Brk* & poss. *Coade L./Brk*
Alick Bay or Kempton Lake	*Oalapei* (F)	?? – No translation listed
Southwest Bay, Lake Rossignol	*Mitetjagôgoômg* (F)	"*Dwelling removed?*"
Lake Rossignol (pre-dam)	*Mesgig Côspem (ôgômgigiagaoei)* (F) *Puhsŭgook* (S)	"*Great Lake* " ?? – No translation listed
"Small Indian Village" ("The Hopper"?)	*Otgotaganegatig Aptjetjg* (F)	?? – No translation listed; "small village between 2nd Lake & Rossignol Lake, south side"
Yeadon Lake (or Third Lake)	*Piosegog* (F)	"*Juniper place* "
Second Lake	*Getosgeg gisna Sosgog* (F) *Kĕdooskĕk* (S)	"*Grassy place, surrounded by grass* " ?? – No translation listed; possibly "*Second Lake* "?
"Indian Village"	*Elnoi Otgotaganegatig* (F)	"*Graveyard* ", (F) – "site of old village between 1st & 2nd Lakes on 'left' bank, graveyard last used ca. 1790", p. 296.

First Lake	*Banook* (S) *Panook* (D) *Ponhook* (S) (M)	"*The river opens out into a lake*"; A common name for the first lake in a series as you go up river – Rand 1999:97
Indian Gardens (or First Lake)	*Sesenemetoeg (gộspem)* (F)	"*Scattered* "; (F) – "perhaps many people there formerly", p. 296
Kempton Lake	*Mi'kmaw name not given* (T)	"*Place-where-people-were-burned* ", (T) – " where the ancient inhabitants of Indian Gardens had taken their dead for secret cremation & burial" 1977:131.
Eagle Lake	*Kitpoo-ak-a-de* (T)	"*Eagle's place*"
Deep Brook (just below Dam No. 5)	*N'-HUN-a-gun-ook* (QCM)	"*Place of old huts, old camping place*"
Milton	*Gepeg gisna Goipegeg* (F)	"*Narrows, at the falls* "
Pontanoc Street (or Potnaoc – (T))	*Mi'kmaw name not given* (T)	?? – No translation listed, (T – p.121)
Hill's Grove (Pine Grove Park, downstream from Milton, NE shore)	*Kebek* (QCM)	"*A narrow place where the river meets the tide* "
Mersey River (historically "Liverpool River")	*Oesgisgasig* (F) *Ogomgigiag* (F)	"*Large Gap* " ?? – No translation listed
Liverpool (and Sandy Cove)	*Ogomkĭgeậk* (S) *Pogomkĭgeậk* (S)	"*A dry sandy place* "
Brooklyn	*Gatogotjg* (F)	"*Barrenness* "
Herring Cove	*Galipotjoegatig* (F)	"*Little caribou place* "
Liverpool Harbour (and general area?)	*Og-om-keg-ea* (QCM) *Ogomkegeok* (T)	"*Departure Place, Going out Place* " "*Place-where-we-go-out*"

Sources for the Mi'kmaw place-names: (**D**) = *D. Ricker 1998:203-207;* (**F**) = *Father R.P. Pacifique 1934;* (**M**) = *More 1972:204-218;* (**P**) = *Parker 1990:26;* (**QCM**) = *Queens Co. Museum, Liverpool - display;* (**R**) = *Robertson 1973:2;* (**S**) = *S. T. Rand 1999;* (**T**) = *Raddall 1977:121,131,171.*

Variability in the phonetic spellings and pronunciations of certain words in *Table 5.2* has occasionally resulted in multiple terms for a single place or feature, such as the Annapolis/Bear River area, Kejimkujik Lake, and First Lake place-names. As well, some words appear to have a fairly recent origin, such the General's Bridge/Lequille terms, which are clearly derivatives referencing the property of John *Eason*, an English Planter who settled in that area in 1745 (Ricker 1998:203, 207).

Father Pacifique's term for Grand Lake as "Ghost Country" is intriguing, but not clearly understood. At this time, no burials or sites of heightened ceremonial significance have been identified in the area. In Rand's book of Mi'kmaw grammar, he interprets the word for Grand Lake as "camping ground", however, it is not clear whether this term describes Grand Lake from the UMARC, or from Halifax County, or one of several other Grand Lakes in Nova Scotia, or the Maritimes (Rand 1999:88).

Although the translated meaning of Liverpool Head Lake (Sandy Bottom Lake) is not given, the fact that this lake was significant enough to be named is an indicator that the headwater of the Mersey was indeed a *'place'*, or at least a named location or known and used by the Mi'kmaq. Furthermore, the next term in Pacifique's list of place-names references the "portage to the Lequille [Allains] River", confirms a portage trail between these lakes in the *Height-of-Land Study Region* existed in the past, which in itself serves to verify Mi'kmaq use of the Allains and the Mersey as a canoe corridor

Unfortunately no translation is available for *Pagemotjigeg*, which refers to Fisher Lake or perhaps the Milford Lakes collectively.

Rand's translation for Kejimkujik Lake as "swelled parts" has been interpreted by Thomas Raddall as a reference to the large stone fish-weirs constructed at the foot of the lake, which metaphorically would have dammed-up or constricted the waters of the lake and caused them to swell (Davis and Brown 1996b:71). An alternate explanation suggests the swelling simply refers to the lake as a widening of the river (Robertson 1973:2). Other sources interpret Kejimkujik as "Fairy Lake", which was also applied to the nineteenth century Fairy Lake Indian Reserve located around much of the north and eastern shores of Kejimkujik Lake. This name survives today at "Fairy Bay", which also features historic Mi'kmaw petroglyphs on slate outcrops (Parker 1990:26).

Pacifique lists *Peskowesk* as "fishing place". It is not clear whether this references Peskowesk Lake or Peskowesk Brook. The absence of pre-Contact sites on Peskowesk

Lake is undoubtedly the result of incomplete archaeological survey; however, a major Mi'kmaw campsite (BbDh-19) is located at the confluence of Peskowesk Brook with the Mersey River. It is possible that this site is associated with stone weir features, which justify the name "fishing place". Unfortunately this site has been largely inundated by the Lake Rossignol Reservoir, and is well known to local collectors.

Unfortunately, the translated meanings of *Tuskopeake Brook, Peskawa Lake*, and *Sisketch Lake,* and *Pontanoc Street* could not be identified, and seem to be lost. They do however represent some of the few Mi'kmaw place-names that survive on modern maps of *Kespukwitk.*

Before the Lake Rossignol Reservoir was constructed in 1928, Lake Rossignol (or Third Lake) was the largest lake in the Mersey system. Unfortunately, the Mi'kmaw place-name *Puhsugook* recorded by Rand does not include an English translation of its meaning (Rand 1999:91; Ricker 1998:203), however Pacifique also lists a place-name for this body of water, meaning "Great Lake" (1934:296). It is significant to note that Mi'kmaw place-names have been retained for tributaries of the original Lake Rossignol, which also served as traditional Mi'kmaw canoe routes through the interior of *Kespukwitk*, such as *Nimocah* or *Inmŭtkaak* (Shelburne River/Sand Lake) and *Cadoscah/Cadooscake* (Forth – Eighth Lake Branch). This is plainly obvious through the interpretation of *Inmŭtkaak*, as "Leading straight on", which suggests linear movement along the Shelburne River and Sand Lake (Rand 1999:91).

Curiously, the Mi'kmaw name for Hilchemakaar Lake (*Elmetgag*) has a similar pronunciation to that of *Inmŭtkaak* on the Shelburne River, and both share the meaning of "Leading straight on". However, in the case of Hilchemakaar Lake, the reason behind this meaning is not clear since the lake is not large enough to 'lead' very far, nor is it part of any major canoe route. It would seem to apply more aptly to nearby Peskowesk Lake.

First and Second Lake are now flooded by the Lake Rossignol Reservoir, but their successive numeric naming relates to movement upstream along a river. Rand does not indicate the term *Kĕdooskĕk* means 'the second lake', but in his list of numbers, *taaboo* is the Mi'kmaw word for 'two', and *taaboo* may have a similar pronunciation to '*Kĕdoo-*' (Rand 1999:65,91). Pacifique indicates "*Getosgeg gisna sosgog*" describes Second Lake as a "grassy place" or "surrounded by grass" (Pacifique 1934:296). This sounds like the prime moose hunting country described by Henry Peters, former chief of Bear River First Nation, as having been destroyed by the flooding of the Lake Rossignol Reservoir (Parker 1990:27).

Several Mi'kmaw village sites are also found in Pacifique's list of place-names (*Southwest Bay*, *The Hopper*, "*Indian Village*", and *Indian Gardens*) (Pacifique 1934:296). These locations around Lake Rossignol all correspond with significant archaeological sites that are also well known to local collectors. The rather ominous translations of some of these place-names ("*dwelling removed*", "*graveyard*", "*scattered*"), may relate to the major impact European diseases had on Mi'kmaw populations during the Colonial Period (ca 1604-1867).

On the lower Mersey, the village of Milton at the first set of rapids, and the Pine Grove Park area, located at the historic head-of-tide, between Milton and Liverpool, mark important resource areas for the Mi'kmaq. Translation of *Oesgisgasig* (Mersey River) as 'large gap' is probably a reference to Liverpool Bay. Rand indicates the terms *Ogomkĭgeą̂k* or *Pogomkĭgeą̂k* refer to the settlement of Liverpool, and means a 'dry sandy place', which "aptly enough describes the mouth of the Liverpool River at Sandy Cove; and neighboring places" (Rand 1999:91). However, *Og-om-keg-ea* (same word, slightly different spelling) listed at the Queens County Museum as referencing Liverpool Harbour is translated as "departure place", and seems to relate to the water instead of the land, as Rand's terms do.

In addition to *Ola tet onigen* (portage to Lequille), the Mi'kmaw term for Deep Brook, on the lower Mersey River near Milton, has to be one of the most significant place-names along the Mersey/Allains Corridor. At the Queens County Museum, a display showing Mi'kmaw place-names featured the label *N'-HUN-a-gun-ook*, at the mouth of Deep Brook where it enters the Mersey River, which was translated as the "place of old huts, old camping place". During the 2004 archaeological reconnaissance survey of the lower Mersey River (Sanders and Stewart 2007), artifacts were surface collected from the mouth of Deep Brook, which indicate this area has been occupied for 5,000 to 7,000 years. The fact that this place-name was recorded in the 20th Century and yet reflects the long-term occupation of this site over several millennia is very significant toward establishing the long-term cultural continuity between the *Kiskukewe'k L'nuk* of today and the preceding *Kejikawek L'nuk* and *Mu Awsami Saqiwe'k* populations of the Ceramic and Archaic Periods in *Kespukwitk.*

Although most of these aboriginal place-names are lost from modern maps of the region, they serve as valuable indicators of the past importance of the Mersey and Allains Rivers to the Mi'kmaq. However, lasting evidence of a Mi'kmaw presence along the central lakes of the Mersey survives in the landscape around Kejimkujik Lake through place-names and family names such as Indian Point, Glode Point, Glode Island, Peter

Point, Jim Charles Point, Luxie Cove, Jeremy's Bay, Big and Little Muise Islands, and at the head and foot of the Lake Rossignol Reservoir at Indian Point (now flooded, off Lows Landing), and Indian Gardens respectively.

According to Mi'kmaw oral history, several of these family names point to interactions with French traders in the early seventeenth century. In Champlain's journal from 1604, he describes sailing into what is now Liverpool Bay and arresting a certain Captain Rossignol, whose name lives on in the Lake Rossignol Reservoir, for illegally fur trading with the Mi'kmaq in the interior (Biggar et al. 1971:237; Grant and Biggar 1911a:229).

Figure 5.2.5: *Illustration depicting 17th Century fur-trade between the French and the aboriginals of North America. Exchanges such as this would have taken place between the Mi'kmaq and licensed traders like Pierre du Gua, or opportunistic entrepreneurs like Captain Rossignol. Note the similarity between the axes featured here and those recovered from the Lake Rossignol area of the Mersey River shown in Figure 5.2.6. Source: Wilson 2007.*

However, a Mi'kmaw version of this story also exists, which provides more details about this event, including Captain Rossignol and his party returning to their ship in *canoes* after trading for furs with the Mi'kmaq *up the Mersey River* (Parker 1990:95). According to former Bear River Chief Henry Peters, two of "...Rossignol's sailors ... escaped over the sides of the canoes, before being seized, and swam to shore underwater to keep from being shot...They went back up river to Kedgie [Kejimkujik Lake] and married Indian women" (Parker 1990:95, brackets mine). Chief Peters further describes that the Mi'kmaq were all living on the islands around Kejimkujik Lake, so the chief assigned each of the Frenchmen a point of land. Years later, when the English began trading furs with the Mi'kmaq, they realized there were two names that were not native names, and this is how [Jim] Charles Point and Peter Point on Kejimkujik Lake, and the families that lived on these points got their names (Parker 1990:95). A similar story may also exist for Glode Point and the family name Glode (also Gload and Gloade), through the French name 'Claude' (Christmas et al. 1994:23; Myers 1973:6). The fact that Henry Peters was able to make direct reference to Captain Rossignol and his crew travelling up the Mersey River to trade with the Mi'kmaq not only indicates that de Meulles was not the first European to travel along these interior waterways, but perhaps most impressively it seems to represent a strand of Mi'kmaw oral history that has been passed on and retold for 400 years.

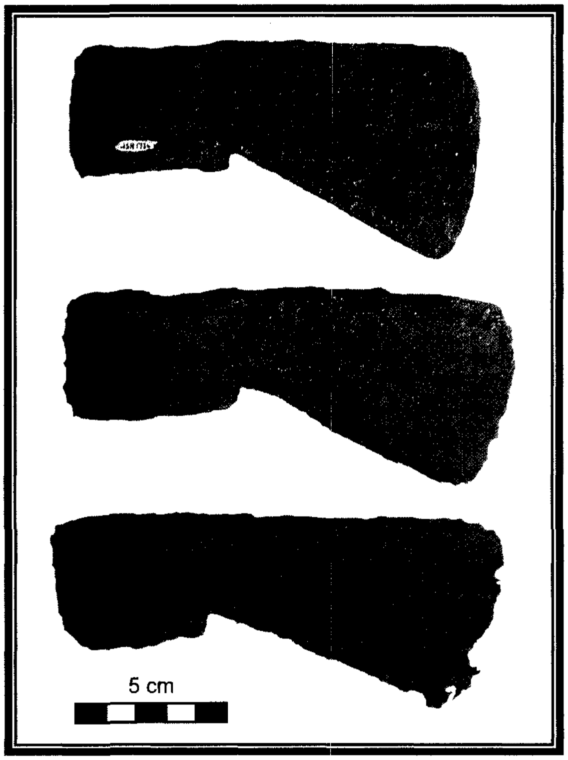


Figure 5.2.6: *Three seventeenth century Biscayan French trade axe heads found on Ponhook/First Lake near Indian Gardens on the Mersey River. These relics from the early fur-trade were collected by Jim Harding along the east shore of First Lake, about halfway between Indian Gardens and East Brook, during low water conditions on the Lake Rossignol Reservoir. At the Queens County Museum in Liverpool, Noel Dexter has a larger trade axe on display, which he picked up near BaDg-02, on the lower terrace at Indian Gardens. These axes would have been similar to, or perhaps actually were some of the items Captain Rossignol and his crew traded with the Mi'kmaq prior to their arrest by Monts and Champlain in May 1604. Note the single stamped makers-mark (four-wedges) on the middle axe. The number of stamps usually represented weight (fewer stamps, lighter weight). Harding's single stamp axes weigh between 400-500g. Photo – B. Pentz*

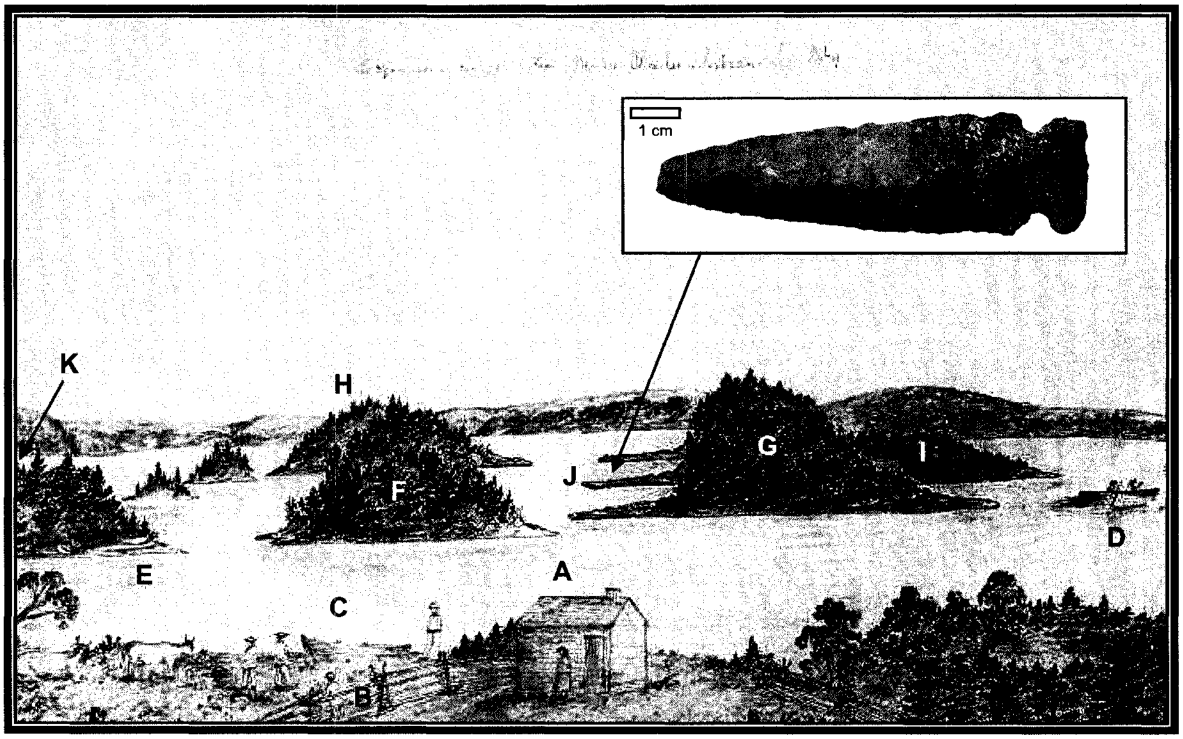


Figure 5.2.7: *1869 illustration of Jim Charles' farm homestead (Jim Charles Point), looking south over Kejimkujik Lake, which at that time was part of the Fairy Lake Indian Reserve. The illustration features Jim Charles' wife and cabin* (**A**) *(and possibly Jim Charles himself* (**B**) *leaning against the fence) watching three European men* (**C**) *prepare to set out on Kejimkujik Lake, as well as two others who are already underway* (**D**). *In the middle-ground at left* (**E**) *is the slate outcrop where the Fairy Bay petroglyphs are located (BcDh-13), with Bear* (**F**) *and Ritchie* (**G**) *Islands, and Peale* (**H**) *and Ell* (**I**) *Islands visible behind them. At centre, the middle of three points* (**J**) *is the northeast end of Ell Island where an isolated Meadowood-like, Early Woodland (ca 3,000-2,000 BP) biface was recovered (BcDh-21). Just off the page at left and behind Fairy Bay point, is* (**K**) *Merrymakedge Beach (BcDh-05), which features material from the Middle Archaic/Mu Awsami Saqiwe'k through to the European Contact Period/Kiskukewe'k L'nuk, demonstrating the long-term cultural presence of the Mi'kmaq within this landscape. Image source: Nova Scotia Museum 1869.*

The landscape analysis of the Mersey/Allains Corridor has only contradicted Ganong's model of pre-Contact site placement in one respect. Several of the major sites along this canoe route are associated with historic and modern Reserve lands, unlike Ganong's observation to the contrary in New Brunswick (Hamilton and Spray 1977:4). The area around Kejimkujik Lake, which features the family names listed above used to be the Fairy Lake Reserve (ca 1835 – 1900), and has revealed several important pre-Contact and early historic Mi'kmaw sites, including the slate petroglyphs at Fairy Bay (see *Figure 5.2.7*). The modern reserve land of Bear River Reserves 6A and 6B along the

Allains River are within 500 – 1,500 m of the sites at the foot of Grand Lake and Dugway Bridge respectively. On the Mersey River, the Ponhook Lake Reserve at the foot of what is now the Lake Rossignol Reservoir includes portions of the Indian Gardens Site Complex, which has been consecutively occupied since the Middle Archaic Period (ca. 7,000 – 5,000 BP) by the *Mu Awsami Saqiwe'k*, *Kejikawek L'nuk* and *Kiskukewe'k L'nuk*. This also demonstrates the long-term continuity in the Mi'kmaw settlement-landscape of southwest Nova Scotia – *Kespukwitk*

5.3 – Settlement Patterns

For simplicity, the majority of this analysis will only attempt to discuss the adaptive settlement strategies of *Kejikawek L'nuk*/Middle-Late Woodland Period (ca 2,000-450 BP) populations in southwest Nova Scotia. The main reason for this being that the majority of datable sites directly investigated by the UMARC Survey are from this period. Woodland Period sites are also predominant along the central lakes and lower portions of the Mersey River, as well as within the site inventory of southwest Nova Scotia, which allows for a wide range of comparisons. Additionally, the Middle-Late Woodland Period (ca 2,000-450 BP) has been well documented by previous archaeological investigations in the region, which provides important context for examining the evidence of late pre-Contact settlement patterns identified by the UMARC research (Erskine 1961, 1998; Myers 1973; Davis 1986; Kristmanson 1992; Deal and Blair 1991; Ferguson 2005; Sheldon 1988).

Furthermore, the objectives of this thesis focus on pre-Contact use of these waterways, and as such delving into the complex and dramatic shifts in Mi'kmaw society that occurred following European Contact is beyond the scope of this research (see Burley 1981; Christianson 1979; Nash and Miller 1987). Finally, having reviewed all the site records between Annapolis Royal and Liverpool, it has become apparent that many of the larger and more productive or extensively investigated Middle/Late Woodland Period (ca 2,000-450 BP) sites along the Mersey/Allains River Corridor also feature Contact Period (ca AD 1497-1604), and Colonial Period (ca 1604-1867) artifacts, as well as older material from the preceding Early Woodland Period (ca 3,000-2,000 BP), and Archaic Periods (ca 8,500-3,000 BP), and even possible Late Paleo-Indian (ca 10,000-8,500 BP) occupations along the lower Mersey at BaDe-13; BaDf-44, 69, 71, 75; and Second Stillwater Falls. This pattern of cultural succession indicates long-term re-use of these sites, and permits concise discussions focused on the Middle-Late Woodland Period to also shed light on a broader time span.

Settlement patterns essentially reflect strategies used by a group of people to acquire the resources they need to survive in a particular environmental setting. Binford describes two main strategies used by hunter-gatherers – foraging and collecting (Binford 1983). *Foragers* frequently move their family unit/band/community across short distances to exploit resource patches near their residence camps, and typically gather food daily. *Collectors* are more sedentary as a group, and use specialized task-groups to bring diverse sets of resources to the people, often across long distances; they also have a greater reliance on stored food reserves (Ames 2002; Binford 1983, 1990; Kelly 1983, 1992). Both foragers and collectors exploit resources at *local task-sites* (see *locations*, Binford

1983) within a foraging radius (half-day travel) from a *residential base-camp*, and the processing of those resources takes place at or near the base-camp. However, in addition to using resources close at hand, collectors also exploit specific resources well removed from their main seasonal base-camp.

Under a collector-based strategy, task-groups venture out from a central base-camp to conduct specific activities (resource acquisition and resource monitoring) at remote task-sites, while staying at a field-camp, which serves as a base close to the targeted resource for either a temporary or extended period of time. The task-group may conduct preliminary processing of the resource (e.g., cleaning fish, primary reduction of lithic blanks, primary butchering) before returning to the main group at the base-camp with both refined goods for consumption and information about the observed status of other resources in the area (Ames 2002:3; Binford 1983:346; Kelly 1983:298-300). Even if unsuccessful in their primary task, the observations made by the task-group about conditions in the local and remote environment enable the group as a whole to make informed decisions about how to approach future resource activities, including when to shift their focus from a resource in decline to resources with greater productivity or economic value (Kelly 1983:299)

Originally, Binford (1983) classified the Mi'kmaq as *cold-climate foragers*, based on the early ethnohistoric record, which indicated frequent group mobility between summers spent on the coast and winters in the interior, and no appreciable reliance on stored food (Binford 1983:352). However, he later argued that groups who exploit aquatic resources, and who have perfected transportation technologies (i.e., watercraft) tend to follow a *collector*-based strategy (Binford 1990:138). At European contact, the Mi'kmaq had a well-developed birch bark canoe technology including hunting, river, ocean-going and war canoes (Whitehead 1980:31). The presence of numerous coastal shell-midden sites and fish-weirs indicates the Mi'kmaq exploited bulk aquatic food resources (Black and Whitehead 1988; Lewis 2007), suggesting they followed a collector-based lifestyle, and that Binford's original concept of the Mi'kmaq as *cold-climate foragers* may not be appropriate.

The development of watercraft technology can expand the radius and increase the frequency of daily foraging trips from a base-camp, and can facilitate the transportation of greater and bulkier resources than is possible by pedestrian hunter-gatherers (Ames 2002:35,37,39). As such, Ames suggests when *aquatic hunter-gatherers* make long-distance task forays for specific resources, this collector-based adaptation is less recognizable archaeologically because the increased cargo capacity and efficiency of watercraft reduces the need to conduct primary processing at field-camps before transport back to the main residence (Ames 2002:40-43). Instead, resources are more frequently transported in bulk to the main base-camp for processing by the group, and may reflect in the archaeological record what appears as a more forager-based strategy (Ames 2002:40,42-43). However, aquatic hunter-gatherers are not as residentially mobile as terrestrial-based hunter-gatherers because of the rich, diverse, and predictable nature of resources provided by the marine environment, and they tend to have food storage practices, suggesting a more collector-based lifestyle (Ames 2002:43-44; Binford 1990:137; Kelly 1983:289, 292, 300-301).

Although decreased reliance on field-camps may suggest a foraging strategy in the archaeological record, if watercraft simply allow aquatic hunter-gatherers to 'by-pass' the use of field-camps during a remote task activity, while still maintaining a central residence camp and practicing bulk food preservation to a certain degree, than perhaps aquatic hunter-gatherers are best described as *modified collectors*. As such, aquatic hunter-gatherers, including the Mi'kmaq, seem to dissolve the rigid definitions of foragers and collectors as proposed by Binford (1983).

However, to add further complexity to interpreting settlement patterns of aquatic hunter-gatherers, even though these groups may have by-passed and reduced their need for field-camps, field-camp sites would still be necessary for exploiting terrestrial resources not closely associated with navigable waterways, or for acquiring resources beyond the foraging radius (half day canoe travel) of the base-camp. As such, field-camp sites should still be recognizable in the archaeological record. In the case of the Mi'kmaq, field camps would be necessary to supporting terrestrial tasks such as large game hunting, which would require butchering before transport, and acquiring non-local lithic materials.

Interpreting ancient cultures and defining their 'typical behavior' in a 'typical year' (despite the fact neither of these constructs exist in the real world) based on the incomplete fragments of the archaeological record, and then applying these 'observable patterns' across many hundreds of years and dozens of generations certainly has its limitations. Settlement and subsistence patterns therefore must be viewed only as generalized observations about the past, which have been imposed by archaeologists in the present. To have value, these models must therefore attempt to provide descriptive detail, yet be flexible enough to accommodate the numerous individual and circumstantial variables and outliers that occur in the archaeological record as a result of personal, cultural, and environmental factors. Archaeological models are not all encompassing or absolute patterns of traditional behavior and mindset, but they attempt to portray a generalized annual survival strategy for a particular cultural group, which is reflected over a period of time.

In examining the archaeological record of southwest Nova Scotia the available archaeological evidence seems to support an aquatically adapted, generally collector-based settlement system for the *Kejikawek L'nuk* of the Middle-Late Woodland Period (ca 2,000-450 BP). However, the lack of extensive subsurface investigation at most of the sites along the Mersey/Allains Corridor means further work is needed to help distinguish interior base-camps from field-camps, as well as provide stronger evidence for bulk food storage by the pre-Contact populations of *Kespukwitk* (see Black and Whitehead 1988). In this analysis, base-camps and field-camps are usually distinguished, but collectively may be referred to as residence-camps.

5.4 – Settlement & Subsistence Analysis

Across the Mersey/Allains Corridor, Middle-Late Woodland Period (ca 2,000-450 BP) Mi'kmaw residence-camps tend to be situated at the interface between several aquatic eco-zones (off-shore marine, in-shore marine, estuary, river, lake, tributary), and terrestrial eco-zones (tidal, marsh, meadow, hardwood/softwood forest, bog, barren), which enabled multiple resources in different environments to be monitored and exploited with the least amount of community movement. (Davis 1986; Nash et al. 1991; Lewis 2007). The centralized placement of encampments by the native population (aquatic-based hunter-gatherers) in an environment with changing and uneven resource availability is characteristic of a collector-based survival strategy (Ames 2002; Binford 1983, 1990; Kelly 1983).

Along the UMARC and throughout southwest Nova Scotia, sites have been identified straddling multiple aquatic eco-zones, such as the transition from salt to freshwater at the head-of-tide on the Allains River (BeDi-07, BeDi-12, BeDi-15), or the shift from open water lakes to flowing rivers and tributaries near the foot of Grand Lake (BdDi-01, BdDi-09), and along the *Milford Lakes Study Region* (BdDi-07) and *Upper Mersey River Study Region* (BdDh-03, BcDh-24). The centralized placement of sites at the interface between aquatic and terrestrial zones in the surrounding resource area on both the Allains River and Mersey River represents a diversified subsistence strategy (Davis 1986; Lewis 2007). This site distribution mirrors a similar strategic site placement recognizable at other sites in southwest Nova Scotia such as the Gaspereau River, which features the Melanson Site (BgDb-07), at the head-of-tide, and several sites at the foot of Gaspereau Lake in Kings County. Additionally, many of these sites are in close proximity to the confluence of navigable radiating tributaries, which open up third or fourth dimensions to the rather linear (up/down-stream) resource area of the Upper Mersey/Allains River Corridor.

The unfortunate reality of strategic centralized settlement, as Ganong points out, is that "many of the most important campsites are now covered by [modern] villages or towns" (Hamilton and Spray 1977:3 [brackets mine]). Middle-Late Woodland Period (ca 2,000-450 BP) lithic and ceramic artifacts have been recovered from either end of the Mersey/Allains canoe route, including the earthworks at Fort Anne National Historic Site in Annapolis Royal (Duggan 2003), and around Liverpool Bay (BaDe-06, 07). Late

Archaic (ca 5,000-3,500 BP) gouges and sharks teeth (possibly fossilized?) have also been collected from the old school grounds in Liverpool and are on display at the Queens County Museum. Furthermore, at Dugway Bridge in Lequille and at the village of Milford on the Mersey (the head-of-tide on both rivers), significant Colonial Period (AD 1604-1867) and later Post-Confederation (AD 1867-present) Euro-Canadian developments such as mills, dams, bridges, and buildings have significantly disturbed or buried any sites located in these areas, beginning in 1607 and 1760 respectively (Lawrence 2002:123; Sheppard 2001:xiii). Evidence of pre-Contact occupation has been recovered around Dugway Bridge (BeDi-07, -12, -15), but no sites have been recorded at the falls in the village of Milford. However, Mi'kmaw place-names do exist for the historic head-of-tide area on the Mersey River at Milton *Gepeg gisna Goipegeg* means "narrows, at the falls", *Pontanoc* Street remains, although its meaning is unknown, and just 2 km downstream from Milton at what is now Pine Grove Park the name *Kebek* actually refers to the head-of-tide (see *Table 5.2*). Middle Archaic through to post-Contact material has been recovered at sites between 0.5 and 2.5 km above Milton, including at the original mouth of Deep Brook/Cowie Falls (BaDe-33, -34), where sites featuring evidence of long-term, repeat occupation since the Middle Archaic Period (ca 7,000-5,000 BP), have been identified which correspond with the Mi'kmaw place-name for this area meaning "place of old huts, old camping place" (see *Table 5.2* above, and *Appendix B*).

Several rivers in *Kespukwitk* feature major interior encampments at the foot of the *Ponhook* (first lake heading upstream on a river) suggesting this river feature is also an important 'central place', likely as seasonal interior base-camp. Examples from southwest

Nova Scotia include the Mersey River (Indian Gardens Complex), the Allains River (Grand Lake Dam, Lambs Lake Brook), the Medway River (Greenfield, at foot of *Ponhook Lake*), the Gaspereau River (Gaspereau Lake Complex), and presumably the Lahave River as well, based on the presence of "Eel Weir Pool" and "Indian Brook" near the foot of Wentzell's Lake. It is also interesting to note that most of these sites feature more than 5,000 years of repeat use and in the case of Gaspereau Lake, perhaps as much as 10,000 years of occupation (Laybolt 1999; Murphy 1998:46,101). Unfortunately, many of these important interior sites have been significantly disturbed by hydro-dams, road/bridge construction, and settlement.

Although distinction between base-camps and field-camps is not always clear, particularly after only Phase I survey-level of investigations, residence sites can be recognized in the archaeological record by the presence of ceramics. Pottery represents evidence of a site having been a focal point of relative permanence, for either a brief or extended period of time. Pottery was used in food preparation, which was a residence task carried out by Mi'kmaw women (Biard 1898: 77; Deny 1908:422-423; Robertson 1969:9, 12; Rice 1987:184; Ricker 1998:23; Upton 1979:5-6), and they typically are responsible for the manufacture of functional pottery in hunter-gatherer societies (Vincentelli 2003). Therefore, pottery found along the Mersey/Allains Corridor serves as an indicator of the presence of women. Mi'kmaw pottery is fairly brittle, and would have restricted pedestrian mobility (including portaging) due to its weight and clumsiness, especially if the vessel is very large, full, or it is necessary to transport multiple pots. The ethnographic record indicates that large wooden kettles were left at major seasonal campsites for later use (Whitehead and McGee 1983:15). If ceramic pots, like wooden kettles, were not frequently carried from camp to camp, but were left behind or cached at a site, as is suggested by Deal, Morton and Foulkes (1991:176), then the caching of these vessels would have been done with the intention of returning to the site to use the pots again in the future. Additionally, women are limited in their mobility not only because of their pottery, but also by the additional gender specific tasks of food preparation and looking after children and the elderly (Ricker 1998:23). As such, the presence of pottery at pre-Contact sites reflects the relative permanence or importance of a camp as a central place, and represents evidence of a residential site, either as a large base-camp, or smaller field-camp.

For this analysis, sites that have not produced pottery but which feature artifacts associated with the Middle-Late Woodland Period (ca 2,000-450 BP), such as corner-notched, or small side-notched bifaces, and chert lithics characteristic of the *Kejikawek L'nuk* occupations during the late pre-Contact period (see *Chapter 4.1.1.3*), have been classified as *task-sites*. Task-sites represent areas where specialized activities were carried out (weir fishing, lithic reduction, kill sites, primary butchering), whereas base-camps and field-camps are the residence areas that supported those task-activities.

The absence of subsurface testing at many sites along the Mersey/Allains Corridor has limited the recovery of pottery. Undoubtedly, many of the larger lithic scatters along the Mersey and Allains Rivers that have not yet produced pottery, and which have been classified as task-sites by this study, are also residence-camps. However, for the purposes of this analysis, non-pottery lithic sites from the Mersey/Allains Corridor that are outside the UMARC study area and which are typically poorly reported on, and with which I am less familiar, are at this time all considered task-sites.

Despite the absence of pottery, McKibbin's Beach (BdDi-07) from the UMARC has been classified as a residence-camp based on personal familiarity with the site, as well as the prominence of its location at the head of Fisher Lake, on McKibbin's Beach, and the fact it was the largest site identified during the 2006 survey. Although pottery has yet to be recovered from this site, its similarity to other pottery producing base/field-camps along the UMARC and in KNP/NHS warrant its inclusion in this analysis as a residence site, and not as a task-site.

Within the Mersey and Allains drainages thirty-seven Middle-Late Woodland Period (ca 2,000-450 BP) sites have produced pottery (see *Appendix A – Residence Sites*), including four along the UMARC (Vidito - BeDi-07; Grand Lake Dam - BdDi-01; Stedman's Beach - BdDh-02; Big River Runs - BdDh-03), and generally appear to represent moderate to large sized sites, both in area and artifact assemblage. This also supports their role as important centralized habitation areas (base-camps or field-camps). Along the interior of the Mersey and Allains Rivers, these sites are usually adjacent to rapids, or located at sand beaches on lakes, and are frequently associated with branching tributaries of the river system. All of these landscape features correspond with Ganong's site location criteria discussed above in *Chapter 5.2* and *5.3* (Hamilton and Spray 1977:3-4). Additionally, these pottery base-camps or field-camps are usually in close proximity to other activity areas or task-sites, such as lithic raw-material quarries, lithic reduction workshops, and fishing stations/weirs.

Forty-eight non-pottery, task-sites featuring Middle-Late Woodland Period (ca 2,000-450 BP) lithic material have been identified along the Mersey/Allains Corridor, between Annapolis Royal and Liverpool, as well as at least forty-eight stone fish-weirs, although due to the challenges of dating stone weir feature, it is unclear which structures may or may not have been active during the Middle-Late Woodland Period (ca 2,000-450 BP) (see *Appendix A*).

Figure 5.4.1: *Hunting party at "Big Sandy Beach" on Boot Lake in 1922, view northeast. Many of the smaller lithic sites along the UMARC, including the Boot Lake site (BdDi-06), would have served as temporary stopping points along the route. Image source: Nova Scotia Museum 1922.*

In addition to their primary function as residences or task-sites, most of the sites along the Mersey/Allains Corridor probably served as rest-stops, or overnight travel-camps for messengers and traders moving more rapidly through the interior. This would include the smaller lithic sites along the UMARC (Baillie Lake Brook - BdDi-04; Springhill Mud Lake BdDi-05; Upper Dukeshire's Falls - BcDh-23), and in KNP/NHS, especially those associated with portage trails (BcDh-02, 10, 23, 25; BbDh-04, 05, 11, 12; BbDi-01, 02, 03). The Mill Falls site (BcDh-25) in the *Park Study Region* may have also served as a task-site for fishing activities associated with Mill Falls, as well as a resting stop for pre-Contact aboriginal canoeists portaging around the slate-ledge rapids. Despite intensive testing, and an ideal location near a sandy beach with a spring fed creek, the Boot Lake site (BdDi-06) in the *Milford Lakes Study Region* only produced a twenty-eight quartz flakes, suggesting this is also only a briefly occupied travel camp, although historically it was used during autumn for moose hunting (*Figure 5.4.1*).

In some cases the artifacts themselves speak to the activities that were carried out at the site, such as the scrapers found at the Meuse site (BdDi-08) at Grand Lake Flowage which may be related to hide processing, or the isolated biface at the McGinis site (BdDi-10) on Grand Lake which may have been related to hunting activities or a kill-site.

Although no ceramics were found at Lower Dukeshire's Falls (BcDh-24) at the head of Harry Lake, this site probably functioned similar to other pottery-producing base/field-camps such as Big River Runs (BdDh-03), which is located further upstream at the head of Kempton Lake. Both sites feature dense lithic scatters, located at the foot of a portage trail, where a set of rapids enter a small lake, and both are in close proximity to a major tributary (BdDh-03 is near the Allison/Rocky Lake branch of the Mersey; BcDh-24 is across Harry Lake from the mouth of the Liverpool River – another northern branch of the upper Mersey). Lower Dukeshire's Falls may also feature a badly damaged *Type 4* stone weir. The absence of pottery at Lower Dukeshire's Falls may suggest this was a *Mu Awsami Saqiwe'k*/Archaic Period site. This is supported by the presence of an adze preform matching similar tools found by a local collector at an unrecorded site at Second

Stillwater Falls on the lower Mersey River (Dexter 2006; see *Figure 4.4.7*). The Second Stillwater Falls site produced Middle-Late Archaic (ca 7,000-3,000 BP) material, which suggests the Lower Dukeshire's Falls site may actually be a pre-Ceramic Period (+3,000 BP) base/field-camp.

Sixteen of the pottery base/field-camps and twenty-nine of the non-pottery task-sites throughout the Mersey/Allains Corridor are within 1 km of a stone fish-weir (see *Appendix A*), indicating the function of these sites was probably closely tied to the harvesting and processing of aquatic resources. Most of these weirs are *Type 4* eel weirs.

No *Type 1* pre-Contact fish weirs have been identified in Nova Scotia because of poor preservation and the fragile organic nature of this type of weir's wooden construction materials (Grant and Biggar 1911b:286-287; Lewis 2007:11, 27-28, 38, 40, 59) However, they were likely used throughout much of the Maritime region wherever there was sufficient tidal range to trap fish, such as herring, gaspereau, mackerel, striped bass, or salmon, during a slack tide (see *Figure 4.5.1*). Presumably fence-stake weirs would have been used and maintained throughout much of the year, perhaps by semi-permanent or less mobile residents such as the elderly or adolescents who resided at the larger base-camps near the river mouths or head-of-tide area.

The Dugway Bridge Weir (BeDi-07) at the head-of-tide on the Allains River is the only *Type 2* weir along the Mersey/Allains Corridor (see *Figure 4.5.3*). No corresponding *Type 2* weirs have yet been identified on at the head-of-tide on the Mersey River.

Variability in *Type 3* weirs was noted following a closer review of the site record forms from the 2004 NSPI Lower Mersey River Reconnaissance Survey (Sanders and Stewart 2007) (see *Figure 5.4.2*). In addition to the up- or downstream U-shaped *Type 3* weirs (BaDf-03, 76, 77, 83, 84 – see *Figure 5.4.2a*) described by Lewis (2007), other forms have been identified, including linear structures (*Figure 5.4.2b*) for dipping or spearing fish (BaDe-38; BaDf-55), and complex weir structures (BaDf-22, 51, 85, 88, 89, 90, 91 – *Figure 5.4.2c*). The complex weir structures feature both up and downstream elements, either as a result of several building episodes, or representing weirs designed for harvesting multiple species (both up- and downstream migration) from a single location. On the Mersey River, these variations on *Type 3* weirs are found between the head-of-tide at Milton and the foot of the Ponhook Lake at Indian Gardens, suggesting the geographic distribution of these weirs may be somewhat wider than "just above the head-of-tide", as described by Lewis (2007:41, 48, 60), although they still appear to be confined to the "lower river" as he suggests, downstream of the *Ponhook*.

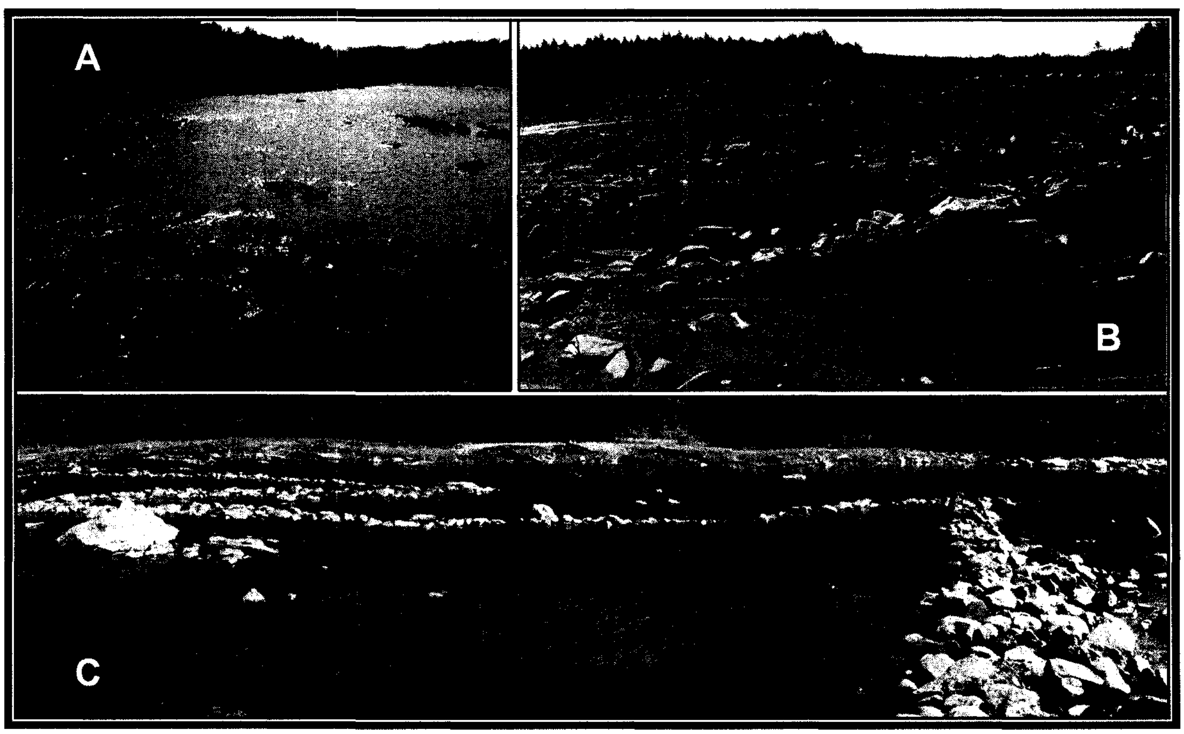


Figure 5.4.2: *Variability in Type 3 weirs along the Mersey River.* ***(A)*** *= U-shaped, downstream weir BaDf-03;* ***(B)*** *= Linear stone formation BaDf-38, extends from shore at left to large boulder;* ***(C)*** *= Complex weir featuring both up and downstream components, BaDf-90 at right & BaDf-89 at left in background. Photos courtesy of CRM Group.*

Throughout the Mersey River sites have been identified featuring successive cultural occupations extending from the Middle-Late Archaic Periods (ca 7,000-3,000 BP), and in some cases Late Paleo-Indian Period (ca 10,000-8,500 BP), through to the post-Contact period (see *Appendix B*). More than half (15/27 – see *Appendix B*) of these sites are within 1 km of a stone fish-weir. This relative separation from the weir may be explained by the overwhelming smell of decomposing fish that can be associated with weir-fishing stations and fish-processing sites (Lewis 2007:52). The repeat occupation of habitation sites associated with weirs over several millennia, suggests earlier occupants of these sites also settled in these areas because of the good fishing, particularly the autumn eel run and may have built and maintained these weirs for thousands of years. This represents important evidence that pre-Woodland, and *Kejikawek L'nuk*/Woodland Period populations, as well as *Kiskukewe'k L'nuk*/post-Contact Mi'kmaq in southwest Nova Scotia followed similar interior-oriented autumn subsistence and mobility patterns focused on the eel fishery (Nash 1980:35-36; Nash and Miller 1987:50, 52).

In the archaeological record of southwest Nova Scotia, fish-weirs designed to intercept large quantities of migratory fish, and coastal shell-middens indicate mass collection of food, particularly aquatic resources, did occur; however, there is only limited physical evidence of bulk food storage (Black and Whitehead 1988; Lewis 2007). Lewis reports that fish-weirs are often associated with circular pits (1-3m wide), which are lined with coarse sand or gravel and may include a hearth feature, for smoking the fish, or for de-sliming eels (see *Figure 4.5.5*) (Lewis 2007:47). In the early 1900s, British author and sportsman George N. Tricoche recorded the preparation of eels in Cape Breton. "Eels are dumped into a hole at the bottom of which are very hot ashes. There they disgorge their slime, after which they may be smoked like any other fish... A wide but rather shallow hole is dug...and filled with very hot embers from birch wood." A lattice of green limbs is then built over the embers, on which the eels are laid, and are tended for a week or more (Parker 1995:101). Limited ethnohistoric evidence supports the preservation of bulk food through references of smoking meat and *fish* (Black and Whitehead 1988; Christianson 1979:105,112; Hoffman 1955:193-195; Le Clerq 1910:110,119; Ricker 1998:19; Robertson 1969:7; Rostlund 1952:139,301; Thwaites 1959:v3, 101, 107; Whitehead and McGee 1983:12), in addition to other food storing techniques, including using skin bladders to store moose, caribou (and probably bear) grease, and seal oil (Christianson 1979:104-5,112; Hoffman 1955:193-5; Le Clerq 1910:118; Thwaites 1959:v3, 79), and suspending meat in sacks covered by bark in high tree branches (Christianson 1979:104; Hoffman 1955:193-5; Thwaites 1959:v3, 107).

Erskine indicates, "fires for smoking meat or fish are said to have been long and narrow." (1960:350). Several sites in southwest Nova Scotia feature linear smoking hearths (Serendipity – BbDh-16; Shelburne River 9 – BbDh-33; Timber Island Brook 1 & 2 – AlDf-14), small and medium sized pit features (Bear River – BdDk-01), or stone-lined roasting pits (White Beach site, on Kejimkujik Lake – BcDh-06), which may have played a role in food preservation and storage practices (Christianson 1986a, 1986b; Erskine 1998:76; Ferguson 2005:25,27). Unfortunately, physical evidence of activities such as smoking and drying fish and game are not plainly obvious in the archaeological record (Black and Whitehead 1988:22-3; Burley 1983:161; Spiess, Bourque and Cox 1983:104). However, the thick black soil at Eel Weir 6 (BbDh-06) in KNP/NHS may largely be a product of the oily residue resulting from smoking of eels, which appears to have been the major focus of activities at this site since at least the Late-Terminal Archaic Period (ca 5,000-3,000 BP) (Ferguson 2005:25; Myers 1973:58). The lack of in-depth excavation and reporting of sites in southwest Nova Scotia has limited our ability to reconstruct the past, and furthermore, poor organic preservation at most sites has eroded nearly all trace of the organic materials that would have played a major role in traditional food storage practices (i.e.: baskets and containers made from wood, bark, skins, or plant fibres).

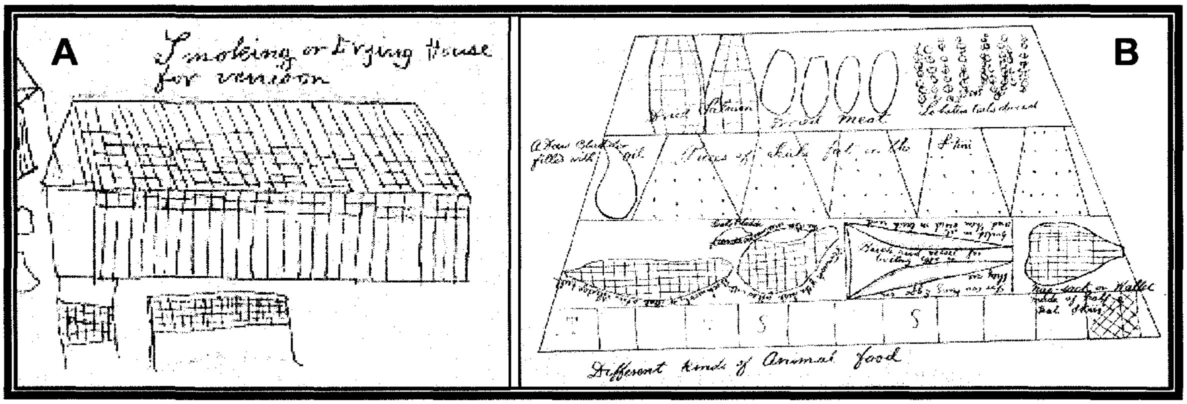


Figure 5.4.3: Shanawdithit's sketches from 1828 depicting food preservation by the Beothuk. The first drawing (A) shows wooden drying wracks and a smoking/drying house for venison. The second drawing (B) shows the interior of a pantry house featuring dried fish and meat at the top, seal fat drying on the skin and a deer bladder filled with oil in the middle, and at the bottom, a birch bark vessel for boiling eggs and seal bladders filled with meat, sausage and oil. This parallel line of evidence from the neighbouring Beothuk supports the notion that the Mi'kmaq probably practiced similar food preservation techniques (Marshall 1999:279, 318).

Despite the fact that temporary structures such as smoking/drying racks and perhaps pantry houses may not be plainly obvious in the archaeological record, their use by the Mi'kmaq has been documented in the ethnohistoric record (Ricker 1998:23). The identification of such features as linear hearths, storage/roasting pits, shell-middens, and organic-rich soil at archaeological sites, suggest the Mi'kmaq and their pre-Contact ancestors carried out food preservation activities, at least to a certain extent (Black and

Whitehead 1988; Burley 1983:162). Since bulk food harvesting and storage significantly restrict residential/group mobility, this further supports evidence presented above indicating the *Kejikawek L'nuk* of the Middle-Late Woodland Period (ca 2,000-450 BP) followed a collector-based survival strategy.

As aquatic hunter-gatherers following a watercraft-adapted, collector-based settlement strategy, the *Kejikawek L'nuk* of the Middle-Late Woodland Period (ca 2,000-450 BP) in southwest Nova Scotia appear to have organized their seasonal movements around the rich diversity of aquatic food resources available to them, particularly species that follow predictable annual cycles and migration patterns. The major fish migrations in the region include American smelt (*Osmerus mordax*) [March – April], alewife/gaspereau (*Alosa pseudolarengus*) [April – May], Atlantic salmon (*Salmo salar*) and Atlantic sturgeon (*Acipenser oxyrhynchus oxyrinchus*) [May – June, and September – October], mackerel (*Scomber scombrus*) [June – July], American eel (*Anguilla rostrata)* [September – October], and tomcod (*Microgadus tomcod*) [December] (Christianson 1979; Nova Scotia Department of Fisheries and Aquaculture [NSDFA] 2007). Species such as Atlantic cod (*Gadus morhua*) and haddock (*Melanogrammus aeglefinus*) also are available along in-shore coastal waters during the summer, and striped bass are available at this time of year in estuary waters (Department of Fisheries and Oceans Canada 2008; NSDFA 2007; Lewis 2007:49).

These species must annually enter environmental boundary zones (tidal shallows, or fresh/saltwater), or pass through narrow channels where the fish are concentrated and vulnerable, and where they can be easily and efficiently exploited through weir technology (Davis 1986:xiv; Lewis 2007:12-14,17,39,48; Rostalund 1952:102). However, since weirs do not tend themselves, and the fish they trap run for several weeks, it would be necessary for the Mi'kmaq to set up habitations (base-camps or field-camps) near these fishing stations to monitor and process the harvested fish, and supplement these activities by exploiting other land-based resources also available in the boundary terrestrial environment around the site (Lewis 2007:9-10). Therefore, sites associated with weirs provide an opportunity to define the seasonal occupation of a site, based on which fish species the weirs targeted.

In Lewis' model, three of the four types of weirs he has identified feature a saltwater or near-coastal orientation (*Type 1* – tidal fence-stake weirs; *Type 2* – estuary-head, up-stream weirs; *Type 3* – U-shaped, pen-weirs above the head-of-tide). Weirs located in these three aquatic-zones could all be operated by small task-groups working from a single strategically placed central base-camp located near the head-of-tide on a river.

Using Lewis' (2007) weir typology model, this places the Middle-Late Woodland Period *Kejikawek L'nuk* on the lower freshwater and estuary portions of river systems during the spring and early summer, where *Type 1*, *Type 2*, and *Type 3* weirs would have been constructed for dipping, spearing, and trapping fish. Lewis believes these types of weirs along the lower sections of rivers targeted species like gaspereau, salmon and sturgeon because it was advantageous to intercept these species while they were most concentrated in the main river, and before they expended valuable fat reserves during their upstream spawning migration (Lewis 2007:60). Remembering that the Mi'kmaq were using canoes, the relative close proximity of these freshwater weir sites and their associated field-camps to the larger base-encampments at the head-of-tide area, enabled other spring/summer seasonal resources on the coast and in river estuaries, such as migrating and nesting waterfowl, to also be exploited by other task-groups who also operated from the same head-of-tide residential base-camp (Christianson 1979:103-104).

In addition to fish, migratory birds such as the passenger pigeon (*Ectopistes migratorius*), Great auk (*Pinguinus impennis*), Canada goose (*Branta canadensis*), and various species of ducks would have provided important variety in the seasonal diet between spring and fall, especially in the availability of eggs during the early summer nesting period. These species often congregate at estuaries, tidal marshes, and wetlands along the coast, which would have been easily accessible from the base-camp residences near the head-of-tide on many of the major rivers in southwest Nova Scotia.

In the fall, settlement patterns seem to shift further inland for the eel run, possibly centred around interior base-camps located at the foot of *Ponhook* lakes (first major lake on a river). However, the autumn eel harvest may also represent a time of more dispersed population density, based on the numerous *Type 4* (downstream, V-shaped) weirs, task-sites, and supportive field-camps represented throughout the Mersey system.

Although game animals would have been hunted throughout the year, both by design and opportunistically, having already established themselves in the interior for the fall eel harvest enabled aboriginal hunters to efficiently take advantage of the fall rut for animals like moose, caribou, and white-tailed deer later in October and November (Christianson 1979). As such, interior pottery sites associated with weirs such as the Grand Lake Dam site (BdDi-01) at the foot of Grand Lake probably served as an autumn base-camp for both eel fishing and for hunting large game animals. On the upper Mersey River, pottery-sites not associated with weirs, such as Stedman's Beach (BdDh-02) and

Big River Runs (BdDh-03), as well as large lithic/beach sites like McKibbin's Beach (BdDi-07) on Fisher Lake probably functioned as autumn interior hunting task-camps.

Evidence for *Kejikawek L'nuk* winter adaptations during the Middle-Late Woodland Period (ca 2,000-450 BP) are not so easily defined. Ethnohistoric records from the seventeenth century indicate that tomcod fishing was carried out in estuaries in December, and whelping grey seals (*Halichoerus grypus*) were hunted in January and February along the coast (Christianson 1979:96,99,114; Rand 1999:54; Thwaites 1959:79). Christianson indicates other seal species particularly harbour seal, which whelps in the spring, were probably hunted at other times of the year (Christianson 1979:96). Considering hunters had the use of snowshoes and dogs, deep winter snow would have made tracking and stalking moose, caribou, and deer easier than at other times of the year, especially when they were congregated in 'yards' (Christianson 1979:101,102,105-106,110; Davis 1986:176; Erskine 1960:355; Thwaites 1959:79). Additionally, the sedentary nature of hibernating black bears and the predictable use of ice holes in rivers and lakes by beaver and otters, as well as the thicker winter coats of all these fur-bearing animals, would have made winter an ideal time of year to target these species for warm clothing, even before the onset of the pelt-hungry European fur-trade made this a necessity (Burley 1981; Nash and Miller 1987).

The sedentary nature of shellfish species like clams, are especially easy to acquire in coastal sand-flats, and are available throughout the year, including winter. Erskine indicates Middle-Late Woodland Period (ca 2,000-450 BP) midden sites around Port Joli (AlDf-02, 03, 04, 07, 08, 09), on the Atlantic coast between Liverpool and Shelburne, and at Bear River in the Annapolis Basin were used throughout the year, except perhaps in spring (Erskine 1960:373). Erskine recounts an old Mi'kmaq named Peter Michael having told him "it was their custom not to eat clams from April to July because they were full then of eggs and sand" (Erskine 1960:354). Erskine also admits the tidal clam flats can become inaccessible when ice pans build up along the shoreline during particularly cold winters (Erskine 1960:355), and that this may have played a role in what he observed as a shift from a coastal winter adaptation to winters spent in the interior at *Ponhook* base-camps around AD 1150; a change that coincides with the worsening climatic conditions of the Little Ice Age (Erskine 1960:355, 374).

The Bear River midden site (BdDk-01) in the Annapolis Basin has shown evidence of both summer and winter use during the Middle-Late Woodland Period (ca 2,000-450 BP) (Erskine 1960:351, 1998:53). Similar results have been recorded from midden sites in Passamaquoddy Bay, New Brunswick, and along the coast of Maine on the north side of the Bay of Fundy (Black 2002; Sanger 1996:522-523). It is interesting to note that Early-Middle Woodland Period (ca 2,700-2,100 BP) midden sites on the Bliss Islands in Passamaquoddy Bay, which are in traditional Passamaquoddy tribal territory, feature a preference for mussels, which the Mi'kmaq considered taboo as a food source (Black 2002:313; Lescarbot 1928:225; Ricker 1998:21). This represents an apparent archaeologically visible cultural distinction between the Passamaquoddy and the Mi'kmaq. However, Erskine (1998:53) indicates he recovered mussel shells during his excavation of deeper strata midden material at Bear River (BdDk-01), indicating *Kejikawek L'nuk*/Middle Woodland populations in southwest Nova Scotia ate mussels, similar to the results of Black's (2002) excavations in Passamaquoddy Bay, New Brunswick. This suggests the taboo of eating mussels described by Lescarbot (1928) in the early seventeenth century was perhaps only a recent development, or possibly the mussels recovered by Erskine in southwest Nova Scotia represent evidence of interaction between the Passamaquoddy and the Mi'kmaq in *Kespukwitk* (Ricker 1998).

Terrestrial game animals including ruffed grouse (*Bonasa umbellus*), snowshoe hare (*Lepus americanus*), groundhog (*Marmota monax*), porcupine (*Erethizon dorsatum*), river otter (*Lontra canadensis*), beaver (*Castor canadensis*), lynx (*Lynx canadensis*), black bear (*Ursus americanus*), white-tailed deer (*Odocoileus virginianus*), moose (*Alces alces*), and woodland caribou (*Rangifer tarandus*), would have been more or less consistently available throughout the year in the boundary terrestrial environment around the base-camps, field-camps, and task-sites used by the Mi'kmaq of southwest Nova Scotia while exploiting the available aquatic resources. It is likely that at certain times of the year it was particularly advantageous to concentrate on these terrestrial species (i.e.: autumn – for the rut and higher fat content of meat; winter – better fur, dens/breathing holes in the ice; tracking in the snow), and these animals certainly would have formed an important part of the pre-Contact *Kejikawek L'nuk* diet. Archaeological investigations from Passamaquoddy Bay, New Brunswick indicate that migratory birds were also an important food sources exploited throughout the year (Davis 1986:210; Stewart 1974:31). However, the wide and uneven distribution and less predictable nature of terrestrial and avian species, versus the seasonal concentrations of rich aquatic species such as gaspereau, salmon, and eels, which were only available for brief periods each year, suggests aboriginal settlement patterns and shifts in seasonal harvesting was directed by the ebb and flow of available migratory aquatic species, and to a lesser extent by migratory birds during the Middle-Late Woodland Period (ca 2,000-450 BP).

The results of this settlement and subsistence analysis for the Mersey/Allains River Corridor indicate the *Kejikawek L'nuk* of the Middle-Late Woodland Period (ca 2,000-450 BP) were oriented toward near-coastal resources for much of the spring and summer. Centrally-located base-camps at the head-of-tide of these rivers would allow freshwater resources like gaspereau, salmon, and sturgeon to be harvested, while still intercepting coastal and saltwater resources like migratory birds, or schooling mackerel and cod (Christianson 1979). From September to October resource harvesting appears to shift focus toward the interior eel fishery, and the *Kejikawek L'nuk* probably remained inland into November for hunting large game. Autumn occupation of the interior is supported by archaeological evidence through the association of task-camps with *Type 4* eel weirs, and from botanical evidence of charred acorns and a burnt blueberry seeds from an interior field/task-camp along the upper Mersey (BdDi-07) (see *Chapter 4.2.1*). The large number of field-camps suggests the interior fall eel fishery and the hunting of large game animals may have been a period of population dispersal, although large sites at the foot of *Ponhook* lakes in southwest Nova Scotia may have served as congregation areas during the fall.

Evidence for winter settlement and subsistence patterns is limited, although a coastal orientation and a return to estuary-head base-camps focused on exploiting shellfish (when not covered by ice-pans), seals, large and small game animals (both within and beyond the base-camp foraging radius), and food preserved from the fall harvest is suggested.

This settlement model represents only a general depiction of Mi'kmaw seasonal mobility and lifestyle during the late pre-Contact period. It is presented with the understanding that there is no such thing as a 'typical year'. The collector-based survival strategies represented by the archaeological and ethnohistoric evidence outlined above, would have been constantly adapted to accommodate shifts in the environment, regional ecology, and Mi'kmaw society. This model's scope of roughly 1,500 years is still too broad to accommodate all the nuances, and events of daily life that are represented by the archaeological record. However, the repeat use of sites along the Mersey and Allains Rivers for thousands of years suggests that aspects of this model from the Middle-Late Woodland Period (ca 2,000-450 BP) may accurately correspond with much of the occupation history of the region. It is hoped that future research in southwest Nova Scotia, and particularly along the Mersey/Allains Corridor can portray in greater detail the lives of the Mi'kmaq and their ancestors, and provide new insight into the history of *Kespukwitk.*

CHAPTER 6 – CONCLUSION

"It is precisely what is invisible in the land...that makes
what is merely empty space to one person, a place to another"

– Barry Lopez, American writer (Ryden 1993:207)

As discussed at the beginning of this thesis, the primary goal of the 2006 Upper Mersey/Allains River Corridor Archaeology Survey was simply to identify new pre-Contact sites along this historic canoe route through the interior of Annapolis County. In doing so, these sites and the artifacts they yielded would provide the basis for interpreting the lifestyle and land-use patterns of the pre-Contact aboriginal populations of southwest Nova Scotia. As a result of the 2006 fieldwork, sixteen new archaeological sites across the six study regions of the UMARC were identified featuring pre-Contact material or traditional Mi'kmaw technology, as in the case of the four stone fish-weirs. Five previously identified pre-Contact sites were also revisited along the Allains and Mersey Rivers, resulting in the documentation of additional artifacts and new information, which has increased the cultural significance and research value of these sites.

Having accomplished this primary research goal, the UMARC Survey has also managed to raise the profile of this under-appreciated area of southwest Nova Scotia, and has succeeded in bridging a gap in the archaeological record between the 206 existing sites strung along the lower half of the Mersey River, with the five previously identified pre-Contact sites on the Allains River. By building on the successes of previous research, a continuous line of 227 aboriginal sites now extend from Annapolis Royal on the Bay of Fundy, to Liverpool on the Atlantic coast at the mouth of the Mersey River. When historic period aboriginal sites, and unrecorded sites known to collectors along the route are also included, this figure surpasses 250 archaeological sites of the Mi'kmaq and their ancestors along the Mersey/Allains Corridor.

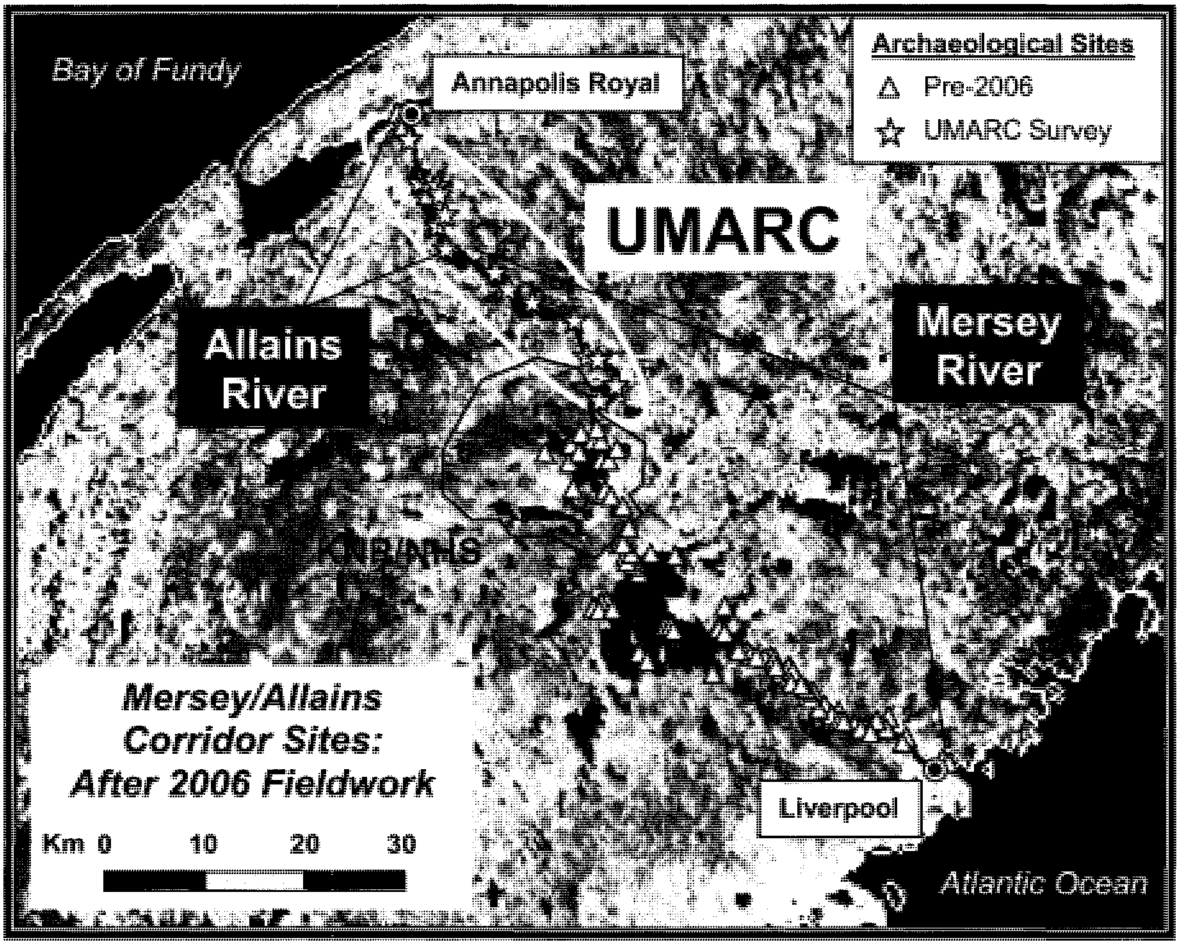


Figure 6.0.1: *Map of southwest Nova Scotia showing the results of previous archaeological research, as well as the 2006 UMARC Survey, along the Mersey/Allains Corridor. A continuous line of archaeological sites now extends across the whole canoe route between Annapolis Royal and Liverpool. Map source:* King 2006.

This sequence of sites along the Allains and Mersey watersheds provides the archaeological basis for extending historic use of these rivers as a canoe route across southwest Nova Scotia far into the distant past, and validates the long-term use of these waterways as an ancient travel corridor. It also establishes that use of the Mersey/Allains Corridor did not simply develop during the seventeenth century French Colonial Period, as a result of French settlements established at either end of the route – Port Royal in the north, and Port Rossignol in the south. Instead, this trail of pre-Contact sites through the interior of *Kespukwitk* demonstrates the waters of the Mersey and Allains Rivers have held long-standing importance to the Mi'kmaq and their ancestors for thousands of years.

The presence of imported Bay of Fundy chert all along the Mersey/Allains Corridor, as well as the direct association of ancient sites with modern portage trails has established these waterways as a pre-Contact travel and trade route across the province used by the Mi'kmaq and their ancestors for millennia. Evidence of these rivers having formed a traditional canoe route across *Kespukwitk* is best represented through the identification of the Springhill Mud Lake site (BdDi-05) in the *Height-of-Land Study Region*. Not only is this campsite located at the closest point between the headwaters of Allains and Mersey Rivers, but it also featured Bay of Fundy chert. Furthermore, ethnographic records indicate the Mi'kmaq referred to the height-of-land area of the Mersey/Allains Corridor as "*Ola tet onigen*" – the portage to the Lequille River (Pacifique 1934:306; Ricker 1998:206). Also, recent use of this location as a logical portage route between the two drainages by modern canoeists serves as further evidence of these drainages forming a viable canoe-route across southwest Nova Scotia. Finally, the use of these waterways as a traditional travel corridor is also supported by the identification of pottery made with greyish-pink clay, suggestive of a Bay of Fundy clay source, found at Big River Runs (BdDi-03) in the *Upper Mersey River Study Region*.

As a result of the 2006 UMARC Archaeological Survey, early pottery (Ceramic Period 2: ca 2,150-1,650 BP) from the head-of-tide on the Allains River (BeDi-07), as well as diagnostic chipped-stone bifaces (BeDi-07, BeDi-10, BdDi-01, BdDh-01), and ground-stone artifacts (BdDi-01, BdDi-09) have been recovered, indicating the Allains River has been continuously occupied for at least 5,000 years. Evidence of similarly aged, if not older occupations have also been identified along the central lakes and lower reaches of the Mersey River.

On the upper Mersey River, artifacts such as decorated pottery (Ceramic Periods 3-6: ca 1,650-400 BP), and Late Woodland Period (ca 1,000-450 BP) lithic material (side-notched quartzite biface base, chert debitage) have been recovered matching similar artifacts from other portions of the Mersey/Allains corridor. This indicates the entire canoe route has been used for at least 1,000 years.

Unfortunately, the UMARC Survey was unable to confirm an early-Ceramic (ca +1,650 BP) or pre-Ceramic (ca +3,000 BP) presence along the upper Mersey River. However, the presence of a Late-Terminal Archaic Period (ca 5,000-3,000 BP) biface previously discovered at Rogers Brook (BcDh-09) in KNP/NHS, and the recent recovery of extremely dehydrated or weathered chert material (BdDi-05, BcDh-24), as well as undated lithic scatters (BdDi-06; BcDh-23, 24, 25), undiagnostic ground-stone tools (BdDi-07, BcDh-24), and rhyolite chipped-stone lithics (BdDh-02, 03), are suggestive evidence of earlier occupations along the upper Mersey. It is hoped future research will be able to confirm a lengthy occupation sequence along the upper Mersey River similar to that of the Allains River and the lower half of the Mersey, and that it will be possible to establish archaeological evidence that extends use of the whole travel corridor beyond the Middle-Late Ceramic Period (ca 2,000-450 BP).

This study has also revealed the interior climate and geography of southwest Nova Scotia have remained relatively stable throughout the last 2,000 years. Botanical analysis of soil samples collected from the upper Mersey River (BdDi-07, BdDh-02) indicate the same tree species found at these sites today were inhabiting the landscape during the Middle-Late Ceramic Period (ca 2,000-450 BP). Additionally, modern/historic artifacts (clay pipes, buttons, ceramics, glass, metal), as well as campsites, settlements and portage trails used by both natives and non-natives have been found overlying pre-Contact sites along the route. This reflects the long-term stability of the landscape and continuity of land-use by the Mi'kmaq through site re-occupation, demonstrating the human history of this region extends back thousands of years.

For the modern Mi'kmaq/*Kiskukewe'k L'nuk*, this continuity is most dramatically represented by the presence of modern and historic reserve properties, aboriginal place-names, and Mi'kmaw family names that remain tied to the modern landscape of the Mersey and Allains Rivers. Even more significant though is the fact that many of these locations overlap or are directly associated with pre-Contact sites that have been used for thousands of years. Additionally, the continued modern practice of weir fishing for eels in the fall along the lower Mersey River indicates the traditional and historic use to this landscape remains important to the Mi'kmaq of today. However, the fact that de Meulles' journal appears to be the only record of the Allains and the upper Mersey Rivers having formed a Mi'kmaw canoe route indicates much of this areas' past importance has been eroded. This research project serves to re-emphasize the value of archaeology as a tool for reconnecting with the past, by having succeeded at recovering a small piece of forgotten Mi'kmaw history, and has re-established the long-term importance of the Allains River and the upper Mersey watershed to the Mi'kmaq of *Kespukwitk*.

Across the broader region of southwest Nova Scotia, the presence of Highway No. 8 reflects the continued use of this landscape as a travel corridor between Annapolis Royal and Liverpool. From humble beginnings as a cart-path through the woods in 1804, the route was expanded into the New Liverpool Road by the 1830s (Bell et al. 2005:63). Although this roadway supplanted canoe travel across the interior of southwest Nova Scotia along the Mersey/Allains Corridor, it still parallels these waterways and has its roots in the ancient interior water-highway of the Mersey and Allains Rivers. This is again similar to Ganong's description of portage trails, where "the exact line of the path is constantly changing, though in the main its course is kept" (Hamilton and Spray 1977:14).

The results of this investigation have also substantiated previously observed patterns in the archaeological record, and seem to shed light on patterns of regional lithic use in southwest Nova Scotia. Examination of the limited ceramic material from the UMARC study area supports the results of previous ceramic studies from the region (Kristmanson 1992; Petersen and Sanger 1991), and examination of the four new fish-weirs along the UMARC identified during the 2006 fieldwork corresponds with Lewis' (2007) fish-weir typology model for southwest Nova Scotia. Surprisingly, despite the major difference in the size of the two drainages examined, the application of fish-weir technology and pre-Contact settlement patterns on both the Mersey and Allains Rivers appears to be the same, simply on different scales. However, the lithic assemblages of these two watersheds appear to show unique attributes. Throughout the Mersey drainage, quartz is the dominant chipped-stone artifact material; while on the Allains River chert and quartzite dominate the assemblages. It is suggested that while occupying sites along these rivers, the Mi'kmaq more commonly exploited the locally available material. Perhaps future investigations in the region can further illuminate whether these same patterns of lithic preference are common to other Atlantic and Bay of Fundy drainages. However, at this time the presence of Bay of Fundy chert throughout the Mersey River does indicate this material was widely transported, possibly as a preferential or luxury item, and further supports the use of the UMARC as a travel and trade corridor within the network of water-highways throughout southwest Nova Scotia.

By building on the results of previous investigations along the Allains and Mersey Rivers, the UMARC study has bridged the final archaeological gap along this route. Having linked a continuous chain of pre-Contact sites across the Mersey/Allains Corridor, this study has completed the groundwork for establishing a geographic cross-section of Mi'kmaw land-use patterns in southwest Nova Scotia from the Bay of Fundy to the Atlantic coast. As a result, it appears the size of a river system did not alter the way aboriginal populations placed themselves on the landscape, or exploited available resources. Following Nash, Stewart, and Deal's (1991) concept of *central place*, this analysis of the Mersey/Allains Corridor suggests the head-of-tide, and the foot of *Ponhook* lakes (first major lake) were important central places along Bay of Fundy and Atlantic draining rivers of *Kespukwitk*, and that these areas represented seasonal base-camp residences from which task-groups operated to acquire resources in the surrounding environment. The aquatically adapted, collector-based strategy of the late pre-Contact *Kejikawek/Kiskukewe'k L'nuk* allowed the diverse seasonal resources of southwest Nova Scotia to be efficiently exploited with limited group mobility, but with frequent excursions made by specific task-groups from a central camp (Ames 2002; Binford 1983, 1990). The presence of shellfish middens, as well as the traditional use of canoes, and bulk harvesting fish-weirs throughout the region indicate the *Kejikawek L'nuk* of the Middle-Late Ceramic Period (ca 2,000-450 BP), and perhaps earlier populations, followed a collector-based adaptive survival strategy focused on exploiting aquatic resources, and practiced mobility strategies organized around intercepting these seasonally available species.

Using Lewis' weir typology, it is possible to determine which fish species were targeted by specific kinds of weirs, and in doing so it is possible to map the seasonal movements of the Mi'kmaq and how they tended to place themselves on the landscape throughout the year. As a result of this research, it appears the majority of the Middle-Late Ceramic Period (ca 2,000-450 BP) *Kejikawek L'nuk* along the Mersey and Allains Rivers, and perhaps throughout much of *Kespukwitk*, were concentrated near the head-of-tide on river estuaries during most of the winter, spring, and into the summer. This area was strategically and centrally located to exploit the fluctuating diversity of rich saltwater and freshwater aquatic species through *Type 1*, *Type 2* and *Type 3* coastal and near-coastal weirs, in addition to exploiting the diverse terrestrial resources available in surrounding environments (Davis 1986, 1991; Lewis 2007; Nash *et al.* 1991).

Intensive occupation of the interior does not seem to have occurred until the late summer or early autumn, when attention was focused on eel fishing. Evidence of this inland shift is represented by the presence of numerous residence/pottery camps along the Mersey River and to a lesser extent the Allains River, and by the common association of these sites with *Type 4* interior eel weirs. This seasonal placement is further supported by the recovery of a charred blueberry seed and charred acorns from the McKibbin's Beach

(BdDi-07) residence-camp on the upper Mersey River. Following the eel run, the *Kejikawek L'nuk* probably remained at these interior sites until late fall in order to hunt for moose, caribou, and other large game, before gradually heading back toward the coast as winter approached. Interior hunting and trapping for large and medium game likely continued to be important during the winter months, to supplement preserved food with fresh meat and grease, and for providing warm clothing. In winter however, hunting activities were likely conducted to support a population congregated at residence-camps located near the head-of-tide, even if this may have forced them to make extensive inland expeditions.

In addition to their role as residence-camps, or perhaps even task areas, most of the sites along the Mersey/Allains Corridor also would have served as temporary overnight camps and rest-stops for travellers moving rapidly through the interior. Travel along the Mersey and Allains Rivers probably occurred throughout much of the year using canoes and portages, or perhaps following riverside trails and trekking across frozen lakes with toboggans and snowshoes in winter. However, these interior travels may have been less frequent during the 'shoulder seasons' of freeze-up and ice-out in early winter and early spring. Deal believes the chert quarry at Davidson's Cove (BhDc-02) in Scots Bay was exploited during the summer by residents from the Minas Basin area, and exchanges of this material would have taken place along the borders of hunting territories or at contact points along major portage routes such as the Annapolis River corridor (Deal 1989:5-6), and so use of the Mersey/Allains Corridor to access this trade may have been most frequent at this time of year.

Although aspects of the settlement strategies described above are reflected both before and after the Middle-Late Ceramic Period (ca 2,000-450 BP), particularly through the long-term re-use of residence-camps and *Type 4* interior weir sites, it is not yet possible to present more than a generalized pattern of seasonal mobility, based on the level of information available from the archaeological record of southwest Nova Scotia.

However, by using historic evidence as a point of reference for combining ethnographic and primary Mi'kmaw sources with the results of previous archaeological research and the sites newly identified by this survey, it has been possible to reach beyond the limitations of the documented past, and succeed in filling a small but significant void in our understanding of the pre-Contact Period of southwest Nova Scotia. This study has demonstrated that use of *synthesized cultural descriptions* and a *direct historic approach* can be a valuable tools for guiding archaeological research questions, and can lead to a more personal connection with the archaeological material that is recovered. Having completed this survey of the Mersey and Allains Rivers, it is now possible to discuss these and other waterways of the region as important networks of pre-Contact travel, trade, and communication. Hopefully future archaeological investigations will be able to address more specific research questions and present an even clearer picture of the past, by compiling both a wider reaching and more detailed understanding of the rich history of the Mersey and Allains Rivers, as well as the many other significant waterways of southwest Nova Scotia, and the Maritime region as a whole.

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Potter, Doug (continued)
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Swinarton, Lindsay
2007 Personal Communication January 11, 2007: examined faunal material recovered from Stedman's Beach (BdDh-02) and McKibbin's Beach (BdDi-07). Graduate student faunal expert. Memorial University of Newfoundland, St. John's.

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1974 Stratigraphy and Geochemistry of the Scots Bay Formation, Nova Scotia. Unpublished M. Sc. thesis, Department of Geology, Acadia University, Wolfville, Nova Scotia.

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2003 *Canoe Annapolis Country: A Paddler's Guide to Outdoor Adventure*. Municipality of the County of Annapolis Recreation Services, Annapolis Royal, Nova Scotia.
2006 Personal Communication May 14, 2006: provided information on the 2005 Deja Canoe Trip recreation of Jacques de Meulles' canoe route across the Mersey/Allains Corridor. Experienced canoeist and GIS Specialist. Perotte, Annapolis County, Nova Scotia.

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APPENDIX A: WOODLAND PERIOD RESIDENCE, TASK & WEIR SITES

The table below lists the recorded Middle-Late Woodland (ca. 2,000-450 BP) *residence sites* (base- or field-campsites with pottery), *task sites* (activity sites) and *weir sites/features* found along the Mersey/Allains Corridor, which were discussed previously in *Chapter 5.5 Settlement and Subsistence Analysis*. The sites have been organized north to south, and have been divided into regions along the Mersey/Allains Corridor. Sites marked with an asterisk (*) feature evidence of long-term re-occupation, which is further demonstrated in *Appendix B*. Other symbols in the table below represent features associated with these sites, including (P) portage trails, (Q) lithic quarries, and (W) fish weirs. Question marks (?) represent uncertainty in the above-mentioned characteristics.

	Residence Sites	**Task Sites**	**Weirs**
Allains River	Fort Anne 5B	BeDi-12 (W)	BeDi-15
	BeDi-07 (P, W)	BdDi-08 (W)	BdDi-03
	BdDi-01* (P, W)	BdDi-09	BdDi-02
		BdDh-01 (Q?)	
		BdDi-10	
		BdDi-04 (P)	
		BdDi-05 (P)	
Total	**3**	**7**	**3**
Upper Mersey River	BdDi-07	BdDi-06	BcDh-26
	BdDh-02	BcDh-23 (P)	
	BdDh-03 (P)	BcDh-24*? (P, W?)	
Total	**3**	**3**	**1**
Kejimkujik National Park / National Historic Site	BcDi-01*	BcDh-25 (P, Q?)	Eel Weir Feat. 1
	BcDh-05*	BcDh-09	Eel Weir Feat. 2
	BcDh-07* (P, W)	BcDh-08 (Q?)	Eel Weir Feat. 3
	BbDh-13 (P, W)	BcDh-18	
	BbDh-35 (P)	BcDh-03	
	BbDh-06* (P, W)	BcDh-21	
	BbDh-07 (P, W)	BcDh-22	
	BbDh-08 (P, W)	BcDh-20 (P)	
	BbDh-09 (P, W)	BcDh-06	
	BbDh-11	BbDh-02 (P, W)	
		BbDh-04 (P, W)	
		BbDh-05* (P)	
		BbDh-12	
Total	**10**	**13**	**3**

	Residence Sites (cont.)	Task Sites (cont.)	Weirs (cont.)
Lake Rossignol	BbDh-19* (W?)	BbDh-18 (W?)	Feat. at BbDh-19?
	BbDh-16 (W?)	BbDh-20 (W?)	Feat. at BbDh-33
	BbDh-15	BbDh-17	
	BbDg-14	BbDg-01	
	BbDh-25* (W)	BbDg-13	
	BbDg-17*	BbDg-04	
	BbDg-11	BbDh-26 (W)	
	BaDh-01*	BaDg-10	
	BaDg-01* (W)	BaDg-03	
	BaDg-02*		
	BaDg-04		
Total	**11**	**9**	**1**
Lower Mersey River	BaDf-18 (Q, W)	BaDf-02 (W)	BaDf-03
	BaDf-31	BaDf-07* (P?, W)	BaDf-10
	BaDf-59*	BaDf-12 (W)	BaDf-11
	BaDf-68*	BaDf-17 (W)	BaDf-22
	BaDf-69*	BaDf-25	BaDf-32
	BaDf-71*	BaDf-01 (W)	BaDf-33
	BaDe-09	BaDf-40 (W)	BaDf-35
	BaDe-31*? (P?, W)	BaDf-42* (W)	BaDe-36
	BaDe-33 (W)	BaDf-44* (W)	BaDf-34
	BaDe-40* (W)	BaDf-45* (W)	BaDf-37
	BaDe-06	BaDf-46 (W)	BaDf-39
		BaDf-50 (W)	BaDf-43
		BaDf-57 (W)	BaDf-47
		BaDf-56	BaDf-48
		BaDf-62	BaDf-49
		BaDf-65	BaDf-51
		BaDf-67*	BaDf-55
		BaDf-95* (W)	BaDf-78
		BaDe-14* (W)	BaDf-80
		BaDe-13 (W)	BaDf-81
		BaDe-21	BaDf-82
		BaDe-30 (W)	BaDf-76
		BaDe-32 (W)	BaDf-83
		BaDe-34* (W)	BaDf-77
		BaDe-37 (P?, W)	BaDf-84
		BaDe-01 (W)	BaDf-87
		BaDe-39 (P?, W)	BaDf-88
		BaDe-03	BaDf-89
		BaDe-02	BaDf-86
			BaDf-85
			BaDf-92
			BaDf-90
Total	**11**	**29**	**32**
TOTAL	**38**	**61**	**40**

APPENDIX B: MERSEY/ALLAINS CORRIDOR REPEAT USE SITES

The table below lists recorded sites along the Mersey/Allains Corridor that feature evidence of long-term re-occupation. The sites have been organized north to south, and have been divided into regions along the Mersey/Allains Corridor. Other symbols used in the table below represent features associated with these sites, including (P) portage trails, (Q) lithic quarries, and (W) fish weirs. Question marks (?) represent uncertainty in the above-mentioned characteristics.

Repeat-Use Sites	Cultural Periods									
	Paleo	Archaic			Woodland			Contact	Colonial	19th Cent.
	Lt	Ea/Md	Lt	Tr	Ea	Md	Lt			
Allains River										
BdDi-01 (P, W)		x	x		x	x	?			x
Upper Mersey										
BcDh-24? (P, W?)			?			x				x
KNP/NHS										
BcDi-01			x			x			x	
BcDh-05			x		x	x	x	x		x
BcDh-07 (P, W)			x			x	x			
BbDh-05 (P)			x			x		x		x
BbDh-06 (P, W)				x	x	x	x	x	x	x
Lake Rossignol										
BbDh-19 (W?)		?	x			x			x	x
BbDh-25 (W)		?	x			x				x
BbDg-17		x	x			x	x			x
BaDh-01			x			x	x			?
BaDg-01 (W)		x	x	x	x	x	x	x	x	x
BaDg-02			x		x	x	x	x	x	
Lower Mersey										
BaDf-07 (P? W)		x				x	x			x
BaDf-42 (W)			x		x	x	x		x	
BaDf-44 (W)	x	x	?			x	x			x
BaDf-45 (W)			x			x			x	x
BaDf-59			x			x	x		x	
BaDf-67		x	x			x			x	
BaDf-68	x	x	x		x	x	x		x	x
BaDf-69	x	x	x		x	x	x		x	
BaDf-71	x					x				x
BaDf-75	x	x	x							
BaDf-95 (W)										
BaDe-14 (W)		x	x			x			x	
BaDe-31 (P? W)			?			x	x		x	x
BaDe-34 (W)				x		x	x		x	
BaDe-40 (W)		x			x	x	x		x	