

ARCHAEOLOGY IN NOVA SCOTIA: 2010 NEWS

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Coastal Heritage Conservation at the Fortress of Louisbourg – Planning it Out

By *Rebecca Duggan, Parks Canada Agency*

Rising sea levels and storm activity have led to significant change along the shores of the Fortress of Louisbourg National Historic Site of Canada. The coastally-positioned remains of the 18th century fortress, fishing properties, defence batteries, and battlefields, which have been fortuitously preserved on the low coastal plains of Louisbourg, are now under threat of damage and loss due to erosion.

Archaeological and geological study at Louisbourg has identified a 0.85+ metre rise in sea level, and a coastal retreat in the range of 15-18 metres, since the mid-18th century. The

once comfortably positioned coastal fortress and fishing community now lie at the water's edge.

These measurements are derived from the following lines of evidence:

- The original quay wall, constructed in 1743, was found in-situ during archaeological excavations at the fortress in the 1960s. Mooring rings were found along this wall and these rings are generally placed at high tide level. In 1998, Geologists from the Geological Survey of Canada (GSC) compared the level of the mooring rings to modern high tide level,



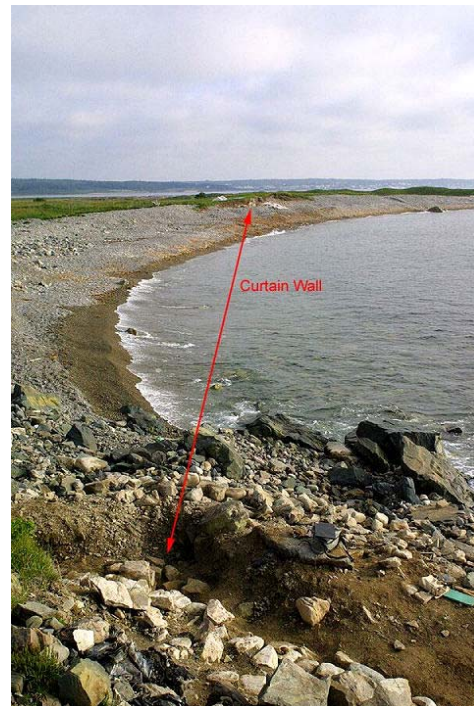
Mooring rings in Louisbourg quay wall
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observing a 0.85 metre change in elevation. In other words, sea level had risen 85 centimetres in 255 years. Further GSC comparison of chart datum between 1720 and 1992, on the basis of relative sea level rise, presented a change of 0.90 metres.

- Archaeological excavation of a fishing property house in 1991, and a cannon battery wall in 2004, revealed a coastal retreat of 15-18m since the 18th century. In both cases, structural features were found eroding along the shoreline. Archaeological excavation revealed the true scale of the structures which were then compared to historical records of their dimensions and position in relation to the shoreline. For example, according to French engineering plans from the 1730s, the cannon battery wall was originally 20 metres in length, extending perpendicular to the shoreline. When excavated in 2004, only 2 metres of this structure remained in-situ, the rest has been lost to the sea. Likewise, only half of the fishing property house excavated in 1991 was found in-situ, the seaward half of the house had eroded away. An 18th century census of Louisbourg provides details on fishing property dimensions, in particular the distance between the still-existing roadway and the shore. Comparison of this measurement to the current shoreline



Overhead view of fishing property house foundation excavated in 1991 © Parks Canada Agency



Showing original position of the masonry curtain wall, on the east side of the fortress, in 2004 © Parks Canada Agency

position has revealed a coastal retreat in the range of 15 metres.

- An 18th century engineering plan & profile of a masonry curtain wall, that ran parallel to the shoreline on the

east side of the fortress, shows the measured distance between the masonry wall and the high tide water line in 1751; the wall stood 10 *toises* 3 *pieds* (20 metres) inland of high tide water line. Today, most of this wall (120 metres length) has been lost to erosion, and the section of this wall that had been profiled in 1751 has been long lost. The beach now extends well inland and the tide flows over the original position of the curtain wall. Therefore the shoreline has retreated more than 20 metres in this area.

- In 1938, a Canadian Hydrographic Survey marker (brass pin in a boulder) was installed 17 feet (5.18m) from the shoreline at the tip of Rochefort Point, just outside of the fortress walls. This marker fell out of the eroding bank in winter 2010, suggesting an incremental rate of coastal retreat on an average of 0.23 feet (0.07 m) per year (if the rate is assumed as a constant). Over 250 years, this amounts to 59 feet (18 m) of coastal retreat.
- The GSC and Parks Canada initiated a coastal erosion monitoring program in 1995 where numerous survey markers were set up near the coastline to monitor rates of change. Measurements are still being recorded at these markers. Retreat rates, based on thirteen years of observation (1995-2008) vary

between 0.01 – 0.45 metres per annum, with an average of 0.17 m/a, where the more exposed coastal banks, of softer sediment, retreat faster than the sheltered or rocky shores.

Over the years, the impact of sea level rise and coastal erosion on heritage sites at Louisbourg has been well documented. Archaeologists first addressed this problem in 1964, conducting rescue excavation at an eroding bastion on the ocean-facing, east side of the fortress. Later, coastal barriers in the form of armourstone and concrete sea walls were installed at three locations to shelter prominent archaeological features, and roadways. Decade after decade, rescue excavation projects have been carried out where archaeological features are exposed along the shore, usually following powerful winter storms. The sites revealed are generally related to coastal activity, such as



Recording coastal change at a survey marker located on the Louisbourg coastline. © Parks Canada Agency

fishing or coastal defence, or they are burial sites, domestic, and functional structures, such

as lime kilns, that stood a good distance away from the shore in the 18th century.

Given the extent of coastal change between the 18th century and now, and the potential for hastened rates of sea level rise and increased storm intensity in the years to come due to climate change, the Parks Canada archaeology unit at the Fortress of Louisbourg, in 2008, began investigating the 50-100 year coastal outlook for Louisbourg. The main objectives were to determine where cultural resources are under threat of loss in the coastal zone, the nature of the threat, the nature of the cultural resources (context, integrity & uniqueness), and options to mitigate these conditions. This resulted in the development of a Louisbourg coastal conservation plan, which was drafted in March 2011 and is currently out for peer review. Extensive research was carried out by archaeologists, historians, geologists, geomorphologists, and coastal engineers to develop this plan:

- Two history student interns from Cape Breton University, supervised by their professors and Parks Canada historians at Louisbourg, conducted two full years of historical research in the Louisbourg archives, pouring over thousands of 18th century records (documents and plans) to identify cultural activity, past storm events, and past mitigation efforts in the coastal area at Louisbourg. The students found the most useful source of information about historical weather events in government correspondence letters while census, admiralty (court),

and notary documents were of particular help when researching domestic buildings.

- A geo-engineering consulting company was hired to conduct a geo-engineering study of the Louisbourg coastline, and to produce a predictive model of coastal erosion and flooding over the next 50-100 years, based on the Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report predictions for sea level rise in this region over the next century (0.73m by 2100). As noted earlier, it took 255 years for sea level to rise 85cm between 1743 and 1998. The IPCC's prediction of a 73cm rise in sea level in 100 years suggests faster rates of coastal change in this century. Broadly-stated, the geo-engineering study proposes a 30 metre coastal setback at Louisbourg to accommodate predicted coastal change over the next century.
- Geologists from the Geological Survey of Canada, having produced a wealth of information about coastal change and coastal dynamics in this region, and specifically at Louisbourg, were called upon for guidance and support, and their work was incorporated into the study.
- The senior archaeologist at Louisbourg conducted a detail study of coastal heritage, erosion and mitigation options on regional, national and international levels, examining how other sites, other

nations, are responding to heritage management in the coastal zone. In particular, the research highlighted an international mandate to adhere to integrated coastal zone management principles including the precautionary principle, the need for sustainable development that recognizes ecological and social equity, and the need to work with nature when managing coastal resources, e.g. recognizing that a segment of shoreline is part of a much larger and dynamic coastal system.

- Since 1999, the Louisbourg archaeology unit has routinely monitored the coastline each spring and after heavy storms. These foot surveys have produced observational records in the form of field notes, photographs, video and GPS survey that provide firsthand accounts and understanding of the coastal environment and the condition and vulnerability of heritage sites within that environment. These observations were incorporated into the plan.
- In summer 2010, the Louisbourg archaeology unit conducted rescue archaeology at two powder magazines on the floor of an eroding bastion, on the east side of the fortress, and at two eroding domestic sites – one related to the fishery, the other a domestic site that originally stood at a distance from the shore with no coastal industry function. These excavations

served three purposes: first, to record unique 18th century structures that were not well understood through historical records; second, to measure the human, financial, conservation and storage resources required to conduct rescue archaeology at sites of different scales and complexity; and third, to examine the potential for public archaeology and site interpretation at these eroding heritage sites.

- The Louisbourg archaeology department, and Parks Canada Geographic Information (GIS) Specialists, updated the Louisbourg archaeology GIS database, correlating all spatial data, acquired new aerial and LiDAR mapping of the site (which was indispensable for the geo-engineering study), and geo-referenced historical plans and older aerial imagery to compare with modern digital aerials of Louisbourg, facilitating understanding of



Kite camera view of powder magazine rescue archaeology project in summer 2010. © Parks Canada Agency

coastal change at Louisbourg since the early 18th century.

This research project, carried out between 2008 and 2010, led to the development of a coastal conservation plan that abides by the principles of integrated coastal zone management (ICZM). In recognition of the complex workings of the coastal environment, the plan first divided the Louisbourg coastline into 8 distinct coastal cells. A coastal cell refers to a length of coastline and associated nearshore areas where movement of sediment is largely self-contained. A common cell, for example, would be a pocket beach where sediment transport is confined between headlands. The shoreline dynamics, coastal geology, and shoreline change predictions for each coastal cell were then defined, and the cultural resources were identified for each coastal cell.

Each cell, its physical characteristics and cultural resources were then collectively defined as a policy unit – the level at which coastal heritage sites would be managed. This grouping reflects the physical interconnectivity of cultural sites within each cell. Changes to the workings of the cell, whether due to climate change or coastal protection measures (e.g. armourstone walls, beach nourishment programs, offshore barriers), would have an impact on the condition of all cultural sites within the cell – thus the resources are grouped first by their environmental context.

Within each policy unit, the cultural resources vary in relation to integrity, durability, vulnerability (due to their position with the cell),

and cultural value. The most threatened sites, such as those positioned at or below tide level, warrant immediate archaeological attention, in



Pocket beach at the Fortress of Louisbourg. © Parks Canada Agency

effort to record information about the sites before they are lost. However the conservation needs for cultural sites that are not immediately threatened by erosion but located well within predicted rates of coastal retreat over the next 50-100 years, are prioritized based on their potential historical value (what do they teach us about life in 18th century Louisbourg? What knowledge would be lost if they erode away?) as opposed to aesthetic appeal or ease of excavation. This prioritization process may be viewed as a sort of coastal 'triage'.

Coastal protection options for each policy unit are also to be examined based on what is feasible within the coastal cell. For instance, an offshore barrier may effectively reduce wave impact along a section of coastline without impeding longshore sediment flow, if the barrier is installed correctly in relation to the workings of the coastal cell. Reduced wave energy reduces

erosion rates and protects cultural resources situated along the sheltered shoreline. Alternatively, there is potential for installing short-term or detachable wave barriers, known as wave attenuators, in some coastal settings during storm seasons. And soft barrier methods, such as beach nourishment, may prove effective within a given environment. There is also potential for innovative efforts of combining energy production in tandem with coastal barrier design. For example, oscillating water column (OWC) systems have potential to function as a coastal barrier and energy producer – harnessing wave energy to produce electricity on a 24h basis. In short, there are many coastal protection options available, however within each coastal cell environment, not every method is workable, or affordable; hard decisions will have to be made about what conservation efforts will work for each policy unit.

Not all coastal cultural sites at Louisbourg can be saved from the rising tides, the environmental implications are too grand and the cultural sites too many. However, by understanding coastal dynamics and the heritage value of coastal archaeological sites, the most valued and informative archaeological sites can be recorded and/or protected for future generations. Moreover, systematic planning of conservation efforts, based on a prioritized 'triage' process, can provide a solid foundation for development of community or public archaeology programs that offer opportunity to tangibly learn about Louisbourg history, archaeology, and the coastal environment, and to make new discoveries, all the while



Rescue excavation of an eroding house site at Louisbourg in 2007. © Parks Canada Agency

contributing to the conservation of Louisbourg heritage.

A coastal heritage conservation plan is a living document, intended to change as knowledge is accumulated about the environment, climate change, coastal heritage, conservation methods and technological developments. In a related sense, the process of managing coastal heritage in the face of climate change is an iterative one – erosion and flooding issues in a changing environment cannot be resolved at a given date or time. Given these dynamics, it is challenging to determine the most effective ways of preserving cultural resources in the coastal zone at Louisbourg, and this subject is being tackled in coastal regions the world over. The Louisbourg coastal heritage

conservation approach is one of many approaches, and one that will inevitably be adapted and improved upon, as the seas rise.♦

E'se'get Archaeology Project, 2010 Field Season

By Matthew Betts, Canadian Museum of Civilization)

The E'se'get Archaeology Project is a long-term research endeavour focused on defining the Late Holocene prehistory of Nova Scotia's South Shore, and in particular the relationship between ancient Mi'kmaq and the coastal ecosystem (Betts 2008, 2009). The early stages of the project are aimed at developing a regional technological, settlement, and economic sequence to provide a platform for exploring Maritime Woodland lifeways in Nova Scotia.

Two target sites, identified during the preliminary seasons of work in Port Joli, were designated for intensive excavation in 2010: AIDf-24, one of the largest intact shell midden sites in Nova Scotia, and AIDf-30, a smaller, inland shell midden site. In reaction to community wishes and requests, the 2010 season was also designed as a public archaeology project with community involvement and student training forming an important part of the excavation strategy.

Like the 2008 and 2009 seasons, the archaeology project was undertaken with significant planning and participation from Acadia First Nation (AFN), the University of New Brunswick (UNB), the Department of Natural

Resources (DNR), the Region of Queens Municipality, and the Department of Tourism, Culture, and Heritage. AFN and UNB were instrumental in providing assistance with public programming and field schools, and DNR in particular provided extensive logistical support for many of the project's activities, including providing staff for the public aspects of the project, and the building of two small bridges to facilitate site access.

Student Training and Public Archaeology

The 2010 season was designed with significant public and student participation as a primary goal. The objectives of the public archaeology portion of the project were: 1) to engage the community in the archaeological process; 2) to educate the public about the region's archaeological resources and (pre)history; 3) to receive community feedback on the project; and 4) to alert the public to the damage caused by unlicensed collecting and development.

Highlights of the public archaeology program include:

AFN Cultural Day (July 4th): The project team was invited to participate in Acadia First Nation's cultural day, held at the Queens County Museum. Three project team members attended; artefacts and animal remains from recent excavations at AIDf-30 were displayed. Pamphlets describing the E'se'get Archaeology Project and the public archaeology program, which was to begin the following week, were distributed.

Public Archaeology Program (Fridays and Saturdays July 9th to July 31st): Local band

members, residents, and tourists were invited to visit the excavations at the AIDf-24 site. Groups of up to 15 visitors were allowed on site during scheduled tours.

University of New Brunswick Archaeological Field School (July 5th to August 7th):

Archaeological training was provided to six undergraduate and three graduate students from the University of New Brunswick.

Acadia First Nation Student Program (July 18th – 23rd):

Seven Mi'kmaw high school students participated in the dig for five days. The students worked side-by-side with university students during the day, learning the process of archaeological investigation. They camped within Thomas Raddall Provincial Park and were introduced to camping skills and traditional activities in the evenings.

Public Lecture (July 31st): An evening lecture was offered in Thomas Raddall Provincial Park.

E'se'get Archaeology Project Blog (June 24th – August 7th): The project investigators and students maintained a blog in which anecdotes and reports of the fieldwork and project were recorded.

<http://coastalarchaeology.wordpress.com/>

Excavations at AIDf-30

AIDf-30 is a small, multi-component shell midden site located in a densely wooded forest 320 metres inland from the water's edge. The site sits on a small knoll that is surrounded on the west, south, and east by a swamp, and on the north by a small stream (Raddall n.d). Archaeological deposits at the site are

composed of at least three discrete shell middens, as well as an extensive cultural (i.e. "black soil") layer and at least one major subsurface feature, which is likely an intact

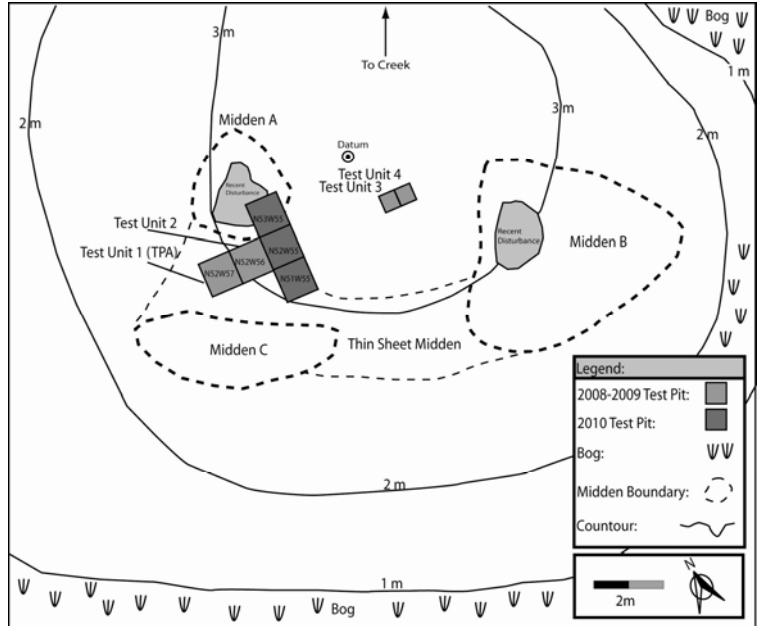


Figure 1: Scale map of AIDf-30, detailing 2010 excavations.



Figure 2: Excavations at AIDf-30, Midden A. The visible shell represents the margin of a looter's pit.

house floor (see Figure 1, also Betts 2008, 2009).

Radiocarbon dates recovered from Midden A and the central feature suggest AIDf-30 was occupied during the period ca. 1650 BP to 1450 BP, a date range consistent with artefacts recovered from the site. The site has been substantially impacted by recent looting and was likely the target of Thomas Raddall's pioneering avocational archaeology in the area (Betts 2009, Raddall n.d). Archaeologically, AIDf-30 is intriguing because of its relatively small size compared to other large Middle Woodland shell middens in Port Joli, as well as its geographic location in the near-interior (most other shell-bearing sites in the region are located directly adjacent to the sea shore).

Due to an unexpected reduction in anticipated crew size, a significant portion of the work intended for AIDf-30, specifically the horizontal excavation of the central house feature, was not undertaken. Instead, work focused on completing excavations in Midden A, which had been test excavated in earlier seasons. A large grid system which incorporated Test Units 1-4 from the previous years' excavations was imposed on the site with the aid of a digital transit. Excavations on Midden A followed the same vertical strategy employed in previous years, with the intention to dig a representative cross-section of the midden through to a sterile pre-cultural surface.

Three 1m x 1m units, positioned contiguous with the east margin of Test Unit 2 from the 2009 season were selected for excavation (Figure 1). These units were positioned to access the apex of the Midden A mound, to assess the damage caused by looting in that area, and to ascertain

the position of the southern margin of midden deposit. Excavations revealed a well-preserved shell midden, approximately 30 cm in depth at its deepest, with abundant soft-shell clam (*Mya arenaria*) valves and faunal remains, consistent with deposits encountered in 2008 and 2009. However, unlike previous years' excavations, significant quantities of large terrestrial mammal bones of moose (*Alces alces*), caribou (*Rangifer tarandus*), medium sized canids (family Canidae), as well as the more ubiquitous Atlantic cod (*Gadus morhua*), and waterfowl remains were recovered. Like previous seasons, artefact yields were relatively small, consisting entirely of highly fragmented pottery sherds with dentate-stamped decoration and grit temper, traits consistent with the radiocarbon dates obtained from the site. No lithic material was recovered.

Excavations at AIDf-24

AIDf-24 is a very large shell midden site located 55 meters from the water's edge, on one of many rocky headlands north of Scotch Point, in Thomas Raddall Provincial Park. The site was the primary focus of the 2010 excavation, training, and public interpretation programmes.

AIDf-24 is dominated by a large shell midden deposit, Area A, which is over one metre deep in sections (Figure 2). To the south of the main midden, away from the beach, several other activity areas were located via a subsurface soil probe (Betts 2008, 2009). Area B is an extensive, shell-bearing deposit with significant quantities of cultural "black" artefact and charcoal rich soil. Area C, located south of a boulder ridge on a small terrace, contains a relatively deep shell midden, with abundant

evidence of subsurface features such as hearths and living floors. Further south, and on the highest terrace on the site, Area D appears similar to deposits in Area C.

A primary goal of the 2010 work at AIDf-24 was the precise mapping of the site using a total station transit system. This was undertaken by Heather Macleod-Leslie, of the Mi'kmaq Rights Initiative, assisted by a co-worker. She spent three full days mapping the site and recorded three dimensional positional data for major topographic and cultural features, as well as the location of all test units spanning the 2008 and 2010 seasons.

Work Conducted in Area A:

The dominating feature of AIDf-24 is an enormous shell midden, Area A, covering nearly 900 square metres. A u-shaped grid system was imposed over the eastern surface of the midden, oriented with the long side of the “u” on a North-South (true) axis (Figure 3). The goal here was to create a large cross-section through the undisturbed eastern portion of the midden. Excavating the midden was a highly technical and detailed process given that a vertical excavation strategy was employed. Many areas of the midden were over one metre deep, and the matrix was composed almost entirely of complete and coarsely broken soft-shell clam valves. The relatively low proportion of soil created a highly unstable matrix where wall collapses were likely; therefore midden walls were sloped towards the centre of the unit to avoid collapses. This worked very effectively (no collapses occurred), though it reduced the amount of excavated volume at lower levels

considerably. All materials excavated from Area A were screened through 6mm mesh, except for

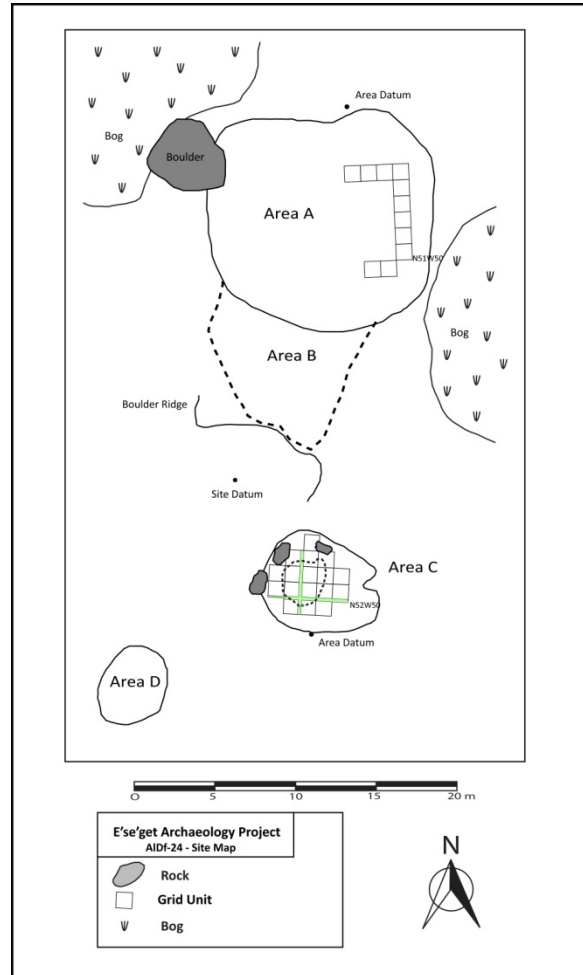


Figure 3: Scale map AIDf-24, detailing 2010 excavations.



Figure 4: 3D image of AIDf-24, facing west.

those associated with Feature 1, a possible house floor, which was excavated using 3mm mesh (see description of Feature 2, below).

The stratigraphic profiles recorded from these excavations suggest the midden did not develop on a uniform surface, but instead was deposited on a small knoll strewn with numerous large boulders, some greater than 3 cubic metres in volume. As the midden accumulated, it filled in the spaces between the boulders, eventually creating a large flat-topped mound. Very little evidence of activity areas or features, in the form of significant artefact rich soil lenses, hearths, or rock alignments, occurred in the midden; in fact, much of the midden is composed of large unbroken clam shells so numerous that in many layers there is virtually no soil development between the shells. Only after the majority of boulders had been completely covered in shells, and the midden surface levelled out, does it appear that formal features were constructed on the midden mound (to be described below).

The midden is clearly stratified and a continuous stratigraphic profile across more than nine metres on the north south axis was recorded and described. The stratigraphic layers appear as alternating lenses of broken and unbroken clam shell with variable amounts of soil, artefacts, and bones. Particularly noteworthy was the variable frequency of other shellfish taxa and faunal remains in each of these layers. Unique stratigraphic units were sometimes discerned by tracking the frequencies of blue mussel (*Mytilus edulis*), razor clam (*Ensis directus*), and green sea urchin (*Strongylocentrotus droebachiensis*) shell.

The only formal domestic feature encountered in Midden A was a possible house

floor (Feature 2), which occurred as a shallow lens of dark gray-black organic soil with little shell and abundant lithic remains, including thumbnail scrapers and corner-notched projectile points (the majority of the midden was practically devoid of lithic materials). Oval shaped and approximately 3m in length (width could not be determined), the house floor was preserved within the first few centimetres of the soil profile, and therefore appears to have been created after the majority of the eastern part of the midden developed. Artefacts recovered from the house feature indicate a much later occupation than the remainder of the midden. In fact, the majority of the midden appears to have accumulated in the Middle Woodland period, while artefact styles from the house suggest a Late Woodland occupation. It seems the house was occupied only after the midden had accumulated to a point where the majority of boulders had been covered to form a stable, level, midden surface.

Work Conducted in Area C:

In 2009, a small test pit was excavated in Area C to discern the nature of the deposit; this test pit revealed several compact, highly organic artefact rich layers which suggested the possibility of house features. A 6m x 5m grid was imposed on the surface of Area C (Figure 3), and the excavations proceeded horizontally for the first ca. 30 cm of the excavation, where the focus was on the exposure of a potential house feature (described below). Given the horizontal nature of these excavations, a cross-shaped baulk system was utilized, allowing for the exposure of large areas while still

maintaining a stratigraphic cross-section of the entire Area C deposit (see Figures 3,5,6). Unlike Area A, all materials were screened through 3mm mesh to maximize the recovery of artefacts and fragmented faunal material. As with all excavations conducted in 2010, all units were excavated by quadrant and non-formal artefacts and faunal remains were bagged by quadrant and stratigraphic level.



Figure 5: Surface of Feature 4 exposed, facing south. The string marks the outlines of the feature, which was determined by changes in soil compactness, artefact densities, presence of charcoal, and quantities of shell.

Following the excavation of the house feature, a vertical excavation strategy was implemented to determine the overall variability and chronological range of the deposit by excavating it to sterile subsoil. This effectively created an “L” shaped trench, where 1m x 1m units contiguous with the eastern and northern side of the baulks were excavated (Figure 6). This strategy worked extremely well, and had the advantage of maintaining large portions of the deposit for later archaeological investigations. Work revealed that Area C contained two primary archaeological deposits, a shallowly buried house floor, labelled Feature 4,

positioned in the western central portion of Area C, and a deep shell midden, located on the eastern margin of Area C.

Feature 4 appears to be the remains of a dismantled wigwam-style tent structure, approximately 3m long and 2.75m wide. The deposit manifested as a layer of compact, black sand-loam, greasy in texture. It contained significant amounts of cultural charcoal, lithic debitage and artefacts, and quantifiably less shell than surrounding deposits. Excavation suggests the feature was a shallow depression no more than 15 centimetres deeper than the surrounding surface when it was occupied. Roughly oval in shape, with the long axis oriented northeast/southwest, the feature is defined by two ephemeral semi-circles of



Figure 6: Completed Area C excavations, facing south. The distinction between the shell-laden midden in the east and the floor deposits in the west is clear in the south profile.

stones, one associated with the eastern exterior of the feature and the other with some type of interior structure. A large angular stone was placed inside the structure and was surrounded by abundant amounts of spirally fractured long bone fragments. The floor deposits appeared to extend to a small ridge of boulders in the

western edge of Area C, and these likely formed the western wall of the structure.

Two possible post moulds were encountered in the south-eastern corner of the dwelling, in line with the outer ring of stones, which probably functioned as post-holders on the eastern margin of the house. Feature 4a, the remains of a hearth, was part of the house and was characterized by a large area of discoloured, reddish soil with abundant burnt shell, bone, and charcoal. The hearth was located near the centre of the dwelling and extends to a depth of at least 35 cm below the original level of the Feature 4 floor. Levels 3 and 3b of Area C, which constitute house fill and floor deposits, contained abundant amounts of formal lithic tools in the form of corner-notched points and thumbnail scrapers, as well as thin, well-made shell-tempered pottery with cord-wrapped stick decoration. Below the feature were alternating lenses of dark black compacted soil with variable amounts of shell. These appear to be alternating lenses of a complex palimpsest of floors, midden, and other activity areas or living surfaces. Bone preservation was excellent, and large quantities of material were removed from these sub-floor strata. Artefacts were somewhat less abundant than in Feature 4, but several corner and side-notched points, as well as shell-tempered pottery were recovered from these layers, which extended to a maximum of ca. 55 centimetres below the surface.

To the east of Feature 4, a relatively deep and complexly stratified midden was deposited. It appears from the stratigraphic profile that Feature 4 and earlier house floors developed on

top of the midden surfaces and were occupied as the midden developed around them. This leads to a very complex articulation between house features and midden layers; in fact, it was often difficult to discern the margins of the Feature 4 dwelling floor, which could only be located by careful scrutiny of the matrix for increased charcoal or lithic debitage and decreased quantities of shell. The Area C midden extended to a maximum depth of 65 cm below surface and contained one enigmatic stone feature, labelled Feature 5. The feature is best described as a rock alignment/cairn of unknown function, perhaps a rock pile created from the dismantling/reconstruction of a house structure.

Materials Recovered

More than 1000 artefacts were recovered in the 2010 excavations. Significant quantities of formal lithic tools were collected from units and levels associated with Feature 4 and Feature 2, including end and “thumbnail” scrapers and



Figure 7: Projectile Points from AIDf-24, organized by level, with the oldest (deepest) layers at the bottom of the image.

corner- and side-notched projectile points. Preliminary analysis suggests that the assemblage of projectile points, in particular, contains several unique forms that are not represented in the assemblages previously excavated by Erskine in the area (1958, 1959, 1962). However, some possible analogues to these forms occur with Late Woodland materials excavated at Kejimikujik National Park (Ferguson personal communication, 2010). Additionally, a large quantity of lithic debitage was recovered from these features, which will provide ample



Figure 8: Decorated ceramics from AIDf-24, organized by level, with the oldest (deepest) layers at the bottom of the image.

evidence of manufacture and maintenance activities on these stone tools.

Relatively few lithic materials were recovered from the midden deposits in Area C, though abundant faunal remains and ceramic

sherds were collected from these deposits. In Area A, pottery tended to be grit tempered with dentate stamped decorations, while in Area C significant quantities of shell and organic tempered pottery with dentate, incised, and cord-wrapped stick decorations were recovered. This latter assemblage appears to be consistent with Ceramic Periods 4, 5, and 6 (Petersen and Sanger 1991, Kristmanson 1992), while the material from Midden A seems consistent with Ceramic Periods 3 and 4 (Petersen and Sanger 1991, Kristmanson 1992). While no lithic materials were recovered from AIDf-30, the ceramic fragments recovered indicate a date-range roughly contemporaneous with the bulk of Midden A at AIDf-24, which is confirmed by recent radiocarbon dates.

Faunal materials recovered at the sites were numerous, resulting in the transportation of over 500 kg of samples to the Canadian Museum of Civilization for study. Preservation was excellent in all contexts, with the smallest and most fragile fish remains (spines, rays) preserved in recoverable condition. While analysis is currently underway, the preliminary field analysis indicates that least 10 species of shellfish were exploited, although soft-shell clam constituted the vast majority of the shell matrix. Terrestrial mammal remains include caribou, moose, beaver (*Castor canadensis*), snowshoe hare (*Lepus americanus*), coyote (*Canis latrans*), fox (*Vulpes sp.*), and a possible domestic dog (*Canis familiaris*); marine mammal remains were very rarely encountered and seem to entirely consist of young harbour seals (*Phoca vitulina*). Bird remains include heron or crane (Ardeidae or

Gruidae), Canada goose (*Branta canadensis*), and various species of duck (Anatidae).

Ongoing Analysis

The fieldwork conducted in 2010 was extensive, marking the largest shell midden excavation in the province for over a quarter century.

Consequently, the artefactual and faunal assemblages recovered are substantial, and artefact cleaning, labelling, and cataloguing are still ongoing. Maps and profiles are being digitized and correlations between levels are being compiled. The faunal analysis is underway, particularly for AIDf-30, but will take many years to complete.

A detailed field catalogue was maintained for every unit-level while in the field (see unit-level records submitted with this report), and this catalogue is currently being resolved by comparison to the recovered remains (e.g. debitage and faunal bags are being checked for possible misidentified formal artefacts, etc.), and formal identifications and material designations are being made for every artefact.

In the fall of 2010, twelve radiocarbon dates were run on charcoal samples from the 2008, 2009, and 2010 excavations. These are currently being interpreted and a full account will be submitted with the final permit report in 2011.

Conclusions

The 2010 season of the E'se'get Archaeological Project far exceeded expectations. In particular, much more diversity, in terms of faunal remains, anthropogenic features, and chronological indicators were encountered in the AIDf-24

excavations than were predicted by the 2008 and 2009 test units. The complexity of the deposits and the materials recovered indicate a much more dynamic relationship between the ancient Mi'kmaw and the Port Joli ecosystem than was previously envisioned. The detailed excavation strategy implemented in 2010 allowed for significant control over slight variations in the stratigraphic sequence in both Areas A and C, which will allow for a detailed diachronic reconstruction of the activities at the site, as well as changes in material culture and economic strategies. The careful excavation of the Area C house floor will permit the assessment of the feature against the greater architectural tradition of the Maritime Peninsula, and to explore aspects of domesticity on the South Shore of Nova Scotia during the Late Woodland Period.

While all objectives planned for AIDf-30 were not met, sampling of the Area A midden is now complete. The faunal sample, which is currently being analyzed at the University of Toronto, will provide important insights into the seasonality and economy of this enigmatic site. The Middle Woodland house floor encountered at the site in 2009 will form the basis of continued archaeological work within Thomas Raddall Provincial Park, planned for 2012.

Acknowledgements

This research would not have been possible without the advice, support, and participation of multiple organizations and individuals. First, Acadia First Nation has supported this work from the very beginning, and in 2010 they provided substantial logistical support for organizing the

public archaeology and student training portions of the dig. I would especially like to thank Judy Boutlier, Donna Whynot, Lisa Francis, and Melissa Labrador for their help during all aspects of organizing and running the student field experience. I thank Todd Labrador, Dave Paul, and Edward Benham for performing a smudge following the discovery of human remains. The Department of Natural Resources provided all manner of assistance for running the public archaeology tours, including providing personnel to escort visitors to the site; Mike Silver, Norman Anderson, and Justin Croft deserve special credit for their hard work. I would like to thank David Black and Susan Blair for their assistance with organizing and running the UNB field school, without which this project would not have been possible. Their good natured approach and competence was critical to the success of the project, and I owe them a great debt. Dirk and Anne VanLoon, who operate the Harrison Lewis Coastal Discovery Centre, gave freely of their time, advice, land, and vegetables. Their dedication to the promotion and betterment of Port Joli as a special place is an inspiration, and their support of the project was very much appreciated. Laurie Boisvert deserves credit for the gourmet meals that kept the crew in good spirits and full of energy. Finally, I must thank the students, crew, and volunteers who worked under sometimes difficult (hot), and trying (poison ivy) conditions, but always with good humour and dedication. ♦

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The site is, of course, best known for its association with J.F.W. DesBarres, who lived at Castle Frederick from 1764 until 1774. His estate included a large Manor House and an observatory, perhaps one of the first in North America, built in 1763. Equipped with some of the most advanced astronomical devices of the time, the observatory was important as a location for the calibration of his survey instruments and DesBarres used Castle Frederick as a base of operations for his famous series of coastal maps entitled the *Atlantic Neptune*.

Archaeological Land Trust of Nova Scotia Signs Stewardship Agreement with Castle Frederick Farms

By Sara Beanlands (ALTNS)

The Archaeological Land Trust of Nova Scotia signed a Stewardship Agreement with the Bremner family and Castle Frederick Farms Incorporated to ensure the protection of six archaeological sites on November 6, 2010. Castle Frederick, located in Falmouth, Hants County, has been the subject of a number of archaeological investigations over the past two decades and is considered to be an area of archaeological significance in Nova Scotia.



Castle Frederick Farm. Photo: Erin Bremner

While DesBarres may have been the most famous resident at Castle Frederick, he certainly was not the only one. Indeed, there is evidence to suggest a First Nations presence in the vicinity as a small number of Native artifacts have been recovered during archaeological investigations. Although little is known about the Native occupation of the area, we do know it was once home to the pre-Deportation Acadian settlement of Pierre Landry and was resettled by Acadians, along with tenant farmers of other ethnic origins, in the 1760's. The archaeological sites to be protected under the Stewardship Agreement, which include the possible remains of the DesBarres manor house and the site of Pierre Landry's settlement, are located on a portion of the original Castle Frederick estate, now owned and operated by the Bremner family, direct descendents of J.F.W. DesBarres.

Modern settlement expansion has been thwarted by the extensive farmland of Castle Frederick. As a result, its archaeological resources have remained relatively intact, providing us with a unique glimpse into pre and post-Deportation Acadian society, eighteenth-century Euro-Canadian life and the development of the estate as a system of tenant farms during the late eighteenth and early nineteenth centuries. Needless to say, Castle Frederick represents an important historical landscape and offers an opportunity for greater understanding and appreciation of our collective past.



The possible remains of DesBarres manor house.
Photo: Craig Chandler



The remains of Pierre Landry's settlement. **Photo: Craig Chandler**

Archaeological research at Castle Frederick began in 1987 with a preliminary reconnaissance by Brian Preston of the Nova Scotia Museum. At that time, 30 cultural features were recorded - believed to date from the early eighteenth century to about 1950. In 1988, reconnaissance continued and in the fall of that year, Stephen Davis of Saint Mary's University conducted two days of test excavation, confirming the presence of one Acadian and two post-Deportation domestic sites. In the summer of 1989, Michael Deal and his crew from Memorial University of Newfoundland continued testing and mapping archaeological features identified during earlier surveys. They returned to Castle Frederick the following year and spent six weeks excavating what has been tentatively identified as the DesBarres Manor House site. Thousands of artifacts were recovered during this excavation, including a Spanish coin dating to 1783. Testing continued in 1992, confirming the pre-Deportation date for one of the Acadian features and the late eighteenth to early nineteenth-century occupation of the Manor House site.

The Archaeological Land Trust of Nova Scotia is grateful to Jim Bremner and his family for their recognition and appreciation of the important archaeological resources at Castle Frederick. The Bremner family's commitment to the protection and preservation of Castle Frederick's archaeological sites is a significant contribution to the historical and cultural legacy of Nova Scotia – and we greatly appreciate their efforts.♦

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Jim Bremner of Castle Frederick Farms and Craig Chandler, ALTNS President on November 6, 2010. Photo: Erin Bremner.

For more information on the Archaeological Land Trust of Nova Scotia visit www.altns.ca



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Archaeological Investigations on the Eastern Shore of Nova Scotia, 2010 Fieldwork

By Robert Shears, Saint Mary's University

Introduction

In the summer and autumn of 2010, graduate student Robert Shears conducted a geophysical survey and subsurface testing on two privately owned properties in the community of Lawrencetown, Halifax Co. (*Figures 1 and 2*), as part of his research toward a Master's thesis in Atlantic Canada Studies at Saint Mary's University. The purpose of the survey was to locate and record any archaeological features existing in an area of the eastern shore of Nova Scotia indicated by historical research related to a pre-deportation French community and subsequent British occupation. Based on this research, it was speculated that the survey might confirm the location of cultural resources representing an Acadian community within the former French Seigneury of "Mouscoudobuet" [various spellings] located in the modern community of Lawrencetown (Halifax Co.). Limited subsurface testing identified 18th century material that may relate to a short-lived British fortification (1754-57) and late 18th to 19th century occupation on the former property of the widow of Benjamin Green Jr., a member of the Halifax Board of Trade, identified in deed records as the 'Dower Farm'.

Brief Study Area History

Longstanding Aboriginal land use in the Study Area was joined by French occupation by at least the year 1668, when French fur traders are

first identified as conducting business in the area. Seigneurial title to the region was awarded in 1691, whose communities are described as fishing stations or trading posts with relatively little agriculture, compared to the Fundy shore, and dependent on trade, fishing, or hunting for sustenance. Eighteenth century French correspondences describe the communities and those living there as vibrant and loyal to France.

Shortly after the founding of Halifax in 1749, however, these communities are abandoned with residents relocated near Louisbourg. In a survey of the eastern shore in 1752, Chief Surveyor Charles Morris identified and described the remains of these abandoned French settlements at what are now Lawrencetown and Chezzetcook.

In 1754, a 20,000 acres land grant, to be known as Lawrencetown was made to 20 prominent Halifax gentlemen and esquires and a short-lived settlement is made on the site of the former French settlement. Threat of attack by the Mi'kmaq forced the community to be abandoned after only three years, and the land lay unused until the land grant is reissued in 1762. Susanna Green, the widow of Benjamin Green Jr. an early member of the Board of Trade, inherits the property of the early town site upon her husband's death. Deed records up to at least 1941 still refer to the 311 acre property as 'The Dower Farm'.

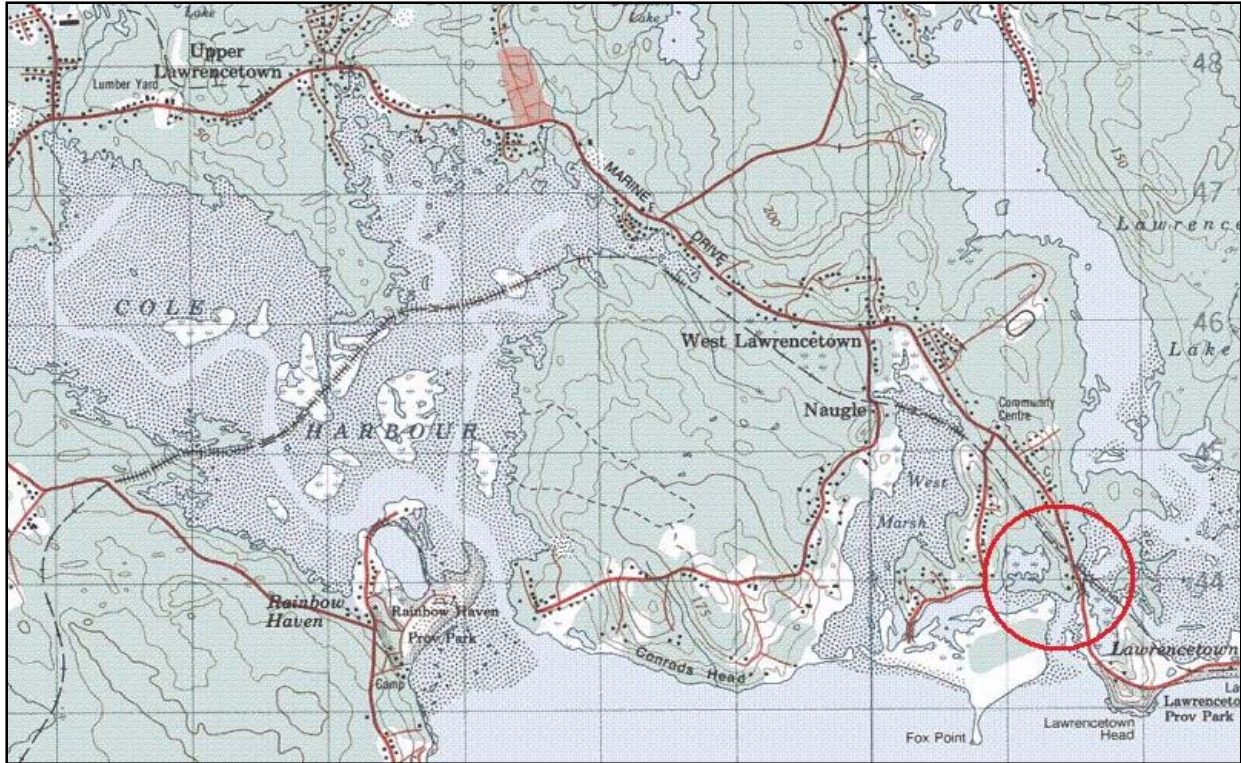


Figure 1: Crop of 1:50,000 NTS map 11D/11 showing Cole Harbour and Lawrencetown and indicating 2010 Study Area.



Figure 2: Crop of 1:10,000 aerial photograph indicating 2010 Lawrencetown Study Area

Property One – Operation A

A 50m² area of the backyard of the house was surveyed revealing an anomaly approximately 7m x 7m which warranted investigation (Figure 3). It corresponded to a pile of stones visible in aerial photography and confirmed by the landowner as having been removed by excavator in 1979. A 1m² test pit (Figure 4) was introduced that revealed late 19th to early 20th century wine bottle glass, colourless container glass, and small amounts of window pane glass, refined earthenware (possibly Creamware), blue underglaze porcelain and other more modern artifacts.

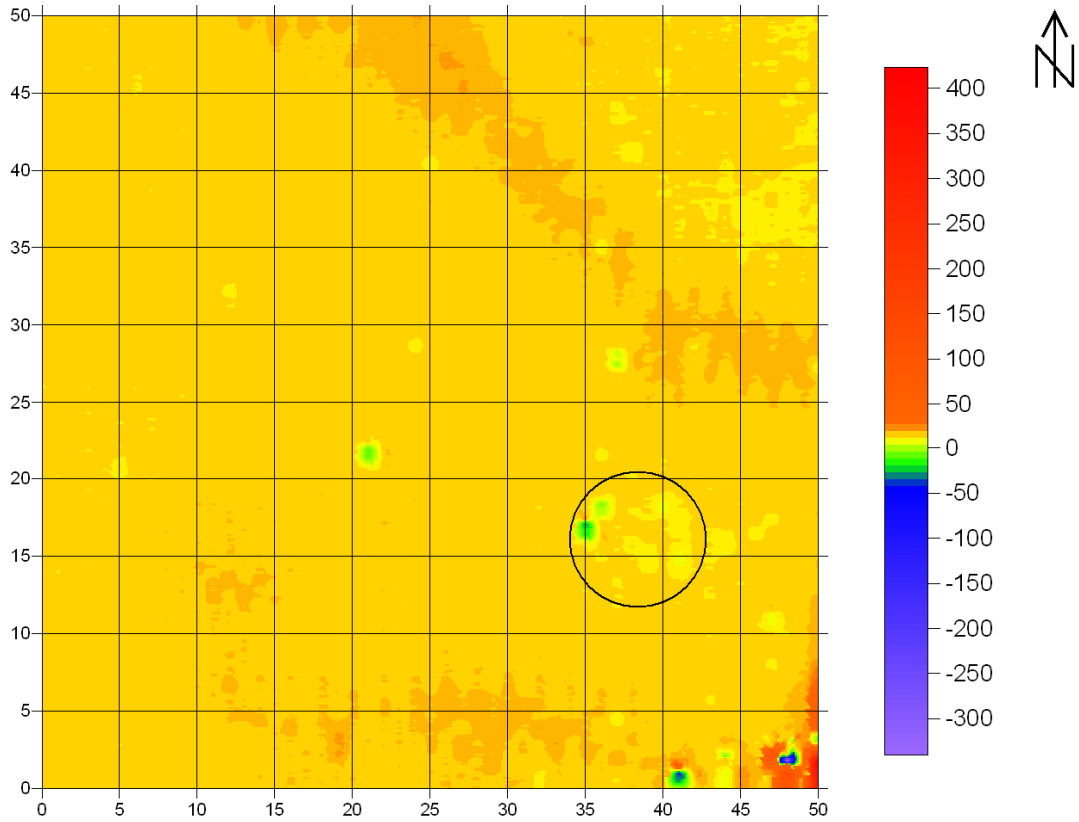


Figure 3: Conductivity reading for Property One survey area showing geophysical anomaly (circled).



Figure 4: Property One – Operation A

Property One – Operation B

Photographs taken by the property owners during the construction of their house in 1979

show a buried block of bricks set in mortar which may have been the base of a chimney. A brick that was saved from the work was of the style of the 18-19th century. It was also learned that many pieces of ceramics were noticed during the house construction. Based on map evidence, it was felt that this material may relate to the homestead of the 'Dower Farm'.

Permission was obtained to introduce a 1m² test pit 3m south of the house which was suggested by the landowner to be outside of the construction footprint of the modern structure (Figure 6). The unit contained a combination of 18-20th century material, including 20th century glass, plastic, refined white earthenware, but also 18th and 19th century artifacts such as clay tobacco pipe fragments, Creamware, Pearlware, Staffordshire slipware, and a British gunflint.

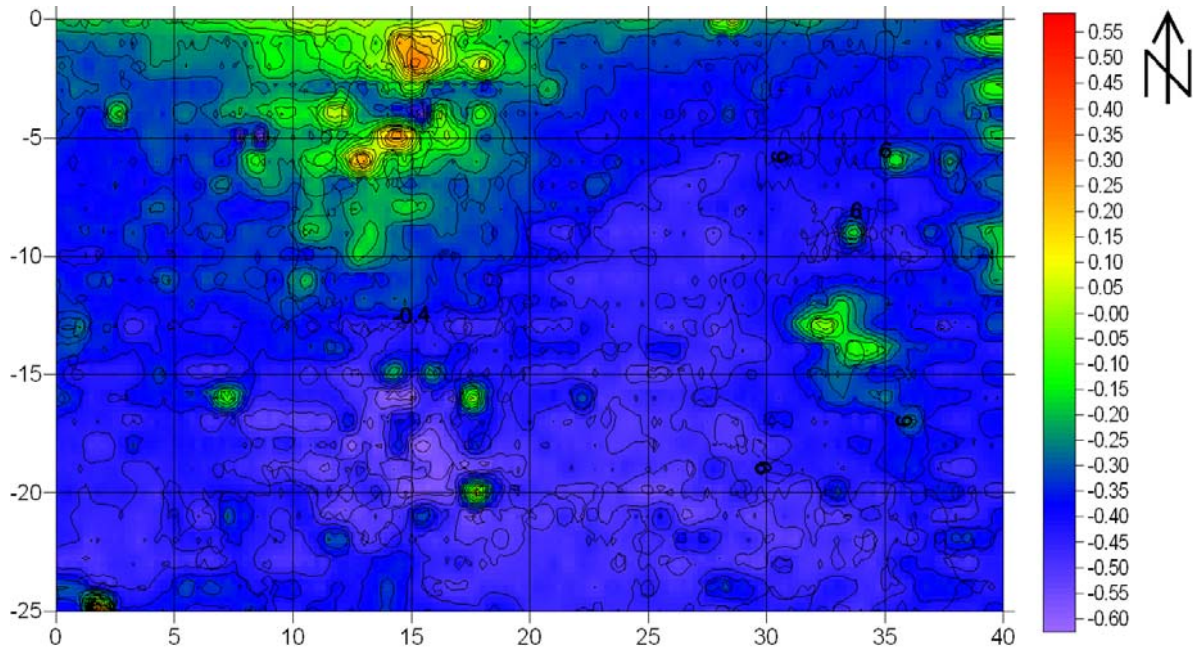


Figure 5: Magnetic Susceptibility reading for Survey Area Two showing geophysical anomaly in Northwest quadrant.



Figure 6: Property One – Operation B

There were also large quantities of architectural material.

The soil matrix was continuous and disturbed from the construction of the existing building. At the extent of the excavation a modern vinyl-trimmed rug was discovered and

the unit was ended at a depth of approximately 70cm.

Property Two – Operation A

Two adjoining geophysical surveys were conducted on this property: 25m x 40m and 8m x 35m, respectively. While the second survey revealed negative results, the first contained a sizable anomaly related to a visible soil depression (Figure 5).

A 2m x 1m test pit was introduced in response to this anomaly. Immediately beneath the sod, the unit contained exclusively 18th century material. It also contained a mass of disarticulated stone and charcoal staining which may be the remains of a structure, possibly pertaining to the short-lived fort at Lawrencetown (1754-57). Some of the artifacts recovered from the unit included window pane glass, clay tobacco pipe fragments, an intact tobacco pipe bowl (Figure 7), Staffordshire slipware, tin-

glazed earthenware, white salt-glazed stoneware, Pearlware, Creamware, Imari porcelain, one musketball, a British style gunflint, and a pewter spoon handle (ca. 1720).



Figure 7: Intact pipe bowl with “WM” maker’s mark – possibly William Manby (1719-63).

The test was not completed due to inclement weather and a water-logged unit. Completion of the excavation with an extension of the unit will occur in the spring/summer, pending a new HRP for the 2011 field season.♦

2010: A Year of Discovery at Grand-Pré

By Jonathan Fowler, SMU

Construction projects have a habit of turning into archaeological sites. Such was the case during the early months of 2010, when Parks Canada installed a sprinkler system in the memorial church at Grand-Pré National Historic Site. The project required a subterranean water line connecting the west side of the building to the main line near the interpretation centre. Although much of the pipe’s path was drilled deep in the earth, surface excavation was needed for the last several meters in order to connect it to the memorial church. Because this near-surface disturbance had the potential of damaging archaeological resources, Parks Canada dispatched a team of archaeologists to monitor and mitigate the final stage of the project. But as is so often the case in archaeology, a series of surprises soon led to an active season of discovery.

Background

Grand-Pré National Historic Site commemorates the lives of the Acadian families who settled here in the 17th and 18th centuries. It is also a memorial to their deportation at the hands of New England forces during the fall and winter of 1755. The story is well known to Nova Scotians, but what is less well known is the fact that the manicured grounds of the national historic site conceal abundant archaeological remains of the pre-Deportation settlement. Above ground, the site’s dominant feature is the memorial church, built in the 1920s on or near what was thought to

be the site of the original Acadian parish church, St-Charles-des-Mines (Figure 1).



Figure 1 (Photo by Jonathan Fowler)

Ten years of excavations by the Grand-Pré Archaeological Field School, a joint initiative of Parks Canada, Saint Mary's University, and the Société Promotion Grand-Pré, have significantly clarified the nature of archaeological resources around the memorial church. Our excavations have been informed by a close reading of the available evidence, and by extensive geophysical surveys courtesy of Mr. Duncan McNeill and the Geonics EM38B.

On the east side of the memorial church, where antiquarians claimed to have seen the ruins of St-Charles-des-Mines over a century ago, student archaeologists in 2001 uncovered what appears to be the cellar of an Acadian house. On the west side, near the apple orchard,

the architectural evidence was also abundant but badly disturbed. Traces of the Acadian occupation were very few in this location, but the artifacts spoke volumes about the period immediately after 1755.

By the end of our first season in 2001, therefore, we knew that a house occupied by the New England Planters – the colonists who settled here after the Deportation – had once stood on the west side of the memorial church. However, the challenge of pursuing it in an orchard, under gravel paths, and beneath hedges, gave us pause. Taking comfort in the notion that our primary research objective, namely St-Charles-des-Mines and associated pre-Deportation buildings, seemed to be hiding somewhere else, we backfilled our test trench and pursued the trail of clues during succeeding years to the eastern part of the national historic site. Little did we know that construction activities in 2010 would bring us scrambling back to the apple orchard.

Winter Monitoring

Although the archaeologist's habitat is generally perceived to be hot, this is not often the case in Nova Scotia, particularly when dig schedules are tied to construction timetables. So it happened that Parks Canada Archaeologist Rob Ferguson and his crew found themselves clearing the way for the new waterline late in 2009, and monitoring actual construction in February 2010.

The initial phase of the project had gone according to plan, allowing the waterline to emerge from its subterranean journey to an area Rob's team had cleared by hand excavation. But

the last leg of the trip – the few meters leading into the west wall of the memorial church – proved more challenging. A line of buried stones came to light as the machinery began trenching toward the memorial church, and this feature extended several meters north and south (Figure 2).



Figure 2 (Photo by Rob Ferguson)

After a lengthy detour, the pipe trench met a further obstacle as it neared its destination: a buried pit, approximately 4m in diameter, filled with rubble.

With sprinkler system installed at last, attention turned to learning more about these mysterious archaeological features. Could the linear stone feature be a foundation? If so, it once supported a large building. Rob's team had traced it for 19m, and its southern end had yet to be determined. As for the rubble-filled pit, could it be an old cellar? Artifacts recovered from the upper layer of the fill include both French ceramics and objects dating to the New England Planter occupation.

Of the two new discoveries, it was the linear stone feature that really caused a stir. In the

expectation that this might be the foundation of St-Charles-des-Mines, Parks Canada decided to launch a public archaeology project to further investigate the area in summer 2010. In the interim, the Saint Mary's field school returned to the site to excavate a 6m section of the stone alignment and explore the possible cellar. The results of both of these excavations added significantly to our understanding of the archaeology of Grand-Pré National Historic Site.

New Interpretations

The first of the two features to reveal its secrets was the possible cellar. Working under difficult winter conditions, Rob's team had defined its extent and excavated its upper portions during the mitigation process. The field school students continued the work in May, polishing the profiles and pressing the excavation further. Gradually, the pile of rubble retreated to form a neat circle, at which point we felt safe in interpreting it as a back-filled well (Figure 3).



Figure 3 (Photo by Jonathan Fowler)

Unfortunately, because the intrusion of groundwater and the increasing depth of the excavation made further work unsafe, we were not able to fully excavate it to determine who

built it and when. Yet artifacts recovered from the rubble indicate that it was filled probably no later than the early 19th century. Perhaps in the future we'll return to this interesting feature.

As in the case of the well, new evidence also forced a rethink of the 19m-long stone 'wall'. In fact, its interpretation as a foundation for a building started to become problematic even as we cleaned it. Rather than running in a straight line, it curved slightly to the northwest. And unlike a proper foundation, which must be level, this structure lost nearly a meter in elevation as it ran down-slope. Nor did it maintain a consistent width. If it was a foundation, it had clearly been heavily disturbed after the superstructure had been removed.

The Saint Mary's students carefully excavated a section of this feature and recovered artifacts from within the fill. The resulting assemblage included several pieces of Creamware, which is a refined earthenware of British origin whose manufacture post-dates Acadian Grand-Pré. A diagnostic fragment of late 18th century wine bottle glass further complicated the picture, suggesting that whatever this structure was, it was probably last modified by the New England Planters.

In an effort to find the missing end of the stone feature we attempted to bisect it with a test unit several meters to the south. As so often happens at Grand-Pré, this innocent little effort yielded an answer, but not without adding additional questions. First to appear was an additional feature: a late 18th century midden. True to form, our test excavation only caught a piece of it as it disappeared under a hedge and

a gravel path. Happily, though, the linear feature continued, but here it took the form of a narrow earth-filled trench instead of the massive rubble construction we had expected (Figure 4).



Figure 4 (Photo by Jonathan Fowler)

This would remain something of a puzzle until the end of the season, when the public archaeology programme had run its course, and the fully excavated trench finally revealed its contents: a stone-lined drain. The 19m 'foundation' was not a building at all. Rather, it was a drainage ditch that had been filled with stone and debris. Because the earth-filled portion of the drain trench continued (yet again) under a hedge to the south, we would all have to wait another year to discover its origin. At this point, however, with the help of a spirited group

of undergraduates and the enthusiastic participants in the public archaeology programme, we knew something of the structure's history. Contrary to expectation, the artifacts recovered from key contexts during our 2010 excavations indicate the drain system was built by New England immigrants in the period following the Deportation of the Acadians.

Summing Up

Without question, 2010 was one of the lengthiest and most eventful of the recent archaeology seasons at Grand-Pré National Historic Site. Our crew opened more extensive excavations than ever before, clarified new features, and we also piloted a successful public archaeology programme (Figure 5). Plans are in the works to see the public dig continue in 2011, and if all goes well it may become a permanent part of the visitor experience.

The 2010 season opened with considerable enthusiasm. Hopes ran high that the elusive church of St-Charles-des-Mines had finally been found, and before the evidence had been fully assessed not a few commentators publically concluded that it had been. What archaeology seems to have offered, however, is an alternative and perhaps less dramatic narrative: that of a family from New England who, in the 1760s, made a fresh start amid the ruins of Acadian Grand-Pré. This result may not be what we expected, and it may constitute something of a detour in the course of our ongoing research at the site, but it is real. ♦

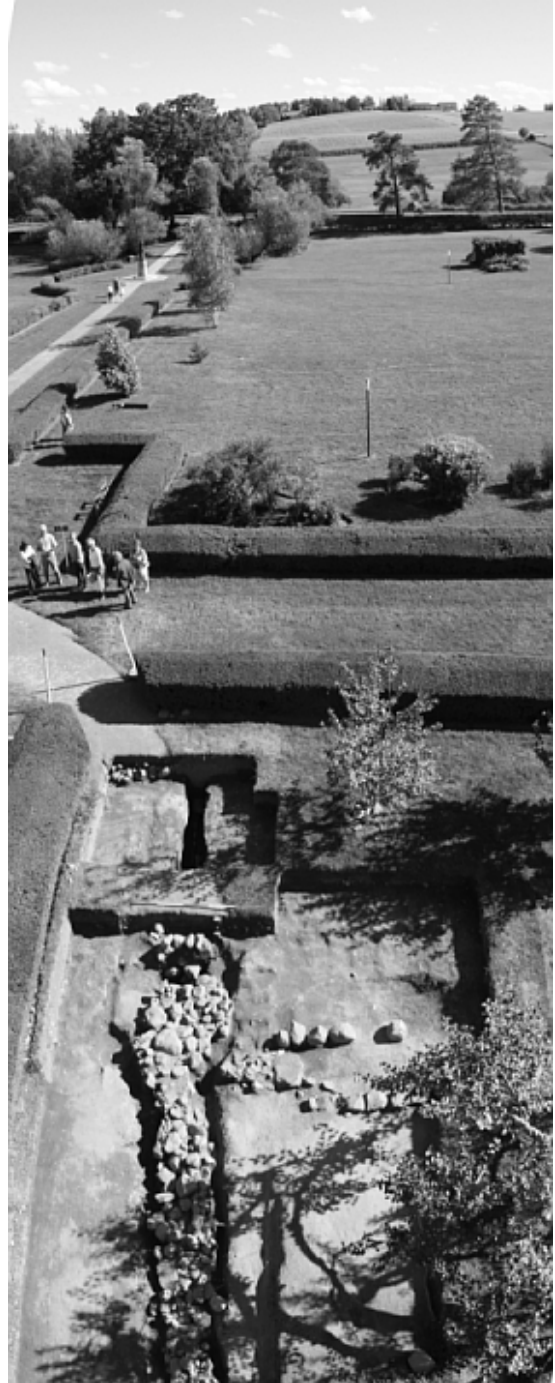


Figure 5 (Photo by Jonathan Fowler)

Recent Paleoethnobotanical Research at Western Nova Scotia Shell Midden Sites

By Michael Deal, MUN, Sara Halwas, UofM, Candace Loder, MUN, and Matthew Betts, CMCC

Gregory Waselkov (1987:95) defines a shell midden simply as “a cultural deposit of which the principal visible constituent is shell.” Yet, it is this shell component in an otherwise acidic environment that makes a shell midden an exceptional archaeological context for the recovery of plant and animal remains. Shell midden sites were once common in the Maritime Provinces, but many have been devastated by winter storms and tidal activity. They were first recognized as cultural deposits in the late 19th century, and the first archaeological excavation was conducted by naturalists with the Nova Scotia Institute of Science in 1863 at Frostfish Cove, outside of Halifax (Jones 1864). In 1868, the American zoologist, Spencer F. Baird (1882), was the first to excavate the extensive shell midden deposits of Passamaquoddy Bay, New Brunswick. This was followed by George Matthew’s (1884) remarkable excavation of the Bocabec Village site for the New Brunswick Historical Society. Jesse Fewkes (1896), best known for his research in the American Southwest, was the first archaeologist to investigate a shell midden

on Prince Edward Island, while vacationing near Rustico in 1895.

Field work in the early 20th century was highlighted by the surveys of Harlan I. Smith and William J. Wintemberg (1929) for the recently created Archaeological Division of the Geological Survey of Canada, and their excavations in 1914 at shell midden sites near Pictou and Merigomish, in Nova Scotia. Archaeological research was almost non-existent in the Maritime Provinces during the next 50 politically-tumultuous years, until Richard Pearson (1971) returned to Passamaquoddy Bay for limited testing in 1966, under the auspices of the National Museums of Canada. However, it was David Sanger’s (1971; 1979; 1987) field work in Passamaquoddy Bay, beginning in 1967, that showed the real potential of these middens to provide valuable information on Woodland period house forms and coastal resource exploitation. Unfortunately, no one in Atlantic Canada at that time had attempted to recover plant remains from shell midden sites (Deal 2008). Today, many archaeologists routinely collect sediment samples for the recovery of plant remains, as they are recognized as a valuable source of information on prehistoric plant use and exchange, as well as site seasonality (Pearsall 1989).

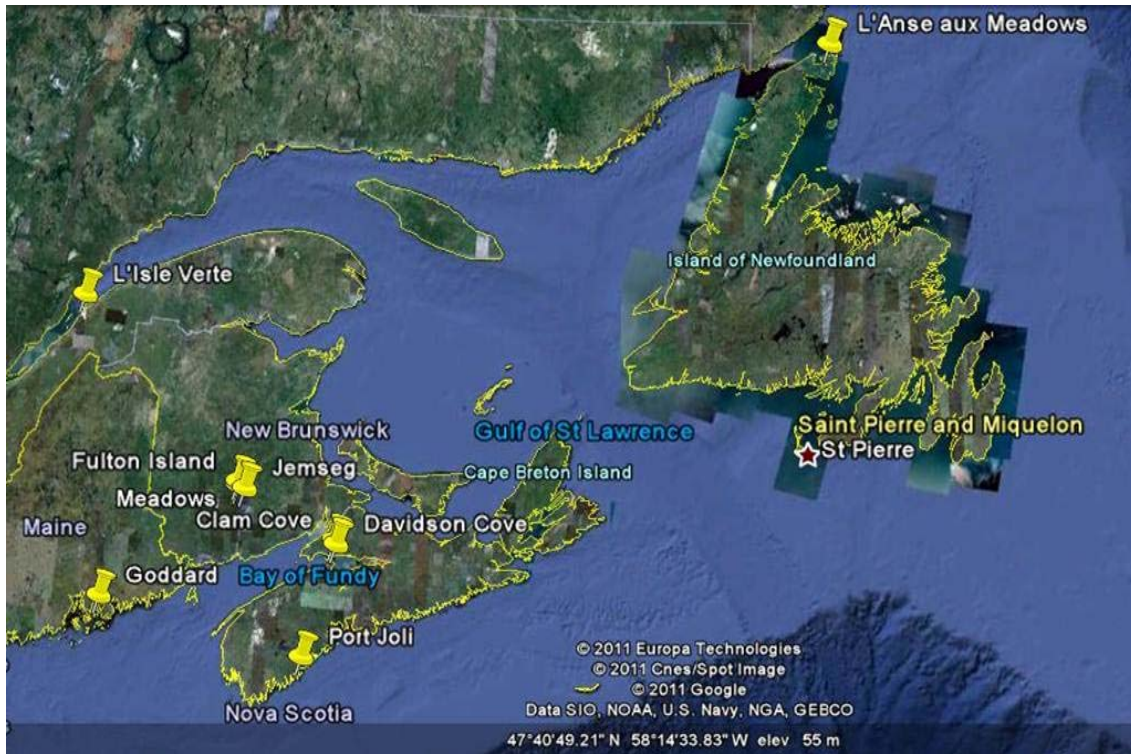


Figure 1: Google Earth map of Atlantic coast indicating general locations of sites mentioned in text.



Figure 2: Sara Halwas and Ben Pentz at Clam Cove, 2005. Garland hand-held screen is in foreground.

This report addresses the recovery and identification of plant remains from shell midden sites in two areas of western Nova Scotia, namely Clam Cove in the western Minas Basin and Port Joli on the southern coast (Figure 1). Clam Cove is located on

Cape Split, in Scots Bay, along the Bay of Fundy coast. The research conducted at Clam Cove between 1988 and 2005 was part of a long-term investigation into late prehistoric land and resource use patterns in the Minas Basin area (Figure 2). Clam Cove is believed to have been a logistical campsite, established to facilitate the exploitation of the chert deposits at nearby Davidson Cove. The relatively isolated and exposed location of Clam Cove, with cool, foggy spring to fall weather and bitterly cold winters, would have made it unattractive for year-round habitation. Other sites may have existed in the vicinity of the modern town of Scots Bay, but the shoreline in front of the town has been heavily impacted by the

removal of sand for road construction and the silting in of the harbour in the late 20th century.

Clam Cove was originally reported by John Erskine (1964; 1998), while he was compiling an inventory of prehistoric sites for the Nova Scotia Museum. Erskine was an avocational archaeologist, who was originally hired for his expertise as a botanist. He was introduced to archaeology by the famous writer and artifact collector, Thomas Raddall. Erskine described Clam Cove as having an extensive shell midden deposit, about one foot deep, but today only a small portion survives on the western extremity of the site. The site was relocated in 1988, during the first season of the Minas Basin Project, and a limited excavation was conducted in 1989. A charcoal sample from a possible house floor in the centre of the site was dated to the early Middle Woodland period (2170 +/- 140 BP; Beta-49257), while soft shell clam specimens from the midden yielded a late Middle or early Late Woodland date (1150 +/- 70 BP; Beta-204761). Sediment samples collected and analyzed at that time showed promise for more intensive palaeoethnobotanical research. The site was visited for two more field seasons (2004-2005), as part of a project to reconstruct prehistoric plant use practices in the Minas Basin area (Deal and Halwas 2008).

Clam Cove had an exceptional recovery rate for plant remains, and the opportunity to compare these results with other shell

midden sites in the region presented itself in 2009 at Port Joli. John Erskine (1960; 1998:58-60) was also the first to alert the Nova Scotia Museum of the existence of extensive shell midden deposits around Port Joli, and between 1957 and 1964 he excavated at several sites, which he categorized as shore camps, forest camps, and clamming camps. Erskine was introduced to the sites by Thomas Raddall, and ironically, many of the sites are now found within the Thomas Raddall Provincial Park. Stephen Powell (1995) returned to the area in the early 1990s to relocate Erskine's sites, during the planning stages for the park. More recently, Betts (2008; 2010) has conducted surveys and excavations at several sites in the Port Joli area and has identified a number of sites missed by Erskine's original survey. The Port Joli samples analyzed in this study were collected in 2009 at two sites not identified by Erskine, namely, AIDf-24 and AIDf-30 (Figure 3). Three additional sediment samples from a Middle Woodland deposit at AIDf-24 were supplied by Matthew Betts after his 2010 field season. In addition, two charred specimens were collected *in situ*, which have been identified as butternut fruit (Figure 4). These were recovered from suspected house floors in Area C; one from an early Late Woodland deposit, and the other from a Protohistoric deposit.



Figure 3: Veronica Lech and Gabe Hrynich profiling Test Pit 2, AIDf-30, Port Joli.

During the 2004-2005 field seasons at Clam Cove, random sediment samples were collected from each level of each unit of the non-midden areas. All excavated shell midden deposits were sieved through a Garland hand-held 6mm mesh screen in order to remove most of the shell matrix, and then samples were collected from the sieved sediments. The same technique was used to collect sediment samples at AIDf-30, Port Joli, while the AIDf-24 specimens were recovered from bulk level sediment samples.



Figure 4: Butternut fruit (*Juglans cinerea*) specimen from early Late Woodland deposit in Area C, AIDf-24 (above top) Photo by Dominique Lavers. Modern fruit (above bottom).

All sediment samples were processed at the MUN Paleoethnobotany Lab, using a combination of dry screening and flotation. Small samples of one litre or less were passed through nested geological sieves (Figure 5). This method is more time-consuming, but it is efficient for small samples, and has close to 100 percent recovery rate. Larger samples, up to 20 litres, were processed by forced-air flotation (Figure 6). Air is pumped into the water to create bubbles that break up the sediment and release the organics, which float to the surface. This method produces three fractions: a flot, consisting of organic materials that are collected in a one-half mm mesh screen, a coarse fraction of larger inorganics collected in a 6 mm mesh screen, and a fine fraction of sediments which settle to the bottom of the flotation tank. The main difference between the two recovery techniques is that flotation sorts organics and inorganics into separate fractions, while dry

screening merely produces size-sorted fractions. Entire flot fractions were sorted, along with 10 percent of the remaining fractions. Some denser organic specimens, like nutshells, often do not float and can end up in the larger inorganic fraction.



Figure 5: Stacked geological sieves were used to screen sediments from Area A, AIDf-24.

Samples were sorted under binocular microscopes. A wide range of plant macrofossils were recovered, including complete and fragmented seeds, cones, needles, buds, charcoal, and fungal spores. Insect remains, including black and red ants, beetles, and even mosquitoes were recovered. The Port Joli samples also included large numbers of terrestrial gastropods (land snails) and sea urchin (*Strongylocentrotus droebachiensis*) spines were recovered in two of the AIDf-24 samples.



Figure 6: Sara Halwas processing a large sample by forced-air flotation.

A total of 5463 seeds were recovered from all contexts at the Clam Cove site, representing 24 families, 53 genera, and at least 84 species. The vast majority of specimens from the non-midden deposits are believed to be from the natural environment, such as various grasses, sedges and rushes. For the purpose of comparison, only the seeds from the shell midden are included in the following discussion. Charred specimens are particularly important, since the general rule of thumb in paleoethnobotanical research is that charred seeds are cultural, while uncharred seeds may be natural (Minnis 1981). However, it is also recognized that the high calcium carbonate concentrations in shell middens can preserve uncharred seeds for very long periods of time (Miksicek 1987:218).

The specimens recovered from the Clam Cove shell midden yielded six plant species bearing edible fruits that have been reported for the Post-Contact Mi'kmaq, including pin cherry and black cherry (*Prunus* spp.),

raspberry and/or blackberry (*Rubus* sp.), blueberry (*Vaccinium* sp.), bunchberry (*Cornus canadensis*), and elderberry (*Sambucus* sp.). Some species, such as raspberry and elderberry, were often dried and stored for winter consumption. A few of the identified species also have edible plant parts, including watercress (*Nasturtium officinale*), and sorrels (*Oxalis* spp.). At least 12 species have known medicinal properties, and their parts were used in modern times to make herbal teas. A number of tree species, including fir (*Abies* spp.) and spruce (*Picea* spp.), were used to make salves and poultices (see Deal and Halwas 2008).

Sara Halwas (2006) studied the charcoal samples from Clam Cove and has identified 23 softwood specimens, representing species of fir and spruce, and 48 hardwood specimens, representing at least five species, including maples (*Acer* spp.), alder (*Alnus* sp.), birches (*Betula* spp.), beech (*Fagus* sp.) and poplar (*Populus* sp.). The preference for hardwoods may indicate a late summer to fall occupation, since the temperatures at Clam Cove tend to be up to 15 degrees (C) cooler than those in Minas Basin proper. The charred conifer needles recovered may also be from fuel woods, or from boughs used as bedding or floor coverings near hearths (see Deal and Butt 2003). Hardwoods in general are also useful as construction materials and tool hafts. White birch (*Betula papyrifera*) may have been the most important species since its bark was used for making wigwams, canoes, containers, and burial shrouds.

By comparison, the seed recovery rate at the two Port Joli sites seems very modest. However, this is only a preliminary assessment based on a partial analysis. The initial sorting and identification of specimens from AIDf-30 was done in 2010 by Candace Loder (2010). The 12.5 litres of sediment from this site produced 44 seeds, representing at least 10 species. Ten specimens were charred, including six blueberry, five raspberry and/or blackberry, one cherry stone and one birch seed. The early evidence points to the collection of edible berries, which would have been available in the late summer and early fall. Thus far, the Area A shell midden at AIDf-24 has only produced nine seeds, none charred, compared to 178 uncharred seeds from the off-site control sample.

The most encouraging finds from AIDf-24 are the two butternut fruits recovered during the excavation of Area C. The butternut is not native to Nova Scotia, but is common in New Brunswick along the Saint John and upper Miramichi River valleys, in rich deciduous forests (Hinds 1986:161; Figure 7). Butternut specimens have been recovered from prehistoric sites in the Lakes Region, on the Saint John River drainage, at the Fulton Island, Jemseg, and Meadows sites (Foulkes 1981; Monckton 2000; Varley 1999:43), and at a Middle Woodland site at L'Isle Verte, in the Gaspé (Trembley 1997). These sites are all within historic Maliseet territory. Experimental studies with the collection and processing of various nut species in the

1980s concluded that butternuts are not a reliable subsistence food due to the low calorie yield per hour of work (Talalay *et al.* 1984). However, in the post-contact period they were chosen for their desirable flavour, and eaten raw, or crushed and mixed with other foods (Kuhnlein and Turner 1991:210; Speck and Dexter 1951). They may have been more important as a feasting food in the Pre-contact period.



Figure 7: Location of Port Joli in relation to the natural distribution of the butternut tree (*Juglans cinerea*). Map source: the United States Department of Agriculture.

The discovery of butternut fruits at Port Joli supports the notion of a substantial exchange of plant materials and foodstuffs in late prehistoric times in the Atlantic region (Deal 2008). The same routes suggested for the movement of Scots Bay lithics (Deal 1989; Sable 2011:161) may have served for the spread of butternuts and other foodstuffs to the Port Joli area, that is, along the

southwestern shore of Nova Scotia, or along the Mersey River-Lake Rosignol or Shubenacadie River portage routes.

The exchange of botanical products and plant knowledge is well documented for western Canada (Turner and Loewen 1998). While ethnohistoric information is inadequate for the east coast, a similar range of products was available for trade. Alfred Goldsworthy Bailey (1969) notes that tobacco was the chief article of demand for the early historic Mi'kmaq and Maliseet. The Maliseet grew small amounts, but the bulk of the demand would have to be met through trade and friendly contact with the New England Indians. The fact that the Mi'kmaq took a dominant role in regional trade during the early historic period (Bourque and Whitehead 1987), suggests that they had already established trading links to the south.

In his review of David Sanger's Carson Site volume, Stephen Loring (1988) suggests that interregional trade may have its routes in the Late Archaic, as evidenced by the wide distribution of Ramah and Mistassini cherts. Archaeological evidence hints at an intensification of trade during the later prehistoric period. Stephen Cox (2000) identifies the Goddard site in Maine as an important hub in this trade route, which would have controlled access to the resources of the Penobscot drainage and coastal transportation routes. The Late Woodland component at this site has produced lithics from Nova Scotia, the Great Lakes,

Pennsylvania, and Labrador, as well as Dorset Palaeoeskimo artifacts, and a perforated Norse penny. The Norse may not have ventured as far south as coastal Maine, but the presence of butternuts at L'Anse aux Meadows suggests a visit, and possible contact and trade with the Mi'kmaq, in the lower Gulf of St. Lawrence area (Wallace 2000).

Paleoethnobotanical analyses can be time-consuming, and occasionally non-productive, yet in most cases they lead to new information on native plant exploitation that cannot be obtained from other sources. Shell middens are a particularly valuable context for the preservation and recovery of plant remains. While the Clam Cove midden deposit is nearly depleted, the Port Joli sites hold great promise for future study. Clam Cove appears to have been a short-term, logistical campsite, where visitors to the area took advantage of the local clam beds and floral diversity. Although well-preserved, the few faunal specimens recovered from the Clam Cove midden reflect the limited hunting possibilities on Cape Split. By comparison, the Port Joli middens are more substantial and diverse, suggesting multi-season use. Finally, intra-regional resource variability may have also promoted trade among the Pre-contact Mi'kmaq and their neighbours. Foodstuffs like butternuts, plums, groundnut tubers, wild grapes, basswood, and possibly tobacco and corn in the early Contact period, would have had limited geographical ranges and presented valuable commodities for

exchange. In particular, the presence of butternut at both L'Anse aux Meadows and Port Joli, from contexts dating to the same relative period, suggests that it was an important trade item during the Late Woodland period.

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Nova Scotia Archaeology Society Report – Fort Point Public Archaeology Program

By Darryl Kelman, NSAS

The Nova Scotia Archaeology Society (NSAS) was formed in 1987 in response to a growing interest in the Province's heritage resources. It is the mandate of the NSAS to bring together individuals interested in the study and promotion of archaeology, particularly as it relates to Nova Scotia; to disseminate knowledge and encourage the exchange of information among professionals and amateurs alike; and to promote the preservation and protection of archaeological sites and resources throughout the Province.

To that end, the NSAS conducted a public archaeology program at Fort Point, LaHave, Lunenburg County, in 2010. The public archaeology program was funded by a Nova Scotia Museum Research Grant. The goals of the archaeological program were to provide non-professional members of the NSAS, other heritage societies and the public the opportunity to participate in an archaeological investigation, and to promote archaeology in Nova Scotia through the media and through the presentation and/or publication of any results. A private property, owned by Gary Malone, was brought forward as an ideal location to run such a program. The property is situated on the southwestern side of Fort Point Pond adjacent to a property that contains the registered archaeological site of Fort Ste. Marie-de-Grâce (BbDc-1). It was proposed to shovel test the property to

confirm presence/absence of archaeological resources at selected locations on the subject property.

Historic Overview

The history of Fort Point has been covered in more detail in other publications. What is presented here is a cursory review intended to provide some context for the reader.

In 1632 Acadia was returned to France by the Treaty St. Germain-en-laye. Isaac de Razilly was appointed Lieutenant General and Viceroy of New France and constructed Fort Ste. Marie-de-Grâce on a headland overlooking the LaHave River (Faulkner & Faulkner 1987). Dwellings were also built for the soldiers and various artisans who were to build and defend the fort. Also constructed were a stone storehouse for food and ammunition, a chapel and a mill (Chambers *et al* 2004; Dawson 1982). Razilly's mandate was to bring permanent settlers to the area to farm the land and help make the colony self-sufficient. Across the river were the Governor's farm, which aided in providing fresh food to the colony, and Nicolas Denys' lumbering operation and fishery. During this period the settlement, known as 'LaHave', was the capital of New France.

Razilly died in 1636 and following his death the administrative centre of Acadia, along with the garrison and most of the settlers, were transferred to Port Royal. The area lay almost deserted except for a few settlers who remained behind or returned

shortly after. Some of the French and local Mi'kmaq intermarried (Chambers *et al* 2004).

The mid to late seventeenth century was a time of turmoil as rival French factions, mostly merchants and traders, disputed each other's claims over the region. Several French merchants attempted at various times to control the trading posts of the LaHave River. In 1653 or 1654, Emmanuel Le Borgne, one of the disputing merchants, burned down Fort Ste. Marie-de-Grâce and the chapel to prevent anyone else from establishing there (Chambers *et al* 2004).

By the 1860s, a significant portion of the fort had already been lost to erosion. When DesBrisay wrote his *History of the County of Lunenburg*, he described the remaining ruins in some detail. A lighthouse and keeper's house were built on the point in 1876. By the early years of the twentieth century, the rest of Fort Ste. Marie-de-Grâce had mostly fallen into the river. The foundation of the nearby chapel was also lost by the mid-twentieth century. It was bulldozed to facilitate lawn mowing of the grounds of the nearby cemetery (Chambers *et al* 2004). The lighthouse was demolished in 1954 and replaced by a skeleton tower with an automated light. This has since been demolished as well. The museum that currently sits on the point was opened in 1972 in a house that was constructed in the 1940s (Chambers *et al* 2004).

Previous Archaeological Research

Archaeological testing has taken place on the nearby Fort Ste. Marie-de-Grâce (BbDc-1) site, located approximately 200 metres northeast of the 2010 public archaeology testing area, on the other side of Fort Point Pond. This work, conducted in the 1970s and 1980s by David Christianson and Marc Lavoie, identified intact deposits and features ranging in age from the 17th century through to the 20th century (Christianson 1978; Lavoie 1988). Most notable among the identified features was a trench that likely represents a palisade or piquet structure (Christianson 1978). Based on the historic background, the presence of known archaeological resources nearby and discussions with Heritage Division staff, the property owned by Gary Malone was considered to exhibit high archaeological potential for French and Acadian features, particularly residences, associated with the settlement at the Fort.

Results

The 2010 public archaeology program took place over one weekend in early October. On each day the project benefitted from several professional volunteers who acted as supervisors to members of the public. These professionals included Sara Beanlands, David Christianson, Robyn Crook, Mikael Haller, Matt Munro and Ben Pentz. Each day saw between 12 and 15 members of the public participate, some of whom travelled a fair distance just for the opportunity. During the testing program, 26 shovel test pits were



Figure 1: Lesley Gordon, Ben Pentz, Terry Deveau & Brian Harding (photo courtesy of Terry Deveau)

excavated. No significant features were identified and the artifacts recovered represent late-nineteenth and twentieth century domestic refuse. Although archaeologically, no significant deposits were encountered, it should be noted that only a very small portion of the property was investigated in 2010.

It should also be noted that the primary focus of the archaeological program was the participation of non-professionals (Figure 1). The NSAS membership is a diverse group of individuals, many of whom have never taken part in an archaeological investigation or excavation. Under the supervision and guidance of some professional members of

the society, it is hoped that the non-professional or amateur gained insight and understanding into the methods of archaeology, and had a meaningful and enjoyable experience. It is also hoped that the 2010 program laid the foundation for future public archaeology experiences sponsored by the NSAS. All equipment purchased for the archaeological program at Fort Point is the property of the NSAS. As such, it will be adequately stored and available for any future NSAS field work opportunities. It is the hope of the NSAS that the success of the Fort Point public program will lead to further research-based and community involved field projects and archaeological investigations in future years.

Acknowledgements

The NSAS thanks Brian Harding for his efforts to help organize the Fort Point public archaeology program; the Nova Scotia Museum for funding the program; and Gary Malone for allowing us to dig on his property.♦

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Curator's Corner.....

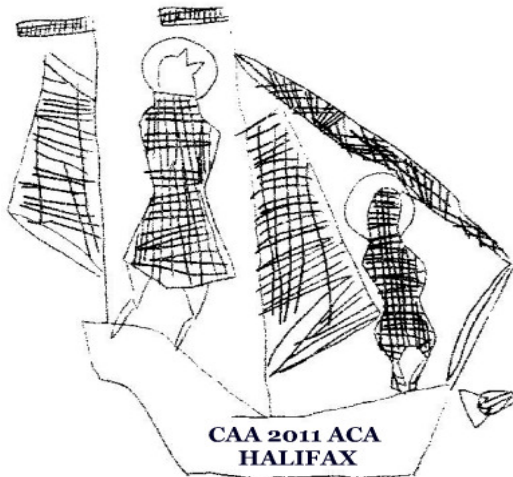
By Katie Cottreau-Robins, Nova Scotia Museum

Archaeological work within the Nova Scotia Museum and its larger government framework, the Heritage Division of the Department of Communities, Culture and Heritage, has once again exceeded in pace and scope than any previous year. It has also been a year when Nova Scotia Museum archaeology staff has worked more closely than ever with non archaeologists from a range of government departments and NGOs. This trend in partnerships and collaborations will continue to grow especially as CC& H begins to develop its new shared-client-service model. This is exciting. Partners and collaborators with the Nova Scotia Museum are contributing insights and expertise at a time when both the archaeological work and the discipline in Nova Scotia are expanding. We look forward to this proactive and beneficial movement forward.

The following is a summary of a few projects and events that were underway in 2010. Some projects spread into 2011 and are now completed while others are nearing completion.

**Canadian Archaeological Association
Annual Conference – Halifax 2011**

After two years of planning and fundraising, the 44th Annual Meeting of the CAA came to Halifax in May 2011. Three hundred delegates registered and attended a full



complement of sessions, tours and events. The focus was current research in the Atlantic region which generated sessions concentrating on Newfoundland, the Maritime Peninsula, practice and policy, interdisciplinary approaches, Late Glacial archaeology, and quarry data. Three sessions honoured career contributions of noted archaeologists David Sanger (University of Maine), Rob Ferguson (Parks Canada) and Michael Bisson (McGill University). The response to the call for posters was very exciting with over 30 submissions. Over \$3000.00 was raised through the Silent Auction in support of local non-profits, the Nova Scotia Archaeology Society and the Archaeological Land Trust of Nova Scotia. At the annual banquet, the Smith-Wintemberg Award, presented in

honour of a member of the Canadian archaeological community who has made an outstanding contribution to the advancement of the discipline of archaeology, was awarded to Dr. Stephen Davis, Professor Emeritus, Saint Mary's University and president of Davis MacIntyre & Associates.



Rob Ferguson recording a c.1689 aboiteau on the Grand Pre Marsh. Many delegates joined Rob in the hospitality suite to celebrate over 30 years with Parks Canada. (K. Cottreau-Robins, 2009)

Support from the local archaeology community, students, provincial government departments, and corporate agencies was outstanding. The conference actually generated a healthy surplus and the Halifax organizing committee along with the CAA Executive will soon determine how best to distribute the funds. Thanks to all who made the conference a tremendous success! Look to Montreal for the 2012 meeting.



Smith-Wintemberg Award recipient Dr. Stephen Davis, 2011. See the CAA website for the nomination submission on behalf of former students and colleagues in Nova Scotia (L. deBoer, 2010)

Mini Gallery Renewals

In anticipation of the 300 delegates arriving for the CAA last spring, two gallery renewals took place at the Museum of Natural History in Halifax. The MNH was a five minute walk from the conference venue and delegates were given free admission to the museum. Long anticipated updates were introduced in both the Archaeology and Ethnology Galleries. Images and artifacts were refreshed and text, including Mi'kmaq concepts and translations, were added to the pre-contact exhibits to reflect more recent scholarship. To bridge the Archaeology and Ethnology galleries, the three minute black and white silent film, *The Porpoise Hunt*, was installed. The film captures the key activities

of the porpoise hunt which took place in the Bay of Fundy and Annapolis Basin. At the time the film was made in 1936, it had been 40 years since the last porpoise hunt among the Mi'kmaq.



Stirring the porpoise blubber after boiling (from the 1936 film *The Porpoise Hunt*, courtesy of the Nova Scotia Museum)

Grand Pré Cultural Landscape and the UNESCO Bid

Another year of work has contributed to the development of the UNESCO bid to have the Grand Pré cultural landscape declared a World Heritage Site. The nomination proposal, a substantial document near half a meter thick, was finally submitted to the UNESCO body this past winter. Review of the nomination proposal is now underway by heritage specialists and preparations have begun for the site visit by an ICOMOS expert who will review the proposed Grand Pré cultural landscape parcel as well as meet with the numerous specialists and interest

groups who have contributed to the proposal process over the last 4-5 years. An important meeting will be held to field questions and discuss the “Strategy for the Management and Conservation of Archaeological Heritage in the Landscape of Grand Pré”, a key component of the overall proposal framework. Members of the task force preparing the archaeological strategy created a framework for collaboration between the three levels of government, the Mi’kmaq of Nova Scotia and the communities of interest. In particular, the Heritage Division of the Department of Communities, Culture and Heritage and Parks Canada will assist with management of the archaeological heritage of Grand Pré and area. This collaboration aims to ensure the effective protection, conservation and monitoring of the archaeological heritage of the nomination property. For specific details see:

<http://www.nominationgrandpre.ca/dossier.html>



Lidar image of the proposed Grand Pré cultural landscape as described in the UNESCO World Heritage Site nomination document. The cultural landscape boundary is in red and includes a buffer zone outlined in grey. Yellow indicates federal lands including Grand Pré National Historic Site. (Image courtesy of Parks Canada, 2010)

Testing at Fort St. Louis (AiDi:1)

Joined by the Assistant Curator of Archaeology (NSM), Stephen Powell and the Manager of Collections (NSM), David Christianson, a brief testing program was undertaken at Fort St. Louis in Port La Tour, Shelburne County in June 2010. The goal of the testing was to verify for Parks Canada that a monument placed in Fort Point, Port La Tour in 1937 was in fact in the location of the historic Fort remains. A single line of shovel test units verified the site location as period artifacts were quickly uncovered in each unit. A portion of an earthwork is still visible on site though coastal erosion is having an adverse affect on the outer edge remains. We were excited to be there. Fort St. Louis is an intriguing place. Established by Charles de la Tour and noted as the strongest French military establishment in Canada during the 1630s, there is a larger story of early French colonial habitation, imperial exchange and aboriginal engagement, waiting to be told through the archaeological record.¹ We returned to Fort Point this summer (2011) to conduct a general walking survey of the Fort area with the landowner and to conduct an expanded shovel test program on lands adjacent to the park. Roger Lewis, Assistant

¹ For recent scholarship on colonization in the Atlantic northeast see John G. Reid with contributions by Emerson W. Baker, *Essays on Northeastern North America: Seventeenth and Eighteenth Centuries* (Toronto: University of Toronto Press, 2008), p. 15-16.

Curator of Ethnology (NSM) joined us and we were successful in locating features and artifacts which verified for the landowner the presence of archaeological remains related to Fort St. Louis beyond the park area. More testing to further delineate the site is planned.



A second summer of shovel testing in the vicinity of the Fort St. Louis monument in Fort Point, Shelburne County confirmed that features remain buried on adjacent lands to the park. A significant burn event with artifacts was uncovered in the shovel test above. (K. Cottreau-Robins, July 2011)



Red clay pipe bowl fragment from Fort St. Louis 2010 testing project. (K.Cottreau-Robins, NSM, 2010)



Possible Bellarmine jug neck fragment from Fort St. Louis, 2010 testing project. (K. Cottreau-Robins, NSM, 2010)

The Boswell Site (BfDf-08)



The Boswell Site on the Annapolis River (K. Cottreau-Robins, 2010)

The Boswell Site, located near farmland on the Annapolis River, was initially discovered by local residents during a fishing trip. Traci Boswell jumped down to the river bank to wash her hands when she noticed a large black biface resting at the water's edge.

When she picked it up another partial point sat beneath. Her thought was to contact the Nova Scotia Museum to see if we were interested in the discovery and indeed we were. She took NSM staff to the place of discovery and the site was recorded and entered into the Maritime Archaeological Resource Inventory database for the Province.



Complete biface collected at the Boswell site in 2009. The base portion of a Susquehanna type stemmed projectile point was also collected. (T. Boswell, 2009)

Given the nature of the finds and the nature of his own research, Michael Deal of Memorial University expressed interest in conducting a testing project in the summer of 2011. With the help of students, NSM staff and KMKNO staff, the project included a week of mapping and thorough testing at the site to determine if more remained from the Terminal Archaic period of the Maritime Provinces as exhibited by the initial finds. Similar finds were not uncovered however,

substantial knowledge was obtained from the landowner regarding surface finds his grandfather and uncle collected over the decades and the scattered flakes found in the vicinity of the site. The site has been impacted by erosion and flooding nevertheless numerous sherds of pottery were excavated, some with pseudo-scalloped shell decoration, suggesting the early Middle Woodland period. Is the Boswell site part of a complex of sites in South Farmington first noted by Steve Davis in 1981? Perhaps one of the graduate students helping with the project has a thesis research question.



Memorial University of Newfoundland graduate student Adrian Morrison begins to uncover ceramic fragments at the Boswell Site. (M. Deal, 2011)

Historic Slipway at Maitland (BhCv:1)

In November 2010, NSM staff visited the beach across from historic Lawrence House in Maitland to record a large feature eroding out of the red sand bank. Likely connected to the nineteenth-century shipbuilding efforts of William D. Lawrence, the feature included

remnants of wooden cribwork, iron shipbuilding materials and tools sprinkled between the planks. Lawrence had a significant and prosperous shipbuilding yard near his Maitland home that was responsible for the construction of many fine vessels during Nova Scotia's golden age of sail. Among those vessels was the largest full-rigged ship ever to be built in Canada - the William D. Lawrence at 2459 tons. ♦



Wooden planks for a historic ship yard crib work eroding out of a low bank along Cobequid Bay in Maitland (K.Cottreau-Robins, 2010)

Editor's Note:

The purpose of this newsletter is to improve communication of research in Nova Scotia between archaeologists and to inform the broader public. A special thanks to all the authors for making this another successful edition of Archaeology in Nova Scotia News.

Stephen Powell, NSM