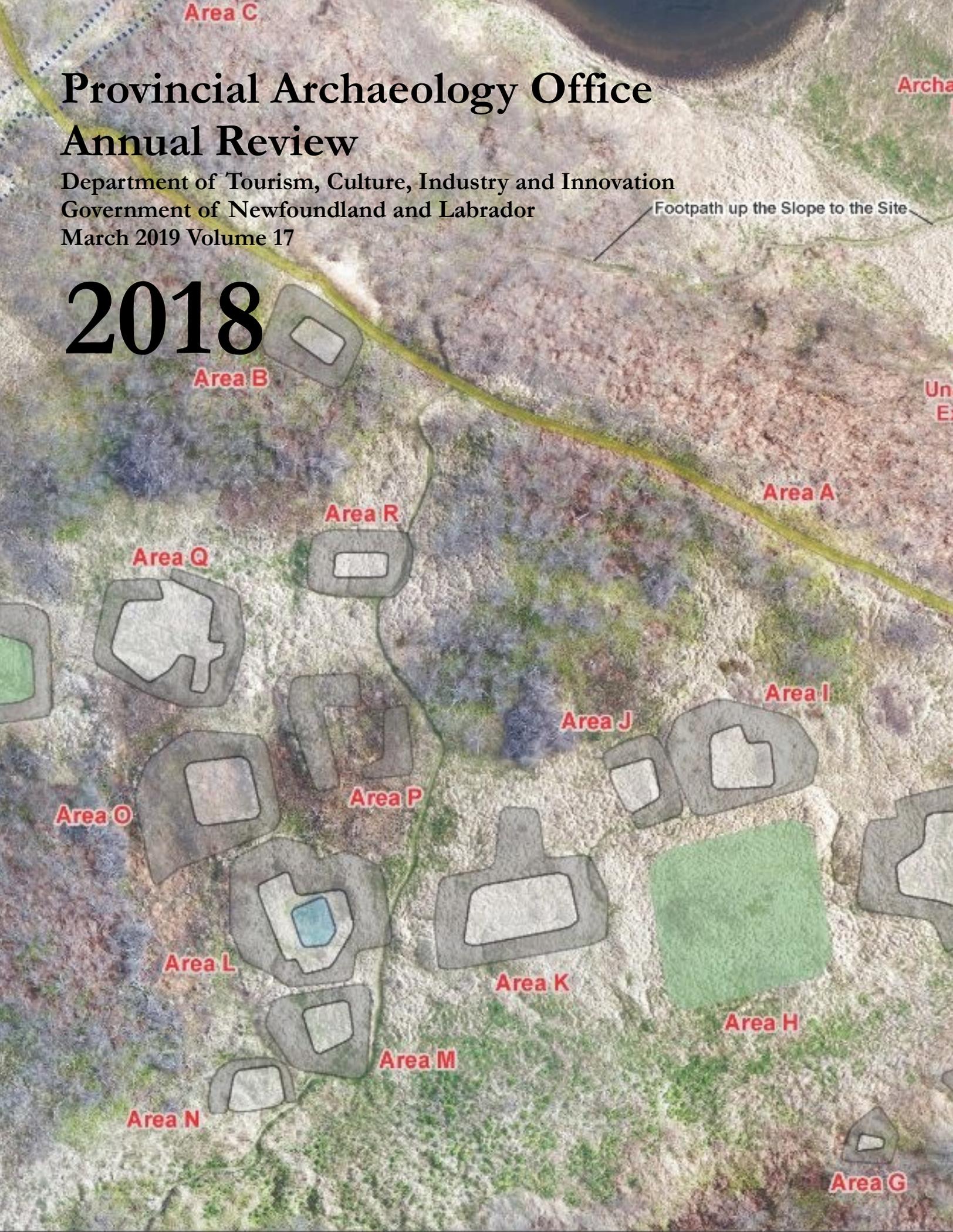


# Provincial Archaeology Office Annual Review

Department of Tourism, Culture, Industry and Innovation  
Government of Newfoundland and Labrador  
March 2019 Volume 17

# 2018



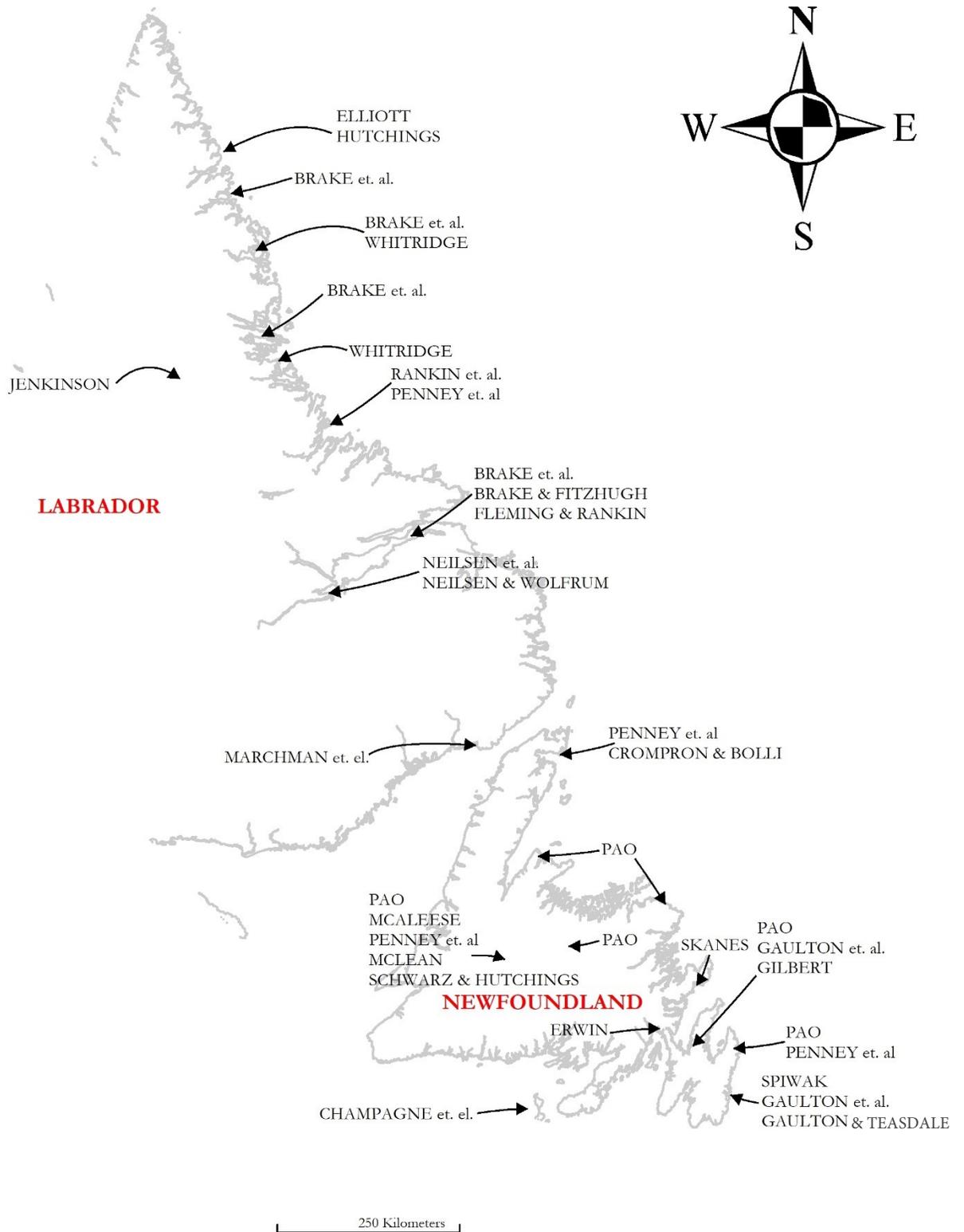




**Cover: Portion of an aerial map of Fox Island 1 (DcAh-01),  
with cultural features highlighted and labelled.  
See Skanes this volume.**

Stephen Hull  
Delphina Mercer  
Editors

# ARCHAEOLOGY IN NEWFOUNDLAND AND LABRADOR 2018



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# Nunatsiavut Archaeology Office Fieldwork 2018

Jamie Brake, Michelle Davies, Kyle Crotty & Noah Nochasak  
Nunatsiavut Archaeology Office

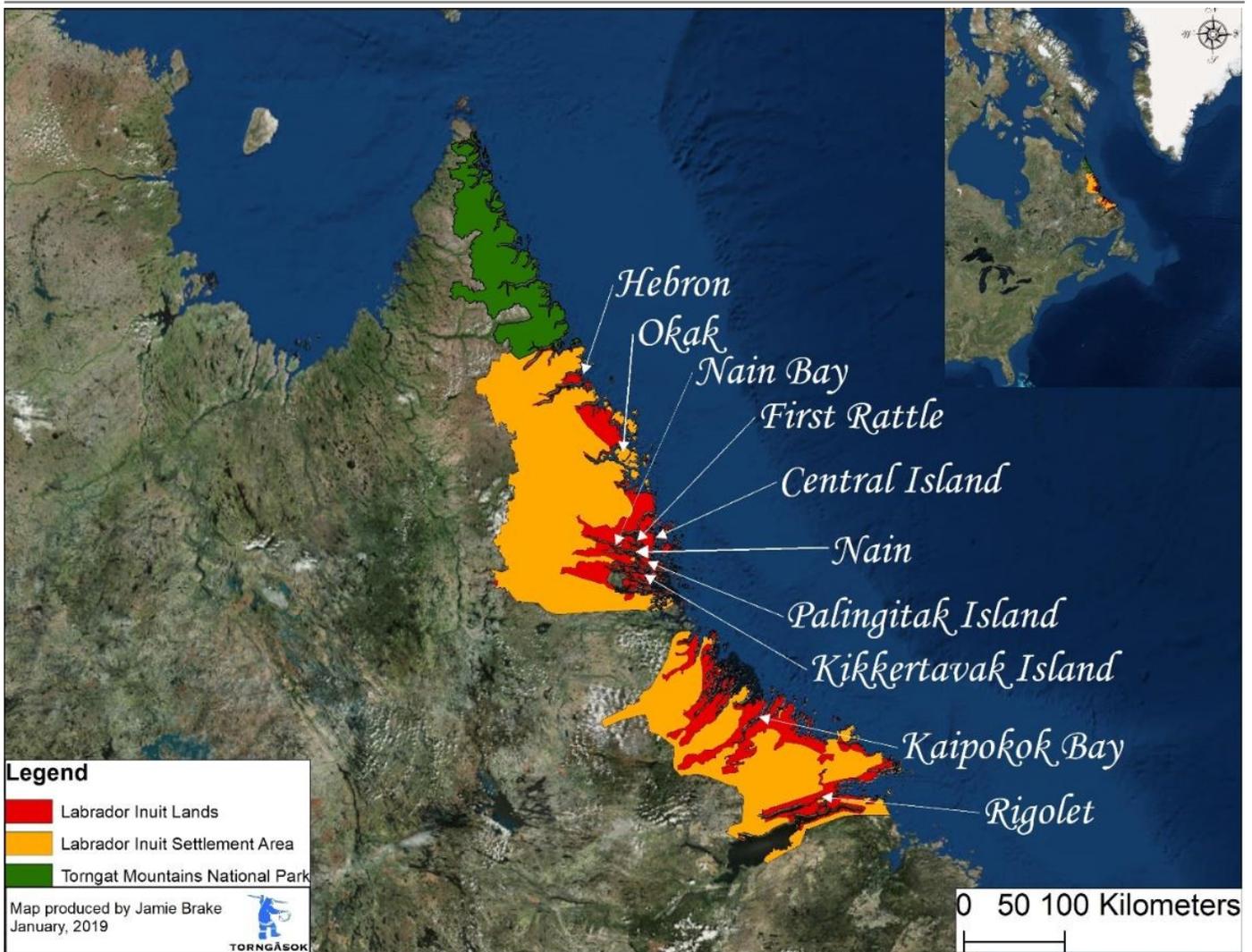


Figure 1: Map showing places mentioned in the text.

## Introduction

The Nunatsiavut Archaeology Office (NAO) has had another busy and successful year. Fieldwork was conducted extensively in the Nain area, the Rigolet Region (see Brake & Fitzhugh, this volume) as well as Postville, and Hebron. A special trip was taken to Okak to help mark the 100-year anniversary of the closure of that community after it was devastated by Spanish Influenza.

Additional office work this year included preparing texts and artifacts for display in Illusuak, Nunatsiavut’s new Cultural Centre, which we anticipate will open in early 2019. In 2018 we reviewed a total of 124 referrals, including applications for land use, mineral exploration, quarries, general research and archaeological permits. We are fortunate to have increased capacity in our office this year and recently hired Cathy Ford of Makkovik to manage a database for a project known as Nanilavut, meaning ‘let’s go



Figure 2: Heritage Forum participants listening to a lecture by Dr. Hans Rollmann.

our annual Heritage Forum, as it guides a portion of our fieldwork and provides a consistent connection to interested communities every year.

### Heritage Forum

In keeping with previous years, the NAO reached out to local organizations in the community where Nunatsiavut's Heritage Forum would be held in order to collaboratively develop an agenda and organize events that are relevant to the host community. This year's forum was held in Hopedale and was planned with the Agvituk Historical Society and the Hopedale Inuit Com-

find them'. Over the course of the next three years Cathy will help Nunatsiavummiut (people of Nunatsiavut) locate family members who never returned after being sent out of the region for treatment for Tuberculosis and other medical conditions in the mid-20<sup>th</sup> century. Nancy Nochasak, a resident of Nain who graduated from high school in June, was hired by the NAO in mid-July to work with the office for 6 weeks as a summer student. She had an opportunity to take part in various aspects of government archaeology work both in the office and in the field and was even able to take part in fieldwork in the Torngat Mountains National Park, Okak Bay, Nain and Zoar with visiting academic researchers from Memorial University (see articles by Elliot and by Whitridge in this volume).

The following article is presented in four main sections, the longest consisting of a summary of the results of fieldwork conducted by the office in 2018. Updates on programming that relates directly to archaeological fieldwork are presented, including developments with the Kayak Revival Program, the Marine Advanced Technology Education (MATE) program, and the continuing use of Labrador's First Snowmobile. A brief analysis and discussion of an interesting community collection, which was brought to the office for documentation in December of 2018, is also included. We begin with the results of

community Government. The theme was *UKalaKatigennik Unikkausinginnik Hopedalimit* - Sharing the Stories of Hopedale, and the organizing committee placed particular emphasis on inviting as many elders as possible to share in storytelling circles. Of particular interest were the storytelling sessions around relocation from Hebron and Nutak, and early stories of Hopedale and Uviloktok. We began with our roundtable community updates so that we could learn more about heritage initiatives from each community. We also took the opportunity to discuss updates to Hopedale's submission to Canada's tentative list for World Heritage, and later conducted a community mapping session to determine which heritage and archaeological sites may be included in the application. We held sessions on archival management and access, and heard updates from projects involved with the Tradition and Transition Research Partnership between the Nunatsiavut Government and Memorial University. Our evening events included a visit to the Hopedale Museum, a trivia night and community feast, as well as a Love Feast and service at the church to close the forum. As anticipated, the forum provided our office with clear direction from the communities and has helped us to organize priorities for our field season and other events in 2018. Of particular note was a group discussion around the commemoration of the 100-year anniversary of the devas-

tating impacts of Spanish flu at Okak, which killed 204 of its 263 residents and resulted in the closure of the community the following year. Several researchers and community members suggested ideas for commemorating these tragic events, and the NAO raised the possibility of conducting a low-impact archaeological mapping program at Okak in the fall for resource management purposes. Discussions during the Heritage Forum helped guide the development of an Okak commemoration committee to plan for further community events.

### Archaeological Fieldwork

NAO Fieldwork this year was largely concentrated in the Nain region, including early summer trips to Palungitak and First Rattle, and late summer and fall trips to Blow Hole, Morhardt Cave, Kikkertavak Island, Central Island and Nain Bay. Michelle Davies continued fieldwork in Hebron as part of her PhD project documenting family histories in the region. Jamie Brake carried out fieldwork near Postville prompted by a land use referral, including Pugaviks islands, and continued archaeological surveys in the Rigolet region in collaboration with the Smithsonian Institution and the Rigolet Inuit Community Government. The results of the Rigolet area surveys are discussed in a separate article by Brake & Fitzhugh in this volume. Our field season was capped with an important trip to Okak to commemorate the 100-year anniversary of the closure of that community after its population was decimated by the Spanish Influenza pandemic of 1918/1919.

### Palungitak

Our first trip of the field season is typically reserved to continue the search for a sodhouse which belonged to the families of Sikkuliak, a prominent 18th century angekok (shaman) and his son Kigluana (see Brake & Davies 2016; 2017; 2018). This provides an opportunity to test out our boat

and field gear in an interesting location close to Nain. However, this year we decided to follow another lead from Garth Taylor's 1966 field notes, in which Ama Harris indicates the existence of sod house remains in a cove on the western end of an island called Palungitak (Taylor 1966).

Palungitak is located directly east of Satsosak Island, about 20km southeast of Nain. We headed out on a calm day on July 5<sup>th</sup>, and following Taylor's notes we first landed on the south side of a pronounced western peninsula. We quickly noticed a family of five black bears and decided to motor around to seek another landing spot. On the north side of the peninsula, we recorded a large box hearth or cache feature with intact vertical slabs supported by cobbles, the box itself measuring approximately 50cm x 50cm internally, and the total size of the feature being 2m x 2m (HcCj-07 [Figure3]). Two tent rings and an iron trap with a stone anchor, and a stone formation, which may have been used to dry skins were also recorded nearby. On the south side of the island's southwest promontory, we also recorded two abutting tent rings measuring 6.3m x 5.2m and 5.2m x 5m (HcCj-08).

Box hearths and box caches are associated with several Paleoeskimo cultures, though most of these can be ruled out in this particular area because of the extremely low elevation. There is a possibility that this could be a Late Dorset structure, and pre-contact artifacts were found a few hundred meters to the southwest on the same island by a Smithsonian crew in 1980 (NG Archaeological Sites Inventory). They did not find features at the time and for that reason felt that the Ramah chert flakes they encountered most likely related to the Point Revenge Complex, but they did note the possibility of a Dorset affiliation. If this does relate to a Late Dorset occupation of

**Figure 3: Box hearth or cache on Palungitak Island, near Nain.**



the area it would be one of, if not the, southernmost known feature associated with this culture in Labrador (see Central Island 1 discussion below). There is also the possibility that this is simply an Inuit feature that closely resembles something from an earlier time.

On August 31<sup>st</sup> summer student Nancy Nochasak accompanied Brake on a second trip to Palungitak to survey the area in search of the sod-house identified by Ama Harris. Taylor's fieldnotes contain a sketch map of the island with an indication that sod house remains are present in a

cove on the western end of the island just south of the largest promontory, which juts out towards Sato-soak Island. No black bears prevented us from landing in August and this time we were able to walk over the entire cove that is referred to in Taylor's notes. Surface inspection did not reveal any sign of archaeological features of any kind in the cove, and the only cultural material found in the area, including a small oar for a flat and a Kamutik box (not collected), appeared to have recently arrived as drift wood. There are several other coves on the west end of Palungitak that we have not yet checked, and it is quite possible that the location recorded by Taylor is slightly off. Surveys of the other coves might be fruitful.

We did record one interesting historic period camp near our landing area on and adjacent to a bedrock point just south of the cove we visited. At least eight archaeological features were found there including a tent ring, two caches, a small temporary shelter with broken yellow ware sherds, and a line of cobbles, all on the bedrock point, as well as a second partially buried and intact tent ring on the land immediately east of, and below the bedrock point (HcCj-09). The ceramics in the temporary shelter would have been made sometime between the late 18<sup>th</sup> and early



Figure 4: Walrus skull in situ on Palungitak Island.

20<sup>th</sup> centuries (MACL 2015). The presence of iron in the southwestern portion of the latter feature was demonstrated with a metal detector, but the dwelling was not tested. Our attention was instead diverted to a piece of buried ivory partially poking out of the sandy ground about 10 meters to the southeast. We spent the remainder of our brief time on the island exposing this object, which turned out to be a complete walrus tusk, which is still connected to a nearly complete walrus skull, missing only its mandible (Figure 4). We carefully excavated around the base

of the skull and found no adjoining vertebrae. No cultural material was recovered from our test unit, and no obvious cut marks or other cultural modifications to the skull or tusks were observed at the time. The skull was not moved from its original position and it was carefully reburied before we left. We used the metal detector over and around the test pit and found no sign of metal in the immediate vicinity of the cranium.

The walrus skull raises several interesting questions. First, how did it get there? Is it just the result of a natural walrus death at or near this location? Alternatively, was the animal killed by humans nearby, or brought to Palungitak from somewhere else? If this was a natural death why were no vertebrae found next to it, and why was it missing its mandible? On the other hand, scavengers could have dragged this part of the carcass there, and if the walrus skull was the result of human hunting, why were the tusks left in place?

Taylor, citing Loughrey (1959:15) states that since the late 18<sup>th</sup> century walruses "...have been reported only off the northern Labrador coast, where some herds seem to pass the winter, migrating north again as soon as the ice breaks..." (1974:27). By the

early contact period in northern Labrador most walrus were found in the Torngat region (1974:27). Palungitak seems like an unusual area for a walrus to die of natural causes, as it is so far from the outer coast. Walrus sightings have been exceedingly rare in the Nain region in recent years, though one was killed in the Zoar area within living memory, apparently in summer (Noah Nochasak, personal communication, 2019).

During the early contact period in northern Labrador, most walrus hunting occurred at the ice edge on the outer coast in winter, and they were sometimes hunted by kayak in open water, which could be quite dangerous (Taylor 1974:47). Walrus were also harpooned in rattles during the cold months of the year (1974:47). This is of interest since the skull was found quite close to a rattle that is located between Palungitak and Satosoak Island.

### **First Rattle**

On July 12<sup>th</sup> Davies, Brake and Crotty headed north from Nain to First Rattle on the south end of Port Manvers Run in the NAO's freighter canoe. The purpose of this trip was to follow up on the collection of a particularly fine example of a Naksak Complex point by Belinda Webb of Nain approximately 11 years earlier (see Brake & Davies 2017). She thought that she could remember finding it on an eroding portion of an active modern beach in that area. This was worrisome since the chert point was made at least 6000 years ago and sites of this age are normally well above sea level in the Nain region as a result of isostatic rebound. If sites this old are being affected by coastal erosion in parts of the Nain region it would be an indication that younger sites would have already been destroyed in these areas. Surprising as this might seem, it is not impossible and reports of storm surges impacting precontact sites in this area go back to the 1970s (Fitzhugh et al. 1979). This year we hoped to relocate the site that the point came from, which Webb indicated was on the south side of First Rattle, about 12 kilometers north of Nain.

Our first stop that day was on Topsy Point (HdCj-06), where tent rings on the shore were clearly visible from the water. On landing, we recorded two adjacent tent rings. A quick sweep with the metal detector indicated that metal was present in one of them, and after we dug a test pit we recovered a small curved piece of iron. We also recorded a small grave

on elevated bedrock about 50m south of the tent rings, measuring 1m x 50cm, and Crotty flew the drone over the site to create a 3D model. Before leaving, we checked for any more features on the opposite side of the point, and recorded another four tent rings, as well as a stone platform measuring 2m x 1.7m and a cache tucked into a boulder. Parts of a wooden Kamutik were scattered on the beach, and we noted the presence of metal in two of them before continuing on to our next stop for the afternoon.

Our next landing was in a small cove at the southwest end of the rattle where the Webb family has an old cabin, as we thought this might have been where Belinda discovered the point on the beach. However, the only other signs of human activity in the small cove were around a wooden platform for a new cabin.

We continued by boat to a small island on the west end of First Rattle where we recorded three tent rings as well as three stone markers (HeCk-16 [Figure 5]). Caches and blinds were also recorded on the east side of the island overlooking the rattle. The island has likely been a good spot to wait for seals, or based on the number of gulls, to collect eggs. The features we recorded are all at low elevations and likely relate to Inuit or settler activity.

We then returned to Topsy Point to climb the hill overlooking the tent rings, where we re-visited the Maritime Archaic component of the site. We recorded Ramah chert flakes, as well as heated Ramah chert flakes at approximately 30m above sea level. We collected a biface fragment, and made note of some possible stone features. A stone fox trap was also recorded nearby. It is possible that the beautiful Naksak Complex point had been transported by hand from this location to beach level before it was collected, or that there is another Maritime Archaic site that we may find in the vicinity another day.

### **Hebron**

NAO staff member Michelle Davies traveled to Hebron from July 23<sup>rd</sup>- July 31<sup>st</sup> for the third year of the Hebron Family Archaeology Project (See Davies 2016, 2017). The project aims to record stories and memories about Hebron before they are lost, and is both part of Michelle's duties for the office and her PhD research at Memorial University. The project is funded by Tradition and Transition, the research partnership between the Nunatsiavut Government



Figure 5: Results of surveys on a small Island in First Rattle.

and Memorial University. Following the protocol from previous years, the Hebron Selection Committee voted for a family of four to participate in the project from applications submitted by Hebron relocatees and their descendants. This year, the committee voted for Martin R. Jararuse and his uncle John Jararuse to share their stories and memories, and to record fishing camps, place names, and archaeological sites, which are relevant to people from Hebron. Martin’s wife Josephine and her daughter Susie also accompanied us on this trip, and they helped to conduct and record interviews with John and Martin about life in Hebron.

While much of our time was spent in Hebron itself, we were very fortunate to have two speedboat drivers, Simon Kohlmeister and Martin Nochasak, to share their knowledge of the land and provide transportation to fishing camps in the greater region. We spent July 25<sup>th</sup> in Itegunnek, a narrow bay north of Hebron where John’s family fished and hunted for seals. At the bottom of the bay, we recorded three tent rings, a grave, and a 2m x 2m circle of packed stones, which may have functioned as a drying rack (IbCr-03) near to a fishing pond. Approximately 1.8 kilometers northeast of the site, we recorded another tent ring with a seal skull inside, though we did not have time to test either feature (IbCr-04). On the way back we stopped in to visit Tikigatsukulluk (Tikeratsuk 1, IbCp-02), a well-known fishing camp

frequented by the Jararuse family, which was an excellent location to record family interviews around John and Martin’s memories of the area.

The next day we traveled toward the Suarak family fishing camp on the north shore of Hebron Fjord. Along the way, we stopped to record a site where tent rings were visible from the boat. The site has three components and has been designated Hebron 19 (IaCs-10). Two tent rings, the first measuring 7m x 7m with an internal stone feature, and the second 4m x 4m, were recorded near the shore and likely had an Inuit affiliation. Two tent rings were recorded approximately 10m above sea level, but no discernable features or artifacts were recovered. On a small sandy blowout approximately 15m above sea level, a thin grey Mugford chert sideblade was collected, representing a Groswater presence. On a lower terrace 10 meters west of the blowout, the base of a notched Ramah chert point was also collected, representing a likely Middle Dorset presence.

We continued by boat to the north shore of Ikaguit, a small arm in the fjord and near to the cabin used by the Department of Fisheries and Land Resources. The Suarak fishing camp has been recorded previously as Siugakulluk 1 (IaCt-01), and our visit provided a fantastic opportunity to conduct interviews in the old fishing camp. The site is comprised of six tent rings as well as dozens of metal drums and two chests with old camp supplies. Simon and I



**Figure 6: Artifacts collected from IaCt-02: a) Stemmed projectile point; b) light grey biface fragment; c) broken unifacial tool with possible ochre stains; d & e) Ramah chert microblades.**

walked up the sandy point towards the first terrace, Siugakulluk 2 (IaCt-02), located about 15m above sea level with flake scatters and indeterminate stone features. The site has both Pre-Dorset and Intermediate Indian components, and we recorded a few diagnostic artifacts from within a 1x2m area, including Ramah chert microblades, a grey Mugford chert stemmed projectile point, a light grey chert biface and a black chert unifacial tool fragment with possible ochre stains (Figure 6). The grey Mugford stemmed point is remarkably similar to two points related to the Little Lake Component of the Intermediate Indian period: one recorded near North West River (FjCa-4) and the other from the Village Bay site (HfCi-3), located north of Nain (Fitzhugh 1972: 114; Nagle 1978: 181). The potential mixture of Pre-Dorset

and Intermediate Indian material from such a small collection area draws attention to the period of overlap between these two distinct cultures and raises interesting questions regarding cross-cultural interaction.

On July 28<sup>th</sup> we traveled back into the fjord to record Dick Kaitok's fishing spot, Kaitokulluk (IaCs-11, Figure 7). At our landing spot on the south shore of Hebron fjord, directly across from Ikaguit point, we recorded three tent rings, measuring 6m x 6m each, and the remains of a small wooden flat. Walking east along the shore, we recorded two more deeply buried tent rings, each at about 8m above sea level (IaCs-12 and-13). Approximately 1.4km east of Kai-

tokulluk, we recorded a D-shaped tent ring at 10m above sea level with a dividing feature and a stone annex, though we did not record any surface artifacts (IaCs-14).

The last few days at Hebron were spent sifting through previously collected objects in the Hebron church for analysis and conducting interviews with John and Martin in different locations. In the

**Figure 7: Susie and Josephine record a tent ring at Kaitokulluk (IaCs-11) in Hebron Fjord.**





**Figure 8:** a) full-channeled gouge found by Nain resident Craig Blake on Flowers River; b) ground-stone lance or end-blade from Blow Hole in Nain; c) Ramah chert biface fragment from Cape Roy 2; d) broken Daniel Rattle complex point from Cape Roy 2.

spring of 2019, a series of community consultations will be conducted to help determine the most appropriate and relevant way to display information from the project to the communities.

#### **Blow Hole & Morhardt Cave**

At the end of August, summer student Nancy Nochasak and Brake visited a small pond called Blow Hole on a hill, which overlooks the south side of Nain. The pond is on a regularly used travel route, and Nochasak's father had found a ground stone point on the edge of the pond many years before (Figure 8b). He brought the artifact to the archaeology office at the end of June asking that it be taken care of and providing details on where he remembered finding it in the early 1980s. Several archaeological cultures made use of ground stone technology in Labrador and there is some uncertainty about the age and affiliation of this object. It could, for example, relate to early Inuit, Dorset, or to Maritime Archaic activity. The material it is made of, a fine-grained siltstone, provides a clue, and it looks very similar to stone that was used to make a fully channeled Maritime Archaic Indian gouge that was recently found on the Flowers River by Nain resident Craig Blake. This artifact was also dropped off at the archaeology office in 2018 (Figure 8a).

On August 29<sup>th</sup> we revisited the area at Blow Hole where Nancy's father had found the ground stone point hoping to find additional archaeological evidence. We walked around the pond and noted well-used trails and one recent hearth, but unfortunately surface inspection and testing revealed nothing else in the area where Mr. Nochasak remembers finding the tool.

The next day we took a brief trip to a cave located near the top of another hill on the south side of Nain, which is named Morhardt after a Moravian missionary. Brake had recently been inside it with his daughter, and at that time, they saw 1980s era trash, charcoal, burnt wood and some faunal material. In August, we

planned to test the archaeological potential of the cave, which is about 30-40 feet from front to back and about 10-15 feet from side to side.

One 50cm x 50cm test pit was excavated near the centre of the cave. At the surface we found charcoal, the lids of two Vienna sausage tins, a caribou vertebra, fire cracked rock, and a melted plastic lighter. No cultural material was found more than 2-3 centimeters below the surface and we struck bedrock at a depth of 25 centimeters. A fairly dense accumulation of dry sticks, charcoal, garbage from the last few decades and faunal material of an unknown age was observed in a cavity beneath a large boulder in the middle of the cave a few meters north of our test pit. This appears to be a good place to examine more closely during a future visit.

#### **Kaipokok Bay**

A land use application for a proposed cabin on Pugaviks, a pair of small islands about 11 kilometers northeast of Postville, resulted in a call for an archaeological assessment which was carried out by Brake with Postville conservation officer George Gear on September 7<sup>th</sup>. Archaeologists had not previously surveyed Pugaviks and the cabin location, adjacent to a small tickle between the two islands, has historic resource potential. No indications of an archaeological



**Figure 9: Conservation officer George Gear standing in front of a sod house at Jacko's Point, near Postville.**

record were found at the proposed cabin site as a result of surface inspection and testing, but a buried tent ring and hearth were recorded about 70 meters away (GfBv-01). These features were tested but no material culture was found, and they are not expected to be impacted by cabin construction. The land use application was subsequently approved as a result.

After having a boil-up for dinner on the island, we headed north to Jacko's Point and Cape Roy by speedboat. We revisited Jacko's Point 1 (GgBu-01), an 18th century Inuit winter settlement, to check the condition of the four sod houses that were originally recorded in 1976 (Fitzhugh 1976 [NAO Archaeological Sites Inventory]). Loring re-visited the site in 2001 when it was being considered as a candidate for the Central Coast Archaeological Research Project, and reported, "extreme storms from the northeast appear to have deposited sand over the site, but there is no evidence of erosion" (Loring 2003 [NAO Archaeological Sites Inventory]). In 2018, we found that the houses are still in good condition and they do not seem to have been affected by erosion to date, though substantial spruce trees are now growing out of several parts of the site (Figure 9).

We made one more stop on Cape Roy where we revisited Cape Roy 2, which was originally recorded in July of 1976 by Fitzhugh (NAO Archaeological Sites Inventory). It has a single partially buried tent

feature built with boulders on a raised beach terrace. Fitzhugh recorded the site as belonging to the pre-contact period, but he was unable to assign a cultural affiliation at the time. This year Brake discovered two Ramah chert biface fragments in a blowout near the dwelling, one of which is a broken Daniel Rattle complex projectile point (Figure 8d).

#### **Nain Bay**

Brake and Crotty made a trip to Nain Bay with Simon Kohlmeister on September 25<sup>th</sup> to collect a cast iron stove leg from a historic tent ring at Nain Bay 1 (HdCm-01). The artifact, which was found with no trouble, will be used in the Illusuak Cultural Centre's new permanent exhibit and is currently being treated by conservator Miki Lee. A Dorset component at the site was seen to be in good condition.

The same afternoon we took the opportunity to dig a test pit in the entrance passage of an Inuit sod house at nearby Nain Bay 5 (HdCm-05), which was recorded by Brake in 2015. A single test pit was excavated the year the site was found but it produced only unmodified faunal material, including ringed seal, unidentified small seal, and medium-large mammal bones (Brake and Davies 2016; Elliot 2017). We hoped to recover artifacts this year that would allow us to date the structure; however, once again our testing produced numerous seal bones but no artifacts. The dwelling resembles 18<sup>th</sup> century Inuit communal



**Figure 10: Three dimensional model of Nain Bay 5.**  
Background data collected and processed by Kyle Crotty, map and interpretation by Jamie Brake.

houses, but additional work is still required before any conclusions can be drawn. We were able to take air photos to model the site in three dimensions using a drone during this visit (Figure 10). We also went over the house with a metal detector just before leaving which showed the presence of iron in various parts of the dwelling and confirms that the structure was in use during the historic period.

**Kikkertavak Island (ItiKaut and Igiak Rattles)**

On September 29<sup>th</sup> Noah Nochasak and Jamie Brake travelled southeast by freighter canoe from Nain to ItiKaut Bay on the east end of Kikkertavak Island with two goals. Noah, who leads Nunatsiavut’s Kayak Revival Program (see relevant section below), wanted to observe ItiKaut rattle and to measure the current speed at this location during the full moon phase when the tides would be most extreme. Rattles are ideal places for advanced kayak training that we hope to offer in the future, and Nain residents had reported ItiKaut as one of the strongest in the region. Brake was interested in doing archaeological surveys nearby since rattles are often associated with human activity, and since the area had not been surveyed before.

The ItiKaut rattle is located in a constricted part of the bay bearing the same name about three kilometers from its mouth on the eastern end of Kikkertavak Island. Two modern cabins are currently located in a little cove on the south side of this con-

striction. Much of the rest of the south side of the bay in this area is high, rocky and steep, but a low, relatively flat peninsula makes up the north side. One archaeological site was recorded on the peninsula adjacent to the rattle, and another on a raised beach saddle a few hundred meters to the east. Two historic period tent rings, one partially eroded, and a possible kayak rest were found at the former (HcCi-15). A recent rectangular tent feature and an older partially buried oval structure were recorded in a blowout at the eastern site (HcCi-16). No artifacts were observed at either location and deteriorating weather prevented test pitting.

We left ItiKaut earlier in the afternoon than intended because of increasing winds and precipitation. We opted to go around the south side of Kikkertavak Island for protection from stiff northwesterly gusts, but two thirds of our way along heavy seas forced us to turn around and take shelter in a cabin in the protected inner end of Igiak Bay on the south side of Kikkertavak. We spent a very comfortable night there and dined on bottled moose by a roaring fire.

High winds continued for much of the following day, and although they confined us to our harbour, they gave us time to make observations and surveys at another significant polynya, known as Igiak Rattle. We spent much of September 30<sup>th</sup> on and near

a prominent point that makes up the north side of the rattle, and archaeological sites spanning at least the last 200 years or so were recorded there (Figure 11).

On the southwestern end of the point, we found two pairs of tent rings about 40 meters apart (HbCj-05). The southernmost set are both oval and one has an external semi-circular wall that might have once served as an outdoor cooking area. These features resemble tent rings associated with Inuit activity known from 19<sup>th</sup> century contexts. The other nearby set are the remains of camping in rectangular canvas trapper style tents with 2x4 inch pieces of lumber and rope still present and in good condition.

Outcropping rock forms a low hill which divides the point roughly in half, and a number of archaeological features were encountered on the north side of the hill and were spread over much of the crest and east side of this portion of the peninsula (HbCj-06). Most striking are the substantial remains of a log based cabin probably originally built in the late 19<sup>th</sup> or early 20<sup>th</sup> century based on the style of cast iron stove and wrought iron nails observed there. Wire nails are also present in some clapboard pieces and an early 20<sup>th</sup> century Primus type camp stove is sitting on top of the vegetation that has grown over the floor. Glass and some ceramics are visible on the surface and the iron stove has collapsed but is still largely in its original position near the south wall of the square structure, which is about five meters wide.

The remains of a second log structure are located about 25 meters southwest of the one just described, but these appear older and are in a more advanced state of decay. This structure is much less obvious and was probably built earlier in the 19<sup>th</sup> century. It could represent a building that was started but never finished.

A series of tent rings, open caches and hearths line the east side of the northern part of the point near the old house remains. Some of the hearths are made with old fuel barrels, others made with pieces of the collapsed cast iron stove mentioned above, and all likely date to the mid-late 20<sup>th</sup> century. The age of the caches is unclear.

Just above the shore to the east of the best preserved log structure we discovered a dilapidated trap skiff with a partially intact Acadia engine with flywheel and driveshaft still attached. Hand tools that were being used to service the engine are still sitting on the broken down deck where it looks like they were placed by the mechanic's own hand. The brass carburetor is still in the boat and is in excellent condition. A disintegrated wooden box, once attached to the port gunwale, released intact .303 rifle cartridges and shot gun shells when it rotted apart years before. The .303 shells all bore the same 'DI Z 1944' headstamp providing information on the manufacturer (Indian Government Ammunition Factory), the location of manufacture (Calcutta India) and a convenient *terminus post quem* (Cushman 2008). Anchor chains

Figure 11: Results of the 2018 Igiak Rattle Survey.



remain bolted to the bow of the 30-foot vessel, and smaller chains, presumably for a small team of dogs, were noted near just aft of the engine.

Another collapsed cabin was found about 600 meters southeast of the point along the shore, which was more recent (14C/12 Ethno 4). This one would have been in use in the second half of the 20<sup>th</sup> century, and certainly at least as recently as the early 1970s based on the presence of Skidoo Elan parts (chain case cover, air box and piston) a model that was being manufactured from 1971 to 1996 (<http://www.reproductionvintageparts.com/elan/1971E.html>). Broken glass, metal leg hold trap parts, a long, narrow Kamutik, pieces of asphalt shingles and other debris are present at the site as well.

This part of Igiak Bay is an interesting cultural landscape and additional surveys and excavations in the area are certainly warranted. A small point on the south side of the rattle looks promising for historic period sites, but boulder barricades and strong currents make it a dangerous place to approach in a motorboat, even one with a very shallow draft like our freighter canoe. However, it would be an easy place to access with a kayak, and we hope to begin incorporating the use of kayaks into our field activities in 2019 as has previously been done with success in other parts of the province by archaeologists like Erwin and Holly (2006), Rankin (2004), and Crompton (2011).

### **Central Island**

On the 17<sup>th</sup> of October Brake and Crotty headed east from Nain for Koliktalik Island in conservation officer Simon Kohlmeister's speed boat. Our plan was to visit Koliktalik 6 (HdCk-23), an important 18<sup>th</sup> century Inuit winter settlement known as Ikkegasarsuk that also has a deeper frozen Dorset component with excellent preservation. The trip was initially triggered by a land use application for the construction of a new cabin in the area, but we are also concerned about permafrost condition and we hoped to collect related baseline data for monitoring purposes. Unfortunately, high seas among the outer islands forced us to turn back before reaching our primary destination. We were, however, able to make stops on Central Island, Dumbell Island and on the southeast end of South Aulatsivik Island where ocean conditions were much better.

We revisited Central Island 1 (HdCh-32), which was recorded in 1980 by Fitzhugh and Kaplan and has both Late Dorset and Inuit components (Fitzhugh 1981). The site is small but significant as it has "...the southernmost Late Dorset structures known in Labrador" (Kaplan 1983:485), because it is at a low elevation and cannot be very old, and because a radiocarbon sample from one of those structures produced a surprisingly recent date of 685±60 BP (SI-4828) (Fitzhugh 1994). For these reasons, Central Island 1 is a site that requires consideration when discussing or debating the Dorset-Thule transition (Park 1993; Fitzhugh 1994). Unfortunately, only one radiocarbon date, which was run on charred fat, is available for the site (Fitzhugh 1994:242), and only a very brief description of the site has been published (Renouf 2003). Our goals were to create a more detailed record using a drone, digital cameras and GPS units, and to test the one unexcavated Dorset dwelling at the site and carefully collect datable material if possible.

Prior to 2018, a Smithsonian crew under a permit held by Fitzhugh in 1989 revisited Central Island 1 just once (NAO Archaeological Sites Database). They had hoped to excavate the second Dorset dwelling at that time but arrived when it was nearly dark and only had time to dig one test pit, which did not reveal any material culture (Fitzhugh 1989). Our own efforts were hampered by snow squalls that began as soon as we landed. Accumulating snow prevented the possibility of responsibly pursuing our second goal of testing a dwelling, and low temperature errors from the drone kept us from being able to model the site in 3D. We were able to relocate most features and to take ground and air photos and GPS points (Figure 12).

Next, we landed on Dumbell Island to follow up on a tip from Nain resident Elizabeth Pijogge who had reported finding what she thought might be old house foundations there not long before. She had brought photos to the office one day and had asked if we could have a look at the area. We walked over most of the western side of the island and recorded four sites with tent rings (HdCh-40-43). We were successful in finding the features that Elizabeth had taken photos of, but they turned out to be natural.

On our way back to Nain, we made one last stop on a point on the southeastern end of South Au-

latsivik Island. Here we recorded one site with five fairly large oval tent rings, each about 5-6 meters across (HdCi-38). Four were found next to each other on an exposed gravel terrace overlooking Harmony Run, and the other was partially buried and obscured by grass immediately above our landing site. Quite a lot of material culture dating to the 20<sup>th</sup> century was found scattered in and near the four clustered tent rings. Broken glass and ceramics, metal barrel straps, wire nails, a cast iron stove door and some bone were present on the surface.

ald Penney Associates state that the death toll in Hebron and Okak was proportionally among the highest in the world (2018:4). Anne Budgell reached the same conclusion when conducting research for a book that she recently published on the subject (2018). One grim and commonly reported statistic is that all adult males from Okak died of Spanish Influenza at the time (Penney 2018:68). The situation was so bad that survivors opted to abandon the community and the last of them were leaving by the fall of 1919 (Penney 2018).

**Figure 12: Aerial view of Brake examining a Late Dorset axial feature on Central Island. Photo by Kyle Crotty.**



### **Okak**

Historically, prior to 1918/19 Okak Bay always supported the largest human population in northern Labrador (Taylor 1974; Penney 2018). In 1776, Moravian missionaries established a station just south of Kheovik, which was the biggest of the Inuit fall/winter settlements in the region. Over the years some Inuit began living next to the mission station and by 1829 nearly 400 people spent a significant portion of each year living in the Okak village. In the early 20<sup>th</sup> century the community even had a hospital and a resident doctor (Hutton 1904), things which no Inuit community in Labrador has today.

Tragically, in 1918 the community was struck very hard by the global Spanish influenza pandemic that killed more than 50 million people around the world. In a report commissioned by the NAO, Ger-

In 2018, a committee made up of people with connections to Okak was formed to guide the Nunatsiavut Government's efforts to commemorate those who died because of the horrific events that began to unfold in the former settlement exactly one hundred years earlier. The committee is made up of representatives of each of the Inuit Communities, Upper Lake Melville and the Canadian Constituency. One of the plans was to briefly visit the site to do non-invasive archaeology involving site mapping and recording for management purposes, which would also provide opportunities for local people with connections to Okak to travel there.

The site was visited by helicopter on November 2<sup>nd</sup> with a small group including Alex Saunders, a member of the Okak committee whose mother was born in Okak and survived the 1918 influenza out-



Figure 13: Okak ground plan from 1861 ([www.collections.mun.ca](http://www.collections.mun.ca))

break. And Sarah Abel, who was raised by her grandmother, Martha Joshua, who also survived the outbreak, in her case as a small child alone in a cabin for weeks under unimaginable conditions (Budgell 2018:203-204). Nain resident James Okkuatsiak was with the group as a polar bear monitor, and Brake and Crotty were there representing the NAO.

Archaeological work that day included photography, GPS use, drone mapping and our first field use of a remotely operated underwater vehicle, recently built with high school students through the Marine Advanced Technology Education (MATE) program with Crotty’s guidance (Brake & Davies 2018). We were able to identify many terrestrial features at the site with ease, despite the fact that there was a light covering of snow on the ground (Figure 13 and Figure 14), and although new ice prevented us from going beyond the intertidal zone we did confirm that our new underwater robot and attached cameras work well.

While we were in Okak the group also took part in a memorial ceremony to mark the anniversary of the devastating events that took place there one hundred years before. Alex Saunders also had a com-

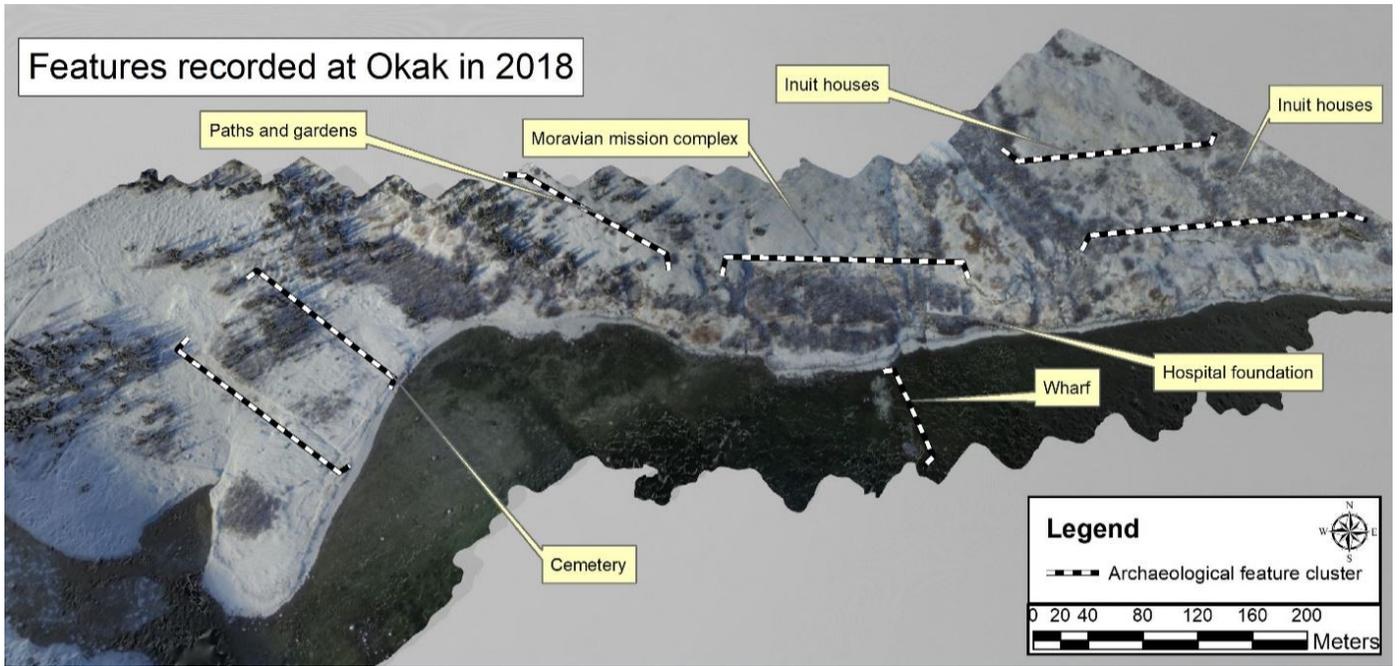
memorative plaque made that was installed that day with the support of the Okak Committee (Figure 15). Sarah Abel, who works with the local television and radio station, called the OKailikatiget Society, recorded an audio interview with Saunders and Brake that was broadcast later, and that is available on the stations website as a podcast. A brief summary of the trip to Okak was also subsequently published in Them Days Magazine (Brake 2018a).

#### Other Programs and Initiatives

The NAO ran a number of other programs in 2018 that relate to the region’s archaeological heritage. Several of these are discussed below, including the Kayak Revival Program, the Marine Advanced Technology Education (MATE) program, and the continuing use of Labrador’s First Snowmobile. Each project discussed below is directly linked to archaeological fieldwork in some way.

#### Kayak Revival Program

The Labrador Kayak Revival Program involves making use of archaeological, ethnographic and archival information to construct skin-on-frame kayaks in this region for the first time in half a century. It is providing opportunities for local people to learn to use



**Figure 14: Three dimensional model of Okak as it looked on November 2<sup>nd</sup>, 2018.**  
 Background data collected and processed by Kyle Crotty, map and interpretation by Jamie Brake.

them, and our program goal is to revive kayak use in Labrador and to make kayaking a routine part of life in Nunatsiavut, as it once was (Figure 16). Program funds are currently being used to build kayaks with interested local people who are learning how to make the boats themselves, and it is allowing a qualified Labrador Inuit instructor (Noah Nochasak) to begin introducing local community members to kayaking under carefully controlled circumstances here in Nunatsiavut. The program has already eliminated the need to bring southern kayak instructors to the region to teach Inuit to kayak. It is reviving a significant cultural practice and is increasing the level of access that local people have to the ocean and to the land. Similar initiatives in Greenland in the 1980s have been very successful for cultural and economic reasons, as well as for the promotion of healthy lifestyles.

In 2018, we ran the program year round with kayak construction taking place during the cold months of the year and kayak use and training-taking place during the open water months. So far this year 15 people have received Paddle Canada Level 1 Skills training, eight have received or have nearly completed Paddle Canada Level 2 skills, and four additional local kayak instructors have been trained to teach Paddle Canada Basic skills and Level 1 Skills courses and clinics. One wonderful result of the program so far is the fact that a number of participants have already

been using newly built kayaks and newly honed skills to practice traditional subsistence activities. People who have been involved with the program have already been successful with egg collection, fishing and sea bird hunting. Kayak seal hunting has recently started here again as well and we expect that this will be successful in the near future.

A series of publications, presentations and interviews by Nochasak and Brake have been making Labrador’s kayak history much more accessible to the

**Figure 15: Group shot at Okak with plaque in background.**  
 Clockwise from the top: James Okkuatsiak, Alex Saunders, Sarah Abel and Jamie Brake.



public. For example, written articles have been published in Nunatsiavut Tugâpvik (Brake & Nochasak 2018), the Downhome's Inside Labrador (Nochasak & Brake 2018), Them Days (Nochasak 2018), and the Encyclopedia of Labrador (Brake 2018b). We have plans to continue to publish extensively and to present information on Labrador kayak history and contemporary kayaking at every opportunity. We hope to begin using kayaks built through the program as archaeological survey vehicles in 2019.

of testing it in Nain prior to trip. The students had three trials to demonstrate their ROV's capabilities, which they improved on every run. At the end of the competition, our students were rewarded with 'Furthest Traveled' and 'Most Spirited' awards. The NAO tested this ROV in a field setting for the first time in 2018 (see above) and we plan to use it to help document Nunatsiavut's underwater archaeological heritage moving forward.

Figure 16: Kayak construction with some participants preparing to paddle.



**Marine Advanced Technology Education (MATE) Program**

On May 1<sup>st</sup> 2018, four students from Jens Haven Memorial School completed building an ROV (remote operated vehicle) that they had started during the school year prior under the supervision of Kyle Crotty and teacher sponsor Gerard White (Figure 17). This ROV was expected to perform at the MATE Regional Scout competition at the Marine Institute in St. John's amongst other ROVs built by schools in Newfoundland and one other school from Labrador. Upon our arrival, the students were given an in depth tour of the Marine Institute and the many programs they offer, and we also were given unlimited time in the acoustics tank to test our ROV as we had no way

**Labrador's First Snowmobile**

The first snowmobile ever used in Labrador was brought to the region with the second Rawson-Macmillan Subarctic Expedition, a scientific endeavor undertaken from 1927-1928. Research headquarters were established about 30 kilometers southwest of Nain in Anaktalak Bay. That station, which was well-known to local people ever since the 1920s, was registered as an archaeological site (HcCm-03) in 1995 during an assessment that was conducted by Jacques Whitford Environment Limited, and the snowmobile was noted as being particularly significant and vulnerable at the time (Thomson 1996:5).

The remains of the machine, a 1927 Model T Ford truck with a patented Snowmobile conversion



Figure 17: High school students from Nain competing in the MATE challenge in St. John’s using an underwater robot that they built with the NAO. The robot will be used to document underwater archaeological resources in Nunatsiavut.

kit, were recovered from HcCm-03 between 2013 and 2014. The Ford was subsequently restored for the Nunatsiavut Government by machinist Frank Noseworthy of Port au Choix between the very end of 2014 and the middle of 2017, returning to Nain in working order in late 2017 (Brake & Davies 2018).

In last year’s Review article our update on this project went as far as our first test drive on January 2<sup>nd</sup>, 2018. Since that time, our Model T driving skills have improved markedly, particularly after a conversation with former Model T Ford Club of America president David Hiltz, who provided extremely valuable information on gear changing. Switching gears is completely different in a Model T than in a modern vehicle with a manual transmission, and it is different again in a Model T with a Snowmobile kit and Ruckstell underdrive.

As planned, the machine was displayed through use during a number of public events throughout the year (Figure 18). For example, it was used during the Heritage Cup Dog Team Race, during a snowmobile endurance race known as Cain’s Quest, and most recently during the 2018 Christmas parade. Local school classes, community members, and visitors, including hundreds of cruise ship tourists came to see the Ford in 2018, and it continues to draw crowds and enormous interest whenever it is driven in town or out onto the sea ice.

There is continuing international interest, and Brake was invited to deliver a public lecture on the project at Bowdoin College in Brunswick, Maine in November. The invitation was accepted and the trip presented a number of valuable opportunities including time to view Labrador collections at the Peary

Figure 18: A high school class (left) and young Heritage Cup Dog Team Race spectators getting familiar with Labrador’s First Snowmobile in 2018.



MacMillan Arctic Museum on the college’s campus, to view documentary records relating to the Rawson-MacMillan expeditions that are housed in the college archives, and to explore ideas for collaboration on several projects in the future.

In addition to the interest in archaeology and history that the Model T is stimulating, it is also creating links between Nunatsiavut and distant places as well as opportunities for partnerships with institutions outside of the region.

**Community Collections**

In November, Robina Pijogge visited the archaeology office with a collection of artifacts that she had found over a number of decades in the communities of Hopedale and Nain. Several archaeological cultures are represented in the collection, and the artifacts she brought included historic Inuit material culture from Hopedale, an undetermined precontact period biface from Hopedale, and a stemmed Maritime Archaic point from Nain made of Ramah chert (Figure 19). One of the Inuit objects, which she discovered while making mud-pies as a child in Hopedale, is a remarkable miniature ivory carving of a person wearing winter clothing (Figure 19a). Robina was able to tell us where, or roughly where each item was found, and we hope to visit these locations in 2019.

**Conclusions**

Information relating to most of the cultures known in Labrador archaeology was documented by the NAO

during the 2018 field season. A significant portion of the work this year involved surveys near rattles in the Nain region, which produced interesting results that are stimulating ideas for future research. Concerns about climate change impacts to archaeological resources have been influencing our efforts in the field for the past few years, and these concerns are likely to intensify as we move forward. Developing regional scale understandings of expected impacts from various aspects of climate change, including coastal erosion, permafrost melt, changing vegetation, precipitation and soil chemistry are essential first steps towards addressing these issues (Westley et al. 2011; Hollesen et al. 2018). The office is commissioning a relevant study early in the new year to help build an understanding of future impacts in northern Labrador and to help guide our plans for fieldwork in 2019 and beyond.

As in previous years, much of our activity in 2018 was based on community input. While some fieldwork, including activity in the Nain region and near Postville, was conducted based on land use referrals, much of it was driven by expressed community interest. The annual Heritage Forum continues to provide an excellent opportunity for public engagement that both NAO staff and community members look forward to each year. Interest in having local community collections documented has increased, demonstrating the value of public outreach efforts.

**Figure 19: Artifacts collected by Robina Pijogge in Hopedale and Nain: a) ivory human figurine from Hopedale (2.7 cm tall); b) drilled iron endblade from Hopedale; c) chert biface from Hopedale; d) stemmed point from Nain.**



We are especially delighted with the results of ongoing heritage programming, including the high level of community interest in the Kayak Revival Program and the opportunities to connect with schools through the MATE program. Both have been used to further fieldwork, including merging Kayak trips with archaeological surveys, and the first use of the newly built ROV in Okak harbour. In 2019, we look forward to commemoration events in Okak, the opening of the Illusuak Cultural Centre in Nain, and another eventful year in both the communities and in the field.

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# The Rigolet Archaeological Survey Project, 2018

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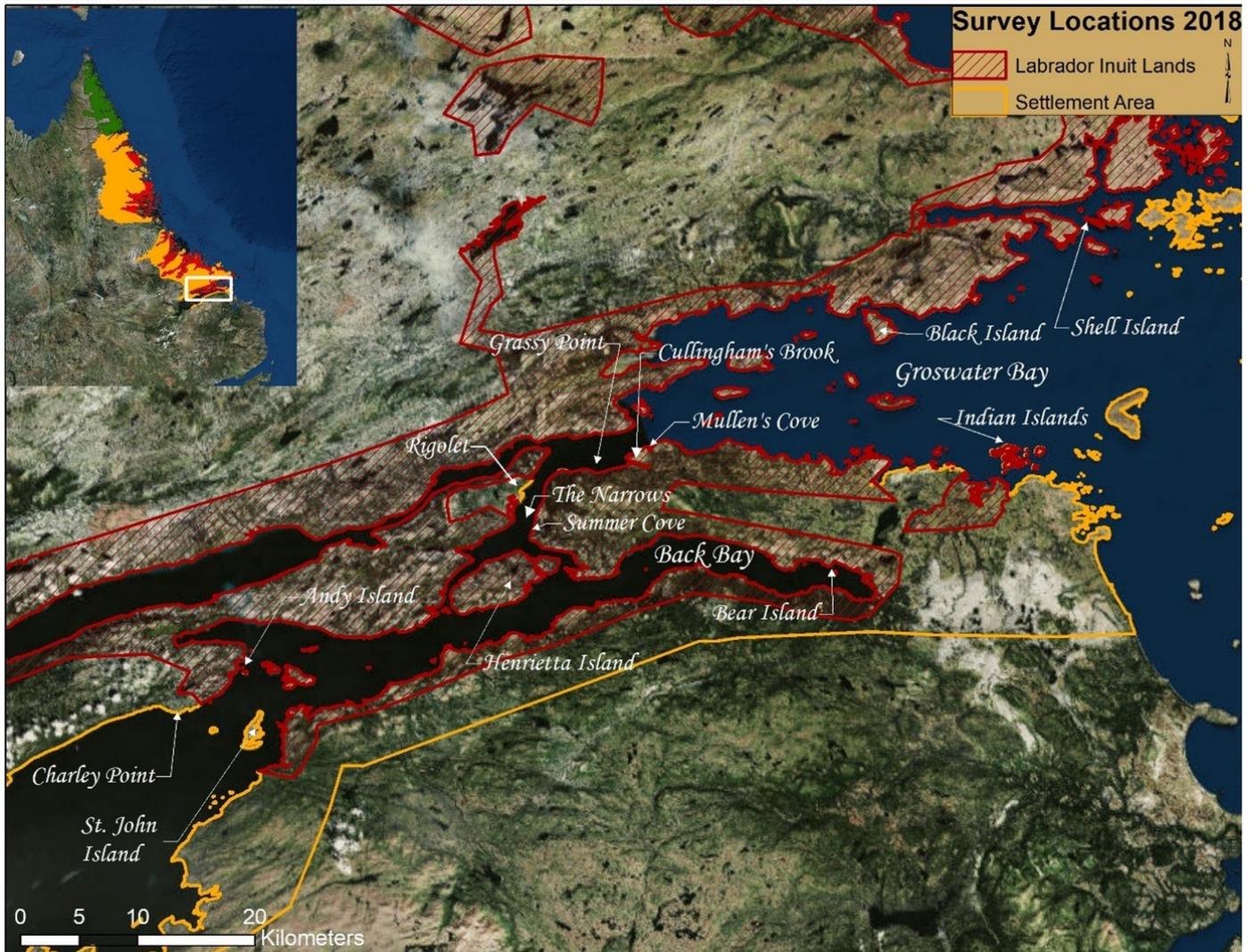


Figure 1: Site and survey location map.

## Introduction

Archaeological surveys in the Rigolet region being conducted through a partnership between the Rigolet Inuit Community Government, the Nunatsiavut Archaeology Office, and the Smithsonian Institution continued for a fifth season in 2018. Field activities took place in Groswater Bay, the Narrows, Back Bay, and Lake Melville, and generated records relating to the last 6000 years of human history in Hamilton Inlet (Figure 1). The most signifi-

cant work this year included revisiting an early Maritime Archaic site on West Indian Island in Groswater Bay, revisiting historic Inuit settlements north of Cullingham's Brook and on St. John Island. We also discovered previously unknown sites at Mullen's Cove and Grassy Point in Groswater Bay, on Bear Island and the mainland in Back Bay, and near Charley Point on the north side of Lake Melville. Revisited sites were subjected to more extensive testing this year,



Figure 2: Mullen’s Point settlement site and midden.

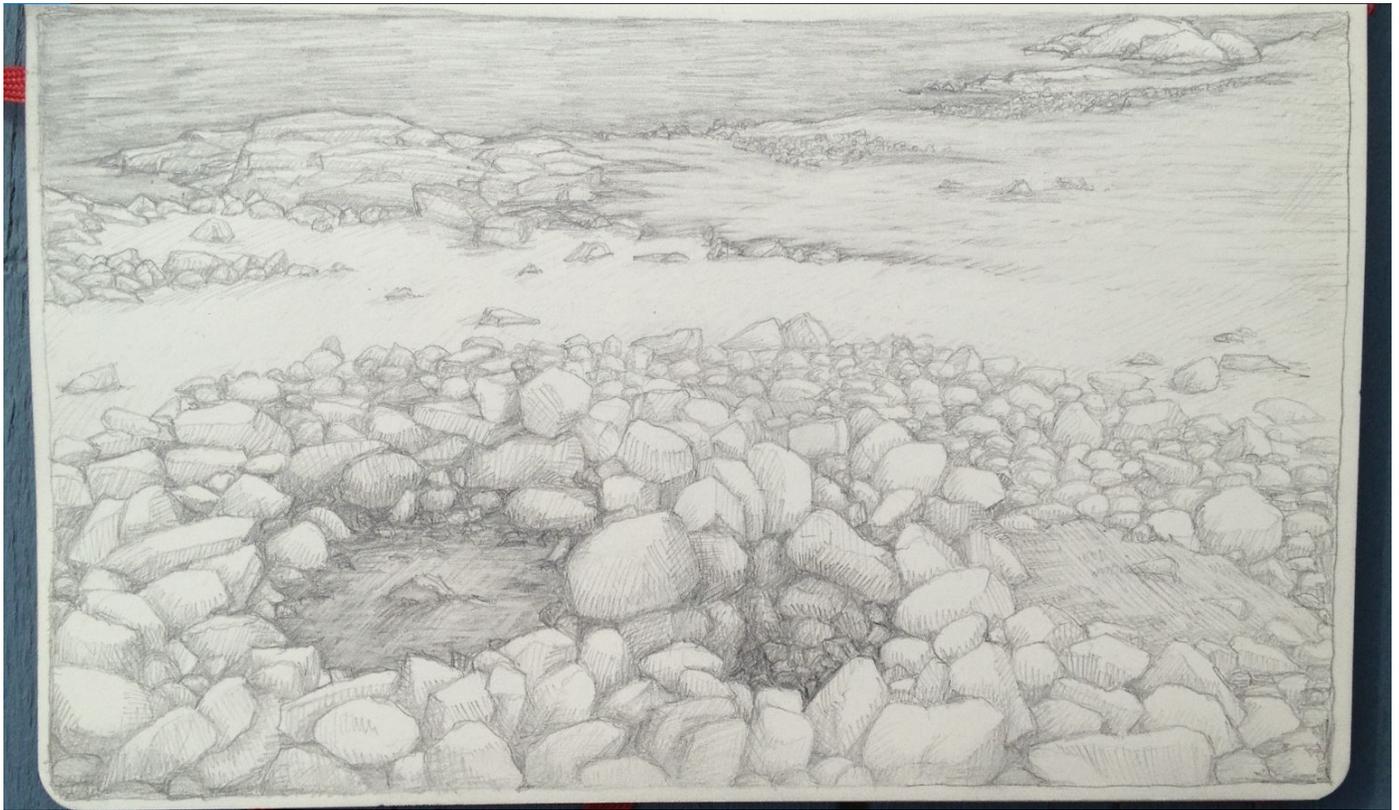
which will allow us to better understand, manage, and make use of the historic resources at those locations.

**Results**

Our 2018 research began with continued surveys along the southern shore of Groswater Bay (Figure 2-Mullens Cove). At Collingham’s Cove (GbBn-17), Mullen’s Cove (GbBn-27), and Grassy (John’s) Point (GbBn-26), we found or revisited sites with deep midden deposits similar to the 18-20<sup>th</sup> century site at Broomfield Point (GbBn-15) that contained ceramics, iron tools and traps, square nails, glass beads, and clay pipe fragments, cartridge shell cases, brick, and other materials. Most of the bones recovered were seal, and the thick, well-preserved middens indicated cold weather occupations. Whether these sites are Inuit, settler, or mixed is uncertain, although the presence of glass beads suggested that Inuit women were pre-

sent. At Rigolet, we heard that Broomfield Point is being considered for tourism development.

In addition to the southern shore survey, we returned to West Indian Island to continue investigation of the Maritime Archaic site (GbBj-11) found in 2015 that had produced a radiocarbon date of cal. 6600 B.P. (Figure 3). Nearby on this same beach level is a series of boulder-lined enclosures (Feature 11) sharing common walls (Figures 4, 5). Test pits in two of the enclosures this year produced no artifacts, flakes, bones, or charcoal. The function of the enclosures remains mysterious, although they are almost certainly a product of the Maritime Archaic occupation. At the top of the beach pass south of Feature 11 a circular tent-ring (Feature 10) with a central hearth produced two Ramah chert flakes and charcoal and is probably a post-Maritime Archaic camp. We also excavated Feature 9, a probable Maritime Archaic boulder-



**Figure 3: Boulder pithouse and cache excavated in 2015, dated 6600 BP. (drawing: K. Meier)**

der pit on the northwestern shore below Feature 11 that had a floor of broken rocks but no cultural material.

Having arrived in Groswater Bay a day early, and with calm weather with no sea swell, we visited the exposed cove on the east side of George Island and scouted the terraces above its sandy beach. The only archaeological features noticed were boulder caches, caribou bones scattered about on the tundra, and caribou trails beaten into the tundra. Rigolet people told us that a few years ago a group of caribou became isolated on the island, reaching it when cold weather created an ice bridge; but after that, with milder winters, they could not regain the mainland and were killed by hunters or died.

We continued north across the mouth of Groswater Bay to Rattlers Bight and visited a small island skerry south of Winters Cove where we excavated Shell Island-1 in 1969 (GcBi-11). This site produced a prodigious amount of Ramah chert biface thinning flakes. This summer, after some difficulty, we relocated the site in order to determine its GPS position. Since our work in 1969, large numbers of Ramah chert bifaces have been found in caches in southern Labrador and the Quebec Lower North

Shore. In the light of these finds, our original interpretation (Fitzhugh 1972) still seems valid: Shell Island is probably a late prehistoric Daniel Rattle or Point Revenge site where Ramah chert quarry blanks were flaked into intermediate stage preforms destined for the large southern Ramah chert market known for this period.

The southwestern corner of Big Black Island is known in local Inuit oral history as an important place for spring and summer camps, and it may have been the place where the early settler William Phippard found a gold medal on an island amongst "...so many dead Esquimaux" (Townsend 1911:261). George Cartwright saw the medal and recognized it as having once belonged to his brother who had given it to one of a small group of Inuit that Cartwright had brought with him to England. Tragically, all but one of that group died of smallpox before returning to Labrador. The only Inuit survivor was a young woman named Caubvik, who was sick with the disease during the return voyage. Though she survived the trip, Cartwright was convinced after seeing the medal that the sickness had been passed on after he had returned Caubvik to her people (Townsend 1911:260-261).

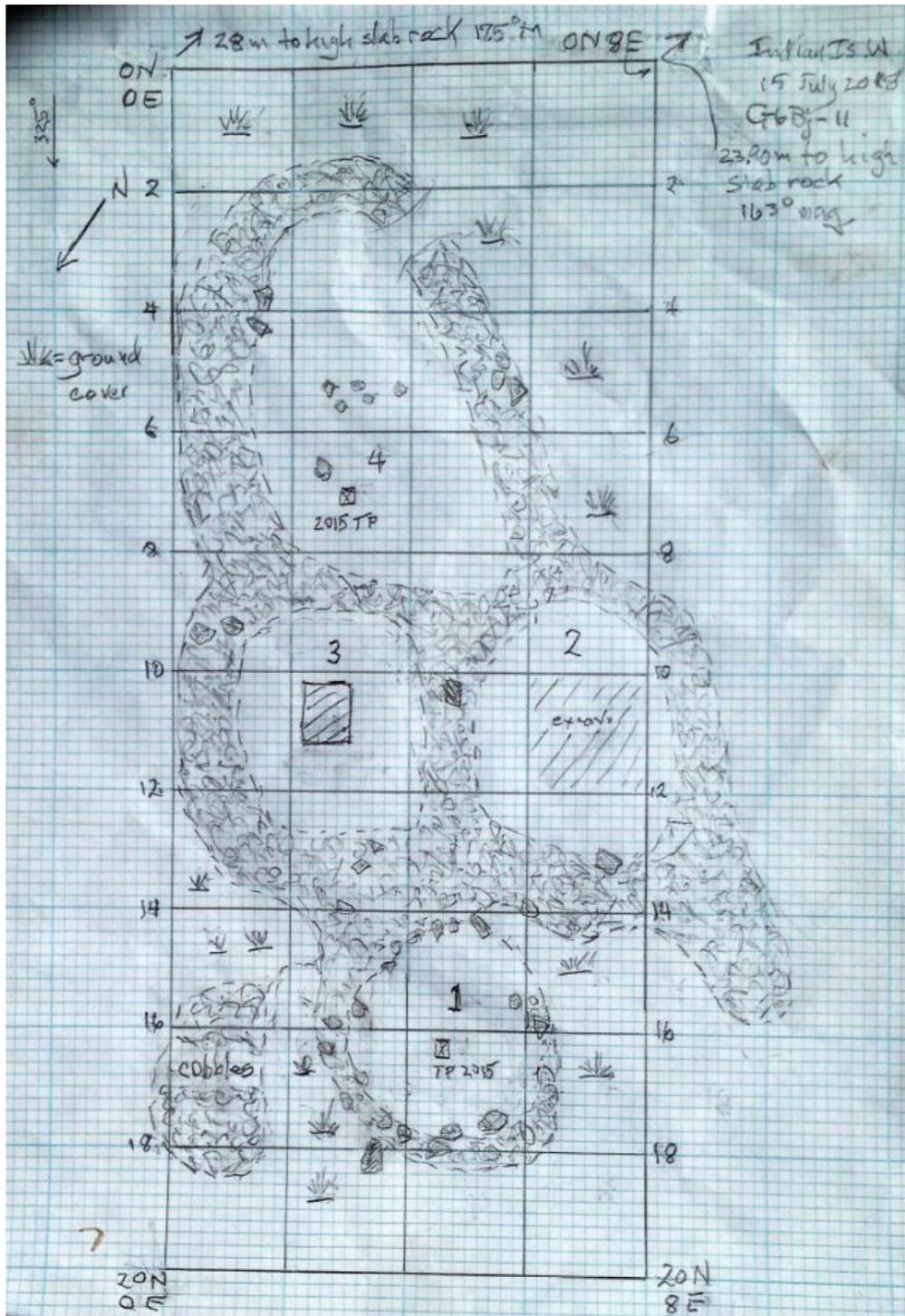


Figure 4: Field map of West Indian Island MA enclosure site.

Visiting this location, we found food caches and some habitation evidence in the boulder beaches (GcBk-18), but little evidence of a large camp. However, inspection of the island’s southeastern corner revealed numerous tent rings and caches (GcBk-19). Most surprising was a huge stonewalled structure

built of tailings around the shaft of an early 20<sup>th</sup> century copper mine (GcBk-20 [Figure 6]).

The quartz-rich tailings had been used to build a platform for supporting a lift to raise rock from the shaft. A prospector’s trench extends south from the mine across the adjacent raised beach. Rigolet people say the mine never produced copper and closed after the manager’s son died in an accident.

Brake arrived on July 18<sup>th</sup> and the field crew left Rigolet later that day aboard the *Pitsiulak*, bound for the far end of Back Bay. Back Bay, also known locally as the Backway, is one of the only remaining substantial portions of Hamilton Inlet that has yet to be surveyed by archaeologists. Richard Jordan spent some time here while working in the Rigolet area in the 1970s, discovering sites at Tea Pound near the southeastern exit of the Narrows. However, the only record for Back Bay itself is a published map showing the locations of plank houses in Hamilton Inlet from the late 19<sup>th</sup> – mid-20<sup>th</sup> centuries (Jordan 1977:45). His map shows the locations of four houses in Back Bay, but it is not clear if he acquired this information through archaeological surveys or interviews with local people.

We started our work on the south side of Back Bay at Seal Point, where Brake and Davies had previously recorded several warm season dwelling features and a quartzite cobble with a single flake removed from one side (Jolicoeur et al. 2016). No new

sites were noted in this area in 2018. A recent tent site was recorded on the shore about 7 kilometers further east where wooden stove supports, modern rope, cut wood and recent trash were recorded (13J/01 E Ethno 3). Next, we stopped at South Long Point, a prominent point nearly halfway along the south side of the bay, which is backed by a substantial, circular pond. Two partially buried tent rings were noted in the grass-covered sand at this location. Both features were tested, but no material cultural was found, so we have little information to allow for suggestions about which culture(s) are represented at the site. The

low elevation strongly suggests a historic period occupation, and the lack of artifacts and ephemeral nature of the features suggest very brief use (GaBm-01).

Continuing east, we reached the end of the bay, landing near a modern cabin on the mainland on the south side of the bay where we noted clear signs of earlier occupations. However, we did not do any testing in this area as the archaeological features were too close to the cabin to disturb without first getting permission from the owner. This site corresponds with one of the ‘abandoned plank house sites’ shown on Jordan’s map (1977:45), and appears to have good potential for future work. A survey of Main Brook to the first rapids produced no sites due to the heavy forest growth. Future work involving labour-intensive testing in the forest on the point on the west side of the brook mouth might result in the identification of sites.

Next, we landed on the west side of Bear Island. Here we recorded two tent rings on the southwest part of the island (Figure 7) (GaBl-01), and a third in a cove about 100 meters further north. A 1980s vintage pop can lid was observed in the latter (13I/04 W Ethno 1). A couple of disintegrated metal barrels were found at our landing site. One of these



**Figure 5: Excavation in Enclosure 3 at the Maritime Archaic site on West Indian Island GbBj-11) near a cal. 6600 BP oval pit-house.**

once contained a complete or nearly complete seal, the bones of which now lie on rusty metal fragments between the rusted lid and base of a broken down barrel.

Shortly after sitting down for our evening meal back aboard the Pitsiulak we felt a slight bump. Captain Colbourne immediately rushed topsides to investigate, and a few seconds later called all hands on deck. What we thought was a change in the wind was actually the sensation of the Pitsiulak’s keel going aground in the uncharted rocky bottom of Back Bay. A depth sounder has indicated plenty of water beneath the boat when she was anchored; however a wind shift had carried us shoreward on the anchor into less than a fathom of water, and as the tide was falling we found ourselves starting to list to starboard as the weight of the boat settled on the bottom. For a couple of long minutes things were very tense, since the tide would still be falling for hours and the Pitsiulak would tip over if we were unable to get her off the bottom and back into deeper water right away. However, the captain’s experience and skill prevailed and with a few quick orders he had us “sallying ship,” rocking the boat from side-to-side while at the same time hauling in on the anchor winch and gunning the

motor, he had us floating freely again. No damage was done, but the event prematurely ended our Back Bay survey by forcing our return to Rigolet.

The next day we conducted surveys on Henrietta Island. Archaeologists had visited the west end and a cove on the southeastern end of the island in the past (Brake and Davies 2015). This year we surveyed part of the northern shore, recording one short term historic camp site in a clearing (GaBo-09), and numerous recent features on a flat gravel and shingle beach a few hundred meters east of a cabin that is currently in use (13J/01 W Ethno 4).

Dates and initials had been spelled out with stones from the beach at the latter site, which are clearly visible in drone photos taken during the site visit. The remains of one ephemeral dwelling were also recorded on the west side of the site that may predate the other features. The dwelling structure was entirely exposed on the surface and no material culture was found associated with it, and so its age and affiliation remain unclear. Following Brake's departure, the Smithsonian team completed the survey of the east shore of the Narrows opposite Rigolet, finding a large 19-20<sup>th</sup> century Inuit tent ring camp on the promontory at Summer Cove (GaBo-10).

On July 20<sup>th</sup> we headed east into Groswater Bay landing just south of the mouth of Cullingham's Brook and working our way from there back towards Rigolet. We recorded one very recent tent site near the brook with four wooden stove support posts still intact along with a beer can (13J/01 E Ethno 4). We excavated three test pits around a possible partially buried tent ring 65 meters further south but found nothing. Walking another 150 meters southwest along the shore, we came to a small burial east of a modern cabin marked by a small ring of stones (1m x .75 m) and an upright driftwood cross. The burial looks to



**Figure 6: Remains of a copper mine on the southeast shore of Big Black Island.**

be recent and is probably a pet burial (13J/01 E Ethno 5). We did not disturb it in any way.

Next, we visited a promising location known as Grassy Point or John's point. Walking across the clearing, we could feel buried features beneath our feet, and at the back of the field, we encountered the burnt foundation and floor of a 20<sup>th</sup> century plank house (GbBn-26). Charred and melted debris covered the floor and objects observed there included wire nails, burnt wood, bed springs, melted beer bottle glass, a rusted shelving support bracket and the blackened arms, legs and torso of a headless plastic doll. Three test pits produced nails (square and wire examples), a variety ceramics, beads, and a pair of scissors, tin can fragments, lead shot, .22 caliber bullet casings, and green bottle glass dating to the 19<sup>th</sup> and 20<sup>th</sup> centuries. The site has good potential for future work (Figure 8) and is known as the location of a tragedy where several people drowned while attempting to save the lives of mariners who had struck a nearby reef.

The following day we travelled south and west into Lake Melville. Our first stop was on the north shore just west of Andy Island, which we had visited in 2017 (Fitzhugh & Brake 2018). Near a

standing cabin, we recorded a number of indications of previous habitation (the remains of an old wharf and boat, a collapsed wooden structure, old snowmobile parts and clearings) (FlBr-13). In the same area, we came across a concrete and stone monument, which incorporates an anchor, a trap, and a plaque. The plaque reads, “This monument marks the old homestead of Jack and Dorcas Sheppard (early 1850’s)”. It also includes an image of Randell and Annie Sheppard and the names of their children (Figure 9).

The Provincial Archaeology Office commissioned a report earlier in the year on the archaeological potential of the north side of Lake Melville (Schwarz 2018:65-67), and we hoped to visit two areas identified as having high archaeological potential. We were limited by time to the easternmost portion of the study area defined as ‘the Highlands’ subarea.

Schwarz had mapped ten different zones with potential in the Highlands; three were identified as having high potential, and seven as having medium potential. Nearly all of these mapped zones (9 of 10) are located between Charley Point and Charley Cove, and one is located at the mouth of a small stream about 4.3 kilometers east of Charley Point (2018:65). Our hope was to visit the latter stream mouth zone and the Charley Point area.

Unfortunately, shallow water and rocky shoals prevented us from being able to visit the stream mouth zone, but we were able to reach Charley Point and made two other stops along the way. This resulted in the discovery of two archaeological sites and one ethnographic site. The first was located two kilometers east of Charley Point and consists of a single dwelling feature that had been built by clearing stones from a cobble beach to form a roughly circular floor

Figure 7: Tent rings on Bear Island, near Main Brook.





**Figure 8: Air photo of Grassy Point showing a 20<sup>th</sup> century house foundation, a clearing and the locations of two test pits.**

about 5 meters in diameter (FIBs-01). A 50cm pit feature was noted on the inside of the southwest wall of the structure towards the water. No cultural material was seen in or around the dwelling. Although we are currently unable to assign a cultural affiliation, we can say that the feature cannot be older than a few centuries at most, based on its elevation of just 1.5 meters above sea level.

The second site was found 1.5 kilometers further west where a stone marker on a prominent outcrop drew us ashore. We recorded a tent ring and a hearth nearby (FIBs-02). The tent ring might be in the 100-year age range, based on elevation as well as moss and lichen cover, but the hearth, built with multiple layers of stacked stones, looks very recent and is probably less than ten years old. The stone marker and the low elevation suggests an Inuit presence at the site.

In the cove immediately northwest of Charley Point we found evidence of camping in the 1980s in the form of vintage beverage containers, discarded tin cans, tent poles, broken glass and ceramics, cut firewood and old rope (13G/14 – Ethno 2). Surface inspection and subsurface testing in the cove and on the point did not reveal evidence of earlier occupations, though this may be present further north and west of the cove where we did not have time to look.

After leaving Charley Point we headed east to St. John Island and spent the rest of the day testing and mapping an important historic Inuit winter site (FIBr-05) that we discovered on the north end of the island in 2017 (Fitzhugh & Brake 2018). A single clear sod house with an entrance passage and sleeping platforms and a nearby stone marker were recorded at this location last year, and the possibility of other buried structures cannot currently be ruled out. This year



Figure 9: A family memorial to Jack and Dorcas Sheppard.

we excavated three 1x1 meter units at the site, one inside the house, one in the entrance passage, and one outside the house north of the entrance passage in an area where we expected to find midden deposits (Figure 10).

The unit inside the house revealed a carefully paved floor and vertical slabs at the rear marking the edge of a sleeping platform. Several beads (2 blue, 1 white, 3 red) were found on the floor, several wrought iron nails, and a few seals bones were found in the unit. A flake of caramel translucent chert typically associated with Groswater culture was also found on the floor. This chert flake, which must have resulted from the disturbance of an earlier site by Inuit when they were building this house historically, is one of the only indications of Paleoeskimo use of Lake Melville yet known.

The entrance passage unit was filled with small cobbles that probably fell in when the roof collapsed. No paving stones were found but the remains of two wooden logs or planks were noted on top of sterile beach deposits. A large number of seal bones were found associated with this wood, including a conspicuous concentration of seal bullae near the centre of the unit. An iron nail, two blue beads and an unidentified piece of iron were also found in this square.

Excavation in the 'midden' did not turn out as expected. Instead of a concentration of material culture, digging revealed another paved area with just a few artifacts. A small number of seal bones were recovered, some badly decomposed wood

and skin-like material were noted, and a soapstone vessel fragment were found on top of the paving stones in this unit.

It is interesting to note that kaolin pipe fragments have not yet been found at the site, despite the excavation of five test pits (including two last year), and only one possible ceramic sherd has been recovered so far. Our work this year produced evidence that supports our previous interpretation of an 18<sup>th</sup> century occupation, and this year's collection should help us refine this date.

### Conclusion

Our 2018 surveys demonstrated the importance of the 18-20<sup>th</sup> century winter sites on the southern shore of Groswater Bay. Each inlet and point has a grass-covered midden that appears to have been a winter occupation site. So far, none seems to have the typi-

cal rectangular house foundations known from Inuit winter sites in the Narrows, and their different settlement pattern suggests single-family plank house dwellings. Finds of glass beads in several sites suggest the presence of Inuit women, so these dwellings may have been occupied by Inuit or by mixed settlers and Inuit. Oral history would provide definitive residential information for recent times.

West Indian Island studies yielded a site map for the 6600 BP Maritime Archaic site, drawings of some of its more prominent features, and a map of the still-mysterious enclosure complex associated with this site. At Shell Island, we obtained an accurate geographic location for one of the only Ramah chert

Lake Melville and the summer fishing places in the Narrows and outer coast. Our findings of short-term camps and hearths confirm this, until recent decades when it has become favored for weekend excursions by people with fast boats from Goose Bay and Northwest River. Our tests at the St. John Island Inuit dwelling confirm this site as the western limit of known historic permanent Inuit occupation in Hamilton Inlet. On the other hand, surveys along the Back Way provide further evidence of Innu inland transits from Cartwright and the Mealy Mountains to the southeastern shore and islands of Groswater Bay. These complimentary movements and the cultural connections between Innu, Inuit, and settlers, should



Figure 10: St. John Island Inuit winter house and midden. Map created by Jamie Brake. Background data collected by Brake and processed by Kyle Crotty.

biface reduction sites known on the Labrador coast. Here, facing the 30-mile crossing of the open mouth of Groswater Bay, Late Precontact Period Amerindian groups appear to have lightened their canoe loads of Ramah quarry blanks by preparing preforms destined for the Ramah markets in southern Labrador and beyond.

Surveys along the northern shore of Lake Melville produced little evidence of early or long-term occupation. This coast is known from recent centuries to have been a transit region for seasonal movements between the winter trapping regions of western

be explored in the future by dedicated excavations.

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# Archaeology at Anse à Bertrand, Saint-Pierre et Miquelon 2018

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Figure 1: Anse à Bertrand, Saint-Pierre, Saint-Pierre et Miquelon.

The archipelago of Saint-Pierre and Miquelon (SPM) is located just off the southern coast of Newfoundland's Burin Peninsula. This unique destination has garnered international attention in recent years (Davidson 2018; Lahiton 2018) as the last remaining French colony in North-America since 1815. This unique history prompted a three-year archaeological research project to better understand SPM's role in the cod fishery and the trans-Atlantic trade networks operating between the 17<sup>th</sup> and 19<sup>th</sup> centuries. The 2018 field season marks the second excavation in Anse à Bertrand, Saint-Pierre.

This small, overseas French collectivity is comprised of three islands; Saint-Pierre, Miquelon, and Langlade. Saint-Pierre, where Anse à Bertrand is located, is the smallest of the three islands; it has however, also been the most densely populated island since the beginning of the colonization era due to its well-sheltered harbour. By the 16<sup>th</sup> century, Europeans had begun exploiting the lucrative cod stocks in and around Newfoundland, and became aware of the archipelago and its key location next to the produc-

tive Grand Bank fishing grounds. When Jacques Cartier claimed the island in the name of France in 1536, it was already being frequented seasonally by Portuguese, Breton, and Basque fisherman. French fisherman would continue to use this island until the beginning of the 18<sup>th</sup> century when the British first pillaged it, starting a long series of aggressions centered around fishing rights and the exploitation of cod. In 1815 Saint-Pierre and Miquelon was retroceded to France one final time after nine changes in governance, marking Saint-Pierre and Miquelon as the last remaining French stronghold in the North-Atlantic. France's maintained governance also served to guarantee their fishing rights in and around Newfoundland.

Little is known about the lifeways of Saint-Pierre's inhabitants prior to 1815, due to the back and forth nature of SPM's early settlement. As a result, there is a lack of archives from this period; local historians have not yet researched the long English period between 1713 and 1763, and their interim settlement until 1815. Therefore, archaeology is a key method in providing access to the past of the archi-

pelago in light of a distinct lack of documentary evidence. Despite the potential presented by archaeology, very few archaeological projects have been implemented in the territory. Our project is only the fourth archaeological inquiry in SPM, but the first ever historical archaeological excavation on Saint-Pierre. Two previous projects were based on Saint-Pierre by Jean Chapelot (Chapelot et al. 1987) and Sylvie Leblanc (Leblanc 2008), and one on Miquelon, by Anne Laure Martinot (Martinot 2009). It should be noted that while there has been little research done prior to 1815, many local historians, mostly descendants from the 19<sup>th</sup> century immigration waves, have researched and documented the history and settlement of the island since then.

The site of Anse à Bertrand, located on the southeast side of the harbour mouth has been continually occupied since at least 1680, when four stages, a fort, a chapel, and two habitations with accompanying graves (stone features used to dry cod) were documented on site (Plan du port et de la colonie de l'isle de St Pierre 1680-1700). This area would continue to be occupied in varying degrees until the 1970s when the French government expropriated the inhabitants in favour of extending the airstrip that backs the area. To date, only three buildings remain on the site, two 19<sup>th</sup> -20<sup>th</sup> c. houses and a saline (salt house).

The first field season of the project occurred in 2017 with nine field school students from Memorial University excavating two 5mx2m trenches over a four-week period (Losier et al. 2018; Livingston et al. 2018). In total, over 7200 artifacts were uncovered



**Figure 2: Field director, Catherine Losier, unearthing the 2017 excavation.**

with about 5000 of them originating from sondage 1, located on the western side of the site. The greater concentration of artifacts from sondage 1, along with visible features and an undisturbed 18<sup>th</sup> century layer prompted the expansion of the area to be undertaken in 2018.

Contributing to the main objectives of filling the gaps in the historiography and better understanding the colonial era settlements of Saint-Pierre and Miquelon, the research goals for the 2018 season were: to locate and document the extent of the erosion that effected the area before the bank was rebuilt in 2005, to locate and document the extent of the flat stone feature uncovered in 2017 in the SW corner of sondage 1, and to locate and document the extent of the 18<sup>th</sup> century layers and

features. To achieve this, Dr. Catherine Losier, Meghann Livingston, Maryssa Barras, and Mallory Champagne, along with 13 archaeology field school students from Memorial University undertook a 5-week formal excavation of four sectors (3, 4, 5, and 6) directly bordering the sondage 1 excavated in 2017. Sectors 3, 4 and 5 are each 5mx2m trenches expanding the western, southern, and eastern borders of the 2017 excavation, and sector 6 is a 1mx5m unit expanding northward towards the shoreline.

The 17<sup>th</sup> and 18<sup>th</sup> century context (fig. 1) found in the northeastern corner of the excavation likely represents the migratory fishing tradition of seasonal European fisherman. We know from archival records and the historiography of the archipelago that around this time fishing traditions saw a shift from seasonal exploitation to settlement, meaning there would be substantial structures built to last. This be-

ing said, Anse à Bertrand was likely still used seasonally for a time as it was and still is a very exposed, windswept stretch of coastline. The 17<sup>th</sup>-18<sup>th</sup> century context is currently unclear. It is centred on a large rock that extends in to the natural soil, and is marked by a very deep, black silty layer, with a high artifact concentration. It is also marked by a linear arrangement of rocks extending around the large rock. The current working hypothesis for this feature and surrounding area is that it marks the end of a stage, which would have been built on top of the large rocks, and lines up almost exactly with the remains of

This period is associated with the “petits pêcheurs” tradition, which marked a more familial settlement in Anse à Bertrand. Archaeologically, this context is characterized by three main features. The flat stone feature associated with the 19<sup>th</sup>-20<sup>th</sup> centuries, has been suggested by a community member to be the base of a cabestan (capstan), which could in turn be associated with the large iron anchoring chain a close distance away. South of the flat stone feature, there appears to be a small wall. The wall running perpendicularly along-side these features is also associated with the 19<sup>th</sup>-20<sup>th</sup> century. Finally, in the southeastern



**Figure 3: 2018 field crew. Top Left: Adam Van De Spiegle, Savannah Hatch, Jon LeDrew, Greg Howley, Liam McCarthy, Julieanne George. Bottom Left: Liam Andrews, Sarah Roberts, Jordan Hollahan, Abby Oyler, Chermaine Liew, Meghann Livingston, Mallory Champagne, Katie Oldford, Hannah Dwyer, Maryssa Barras.**

what appears to be a stage foundation that extends out in to the water.

Artifacts associated with this context include a large concentration of Normandy stoneware, Saintonge coarse earthenware, onion bottle fragments, Westerwald stoneware, and numerous pipe fragments (some with Reuben Sidney stamped perpendicularly on the stem). Sidney, is a known clay pipe maker from Southampton, England operating from 1687-1748 (Gaulton 1999). These artifacts are generally utilitarian objects associated with the French migratory fishery, examples of this can be seen in work on migratory fisheries of the Petit Nord (Pope 2008).

The 19<sup>th</sup> and 20<sup>th</sup> century contexts (fig. 2) can be found along the southern wall of the excavation.

corner, we excavated the stone floor of a 20<sup>th</sup> century saline.

Artifacts associated with the 19<sup>th</sup> and 20<sup>th</sup> century context are more closely associated with the household, with more colorful ceramics being found and greater variability between types. These contexts also demonstrated a high amount of pipe fragments in addition to broken glass and stemware with a significant portion of the collection showing evidence of heat alteration that has been associated with this section of the excavation.

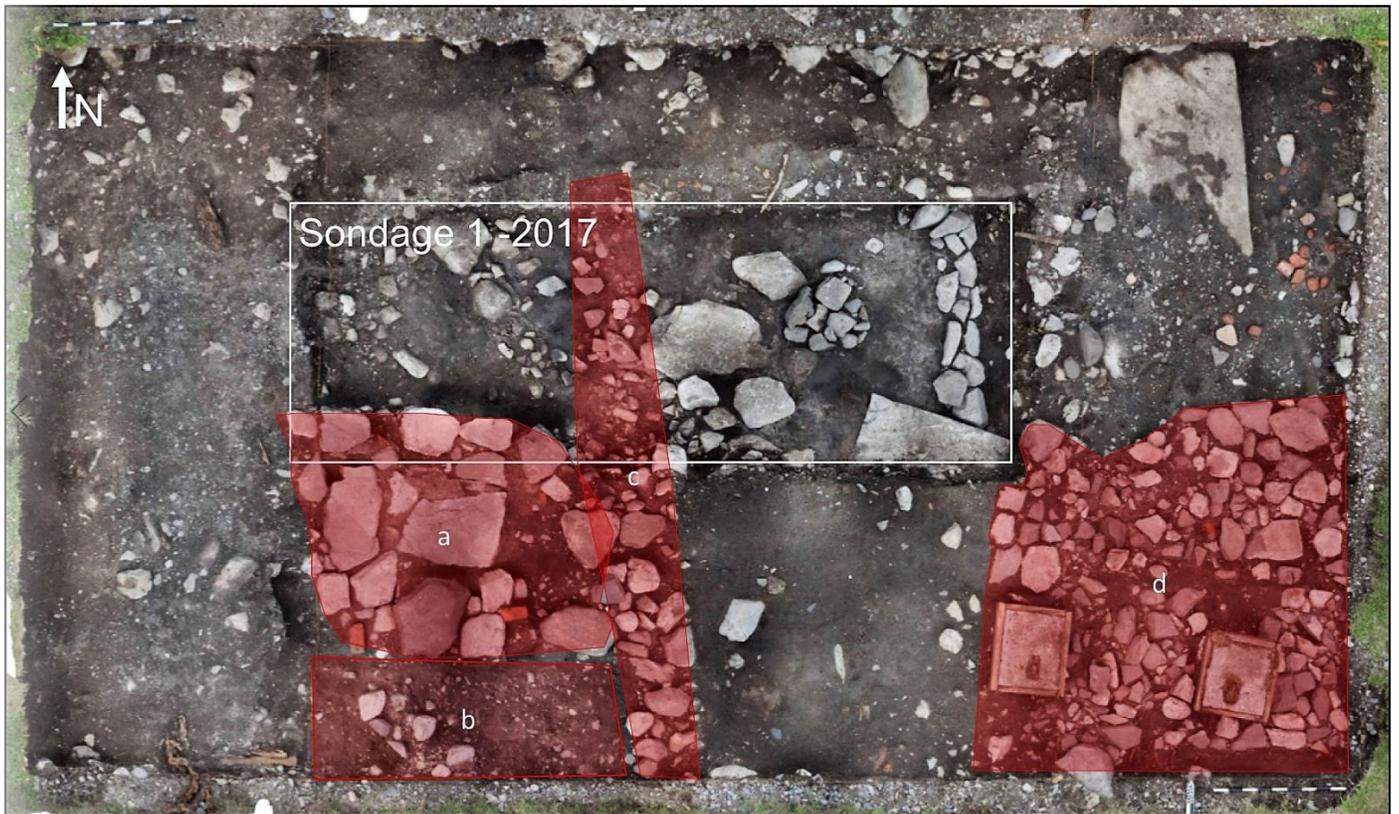
Due to the expropriation of the population of Anse à Bertrand in the 1970s there is very little associated with the 21<sup>st</sup> century context (fig. 3). Today, Anse à Bertrand is used as a popular drive-by spot, and is populated by local horses that graze along the



Figure 4: In red, the 18<sup>th</sup> c. context, hypothesized to be the terrestrial base of a stage.

Figure 5: Students excavating under the watchful eye of Meghann Livingston and Maryssa Barras.





**Figure 6:** 19<sup>th</sup> – 20<sup>th</sup> c. context found within the 2018 excavation of sectors 3,4,5, and 6. (a) Flat stone feature found initially in the SW corner of Sondage 1 from 2017, (b) directly south appears to be a small wall (c) wall, (d) base of 20<sup>th</sup> century saline.

open spaces. Along the northern wall of the excavation unit we have found the limit of the fill associated with the rebuilding of the eroding embankment in 2005. The fill appears to cut a small portion of the

site, leading us to deduce that some of the archaeological context has been lost to erosion over the centuries since it was first settled. In the southeastern corner, over top of the 20<sup>th</sup> century saline floor, we

**Figure 7:** Student Savannah with a French tin-glazed ceramic sherd, found in sector 4.



found two large concrete squares, believed to be the base of a now gone park bench.

To revisit the research goals for this season, we think we can confidently say they were all met. In orange, the limit of the site, and extent of the erosion is denoted by the fill found along the northern wall of the excavation. This would indicate that the northern extent of the site was affected by erosion and some contexts may be lost. In green, the limit of the feature in the SW corner of sector 1 was also completely mapped and identified



Figure 8: 21<sup>st</sup> c. context (a) limit of erosion and fill from the reinforcement of the shoreline in 2005 (b) base of park bench.

Figure 9: In orange, the limit of the site and extent of the erosion before bank rebuilding in 2005. In green, the limit of the structure discovered in the SW corner of the 2017 excavation. In red, the limit of the 18th c. structure uncovered in 2017 and 2018 field seasons.





Figure 9: Student Julieanne looking for the datum with some local equine help.

throughout the season. While it has been suggested that it may be the base of a cabestan, the substantiality of the flat stone feature may not support this theory. The final goal, in red, was also successfully completed, with a preliminary hypothesis that the 18<sup>th</sup> century context marks the terrestrial base of a stage. These hypotheses can be further developed with the complete analysis of the material culture associated with these features, which is currently underway.

The 2018 season also presented us with an opportunity to further build our relationship with the community of SPM. The welcoming and curious attitude of local people, as with last year, was instrumental in helping us understand the landscape and features of their past. We were often visited with stories and pictures of the site, some dating to as early as 1890, that were not located in any archives or museums. Continuing the tradition of last year, we were also able to excavate with youths in the community on a weekly basis, with Meghann, Mallory, and Maryssa also being invited to the high school to do a 3-day workshop with students on how their local archaeology is conducted. To date, the team looks forward to the upcoming 2019 field season, and hopes to return to Saint-Pierre to expand upon and under-

stand the strategies that fisher folk undertook to settle on this small archipelago.

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# UAV-based Low-Elevation Aerial Survey of a Historic Coastal Fishing Site: Year Two

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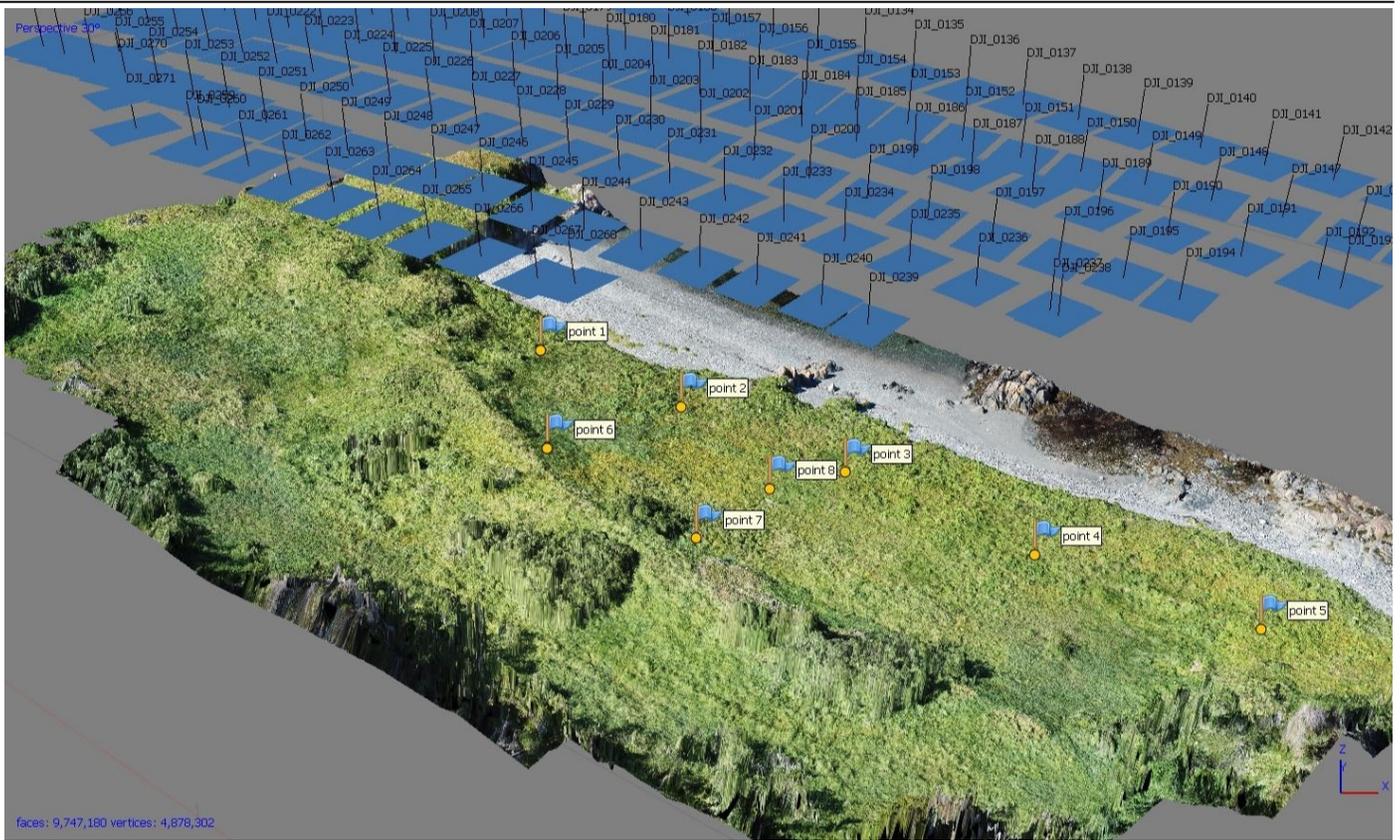


**Figure 1: Location of French fishing room sites at EiAv-03 and EiAv-07. Note: EiAv-03 consists of several separate French fishing rooms; each of these has been marked with a pin. Image: Google Earth.**

In the second year of our research project, we continue to develop and refine methods to characterize the abandoned landscapes of the historic transatlantic cod fishery, specifically querying the relationship between archaeological sites, historic soil enrichment, and contemporary vegetation patterning. By harnessing multidisciplinary methods, we explore the long-term environmental impact of this fishery, and the ensuing creation of novel ecological niches in the contemporary landscape. As French crews processed their catch in seasonally occupied shore stations between ca. 1500 and 1900, they subtly transformed Newfoundland's shorelines. Crews altered cobblestone beaches and shorefronts, and inadvertently enriched the soil through fish processing. Now abandoned and overgrown, these landscapes are marked by little more than distinctively patterned vegetation, which feeds on soils enriched by fisheries practice.

Our broader research project intends to quantify and qualify the extent of anthropogenic soil enrichment at former fishing stations. We also use computational modelling of multispectral imagery collected by Unmanned Aerial Vehicles to demonstrate how changes in contemporary vegetation distribution follows the traces of abandoned fishing stations. Such patterns demonstrate that seasonal occupations produce unique environmental niches, which are stable on a centenary scale at least. Such complex human-animal-plant imbrications permit us to reflect on the multiple material and historical processes that result from fisheries practice, and their long-term persistence.

This year's project built on our 2017 fieldwork (Crompton and Bolli 2018). Our return to Crémallère Harbour (Figure 1) was an opportunity to re-image a site we visited in 2017 at a different time of year in the growing season, as well as to image new



**Figure 2: Oblique view of the ortho model with location of UAV imagery tiles in context. The vertical stick over each tile represents the flight attitude of the UAV at time of tile exposure. In this example, data is acquired at an average altitude above ground level of 25m and in the visible light spectrum. The ground control points shown provide centimetre level accuracy of the resulting ortho-model. In this case, the model is accurate to within five square centimetres with a ground resolution of 9.06mm/pixel.**

sites in the harbour. In 2017, we used Unmanned Aerial Vehicles (UAVs) to gather low-elevation imagery of a known French fishing site in Crémaillère Harbour (Observation Point, EiAv-07; see Figure 1), identified by Bryn Tapper and Peter Pope. The site likely saw its widest use between the 18<sup>th</sup>-19<sup>th</sup> century (Tapper 2014). We selected the site because Crémaillère Harbour is currently unoccupied, and because it appears undisturbed based on the work of Tapper and Pope (2014).

French seasonal fishing in Newfoundland certainly underwent fluctuations in scale over its five hundred-year history, and we can track changing intensities in French usage of different harbours. Nevertheless, the French fishery remained a broadly consistent practice from the sixteenth century until the early years of the twentieth century, over wide sections of the island's shorelines. French fishing masters claimed the beaches that they used for the season on a first-come, first-served basis. By common con-

sent, and later by regulation, crews could not claim a right of return to the same beach in subsequent seasons. Another crew might claim any infrastructure that was constructed in any given fishing room in one season the following season. The most popular fishing rooms were sought out by crews annually, where they built and rebuilt shore side infrastructure every year, shaping the landscape in identifiable and regularly-patterned ways (Tapper 2014). The stages, flakes, cookrooms, bread ovens, garden plots, and cobblestone *galet* beaches for drying fish constituted a shore station. Here, fish were landed on shore, processed, and then dried. At the end of the summer season, the cured fish was loaded on board ship and transported to European markets for sale (e.g. Pope 2008a; Pope 2008b).

Some historic information is available in surveys (both written and cartographic) which detail the French presence along the Northern Peninsula generally in variable detail, and Crémaillère Harbour is fre-

quently numbered among the places surveyed. Between 1764 and 1784, seven censuses record the ships anchored in Crémaillère Harbour, and the number of crew and fishing boats (*chaloupes*) operated by each. However, the nature of each fishing room, its location, its infrastructure, and its organization on the landscape, is not the focus of these census takers, who were only interested in the actual and potential capacity of each harbour's fishing potential (Anonymous 1764, 1765, 1768, 1769, 1770, 1772, 1784). In 1821, an effort was made to complete the most accurate and detailed survey of fishing harbours along the French shore. This survey does add useful

tions between different fishing rooms with shading (Le Tourneur 1784-1786). Stage (*chaffaud*) locations are clearly indicated for each fishing room. Behind each stage lies a building and a series of shaded areas indicating *galets* and *rances* (beds of fir and spruce boughs for drying fish). And yet, Le Tourneur's maps are still hastily drawn and schematic in style (Tapper 2014:63) and abbreviate the state of onshore infrastructure. Comparing Le Tourneur's map with Combis Daugustin's 1786 map of the same harbour, drawn up at roughly the same time as Le Tourneur's, also provides a useful perspective (Daugustin 1786). Le Tourneur shows six fishing rooms, whereas Dau-

**Figure 3: An orthomodel of the EiAv-07 site derived from UAV data acquired at 25m altitude above ground showing the different vegetation features of the site. Also visible are two large culturally modified earthen banks and a stone-lined well, located above Ground Control Point 1.**

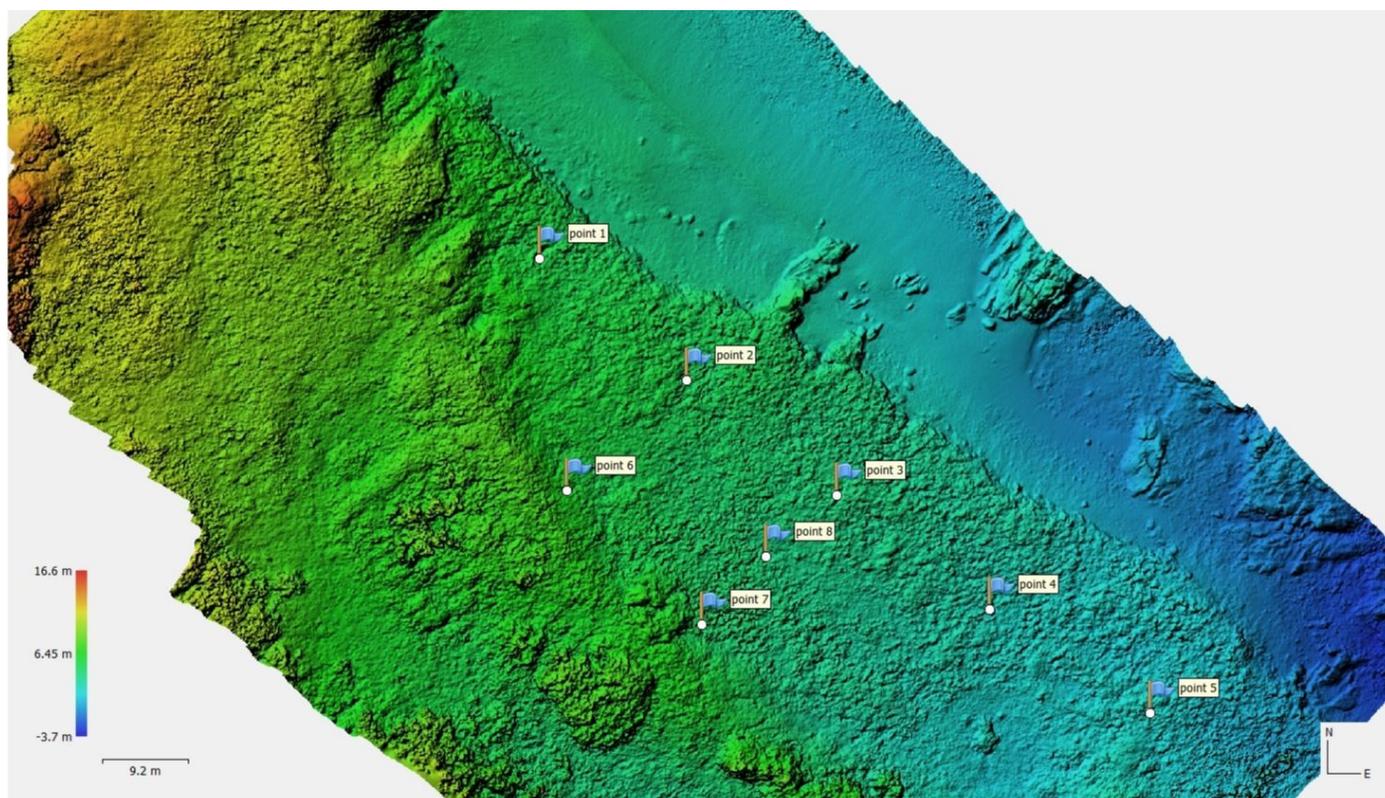


interpretive detail, for the fishing rooms are each given distinct names, and some effort has been undertaken to describe the boundaries that separate adjoining fishing rooms. Nevertheless, descriptions of physical layouts at Crémaillère are brief, and fishing rooms are simply said to possess 'tous ses établissements' (Anonymous 1822:246-247, 280-281).

Detailed cartographic surveys add some further information about site layout. François-Thomas Le Tourneur's plan of the harbour, one of many that he drew up between 1784-1786, shows the distinc-

gustin's map only shows four. Le Tourneur shows a single structure associated with each stage, while Daugustin shows three per stage. Clearly, these maps add useful detail that is missing from written surveys, but their representation of onshore structures is abstracted and schematic.

Crémaillère Harbour, like other French fishing stations, remained in seasonal use until the early years of the twentieth century, when the French abandoned the Newfoundland fishery in the face of profound geopolitical change. Modern communities



**Figure 4: Digital Surface Model of EiAv-07 showing relative elevation distribution of the site, with ground control points (GCPs) identified. Again, the rectangular well structure near GCP 1 is readily apparent.**

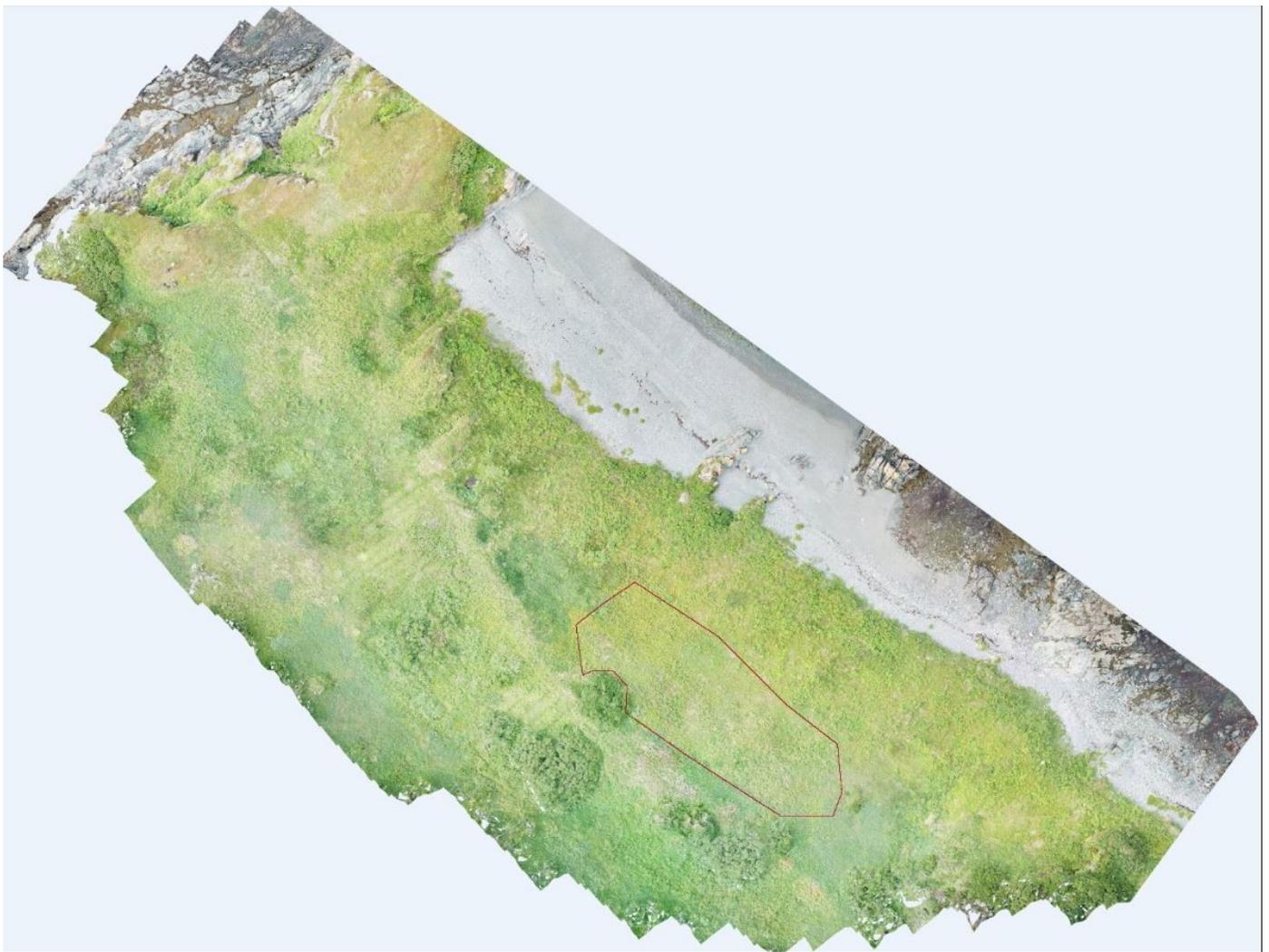
did not extensively overbuild many former French fishing stations after the cessation of French fishing efforts. These abandoned fishing sites are now vegetation-covered, which tends to obscure the subtle topographic changes that mark them as archaeological sites. As they appear today, these landscapes are the product of centuries of human intervention, undergoing auto-rewilding by plant species that favour places of human disturbance. Such places have been termed ‘feral landscapes’, as a shorthand for describing new and persistent ecological niches that occupy extractive (often post-industrial) places (Bubandt and Tsing 2018; Tsing 2017). Extractive sites are often obvious on the landscape (such as former mining sites), but our project contends that the subtle shapes of abandoned landscapes of the fishery are equally as feral.

One of the most useful means to characterize such landscapes is to view them from above, and the accessibility of Unmanned Aerial Vehicles (UAVs) in recent years has meant that archaeologists can scrutinize sites from a low-elevation perspective. This imagery reveals details that might otherwise not be observable in standard aerial photographs, Google

Earth, or satellite imagery. To document the weedy characteristics of feral landscapes, and observing how plants trace the outlines of former fishing stations, a low-elevation perspective is crucial.

This season, we retired our aging large 3DR-X8 octocopter UAV in favour of two newer DJI Mavic Pro quadcopters. To collect our imagery, we used both Mavic onboard visible light cameras, and retrofitted one Mavic with a MAPIR Survey 3W OCN (Orange+Cyan+Near Infrared) NDVI camera in a specially designed mount, with external GPS receiver. The latter camera was upgraded from our 2017 equipment, and records Near Infrared (808nm), Orange (615 nm) and Cyan (490nm) spectra. We selected this model of camera for its ability to clearly show vegetation differences with better contrast than the model used in our 2017 field season. Using NIR imagery can help to distinguish plant species based on different reflectance values, and accordingly can enhance the appearance of archaeological features in plant cover (Verhoeven 2011).

We visited Crémaillère Harbour in July 2018, and spent several days at EiAv-07 (Observation Point). We completed several aerial surveys of the



**Figure 5: Orthomosaic of EIAV-07, with red polygon indicating densest area of wild raspberry (*Rubus idaeus*) vegetation stands, growing directly out of cobblestone *galets*.**

site. The first survey was flown immediately after we arrived at a nearby hill overlooking the site (using onboard visible light cameras only), so that we could image the area before we had trampled any vegetation by walking across the site. Following this, we laid out Ground Control Points (GCPs) at regular intervals across the site to facilitate photogrammetry and the production of orthomosaics. We flew the UAVs (with visible and NIR cameras) over the site in transects with sufficient overlap and sidelap to allow for orthomosaic generation (see Figure 2 for image tile location in context). We recorded the location of GCPs with an Emlid Reach RTK GNSS unit, which provides centimeter-accurate location readings. We also conducted manual surveys of vegetation cover in transects across the site, in a series of 50-x-50 cm quadrats. In this way, we intend to correlate the vege-

tation patterns that we observed with manual survey with the high-resolution imagery collected with our UAVs.

We also intend to determine if any of the patterns that we recognize in plant distribution are the result of enriched soils created by the unintentional incorporation of fish remains in the soil. This research is prompted by similar discoveries of fish-based soil enrichment at sites in other regions (Frink and Knudson 2010; Knudson and Frink 2010, 2011), and the recognition that enriched archaeological soils play a role in contemporary vegetation patterning (Fenger-Nielsen, et al. 2019). Accordingly, we collected another set of soil samples to increase the sample size of those collected in 2017, to characterize their chemical composition (analysis of all samples is ongoing).



Figure 6: Multispectral orthomosaic of EiAv-07, with well feature circled.

We have produced a high-resolution image of the site, allowing close scrutiny of the site and its overlying vegetation, with centimeter-scale accuracy (Figure 3). We are still working further with this imagery, but already have developed promising new interpretations. For example, we have constructed a Digital Surface Model (DSM) of the Observation Point site (Figure 4). This model provides an overview of the vegetation-covered site, yielding useful information on plant canopy height, and providing a rough sense of site surface topography. We have further confirmed the results of our 2017 survey, in which we can directly correlate heavily gravelled *galets* with large stands of wild raspberry plants (*Rubus idaeus*) (Figure 5). These are likely drawn to the well-drained, cobblestone-laden, but nutrient-rich soil that comprised fish drying platforms. Additionally, *Rubus idaeus* is well known to be an early pioneer species, quickly colonizing land after it has been cleared (such as after timber harvesting, or other forest disturbances), and has the ability to outcompete other plant species for decades (e.g. Hughes and Fahey 1991). Weeding *galets* was an important part of their maintenance, so that cod dried properly when laid on the cobblestones. Once human intervention with the

cobblestone terraces ceased, *R. idaeus* plants colonized them.

Our orthomosaics also reveal that stands of Purplestem Angelica (*Angelica atropurpurea*) and Cow Parsnip (*Heracleum maximum*) grow in the depressions left behind by long-vanished structure foundations. Both plants preferentially grow in wet soils along streams, riverbanks, and marshy areas (Gray 1987). Stands of both plants tended to follow along two or more walls of collapsed structures, indicating the anthropogenic origin of the soils below by their geometric shape. The difference between both *A. atropurpurea* and *H. maximum* was made even more apparent when the orthomosaic constructed from Near Infrared (NIR) imagery was consulted. Together, consulting the visible light and NIR images permitted the identification of one possible and three definite structures at the site. One feature strongly visible in NIR imagery was the remains of an abandoned stone-lined well, which has created the perfect wet and boggy conditions favoured by those two plants (Figure 6). The remaining structures (see Figure 7 for one example) likely represent collapsed *cabanes*, or cookrooms, or other fisheries-related outbuildings. Further enhancement of the existing multispectral data will provide



**Figure 7: Multispectral orthomosaic of EIAV-07, detail, showing stands of *H. maximum*/*A. atropurpurea* following the earthen foundation of a collapsed structure.**

false colour imagery, which will allow us to distinguish between different levels of photosynthetic activity with much greater sensitivity. This in turn should allow us to gain increased signal detection out of the ambient noise of our images, which in turn should result in improved detection of vegetative patterning.

Additionally, our orthomosaics have highlighted features that we failed to observe on our field

visits to the site. On the second terrace, long parallel lines are in both visible light and NIR imagery (Figure 8). We currently suspect that represents the remains of linear raised garden beds, either by French fishing crews or possibly later as a Newfoundlander-tended garden. A French origin is not out of the question, as nineteenth century travel narratives record that fishing crews occasionally planted and tended gardens during their brief summer stay in Newfoundland (e.g. Thoulet 2005:80). This discovery demonstrates the value of being able to secure a low-altitude, overhead view of our sites: features that might not be obvious to the observer at ground level can sometimes be readily apparent in overhead views.

We also visited the complex of four French fishing rooms located at the entrance to Crémaillère Harbour, collectively given the Borden Number EIAV-03. This is a substantial area, and full-scale imaging of it would require longer than the afternoon we were able to spend at the site. We focused on imaging the middle section of the site, and continue post-

processing our results at this time.

Throughout the winter of 2019, we will be continuing our analysis. With further post-processing of our low-elevation photographs, we intend to keep searching for links between our key indicator plant species, discrete site areas/structures, and enriched soilscares. Ultimately, the landscapes that we uncover with digital technology are cumulative iterations of daily practice, which inevitably altered the physical



**Figure 8: Relict garden beds indicated in red, not visible from the ground but clearly apparent from the air, at EiAv-07.**

world and modified the surrounding environment. The daily taskscapes of the fishery, and the inadvertent soil alteration and enrichment that these actions produced, today support recognizable patterns of longstanding and cumulative landscape change. The shadows of collapsed structures that we seek in the digital imagery of abandoned landscapes certainly represent a palimpsest of overlapping occupations. We may be able to distinguish different structures at the site, but only archaeological excavation will allow us to determine what those occupational sequences are, their dates, and how they relate to each other.

As always, our research project is the result of generous financial support and in-kind assistance. The Institute of Social and Economic Research at Memorial University provided crucial funding, and we acknowledge this assistance with thanks. Our post-processing and analysis of low-elevation aerial imagery is compute-intensive, producing a need for substantial compute resources. We are also grateful for the support of ACENET (part of Compute Canada,

the national resource for Advanced Research Computing), whose computational resources and knowledgeable staff (particularly Dr. Oliver Stueker) allowed us to process our data on Compute Canada’s Cloud OpenStack resources, with great success. Further post-processing of field data has been made possible at Memorial University’s Computing, Simulation and Landmark Visualization Facility (CSLV), part of the CREAT network, and would like to thank Dr. Charles Hurich (Chair, Scientific Advisory Committee for CSLV Lab) for facilitating lab access, and Peter Bruce and Paul Sherren for the lab’s technical support. We are also grateful to staff at the CREAT Network (Memorial University) for providing analytical computational assistance, and we would like to acknowledge Dr. Brent Myron for facilitating this access. Bryn Tapper (Memorial University) has once again graciously provided both data and advice during the planning and analysis phase of the project, and we acknowledge his help with much gratitude. Once again, we acknowledge the late Dr. Peter Pope’s

(Memorial University) exhaustive work on the archaeology of French fishing sites; we remain grateful for his work, and we thought of him often as we worked our way through the dense tangles of trees to visit yet another French fishing station on the Northern Peninsula.

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# Whale Use Research in Torngat Mountains National Park

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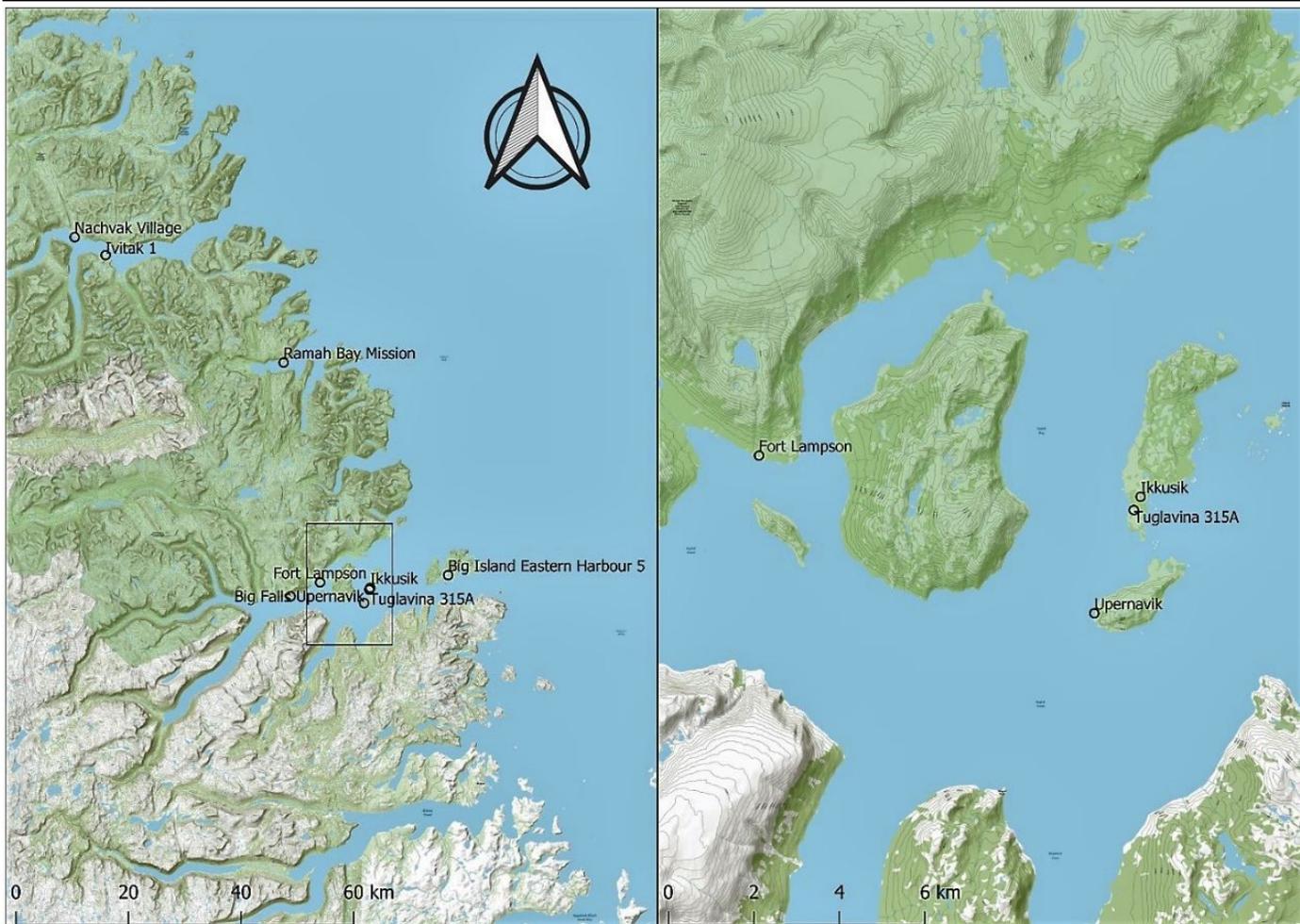


Figure 1: Project sites visited in TMNP in 2018

In August 2018, I undertook a brief but productive period of fieldwork in the Torngat Mountains National Park (TMNP) in northern Labrador, out of the Torngat Mountains Base Camp and Research Station. Between August 2nd and 14th, with the assistance of Nancy Nochasak (Nunatsiavut Archaeology Office summer student) and Corey Hutchings (Parks Canada archaeologist) I visited nine previously-documented Inuit sod house sites within the park. As my PhD project focuses on untangling the history and the archaeological signature of Labrador Inuit whaling and whale use, sites were targeted based on their potential to contribute

to that realm of knowledge. These site visits were conducted in order to collect a series of aerial images with a Mavic Pro Platinum unmanned aerial vehicle (UAV) to construct high-resolution site maps and 3D models, and to collect samples of matrix for fine screening adjacent to previous excavations to augment existing museum collections. Together, these data sets will allow for an examination of whale use from the micro- (bone debitage from working whale bone) to the macro-scale (use of whale bone as a building material, and intra- and inter-site comparisons of house and settlement structures related to



Figure 2: Metal tag on surface at Big Island Eastern Harbour 5

whale use). These sites (Figure 1) and activities are described below, in the order they were visited.

**Big Island Eastern Harbour 5 (IdCq-05/375A)**

This site is located in a small cove on the eastern side of the southwestern point of the Big Island, and is comprised of the stone foundations of six recent (ca. 1950s) fishing cabins, several tent rings and stone caches, and the remains of two sod houses, excavated by Peter Schledermann in 1969 and dated to the early 1900s (Thomson 1982). Because of significant disturbance to the sod houses, and their relatively recent date of occupation, no collection occurred, though surface finds were photographed (Figure 2) and a drone course was flown over the site to create an accurate site map. In an attempt to reconcile old site records with features on the ground, we explored the area of the point to the west, aided by Nunatsiavut youth camp students armed with survey flags. To our surprise, their flags revealed a pattern of Ramah chert

Figure 3: UAV aerial view of Fort Lampson structures (red). HBC structures upper right, sod houses lower left. Largest HBC structure is approximately 10x13 m; smaller structure is 4x4 m.



lithic scatter related to a previously-undocumented probable Maritime Archaic longhouse (see Hutchings, this volume). Not a bad first day out.

**Fort Lampson (IdCs-15/ 298A)**

Fort Lampson is the site of a short-lived Hudson Bay Company post (from 1867 to 1878) on the north shore of Saglek Fiord in Branigan Cove (Thompson 1988). The site is comprised of the faint outlines of the post buildings (dismantled upon abandonment), and two Inuit sod houses and numerous tent rings and caches, most of which are likely associated with occupations related to the trading post. A test pit placed in the entrance tunnel of each of the sod houses supports this affiliation, yielding small quantities of nails, glass, ceramics and pipe fragments consistent

formed part of a proposed hiking route into the park interior, this georeferenced photo will be used in planning a route that avoids damaging archaeological features.

**Upernavik (IcCr-10/ 338A)**

This site became the major focus of the 2018 TMNP work. This site is located on the western tip of Upernavik Island, and was first recorded and tested by Peter Schledermann in 1970 (Schledermann 1971). The site currently comprises the remains of at least five sod houses, though some of these houses display clear evidence of periods of remodelling (Figure 4). Several tent rings, stone caches, and a large stone grave are also located on this small green point of land. Based on house architecture and visible surface



Figure 4: Upernavik, upper terrace houses, view from helicopter

with a mid-late-19th century occupation, and the lack of an obvious midden (but a scant quantity of recovered seal and caribou bones) indicates a shorter-term occupation, perhaps by local Inuit in the employ of the post (as indicated in post journals). A drone course flown over the entire site enabled the creation of an aerial orthophoto, which revealed the outlines of the post buildings that had been impossible to distinguish among the cryoturbation and partial flooding on the ground, and highlighted the proximity of the sod houses to those buildings (Figure 3). As this cove

and recovered artifacts, the site appears to have been occupied at least as early as the late 18th century and more-or-less sporadically likely as recently as the early 20th century. An interpretive tour of the site was later given to park visitors and the Torngat Cooperative Management Board. This site was photographed by UAV, and matrix samples were collected from one of the houses displaying clear episodes of remodelling. Based on late 18th century census data, some portion of this site is very likely contemporaneous with Ikkus-



Figure 5: Ramah Bay Mission from helicopter. Mission cemetery and building foundations along the shore to the left, sod house row along the shore to the right. Note the proximity to active shoreline.

Figure 6: Big Falls, cobbles of Iceberg chert of varying colours (note superficial similarity to Ramah chert – Iceberg has a waxy, rather than sugary, texture).



ik or Tuglavina (or both) on Rose Island (Taylor 1974), though further research is yet ongoing.

**Ramah Bay Mission (IfCt-03/ 231A)**

Because of its unique history as a mission station that had not been built near an existing Inuit winter settlement, and because of the relatively high volume of unsupervised visitor traffic this site receives every year, the Ramah Bay Mission site was seen as a priority for further UAV photography, having been surveyed in 2017 (see Higdon and Weatherbee 2018), to aid in site monitoring and in the creation of low-impact visitor interpretation plans. We arrived by helicopter in the morning of August 5th. After a quick walk-over to determine UAV flight limits, this extensive site was aerially-photographed, and we were then joined by visitors travelling north by speedboat, and by other park visitors in a private helicopter. Because of the high visitor traffic and the proximity of some of the mission building foundations and Inuit sod houses to the active beach (Figure 5), this site is deserving of increased monitoring and further study.

locate the sod houses until late in the day, and bad weather on two occasions prevented our returning to the site to further investigate. Because very little has been published on the Inuit occupations of the site, and because of its multi-component nature and source of a widely traded lithic raw material, and especially due to the rapid erosion of the sandy, unsheltered terraces (Figure 8), this site is deserving of further in-depth study.

**Tuglavina (IdCr-01/ 315A)**

This site is located on the west side of the southern tip of Rose Island, and is comprised of the remains of 14 Inuit sod houses dating from the 18th to the 19th century, one of which was fully excavated by Schledermann in 1970. The early components of this site appear to be contemporaneous with those of Ikkusik (below), while the later (late 18th century and 19th century) components are almost certainly contemporaneous with Upernavik (above). As the island is considered a Special Management Area, permission was obtained from the Torngat Cooperative Management



**Figure 7: Big Falls panorama, view south from north edge of site. Overgrown sod houses in middle foreground, tent rings in middle and right background, outflow of Big Falls to the far right. Active erosion occurring along eastern shore of site (left in photo, see Figure 8).**

**Big Falls (IcCt-02/ 304A)**

This site is located on the north shore of Saglek Fiord, about midway between Nachvak Brook to the west and Fort Lampson/Branigan Cove to the east, just east of a large waterfall within which is found an outcrop of Iceberg chert (boulders of which can also be found scattered throughout the area, and cobbles of which have been used as tent hold-down rocks) (Figure 6). The Inuit component of the site (as the site has been most extensively investigated for its Dorset component) is composed of the remains of three large Inuit semi-subterranean sod houses, all fully excavated by Schledermann in 1970 (Schledermann 1971; Tuck 1975). Unfortunately, the complex topography and archaeology of this extensive site, and the heavy covering of dwarf birch brush within the houses (Figure 7), resulted in our failure to

Board to conduct low-level UAV flights over this site and Ikkusik, under the supervision of Nunatsiavut Elder (and bear guard) Eli Merkuratsuk. The Tuglavina site overlooks a low, sandy beach, which is flooded at high tide, but at low tide is exposed and connects the larger, northern portion of the island on which the site sits with the smaller southern portion. Rose Island, or Sallikuluk, was formerly known as “Saeglek”, meaning “low area of land”, in reference to this tidal beach (Schledermann 1971:28), on which captured whales might have easily been hauled at high tide, to be butchered as the tide went out.

**Ikkusik (IdCr-02/ 325A)**

This site is located on the southeast side of Rose Island, and is comprised of the remains of at least 20 distinct sod houses (most of which are communal) dating from the 16th to the 19th century, all of which

were tested and three of which were excavated by Schledermann in 1970 (Schledermann 1971). Upon cursory examination, several of the impressive house remains contain the crania, mandibles, and other elements of large whales. As with Tuglavina, a low-level UAV flight was conducted and aerial images captured to create a high-resolution orthophoto and 3D model.

#### **Nachvak Village (IgCx-03/ 181A)**

This site is located on the north shore of Nachvak Fiord, opposite the junction of Tallek and Tasiuyak Arms, and is comprised of the remains of 15 sod houses dating to the late 15th to the late 17th/early 18th century, four of which (and the midden of one more) were excavated by Peter Whitridge from 2003-2006 (Whitridge 2006). This site was of particular importance to the project because I had previously analysed faunal remains and artifacts from the site, and

the assemblage of identified whale bone will form a critical component of my dissertation, as Nachvak Fiord was historically documented as one of the most successful for Inuit hunting of bowhead whales. A drone flight was conducted over the village site (challenging, due to high winds), and samples were collected from the middens in front of two of the previously-excavated houses, followed by a quick lunch and a jaunt by helicopter over to Ivitak (below).

#### **Ivitak 1 (IgCw-01/ 201A)**

This site is located on the south shore of Nachvak Fiord, in Ivitak Cove, east of Tallek Arm, and is comprised of the remains of 11 sod houses all dating to the trading post period (19th and early 20th century). Ramah chert flakes were observed on the beach in front of the houses, having eroded out of the house row bank. This site was of interest because it is presumed to have been occupied as the residents of

**Figure 8: Big Falls, eroding terrace along southeastern margin of site. Iceberg chert boulder in right foreground.**



Kongu (the communal house site further east down the fiord, established upon the abandonment of Nachvak Village) relocated to be closer to the HBC trading post established in 1868.

### Conclusion

Although analysis is only in preliminary stages, from revisits and UAV photography, it seems that in this region, villages that were hunting whales (known from Moravian accounts in the 18th and 19th centuries, and through previous excavations) have larger archaeological footprints, were occupied for longer periods, and in some cases, saw episodes of remodeling and re-use of existing spaces and materials. Disentangling the reasons for this will be a primary goal moving forward. Despite occasional weather and logistical difficulties, this season was a resounding success, and demonstrated that the goals of academic archaeology, tourism, and site monitoring, management, and conservation can sometimes dovetail beautifully.

### Acknowledgements

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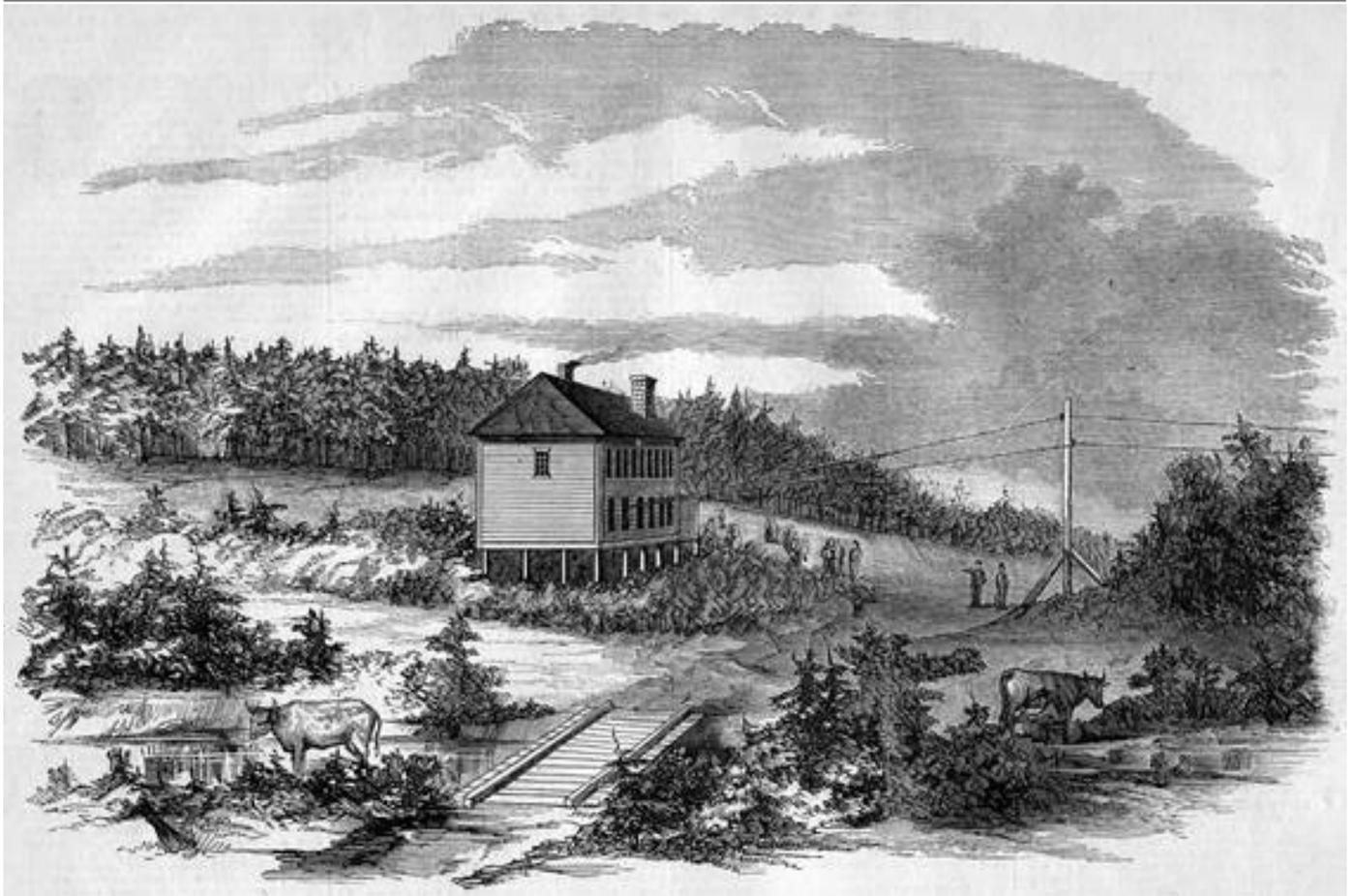
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# A Visit to the Site of the Bay Bulls Arm Telegraph Station (CIAl-04) Sunnyside, Newfoundland

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1858 Leslie Illustration of the “Cyrus Telegraphy Station” Cyrus Telegraph Station, Bull’s Arm Bay, Newfoundland. Source: Frank Leslie’s Illustrated Newspaper, Sept. 4, 1858

## Summary

In concert with the Sunnyside Heritage Society<sup>1</sup>, the Provincial Archaeology Office (PAO) collaborated with the Newfoundland and Labrador Archaeological Society (NLAS) to conduct a field trip to the Site of the Bay Bulls Arm Telegraph Station (CIAl-04) in the town of Sunnyside. This archaeological investigation was a follow-up to 2007 work by Ken Reynolds, who verified the archaeological remains as the Bay Bulls Arm 1858 Telegraph

Station. The goal of the 2018 visit was to re-locate and delineate the extent of the site and identify and document features through photography and GPS. With additional goals to further public education in archaeology and to promote the investigation of the site, the event was available to both society members and to the public. The results of our visit included basic measurement and mapping of the preserved stone foundations, and the discovery of the remains of a possible work camp that may have been associat-

<sup>1</sup>Robert Snook, of the Sunnyside Heritage Society, led our visit to the Bay Bulls Arm Telegraph Station (CIAl-04).

ed with activities related to the construction of the telegraph station. The discovery of an open pit and a discarded metal object is evidence for recent unauthorized site disturbance attributed to a metal detectorist.

**Background**

In July 1866, the cable station in Heart’s Content, Newfoundland became the location of the first permanent telegraph cable connecting Europe and North America<sup>2</sup>. Less well known is the Bay Bulls Arm Telegraph Station which relayed the first official transatlantic cable message on August 16, 1858. The telegram of congratulations was from Queen Victoria to US President James Buchanan stating that she

religion, civilization, liberty, and law throughout the world" (Geere 2011).

Despite the one-time notoriety of this event, this story is largely a footnote in history, save for a few cable enthusiasts, and the members of a local Newfoundland heritage society. While 100 years ago it may have been common knowledge that the cable station “ceased to work and now lies abandoned at the bottom of the ocean” (Howley 2009: 126), few now are aware that remnants of this historically significant site are preserved in the Town of Sunnyside.

According to Howley the buildings at Bay Bulls Arm were removed, by at least 1869, and that the original structures of the telegraph site had been



Stone Ruins (CIAl-04), Sunnyside. Source: Ken Reynolds (PAO).

hoped that the communications cable would be "an additional link between the nations whose friendship is founded on their common interest and reciprocal esteem". President Buchanan replied that "it is a triumph more glorious, because far more useful to mankind, than was ever won by conqueror on the field of battle. May the Atlantic telegraph, under the blessing of heaven, prove to be a bond of perpetual peace and friendship between the kindred nations, and an instrument destined by Divine Providence to diffuse

purchased by “old man Adams” who had them “drawn across the neck in winter, and converted into hay barns, stables and other out houses”. Likewise, it has been documented that the cable office was sold to Capt. William Stevenson, who moved it to Harbour Grace and used it as a family home” which “is still standing and was used by the Stevenson family until a few years ago.”

**Previous Archaeological Research**

In 2007 archaeologist, Ken Reynolds, accompanied local Sunnyside resident Robert Snook, who directed

<sup>2</sup><http://www.seethesites.ca/the-sites/heart's-content-cable-station.aspx>



1858 Theodore Linde Watercolour "The Cable Station in Summer".

1858 Theodore Linde Watercolour "The Cable Station in Winter".



him to ruins that he suggested were the remains of this original telegraph station within a heavily overgrown area at the western end of the harbour. Accordingly, the site was documented, photographed and a Borden Number (CIAI-04) assigned.

From the historical evidence and the observations made by Reynolds, it seemed highly likely that CIAI-04 ruins were the remains of the 1858 telegraph station. However, it is arguable that the archaeological evidence had yet authenticated this claim.

**Research Methodology**

A one-day visit to the site was conducted on July 28, 2018 to establish the nature, size and function of the ruins by conducting a site survey with limited testing. This work included site and feature measurement and mapping, a metal detection survey, and limited test pitting to locate any remnant sections of the first successfully laid transatlantic telegraph cable.

In preparation for this survey, background research relied heavily on the extensive documentation found on Bill Burns’ website: [www.atlantic-cable.com](http://www.atlantic-cable.com). Among some of the most interesting, and perhaps useful resources is the collection of relatively high-resolution images and maps of the station compiled by Burns. Included here are the 1858 watercol-

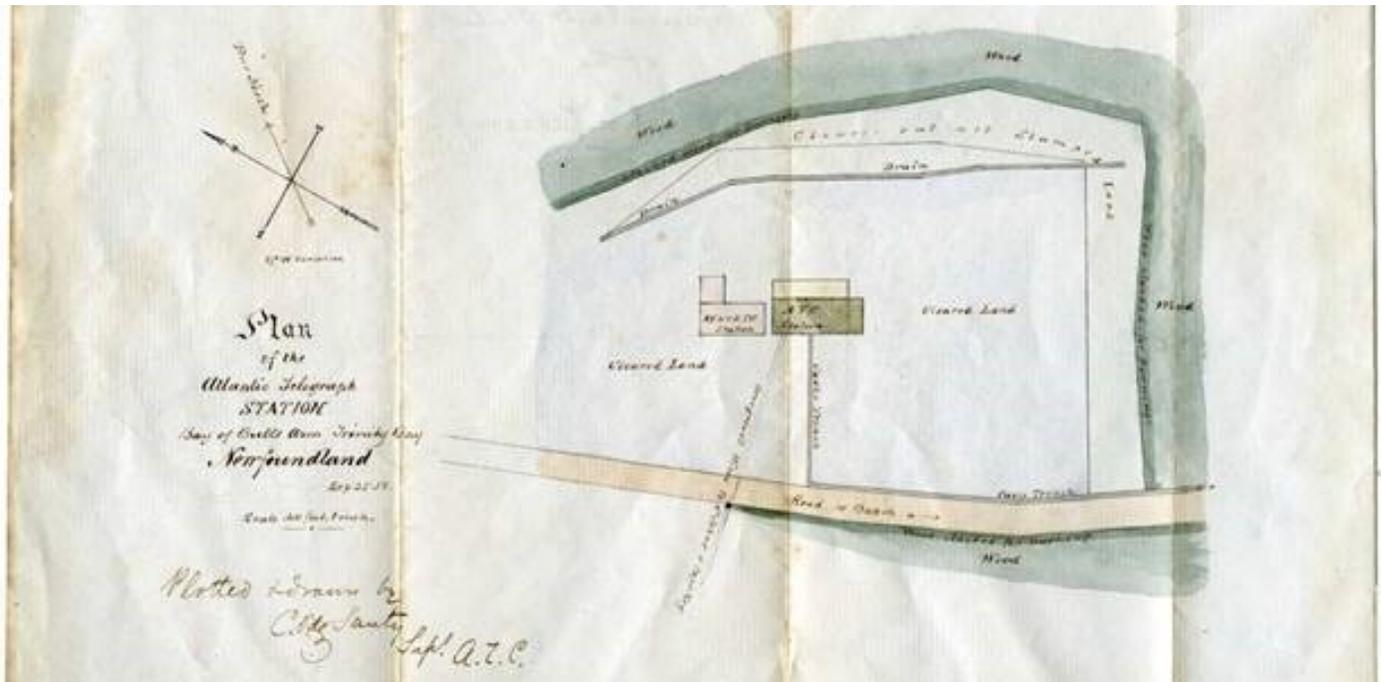
ours by Theodor Linde; and Robert Dudley’s 1858 “Winter View”.

Linde’s “summer” watercolor indicates the presence of the main station building, which appears to be the larger of two buildings that appear on C.V. de Sauty’s Plan of the Atlantic Telegraph Station Bay Bulls Arm, September 25, 1858. Likewise, it is consistent with the depictions of this original building in the “Winter” watercolour, as well as Frank Leslie’s September 4, 1858 illustration. All of these depictions have a single story porch entrance on the east side of the building, as well as the same number of windows, and two chimneys. While it seems likely that Dudley’s painting may have been an improved copy of Linde’s cruder work, there is a single significant difference: the addition of a gable-roofed outbuilding to the east of the station. The existence of such a building had not previously been noted in archaeological documentation, though may have been identified during our survey. Likewise, the presence of a “drain” on the de Sauty Plan is also notable and later observed during our site reconnaissance.

As the superintendent of the Newfoundland Cable Station, C.V. de Sauty’s first-hand knowledge of the facility suggests that his plan is arguably the

1858 Robert Dudley Watercolour of the Cable Station





C.V. de Sauty's Plan of the Atlantic Telegraph Station Bay Bulls Arm, September 25, 1858

Source: <http://atlantic-cable.com/Article/1858NFStation/1858-de-Sauty-Plan-of-the-Atlantic-Telegraph-Station.jpg>

most accurate historical record of the facility. While not containing actual measurements, the relative location of the two buildings do match the archaeological remains recorded in July. It is also notable that the site's topography slopes down from the building foundations toward the "road to the beach" as illustrated on all of the artist's depictions.

### 2018 Field Results

As the written description of the site's location was vague, and did not exactly match the previously recorded geographical coordinates, the first goal of this visit was to retake the geographical site coordinates and provide a more accurate description of the site's location. With the aid of our local guides, we relocated the site and recorded a new GPS location. From this visit, we provided updated geographical coordinates and a more precise description of the site's location on the Site Record Form.

Following the relocation of the site, all participants fanned out and searched for features. From this, two stone foundations, identified as F1 and F2, and a third activity area, identified as F3 were noted, and roughly measured and mapped with a simple hand tape. The two rectangular features which we documented are presumably the remnant foundations of the two buildings depicted in the various historic illustrations and the de Sauty plan. It is also tentative-

ly suggested that we located the remnants of the outbuilding in the Linde "Summer" watercolour and the Dudley "Winter" watercolour.

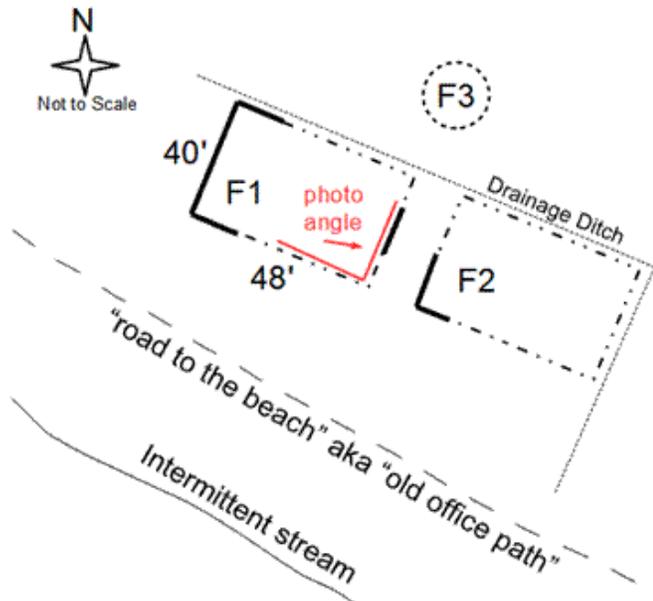
Our site inspection also located drainage ditches (which are included on the de Sauty plan) along the northern and eastern perimeters of the building foundations. Although the actual locations of these ditches are immediately adjacent the foundations, and not set back as illustrated on the plan, their existence seems more than a coincidence, and perhaps indicative of the imprecise nature of the site plan. Considering the sloped setting of the site, the drainage ditches, regardless of their exact position, may have been necessary to divert water away from the structures, which were essentially sitting on dry-laid stone foundations that were likely susceptible to runoff from the hills above.

### Feature Descriptions

The site contains three main features; their approximate locations and dimensions are described as follows.

#### Feature 1 - Cable Station

Feature 1 consists of a seemingly discontinuous rectangular dry laid boulder foundation measuring approximately 40' (12m) X 48' (15m) in size. The foundation along the westerly edge of the feature rises to a height of not more than about a foot (30cm). Howev-



**Feature 1 - Cable Station (East Structure)**

er, the remaining foundation wall along the eastern portion of the feature stood about 2' (0.6m) above ground surface (see orientation of photo in preliminary site plan).

Though we have described this foundation as discontinuous, portions of it may remain buried and thus not visible without further testing.

**Feature 2 – Cable Station**

The visible portions of the dry laid stonewalls identified as Feature 2 are considerably less substantial than those identified as Feature 1. The shape and size of this feature roughly approximate Feature 1, though the physical dimensions are only approximate, and estimated on the presence of the drainage ditch, which may mark the edges of the structure. The presence of brick and ceramic fragments along the feature’s southern edge, also suggests the feature’s location.

**Western Perimeter of Feature 2**

Although there is the possibility that the majority of this foundation may be buried, the construction materials may have been scavenged after the cable station fell out of use and the buildings removed. If the foundation stones were removed, one would expect to find some evidence of a builder’s trench, presuming that the foundation was not simply laid upon the surface. Further work on the site through subsurface testing would help determine the exact nature of the remaining architectural deposits.

**Feature 3 – Outbuilding**

Feature 3 is a small circular clearing in the trees, measuring approximately 3 to 4 metres in diameter. Situated adjacent to Features 1 and 2 it initially appeared as an area of recent disturbance. Under closer

**Feature 1 - Cable Station (East Structure) Photo Credit: Vikas Khaladkar (2018)**



scrutiny the clearing was found to contain a grouping of cobbles and boulders amidst mosses, lichen and scrub vegetation which cover this area. Unlike the well-defined rectangular features, we initially thought that this was an outdoor activity area or camp that was associated with the building or dismantling of the cable station.

Based upon the general location and size of the cobble-filled clearing, this feature is now interpreted as the location of the outbuilding depicted in both of the Dudley and Linde watercolours. In view of the descriptions of the construction activities and the efforts involved in not only laying the cable overland, but in the building of the cable station, it would not be surprising to find archaeological traces of these activities. Further documentary research and ground truthing are required to establish the nature of this feature.



Western Perimeter of Feature 2 (West Structure)

**Feature 3 - Cobble Area (Area of Possible Outbuilding)**



**Buried Cable**

Another goal of this survey was to locate any remnants of buried telegraph cable. Though some efforts were made to locate the cable using a metal detector, numerous positive readings throughout the site would have required considerable shovel testing – which was decided against, based on the relatively undisturbed nature of the site and the uncertainty of the cable’s presumed location. As such, it was concluded that without clearer evidence of the whereabouts of the cable’s location that such a search would be better served with a proper magnetometer survey.

**Conclusions and Recommendations for Further Research**

The 2018 archaeological investigations in Sunnyside substantiate claims that this is indeed the location of the historic Bay Bulls Arm Telegraph Station which relayed the first official transatlantic cable message on August 16, 1858. From this work, we further confirmed the location and remnants of the two main cable station buildings as well as a possible outbuilding. The observations from this preliminary work suggest that there is good archaeological potential, and that further work is warranted. In this regard, the first step in future on-site work should include a mapping of the site’s features employing drone and RTK technology. As such, it is recommended that such

non-invasive survey techniques be undertaken prior to any excavation activities, and that any future excavation work (including testing), be part of a larger plan of investigation. Finally, it is noted that an in-depth desktop historic resource survey of historical documentation, mapping and archival materials was commissioned by the PAO in December 2018 to provide the basis from which to plan future investigations.

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# 2018 Provincial Archaeology Office Activities

John Erwin, Stephen Hull & Delphina Mercer  
Provincial Archaeology Office

Type of Applications	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Crown Land	1225	1449	1972	1559	2046	2178	1818	1774	1466	2542	1813
Environmental Assessment	38	59	88	27	60	51	40	54	48	73	48
Mineral Exploration	278	211	224	214	288	213	301	285	339	355	354
Quarry	143	218	246	242	243	217	306	455	618	207	150
Aquaculture	16	16	14	7	10	10	7	8	1	1	23
ILUC	37	26	33	44	60	39	38	45	71	51	33
Archaeology Permits	53	51	51	47	46	55	56	49	39	42	45
Export Permits	1	1	4	0	2	3	2	1	1	5	0
TCII Proposals	8	1	2	3	6	3	2	5	3	1	0
Research Grants	12	8	12	7	7	10	8	8	6	8	9
Roads & Water and Sewer Plans	29	43	20	33	20	21	35	13	9	36	29
Other Projects	18	8	31	20	17	15	10	10	8	7	2
Palaeontology Permits	0	0	0	0	8	2	3	4	4	5	3
Zoning Regulations (Service NL)	0	0	0	0	0	0	0	4	2	0	0
<b>Total</b>	<b>1858</b>	<b>2091</b>	<b>2697</b>	<b>2203</b>	<b>2813</b>	<b>2817</b>	<b>2626</b>	<b>2715</b>	<b>2615</b>	<b>3333</b>	<b>2509</b>

The Provincial Archaeology Office (PAO) reviewed nearly 2500 land use applications, 45 Archaeological (24 research & 21 Historic Resource Impact Assessment applications) and nine Palaeontological permit applications in 2018. A large part of our job is to process land use applications in the province to determine whether the area being applied for has known archaeological sites or has archaeological potential. For a complete breakdown of the numbers over the last 10 years, see the table above.

## Survey Permit #18.17

Every spring the PAO plans and conducts field surveys in support of its mandate to protect archaeological resources. These surveys are undertaken for a variety of reasons, including preliminary assessments of archaeological potential, revisits to known sites where information is out of date or incomplete, the assessment of potential threats to archaeological resources, and to follow up on reports made by the public about potential historic resources.

For the summer of 2018, the PAO investigated nine areas in the Eastern and Central Regions of

the Island of Newfoundland. We employed standard field methods and recording techniques, including GPS track logs. All UTM coordinates in this report are WGS 1984. The first part of our investigations were conducted on the Bonavista Peninsula and in the Exploits Valley from June 11<sup>th</sup> to 15<sup>th</sup> and the second in Notre Dame Bay and on the Baie Verte Peninsula from August 13<sup>th</sup> to 20<sup>th</sup>. We also met with local heritage stakeholders in Sunnyside, Millertown, King's Point and Fleur de Lys to discuss protection of local archaeological resources and to deliver new signage for the protection of sites.

## Part I - Bonavista Peninsula and in the Exploits Valley (June 11 to June 15, 2018)

Our work began on the Bonavista Peninsula, where there is currently over 80 known archaeological sites. There is, however, only two sites in a 20km radius of the communities of King's and Knight's Cove, namely: Birchy Cove (DdAh-01) – a possible European burial site and, the Open Hall Site (DdAi-02) of undetermined type. The abandoned community of Hodderville (settled in 1800 abandoned in 1971) is also located within this radius. This apparent gap in the

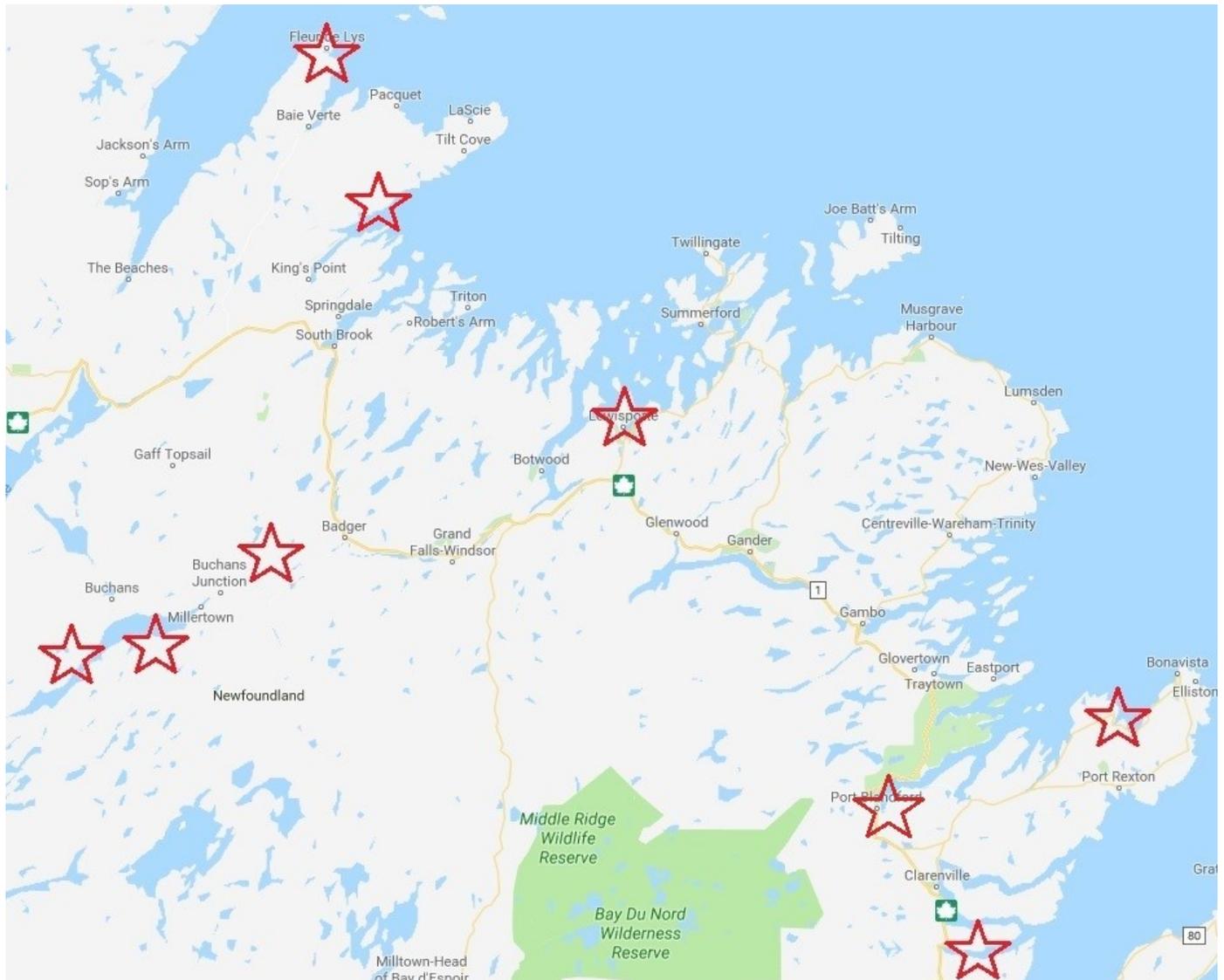


Figure 1: Areas Visited in 2018

number of sites is likely attributable to the lack of archaeological survey and research on this portion of the peninsula, and should not be seen as evidence for low archaeological potential. On this basis, it was our aim to conduct preliminary surveys to further explore the archaeological potential in this area.

**Stock Cove Beach Survey**

The first area that we focused our survey work was in the community of Stock Cove at the mouth of a stream upon a relatively flat area of land that appeared to have good archaeological potential based on the geographical location and physiographical setting. A preliminary desktop assessment for this area indicated that it could serve as a good landing spot for watercraft, and that the tracks into the cove may be evidence for such use.

Based upon a foot survey of this area, we determined that the lands were likely a laydown area for the construction of a nearby bridge and that the original topography was significantly altered. A semi-circular driveway onto the lands is also indicative of its recent historic use – possibly as access for a boat launch. The presence of recent construction debris within the nearby wooded area, and along the hillside nearest the active beach is also consistent with past construction activities.

Two modern fire pits and associated refuse suggest even more recent land use adjacent the grassy ridge. Examination of the deeply cobbled shoreline showed little evidence of historic land use, consisting only of recent debris from the coastal surge and the strong on-shore prevailing winds that have contribut-

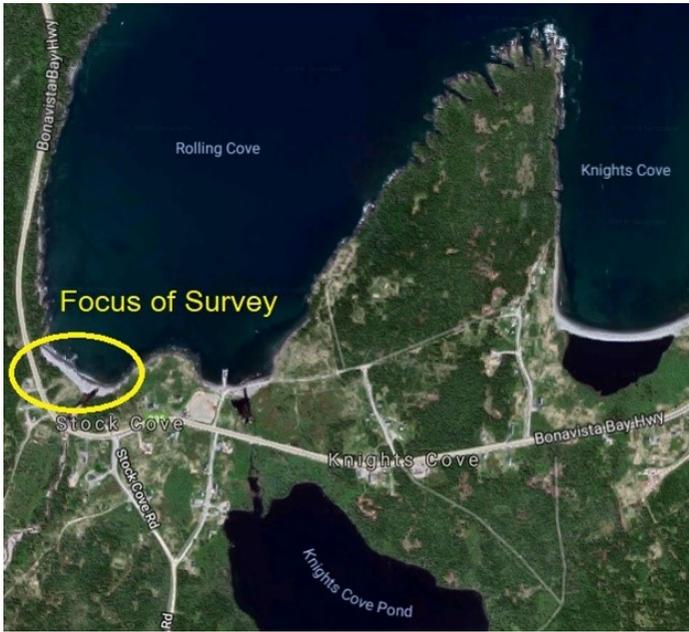


Figure 2: Stock Cove location



Figure 3: Stock Cove Beach Front

### Kings Cove Reconnaissance

The next stop on the Bonavista Peninsula was a visit to the community of Kings Cove, where there are a number of restored and registered architectural heritage buildings, and a local acknowledgment of historic land use on a roadside heritage board as well as trail signage illustrating the town’s 18thC origins and history.

Based upon our cursory survey of the town, we noted numerous dry laid stone walls, building foundations, crop marks and root cellars throughout the community. In particular, and as noted in the Figure 4, these are located in significant numbers along the north side of the harbor from the church and adjacent the Lighthouse Trail. An outcrop of stone, south of the church, is similar in appearance, and may be the source for some of these structures.

An example of one of these stone foundations, (see Figure 5), demonstrates the preserved and robust nature of these features. In view of the limited time, the abundance of historic features, and the lack of knowing whether these were situated on public or private lands, no sites were recorded. The extensive nature of the foundations and walls, however, suggests that further research is required to determine the nature and significance of these architectural remains. Based on the findings of this cursory reconnaissance, any future land use proposals in this community, and in particular, in this area of well-defined

ed to the current heavily modified beachfront. A cave feature was located at the western end of the cove and was visually inspected and photographed. Tall enough to walk into, and measuring about ten feet in depth, the interior of the cave contained no evidence of any cultural activities. Considering the low-lying entrance, and the ocean currents and tides, which continuously sweep the interior clean; it was not surprising that this natural feature was free of debris.

Figure 4: Kings Cove feature location





Figure 5: Kings Cove Stone Walls and Foundations

stone features should be carefully scrutinized for archaeological potential.

**Grand Falls-Windsor**

Located on Scott Avenue, between Valley Road and the site of the former Abitibi Consolidated Mill in Grand Falls-Windsor, this is one of two sites chosen for the development of new Long Term Care Facilities in the province. Notwithstanding the fact that we expected these lands to be heavily disturbed, a brief foot survey was conducted in the early evening of June 11, 2018 to determine if there might be any historic resources on the property.

Based on a limited foot survey, we confirmed that the area is heavily disturbed. In fact, this former valley contains massive amounts of debris, estimated in some places, to be over a metre in depth. Although much of this material appears industrial in origin

(seemingly related to the mill operation), it also looks to have served, for some time, as a dump for residential debris. In addition to evidence for geotechnical work, ground water monitoring stations are located throughout the area, suggesting that there are known or suspected environmental concerns. Potential for preserved significant historic resources in this area is unlikely due to heavy modification of the lands.

Figure 6 illustrates the track log and the location of landfill along the hillside a few meters back from the intersection of Scott Avenue and Taylor Road. If construction activities were to uncover historic resources, archaeological assessment would normally be required. In this case, however, due to the uncertain nature of the fill, the PAO would not support archaeological investigation without verification



Figure 6: Grand Falls-Windsor GPS Track Log and Evidence of Landfill

of site safety through appropriate environmental review and testing.

**Sabbath Point, Red Indian Lake**

Since 2010, the PAO has funded Directed Research projects in the Exploits Valley, which have among other things, resulted in the discovery of the Sabbath Point (DeBd-08) house pit on Red Indian Lake in 2016. In June 2017, the PAO conducted a metal detection survey of the site that resulted in the recovery of a complete Beothuk iron spear point approximately 10 to 15 cm below surface – a defining characteristic of interior historic Beothuk sites (Erwin and Hull

2018). In October 2017, detailed site mapping of the house pit was conducted utilizing Unmanned Aerial Vehicle (UAV) technology and advanced computational work that resulted in highly accurate and scalable images that have firmly established the feature as a large well-preserved Beothuk house pit (see Erwin 2017; Erwin, Bolli and Crompton 2018).

Plans for excavation in 2018, based on the survival of the site from active shoreline erosion, initially included a Ground Penetrating Radar (GPR) survey to help inform excavation, and to record features as part of the overall effort to preserve site in-

Figure 7: Erosion of Shoreline at Sabbath Point





**Figure 8: Remaining House Pit at Indian Point**

formation. Unfortunately, the GPR survey, planned for late May could not be conducted due to spring flooding, site access issues and scheduling problems. As such, our visit in June was the first chance we had to assess site conditions in 2018.

Based on the high water levels on the lake due to spring flooding, approximately 1-2 meters of the shoreline had collapsed (see Figure 7). As suspected from last fall's visit, when we observed the shoreline to be deeply undercut (Erwin and Hull 2018:67-68), significant erosion had taken place over the preceding months. One large tree had fallen into the lake, and the ground had slumped where it was previously undercut, leaving only 1-2 meters of shoreline from the edge of the house. Though no cultural material was noted in the collapsed portions of the shoreline, any further erosion would likely result in a loss of historic resources. Based on these observations, the PAO initiated excavations through the Department's Directed Research Program, and supported the excavation of 20 square meters of the most exposed areas of the

site in two phases. See Schwarz and Hutchings 2018 (Phase I); and McLean 2018 (Phase II).

The aim of this work was to salvage exposed portions of the site, and to promote research interest in the site. We are currently exploring plans to further the investigation and salvage of the site in 2019.

#### **Indian Point, Red Indian Lake**

After the assessment of the Sabbath Point house pit, we met with Teresa Greene, president of the Red Indian Lake Heritage Society to discuss the proposed location of a new Parks Canada Plaque at Indian Point. Together, we reviewed the proposed location (adjacent the easternmost storyboard), and confirmed that previous testing was sufficient, and that the new signage would not require any further testing. In reviewing the general area, we also revisited the last remaining house pit (believed to be Devereux's Feature B5) at Indian Point, which McLean had relocated in 2016 (McLean 2017a:30-31). Similar to, but smaller than the Sabbath Point house pit, it is not as well defined. Returning to this site the evening of June 12<sup>th</sup>, a cursory metal detection survey resulted in a number

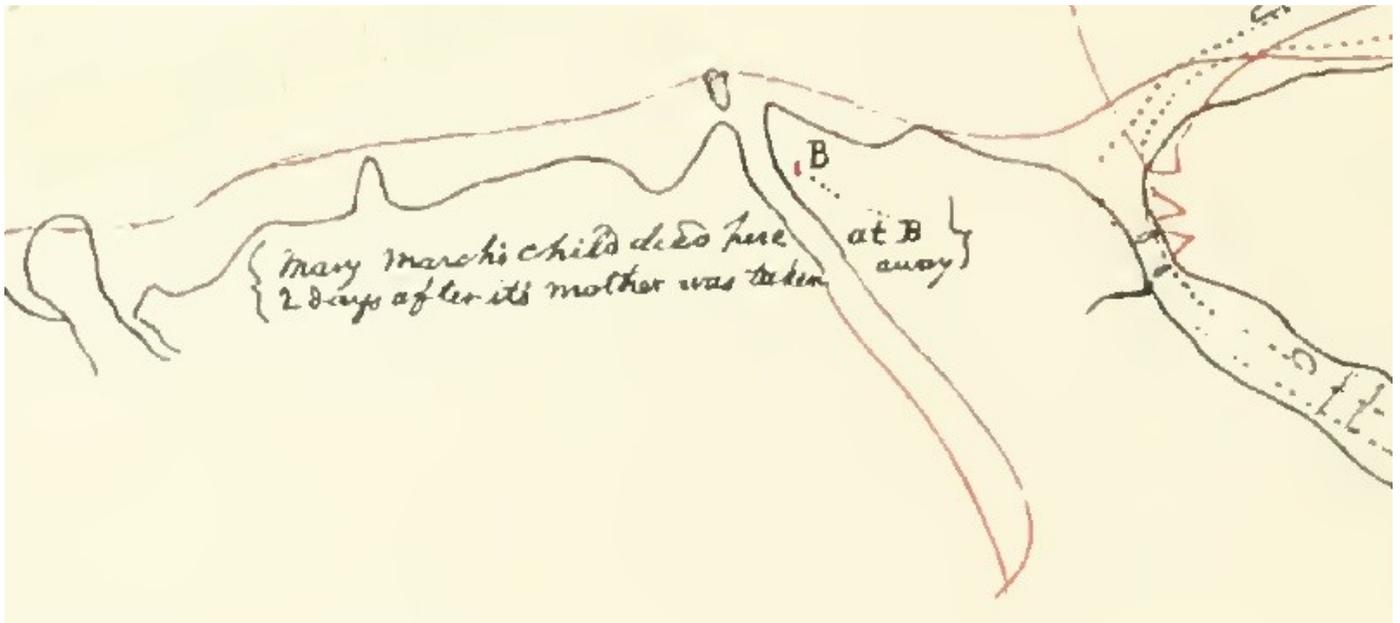


Figure 9: Excerpt from Shanawdithit's Sketch Map III

of positive readings. Appearing in relatively good condition, the house pit was cleared and tested in 2016 by McLean, and as such, remains somewhat exposed. It is recommended that this house be mapped using UAV technology and that excavation be undertaken in the future, owing to its highly accessible location.

**Red Indian Lake, Southern Shore**

The discovery of a previously unrecorded and undisturbed Beothuk house pit at Sabbath Point suggests that other such features may have escaped the ravages of erosion along the southern shoreline of Red Indian Lake. However, pressures for cabin development along the lake also continue to threaten potential archaeological resources. One such area, which has received little previous archaeological survey, is the area west of Victoria River, opposite a small Beothuk encampment (Lloyd 1876:223), and the location of the death of Mary March's child (Howley 1915:240) (see Figure 9).

Although there are no known archaeological sites immediately west of Victoria River, nor are there Beothuk encampments noted in Shanawdithit's drawings, this area is considered to have potential for historic resources. To this end, we continued preliminary survey work in the afternoon of June 12, 2018 along the southern shoreline of Red Indian Lake about midway between Victoria River and a small stream further west. The shoreline, however, consisted of steep sloping, undulating land with few level areas

that would be suitable for sites. The examination of a number of tree falls revealed no cultural materials. Considering the physiography and the lack of any exposed cultural materials, we concluded, that this area has low archaeological potential.

**Sutherland's Pond Survey**

As part of our ongoing efforts to digitize archaeological records, a letter and a sketch map of Sutherland's Pond, also known as Solomon's Lake, was uncovered in the spring of 2018. Originally mailed to Dr. James Tuck of Memorial University regarding a possible Beothuk "burial" site, this was information provided to Henrik Deichmann of Terra Nova National Park, by Mr. Frank Paul, who conducted a forest survey in

Figure 10: Sutherland's Pond Survey



1958. It is unclear whether any archaeologists had previously visited this area, as there are no records of any site visit. Likewise, there are no reported archaeological sites on this pond, nor is it an area noted to be of any significance in Shanawdithit's drawings. While such reports, more often than not, provide negative results, the location and proximity to Red Indian Lake and Victoria River, suggests that there may be potential for historic resources at this location.

On this basis, we undertook a survey of the northeast shore of Sutherland's Pond as outlined in the 1958 letter. As indicated by our track logs in Figure 11, we followed a woods road adjacent to the stream for approximately 1.5 to 2km. We then found our way to within approximately 500m of the river, then crossed through a wooded area to the stream that connects the pond to the Red Indian Lake. Upon reaching the stream, at about 200m from the mouth

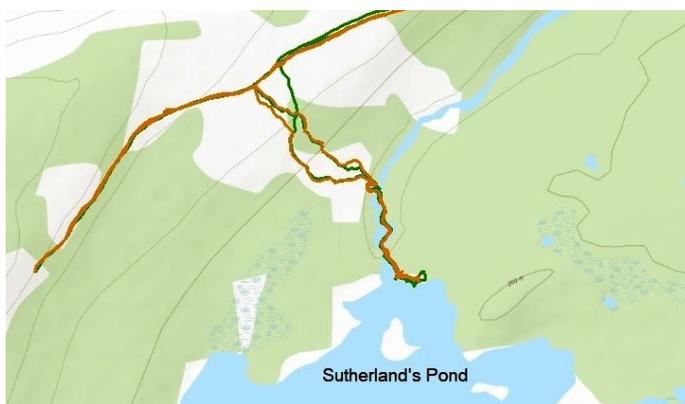


Figure 11: Sutherland's Pond Survey Track Routes

of Sutherland's Pond, we crossed at a narrow section by hopping from boulder to boulder. From there we made our way along the eastern side of the stream to the head of the pond. The route to the pond along the stream was heavily wooded providing minimal clear footing to the top of the pond.

Upon reaching our destination, we discovered the area to be largely inaccessible due to forest, poorly drained soils with scrub, brush and mossy vegetation. A brief foot survey conducted in better-drained areas, away from the water's edge and into the dense forest cover failed to uncover any evidence of cultural activity. It is noted that there was little chance of identifying any archaeological sites in this area due to high water levels, and the waist-high vegetation within the non-forested areas, and even less within the heavily wooded portions (which all but prevented movement within). A small island (to the south) might have some archaeological potential, but there

Figure 12: Island in Sutherland's Pond (south)





**Figure 13: Little Red Indian Pond 2017 and 2018 Survey Track Logs**

was no way to access it on foot. Any future survey of the shores of Sutherlands Pond should be conducted by boat, and when water levels are lower.

#### **Little Red Indian Pond Survey II**

The transportation of Demasduit's body by Buchan up the Exploits in January 1820 is one of the most enduring historical events during the final years of the Beothuk and marks the period in which the entirety of the Beothuk tribe was said to have "only amounted to 27 in all" (Howley 1915:242). An initial attempt to locate this last known site by the PAO in 2017 was unsuccessful, and it was concluded that the areas we had searched were likely under water due to natural factors relating to pond ecology. As such, it was proposed that a future survey should begin along the 180m contour interval (shown in red in Figure 13) – which might have been the "dry" edge of the pond at the time of the Beothuk encampment.

As indicated in Figure 13, the yellow line is the 2017 GPS track log and the area in which we conducted our first unsuccessful survey. The or-

ange line is the track log for the area in which we focused our activities in 2018. The survey of this area began June 13, following heavy rains during the early morning. As in 2017, we were able to drive into the area via a woods road to a cleared power line corridor. Travelling west on foot from the location of our parked vehicle, we traversed the corridor for a distance of approximately 2km toward the edge of the 180m contour (See Figure 14). Along the power line corridor, we conducted a visual survey of a number of exposed and blown out areas. None of these inspections resulted in the discovery of any cultural material. Likewise, a single test pit, excavated within the perimeter of a small boulder "ring" down to sterile through a grey sandy subsoil filled with waterworn cobbles, failed to produce any cultural material.

Upon reaching the edge of the 180m contour interval, which was the high point along this ridge, Little Red Indian Pond was clearly in view to the northeast. The view southward to the Exploits River, however, was blocked by the conifer forest. If this was the location of the Beothuk camp illustrated and recounted by Shanawdithit, the view may have been clear through a deciduous (birch) forest during the winter months when foliage was absent. A single (sterile) test pit along the edge of this ridge was excavated through a soil horizon down to a depth of 60cm. The buried soil horizon is the result of the movement of soils related to construction activities associated with the development of the power line corridor.

**Figure 14: Southern ridge at Little Red Indian Pond**



In view of the lack of any evidence of cultural materials, it is proposed that the northern ridge of the 180m contour interval may have been the area of the encampment. Access to that area, however, was not possible due the expanse of the bog between the two ridges. Nevertheless, the location of the



Figure 15: Four Mile Rapids (DfAv-01)

Beothuk camp (if it existed in this area) was likely no lower than this ridge. Alternatively, Beothuk away from the main camp may have seen Buchan's party from a lookout position that was closer to the river. Despite the negative results of the 2018 survey, further research should explore how this site fits within the Beothuk's movement within the interior of the island during their terminal days of their culture.

Finally, from an access standpoint for future survey work in this area, it is noted that the 180m contour may be more easily accessible from an alternative woods road about 2kms from the highway toward Millertown. If passable by vehicle, the alternative route would reduce walk-in by about 2kms. Likewise, any subsequent survey might take advantage of drier conditions of the late summer, which could allow access to north ridge. From an archaeological landscape perspective, it would also be interesting to visit this area during the winter.

**Return to Four Mile Rapids (DfAv-01)**

There has been some discussion whether or not the Four Mile Rapids site is illustrated on John Cartwright's 1786 map recording his journey up the Exploits River as far as Red Indian Lake. However, it was more likely first seen by David Buchan, who observed two wigwams on January 16, 1811 during his voyage up the Exploits (see McLean 2016:8-9). In 1967, Don Locke reported finding this site, which he described as having three house pits. In 1992, Schwarz briefly revisited the site and reported finding only a single house pit, though suggested that this was likely the site identified by Locke (Schwarz 1992:28-29). In 2016, McLean conducted a five-day reassessment of the site that confirmed three house pits (McLean 2016:11-26). Noting that the house pits were relatively small in size, similar to "older circular

forms" and contained little European materials, McLean suggested that this site may represent one of the earliest Beothuk sites in the Exploits Valley (McLean 2016:27-18). Likewise, the location is significant as the eastern-most interior Beothuk site on the Exploits River.

Owing to the fact that this site is easily accessible, and thus susceptible to looting, we undertook a brief visit to check on site conditions. Situated within a couple meters of the riverbank atop a steep slope, we identified the three previously reported house pits. Despite the tree growth, the site remains in relatively good condition. McLean's survey stakes from 2016 remain in place, and with no evidence of recent pot hunting. Other than Locke's targeted digging and McLean's testing, the site remains unexcavated. As a possible eastern terminus of a portage path used by the Beothuk to bypass the rapids and waterfall associated with Grand Falls, this is an interesting site that contains relatively intact architectural elements, as well as fire cracked rock and bone deposits, with some potential for excavation. The site's proximity to Grand Falls-Windsor and ease of access is also advantageous for conducting additional investigations.

**Warford Brook, Red Indian Lake**

The significance of the Beothuk occupation of Red Indian Lake has been the subject of archaeological enquiry for some time. To this end, Shanawdithit's sketches and descriptions of Beothuk settlement on the Lake have proven to be an invaluable resource to historians and archaeologists. The general geographic location of a number of places depicted in Shanawdithit's drawings have proven to be useful in the location of the archaeological sites. However, as archaeological remains are often ephemeral, they are not always easily located. One such site is the Nonosabasut and Demasduit Burial Hut (DeBd-05) which is included in the province's archaeological inventory on the basis of Shanawdithit's Sketch I (see Figure 16), and Cormack's 1827 description of an abandoned campsite that contained scaffold and box burials (Howley 1915:192-194; Marshall 1996:398-399).

A PAO sponsored Directed Research Project in 2012 of a 6.2km portion of the Lake's northeastern shore in this vicinity failed to find any evidence for this site. Results of that survey demonstrated that a great deal of shoreline had been lost to erosion, and that such sites may well be lost to the lake. Despite the negative results, local resident and retired outfitter Don Pelley (pers. comm. 2017), who had worked on the 2012 project, suggested that a more intensive survey undertaken from Warford's Brook in an area ¼ to ½ mile west might yield more positive results. To this end, the PAO proposed a one-day targeted survey to locate any traces of this site on June 14, 2018. Unfortunately, due to unforeseen circumstances, we were not able to proceed with this survey. A survey is tentatively planned for the summer of 2019.

**North Side of Red Indian Lake**

In view of mounting development pressures owing to the release of former Abitibi Lands by Crown Lands, the PAO has focused Directed Research activities,

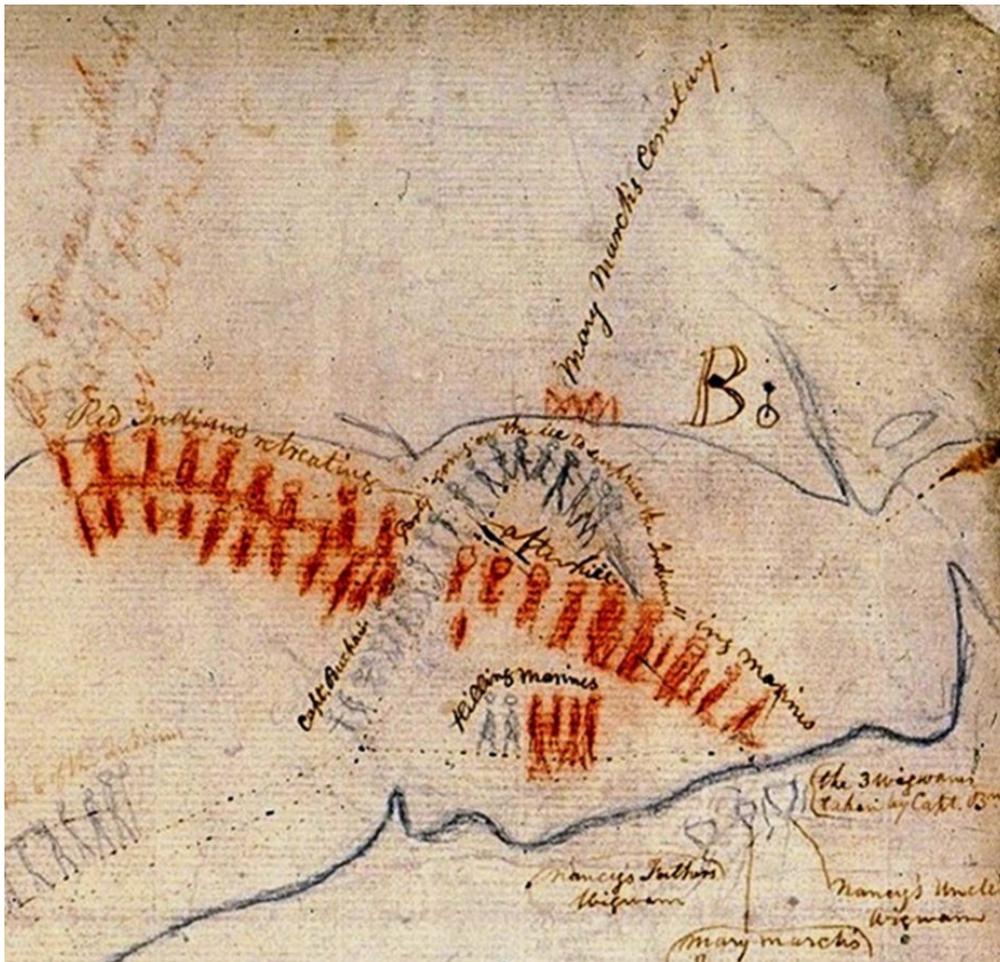
including two modelling exercises of archaeological potential in the Exploits Valley (see Rast and White 2017, and this volume and Tapper 2018). To date, the focus of much of the archaeological work on Red Indian Lake has been in the eastern end of the lake. Surveys along the northern side of the lake, and in particular, the western end have been minimal. Additionally, this work serves to familiarize ourselves with the opportunities and challenges for conducting future work in this area, and to determine the feasibility of future Directed Research projects.

Past archaeological survey on Red Indian Lake has focused on the notations made by Shanawdithit of Beothuk encampments. Her drawings of the lakes, rivers and ponds are a reflection of her memories of the places and events (see Figure 17). Though the focus of these events relate to the last days of her tribe, her geographical knowledge was gained over her lifetime. In using these drawings, Don Locke, and others have focused on the annotated points of interests, and particularly the habitation areas, practically all of which have been located.

Outside of these annotated points of interest, very little archaeological reconnaissance has been conducted around the lake. It is important to note that while Shanawdithit's recollections of her people's movements is an invaluable historical record, there are likely other areas of archaeological interest not depicted. As such, it was the goal of our survey to investigate areas along the north side of Red Indian Lake, and in particular, any points of land that are easily accessible from the road that follows much of the lake edge.

Notwithstanding the erosional processes that have decimated the shorelines of this lake, the recent evidence

Figure 16: Excerpt from Shanawdithit's Sketch I





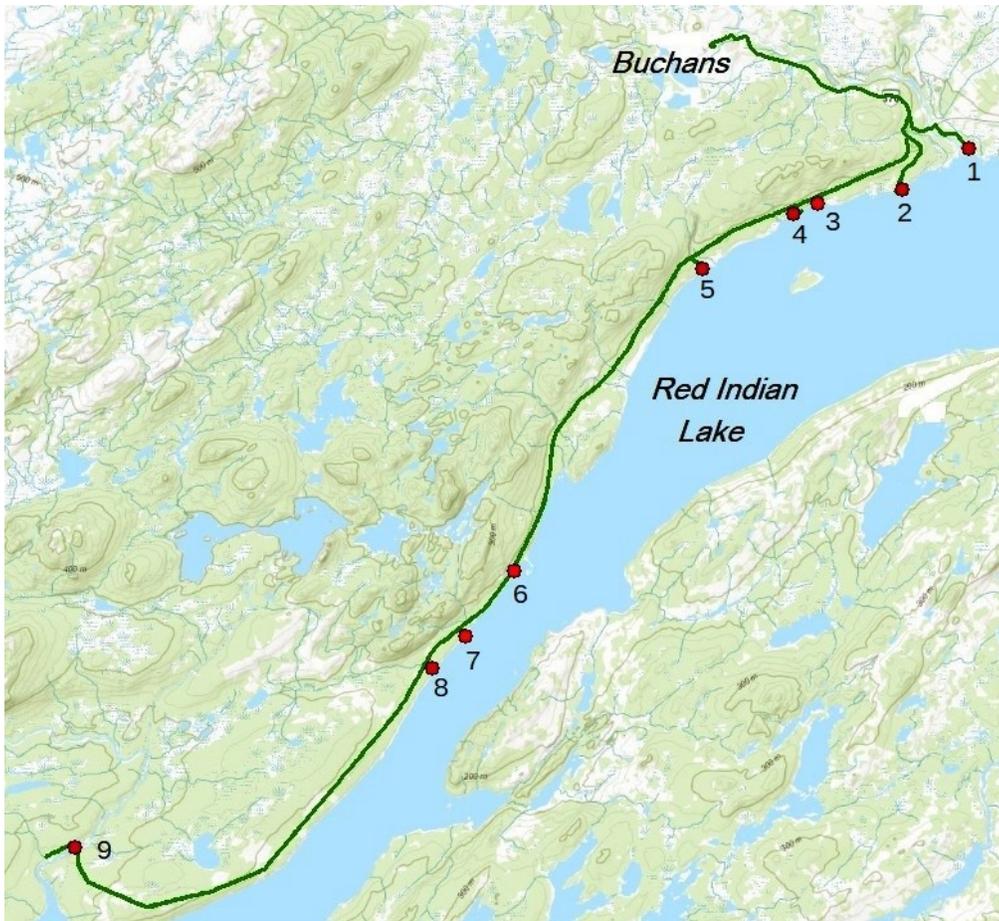


Figure 18: Red Indian Lake North Shore Survey

of the previously undocumented Sabbath Point site provides some hope that other such sites exist. In view of this possibility, we inspected nine areas covering a distance of approximately 50km along the north side of Red Indian Lake from Buchans Brook to Shanadithit Brook. These areas are marked as red dots and labelled 1 to 9 in Figure 18. Although no cultural remains that could be attributed to Beothuk were found, the surveys did not include any subsurface testing. Rather, a simple visual survey for eroding features or other similar evidence was employed. While much of the road along the north side of the lake was passable, there were a number of washed-out areas that proved challenging. Eventually poor road conditions prohibited us in reaching our goal of prominent point of land situated about 10 km past Shanadithit<sup>1</sup> Brook. Despite not reaching that point, we were able to make a number of walking surveys along the lakeshore as follows.

While our survey failed to discover any evidence for significant historic resources, the lack of cultural resources at a number of these locations is likely due to a number of factors, not the least of which was extensive shoreline erosion. Despite the negative results, this work is important relative to the portions of Shanawdithit's Sketch I (see Figure 17), entitled "Captain Buchans' visit to the Red Indians in 1810-11". In particular, this annotated map illustrates the locations of Beothuk encampments and events related to Buchans' visit. As such, the sketch map illustrates five locations related to the historical events surrounding Buchans. From east to west, these include locations for the following:

- A) The pole on which they had placed one of the marine's severed head, around which they had danced and sang;
- B) Mary March's Cemetery, from which Demasduit and Nonosabut were interred in a burial hut;
- C) Two wigwams where the Beothuk had camped during the first night of their retreat after the killing of the marines;
- D) An encampment (across from Buchans Island) that the Beothuk had reached before daylight, and where they remained one day, waiting for Nancy's uncle to join them; and
- E) An encampment in the woods that the Beothuk had reached at night, and from which they set off across the lake early the next morning.

By attempting to locate the area of these events, we hope to direct future survey toward determining, what, if any archaeological remains might exist.

#### Survey Area 1

The survey in Area 1 was conducted along the north side of Buchans Brook. Following an overgrown road

<sup>1</sup> The spelling of the brook named after Shanawdithit on the topographic 1:50,000 mapping is "Shanadithit".

a distance of approximately two kilometers on foot, we were able to reach the shoreline of Red Indian Lake near Area C, described by Shanawdithit as the location of two wigwams where the Beothuk had camped during the first night of their retreat after the killing of the marines. Unfortunately, we were on the opposite side of the brook according to the placement of two wigwams on Sketch I. However, the Lake we discovered a complex set of ponds and flooded areas



Figure 19: Survey Area 1

and a massive amount of rotting organics, which attests to the seasonal flooding of this area. A small off-shore island, which presumably was once a point of land during lower lake levels was also noted. Water-logged soils in this location predominated the landscape, offering little opportunity for subsurface testing.

Curiously, the pathway leading to this area also contained a great number of recently butchered bone remains scattered about, including a large boulder-lined bone midden containing numerous long bones and scapula.

As the smell of the rotting grease attested, the bone midden appears to have been recently used. While the adjacent boulder construction may be of some age, it was not recorded as an archaeological site due to its current use. The abandoned roadway to this area, which is marked on the 1:50,000 topographic maps, seems to have long since been regularly travelled as evidenced by the encroaching vegetation. Local resource interviews may be the key to understanding the use

of this area for butchering purposes, as well as the abandonment of the remnant road.

**Survey Area 2 - Eroding Shoreline**

Other than the area nearest Warford Brook (which was surveyed by McLean in 2012), none of these areas has been professionally surveyed. In view of the fleeting nature of the events, save for areas B and C (the two wigwams and the burial hut), any archaeological remains would be ephemeral at best. With the apparent loss of shoreline due to erosion, it is possible that no traces of any of these activities remain. However, considering the lack of any previous survey, it would be a mistake not to look. As such, our

Figure 20: Survey Area 1 – Flooded Landscape on the East Side of Buchans Brook





**Figure 21: Boulder-lined Bone Midden**

starting point was an area of cabin development (Area 2) situated on a wide sandy beach. From this vantage point, we had a clear view, across the lake

**Figure 22: Survey Area 2 - Eroding Shoreline**



toward Sutherland's Pond. The beach is composed of a coarse sand, gravel and waterworn cobbles and is approximately 150 meters in width and about 30m in depth. The water is no more than about a metre deep, some 15 metres out from shore, suggesting that the original shoreline was well into the water, and that the sandy beach is what remains of the forest floor.

Active erosion, including undercutting, is also evidence of the loss of shoreline at this location. The cluster of cabins at this location,

and the considerable development along the north side of Red Indian Lake suggests that many of the best areas (with access to the lake) are already developed. As such, any future surveys should include interviews with local cabin owners to determine if historical objects of interest have been found in these areas, and to seek permission to test on private lands where feasible.

**Survey Areas 3 and 4**

Shanawdithit's Sketch I is an important resource for the area of shoreline adjacent Buchan's Island, which would have been clearly visible from Areas 3 and 4. It is in this vicinity where the Beothuk camped waiting for Nancy's uncle to join them (Event D). Our initial reconnaissance of this area suggested considerable shoreline erosion, however, without systematic testing, we should not rule out the possibility that something might remain of these sites. More specifically, we noted an abandoned cabin that lay in ruins along the shoreline at Survey Area 4. Accessed from a power line corridor and along an overgrown path, we were able to gain access to the lakeshore that is almost directly across from Buchan's Island. The collapsed cabin remnants appeared to date to the 1960s, and were of no apparent historic value. The shoreline at this location is narrow, but does not appear to be as heavily eroded as other areas of the northern side of Red Indian Lake. This may be, in part, due to the location of Buchan's Island, which could serve as a



Figure 23: Survey Areas 3 and 4

buffer between some of the erosional forces of the lake, such as ice rafting. At this location we conducted a more extensive foot survey of the beach, owing to the fact that this area is believed to be near Area D.

Based upon Shanawdithit's sketch map, it appears likely that the point of land on which this camp was located may have been the point west of areas 3 and 4 (as indicated by the yellow arrow in Figure 23). Although areal imagery indicates that this point is heavily eroded, the area of encampment is only roughly indicated as three small circles on the west side of the point of land. In view of the imprecise nature of the sketch, and the fact that the Beothuk were fleeing as the result of the marine incident, their camp may well have been back from the shoreline as a means to minimize their detection.

Survey Area 3, which is also situated across from Buchan's Island, was accessed from a roadway that led to a cabin. The sloping lands toward the Lake also showed evidence of shoreline erosion, and with much less archaeological potential than Area 4. Despite the negative results of this preliminary work, it is recommended that a more thorough survey be conducted on the point of land located west of Area 4 to determine what, if any, evidence remains of the Beothuk retreat along the north side of Red Indian Lake.

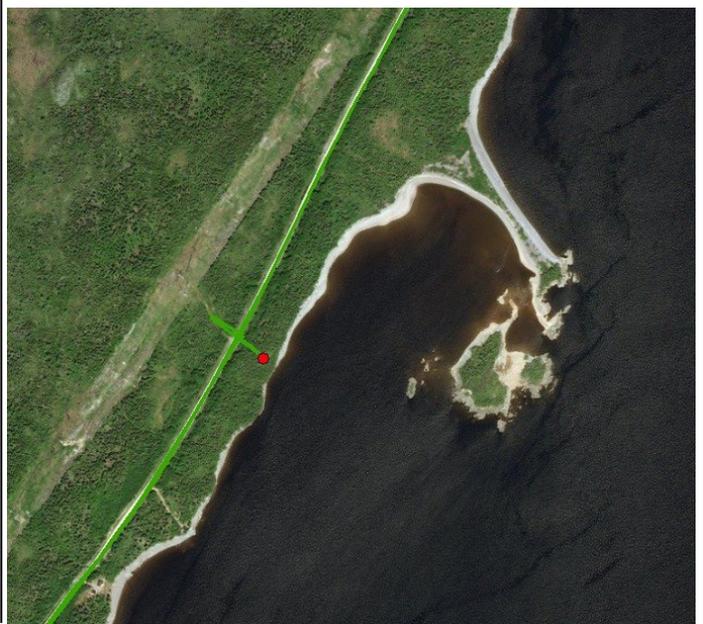


Figure 24: Survey Area 5

### Survey Area 5

A survey of Area 5 was conducted at the mouth of Clench Brook, which empties into Red Indian Lake adjacent Red Indian Lake Outfitters. This is on a portion of the lake where there is evidence of extensive erosion and flooding as observed from both the aerial maps and the presence of large drowned tree stumps. The adjacent point of land (eastward) may have some potential, though it too shows evidence of extensive erosion. From a logistical perspective, the camp would serve as an excellent base for future water-

Figure 25: Survey Area 6



based surveys of the Lake, including a research project to explore Buchan’s Island and the areas identified by Shanawdithit.

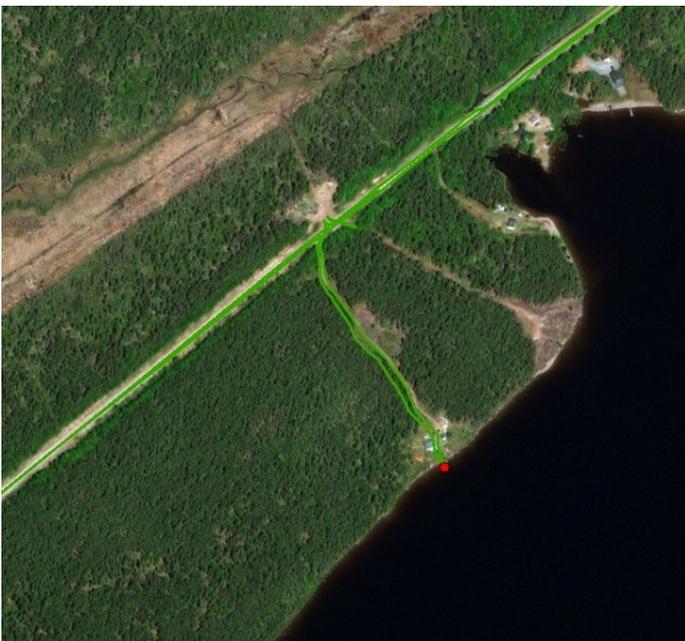
**Survey Area 6**

Survey Area 6 followed an overgrown trail down to the Lake, where we came to a narrow sandy beach that widened out to the east and which was protected by a long spit of land and a small island that looks to have once formed part of a small peninsula that provided some shelter to this area. While the lands in the immediate vicinity were sloping and had little to no archaeological potential, the remnant peninsula and island are noteworthy, even though they show signs of flooding and erosion. Despite the fact that the shoreline provided access to this area, we lacked the time to conduct any further survey of this area. A future survey along this peninsula and island is recommended.

**Survey Area 7**

Survey Area 7 followed a steep path down to the lakeshore and a clearing that contained a cabin. A wide clearing associated with this property exposed the shoreline and showed evidence of active erosion of the bank, that dropped approximately one metre to the water’s edge. Conditions along the lakeshore suggested that much of the original shoreline had washed away and that little potential remained at this location. The point of land and the small cove northeast of this area was heavily developed and is likely an area of

**Figure 26: Survey Area 7**



higher archaeological potential before cabin development.

**Survey Area 8**

Survey Area 8 consisted of a brief reconnaissance of a small un-named cove and brook that empties into Red Indian Lake. This area was accessed from a road that services a number of cabins along the south side of the cove. The shoreline at the end of the road was sloping but relatively stable, showing no obvious signs of active erosion. A potentially attractive area for a campsite, however, was a low flat beach area located about the mid-way point along the southern side of the cove (indicated with the yellow arrow in Figure 27) that contained a cabin. As such, little potential seemed to remain, owing to the existing development.

**Figure 27: Survey Area 8**



**Survey Area 9**

Due to low water levels near the bridge (see Figure 28), the brook looked to be largely impassable by watercraft, except perhaps by kayak. Owing to seasonal flooding, the banks of the brook are relatively clear of vegetation, making a foot survey possible. Future survey work along this brook could readily be conducted from this point, south toward Red Indian Lake. Though there are no historic records of any Beothuk encampments in this area, the stream is a noteworthy feature in any historic resource modelling exercise,

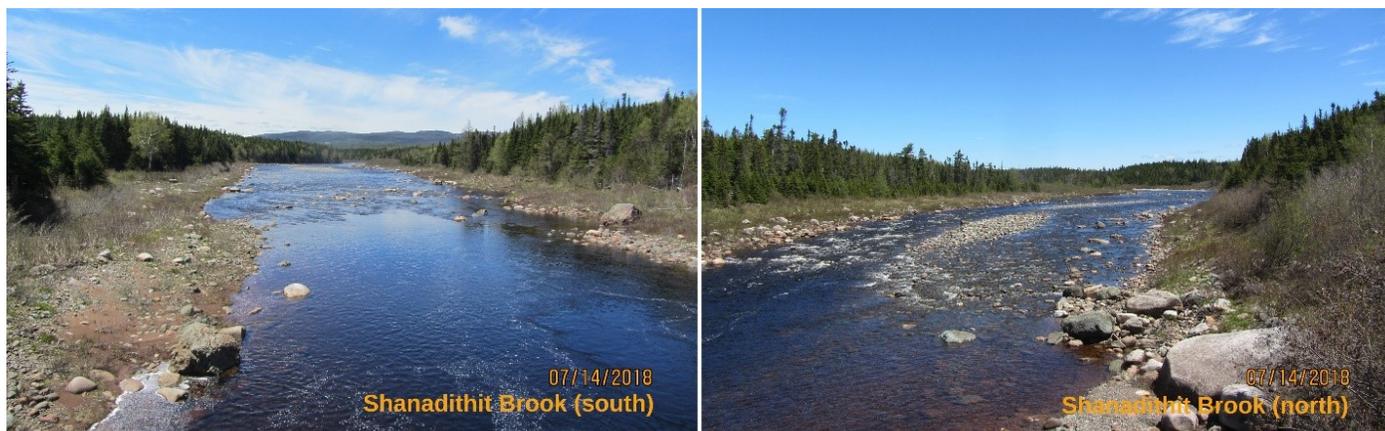


Figure 28: Survey Area 9 - From the Bridge at Shanadithit Brook<sup>2</sup>

and should eventually be the subject of archaeological survey.

Our survey of the north side of Red Indian Lake was curtailed just past Shanadithit Brook due to the washout of the road. At this most westerly point, it is noted that finds have been reported at the mouth of Shanadithit Brook (Wayne Hynes pers. Comm. 2017), but have yet to be verified.

**Part II –Notre Dame Bay and White Bay Surveys (August 13 to 20, 2018)**

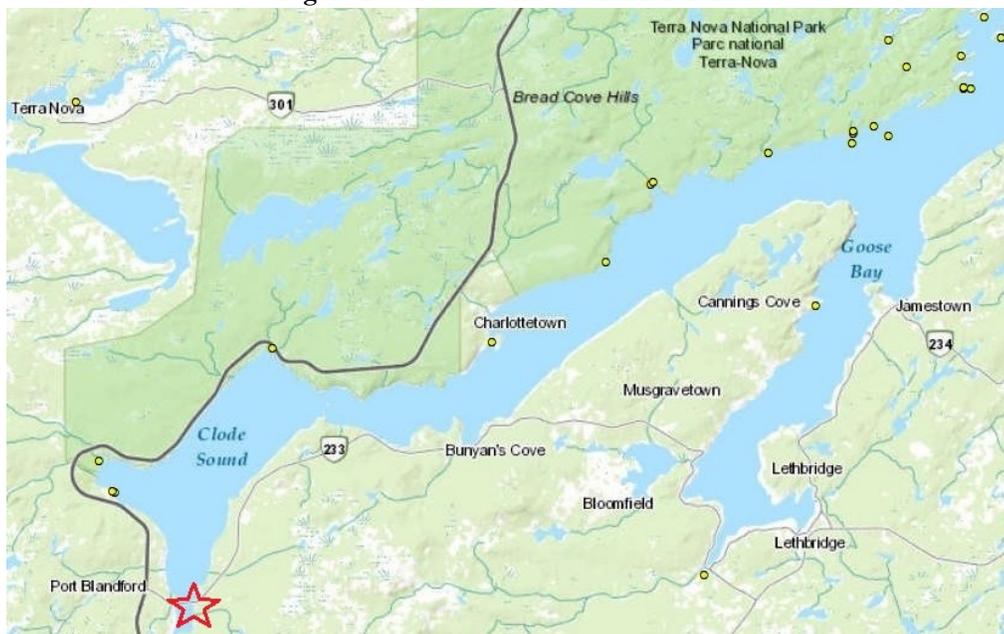
Our second week of survey activities in 2018 saw the PAO in a number of communities from the Avalon to the Baie Verte Peninsula. In the town of Sunnyside, we delivered archaeological signage to Robert Snook of the local heritage organization for the Bay

Bulls Arm Telegraph Station site. Later that day, our survey work took us to the east side of Clode Sound in the town of Port Blandford, just south of the site of a small park that commemorates the lives lost in a 1963 bridge collapse. This area has seen limited archaeological research, most of which has been focused within Terra Nova Park along the north side of the Sound.

Archaeological investigations within a 20km radius of Port Blandford have resulted in the discovery of only four sites with limited historical significance. In view of the paucity of known historic resources in the immediate vicinity of the town, the dozens of archaeological sites further out toward the coast, and the lack of survey work outside of the Park, it seems that the full potential for historic resources in this region is yet to be fully understood. Toward this, the PAO surveyed a portion of coastline in Port Blandford, where there are plans for shoreline stabilization and a new wharf, to determine if a Historic Resource Impact Assessment might be required.

This survey revealed that the Memorial Park, road construction and tree cutting had disturbed an adjacent section of shoreline south of the bridge. Two test pits were excavated to sterile, with no

Figure 29: Clode Sound – Port Blandford



<sup>2</sup>See page 18 for alternate spelling of Shanawdithit vs. Shanadithit Brook.



Figure 30: Track Log in Port Blandford

evidence for the presence of historic resources or archaeological potential. Despite the negative findings, additional survey along the southern side of the Sound seems warranted in view of the foregoing discussion.

**Cape Freels**

Following our work in Port Blandford, we went on to Cape Freels to meet with Roberta Bungay at the Barbour House to deliver archaeology signage for the proposed Cape Freels Heritage Trust’s trail redevelop-

ment. In an ensuing discussion regarding the potential impact of the proposed trail extension and the requirements for a Historic Resource Impact Assessment, it was determined that more exact geographical coordinates would be required to facilitate any required archaeological work. Working with the Heritage Trust, arrangements were made with local volunteers Duane and Renee Collins, who would go on to provide a GPS track log for the proposed new trail.

**Shalloway Stone Point**

In July 2018, the PAO received a report that a stone projectile point, found in a load of “gravel” likely originated from a quarry located between Deadman’s

Figure 31: Shalloway Stone Point



Figure 32: Shalloway Sand Quarry



Bay and Musgrave Harbour, near Shalloway. The spear point (as it appears too large to have functioned as an arrow point), is fashioned from a white weathered stone similar in appearance to “Trinity Bay Chert”. Arriving at the coordinates of the quarry, we undertook a brief walking survey of the area, and found deeply stratified sands with some large water-worn boulders. No evidence of archaeological deposits could be found.

Considering that this quarry contained sand and not gravel deposits, it seems likely that either the information we had received was not accurate, or we had failed to locate the actual gravel deposit. Regardless, Cape Freels remains an area of high archaeological potential, which will benefit from further survey.

**Lewisporte Harbour**

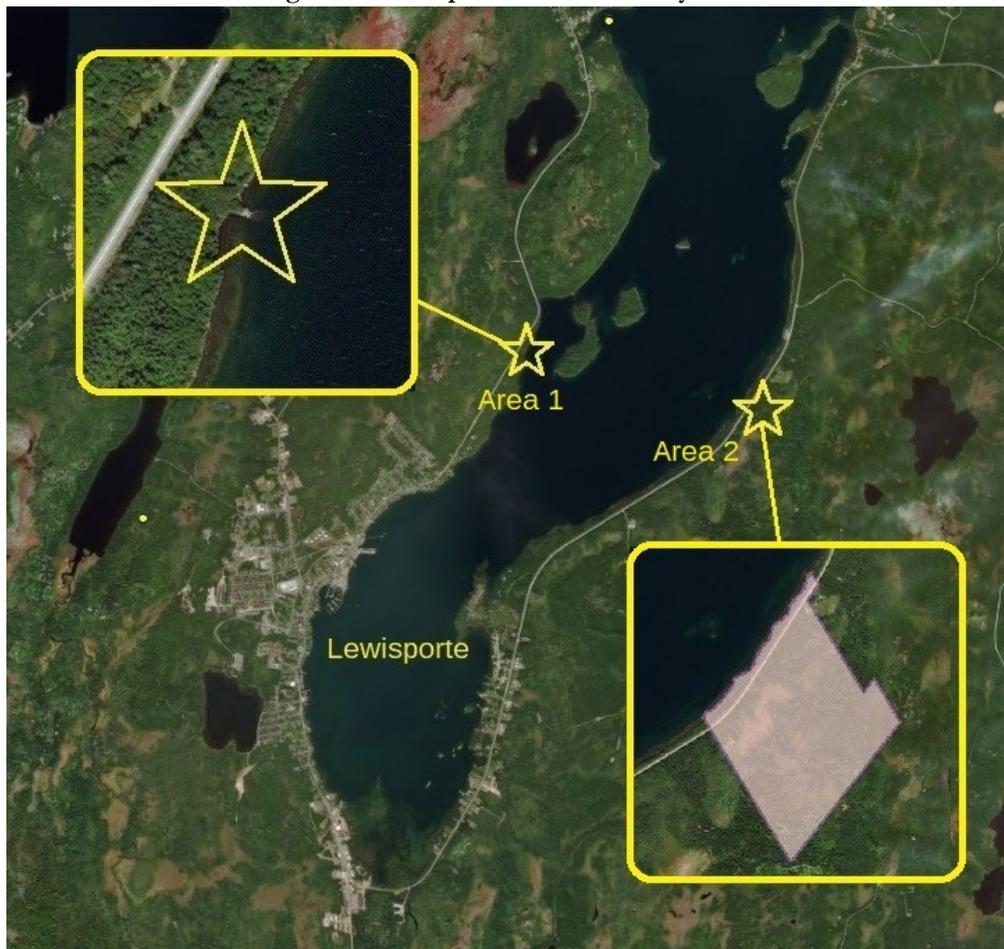
The focus of our next stop was the Town of Lewisporte where we investigated a small peninsula of land on the west side of the harbour that had the appearance of a wharf, and a strip of shoreline along the east side of the harbour adjacent a planned Industrial Reserve.

Previous archaeological investigations in the region have demonstrated the archaeological significance of this region to include Maritime Archaic, Dorset, Recent Amerindian and Beothuk peoples. However, aside from Penney’s (1999) assessment of Commercial Harvesting Areas in the Lewisporte Resource Management District, archaeological work had not been previously documented in Lewisporte Harbour.

The point of land, identified as Area 1 in Figure 33, extends into Lewisporte Harbour and based upon aerial imagery, appears to be a wharf that has fallen out of use. Located only about 120m from the road, this point of land was accessible by foot down toward the water’s edge. The hillside is steeply sloped, heavily treed and covered in much debris dating from the 1950s-60s, including the wreck of a truck, iron fencing, heavy gauge cable, concrete and paving. Upon inspection of the topography, it was clear that this area was heavily disturbed and that fill for road construction was responsible for the hill that led down to a mid-20<sup>th</sup> C wharf constructed from large boulders, concrete and paving. In addition, the remains of a small wooden slipway was visible under the water along the northern side of the wharf. Considering the nature of the debris, including the possibility for petrochemical contamination of the soils (possibly requiring environmental remediation), the area is not considered to have historic value, and as such, was not recorded as an archaeological site.

Area 2 is a large tract of land being considered by the Town of Lewisporte as an Industrial Reserve. Located on both sides of Route 340 in Lewisporte, we undertook a preliminary shoreline survey to determine if a Historic Resource Impact Assessment might be required. Considering the accessible,

Figure 33: Lewisporte Harbour Survey Areas



the current state of development, and the lack of any reports of historic resources in the vicinity of this side of the harbour, there seemed only a small possibility that significant historic resources would be preserved at this location. Notwithstanding these factors, the narrow strip of land between the road and the shoreline was likely to have the greatest potential for historic resources. As such, we conducted a foot survey along the beach and the eroding edge of the shoreline, noting that the area was also bisected by a power line which, not previously observed. Walking the length of the shoreline, no historic resources were noted, nor did there appear to be much potential con-

interest of a local resident in Little Burnt Bay, who had contacted the PAO the previous summer to report evidence of carving on a rock face and a nearby “grave” site, we decided to give this area a look. As efforts to contact the resident prior to the survey were unsuccessful, our activities in Little Burnt Bay were unguided.

Beginning in Mason’s Cove, we hoped to gain access to a forested headland that looked to have some archaeological potential from the aerial imagery. Our visit also served as a preliminary assessment to determine if there was any need for a full impact assessment. Although high tide limited access to the



Figure 34: Mason’s Cove

sidering the high level of disturbance associated with the construction of the roadway and the power corridor.

Upon inspection of the opposite side of Route 340, it was also noted that the road is built upon at least 5m of fill, further obscuring much of the original landscape in the immediate vicinity of the harbour. Lands on the south side of the road consist of a flooded low lying forest, and in view of the significant alterations to the lands, no subsurface testing was conducted.

#### **Mason’s Cove and Little Burnt Bay**

Recent archaeological investigations in the Bay of Exploits include have demonstrated the continuing archaeological potential of the region (See McLean 2017b; Skanes 2019). In view of these results, and the

shoreline, and overland access was restricted by private lands, we observed steep rocky shoreline that impedes easy access to the water. Considering the unfavorable physiography and the limited nature of the proposed land use (for animal grazing), it was concluded that an assessment was not required

#### **Little Burnt Bay Survey**

Despite not being able to contact our local informant in Little Burnt Bay, we decided to look around the community to determine what potential, if any, this area might have. With no previous archaeological survey in this area, it was our aim to undertake a preliminary reconnaissance of the community to determine where future survey work might be most useful.

At first glance, we noted that much of the shoreline in the community of Little Burnt Bay is



Figure 35: Little Burnt Bay Track Log and New Site Locations

land, consists of what appears to be a collapsed tilt dating from the mid-20<sup>th</sup> century. The site contains a good deal of historic debris, including remnants of wooden framing held together with wire nails, a steel “barrel” stove, a bed frame and other related items. Considering the recent age and above ground state of this occupation, it is considered an ethnographic site, and as such, recorded accordingly.

heavily developed and that access to lands adjacent to the water’s edge was quite limited. One exception to this was a wide area of undeveloped shoreline, known locally as Foulke Cove. Located on the west side of the peninsula, we were able to gain access to this area by way of a couple of cut lines from the main road. The only land use in this cove was a single cabin situated on the far west side of the cove on a point of land.

**Foulke Cove Area 1**

Generally intact, with only minor evidence of shoreline erosion, the Foulke Cove beachfront contained considerable recent debris. Based upon our foot survey of the area we located two areas of interest. Area 1 is a historic occupation that is located on the north side of the cove. Here, we recorded a large clearing of level and well-drained land in which a single pine tree was centrally located. At this location, we found a small excavation where the sod had been removed for what appears to be an abandoned attempt at creating a garden plot. Within this excavation, which measured approximately two feet by six feet, we found a number of 19<sup>th</sup> century artifacts, including fragments of tobacco pipe stems, ceramics and heavily corroded iron nails. These objects were noted and photographed, but were not collected. In view of the exposed nature of this portion of the site, test pits were not required. Accordingly, the site was added to the provincial inventory of archaeological sites as Foulke Cove 1 (DhAs-08).

**Foulke Cove Area 2**

The second area of interest, which is located in the middle of a small clearing within a wooded point of

**Baie Verte Peninsula Surveys**

The final days of our August survey were conducted on the Baie Verte Peninsula at a variety of locations, including King’s Point, Harry’s Harbour, Rattling Brook, Burlington, Harbour Head and Fleur de Lys. Overnighting in King’s Point on August 14th, we met with David Hayashida and Linda Yates of King’s

Figure 36: Little Burnt Bay Area 1





Figure 37: Little Burnt Bay Area 2

Point Pottery, who had been helpful in 2003 during work that John Erwin conducted in conjunction with the Memorial University Archaeology Field School. David showed us a Maritime Archaic gouge, measuring approximately 25cm in length that he had found some years earlier from under a partially collapsed house in Indian Burying Place. As the artifact had been associated with a historic dwelling, it appears that a resident of the historic fishing village who had collected it had left behind the artifact. Since it could have been collected anywhere, no provenience was assigned. David also provided some information on Harbour Head, confirming the likelihood of a site in an area.

### Jasper Source in Harry's Harbour

As part of his doctoral research (Erwin 2001), surveys and excavations on the Baie Verte Peninsula, resulted in the discovery of a number of new sites, including the French Island Tickle (EaBa-19). That site, which is a French fishing room, also contained evidence of a small Dorset occupation in which hundreds of red jasper flakes were recovered. In subsequent field excavations at the nearby Dorset site of Cow Cove 3 (EaBa-16), a large red jasper scraper was recovered in 2004, suggesting a link between these two sites. The possible source of this material was described by David Hayashida in 2003, and briefly discussed in the Field Report for that summer (Erwin 2004:20). Ex-

posed by a road cut leading into Harry's Harbour on the west side of the main road (Hwy 391), there has yet to be any proof that Harry's Harbour was the source of the jasper flakes and scraper. While geochemical analysis might prove useful, it seems probable that this, the only known source of jasper on the Baie Verte Peninsula, is the likely source and that all of this material is related (see Erwin 2009:13-15). Accordingly, the site was added to the PAO Archaeological database as Harry's Harbour Jasper Source (DkAx-11).

Figure 38: Jasper source in Harry's Harbour. Inset jasper scraper from the Dorset site of Cow Cove 3 (EaBa-16)



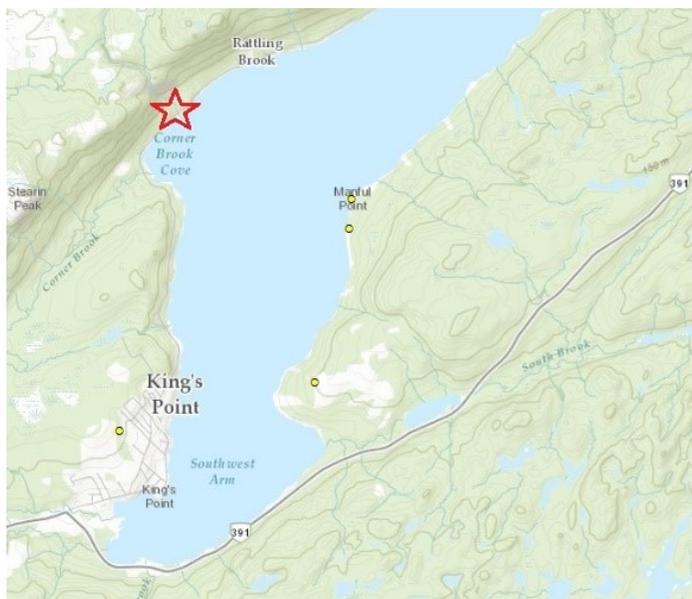


Figure 39: Location of Corner Brook Cove

**King's Point**

There are four archaeological sites in the community of King's Point. From two of these, a small collection of Maritime Archaic artifacts was found by local collectors, reportedly from agricultural fields at elevations of over 100masl. In 2003, surveys by the MUN Archaeology Field School resulted in the discovery of a Groswater site at Manful Point, and an undetermined pre-contact site further south (Erwin 2004). Besides these finds, there is a conspicuous lack of archaeological sites in this attractive inner coastal location. As part of our work in 2018, we conducted a brief reconnaissance along the west side of the Harbour, at Rattling Brook, which runs adjacent to a rest stop and empties into Corner Brook Cove.

Rattling Brook is a fast moving stream fed from a series of ponds located about 2km inland at about 240masl. Emptying into Cor-

ner Brook Cove, the stream delivers a considerable amount of debris stone, sand and silt that washes out into the harbour. Two areas of interest included: 1) a charcoal layer and rhyolite flakes found near the mouth of the stream, and 2) a small linear arrangement of rocks located approximately 200m up the valley adjacent a walking trail.

Area 1 is a charcoal lens that was found eroding out of the southwestern edge of the area of land developed as a rest stop. While the charcoal initially appeared localized, and thus a possible hearth feature, a careful excavation profile of the eroding shoreline showed that the lens continued, suggesting that its cause was likely a widespread fire event. Likewise, we found a small number of black rhyolite “flakes” from the eroded surface of the streambed near a culvert that diverts the stream under the road. We concluded that the presence of this fractured rhyolite material was likely naturally occurring, and probably related to the tremendous forces that wash out these materials during periods of heavy runoff. Its presence, howev-

Figure 40: Rattling Brook Track Logs





Figure 41: Rattling Brook, Rock Concentration

er, suggests that the source of this material may be further upstream.

Area 2 (see Figure 40) is located approximately 200m up stream and adjacent a walking trail that is associated with the rest stop. The possible feature consists of a small linear arrangement of partially buried rocks measuring 1m X 2m in size. While the rocks appeared to have been in-situ for some time, and did not seem to be associated with the construction of the trail, there were no visible cultural materials associated with it, nor were there any other notable features in the vicinity.

As a continuous source of fresh water, it seems highly likely that the area around the mouth of Rattling Brook was utilized in the past. The level of natural erosion from the river, however, has likely swept the lower portions of this valley clean. Further investigation of the valley around area 2, however, highlighted some evidence of cultural activity.

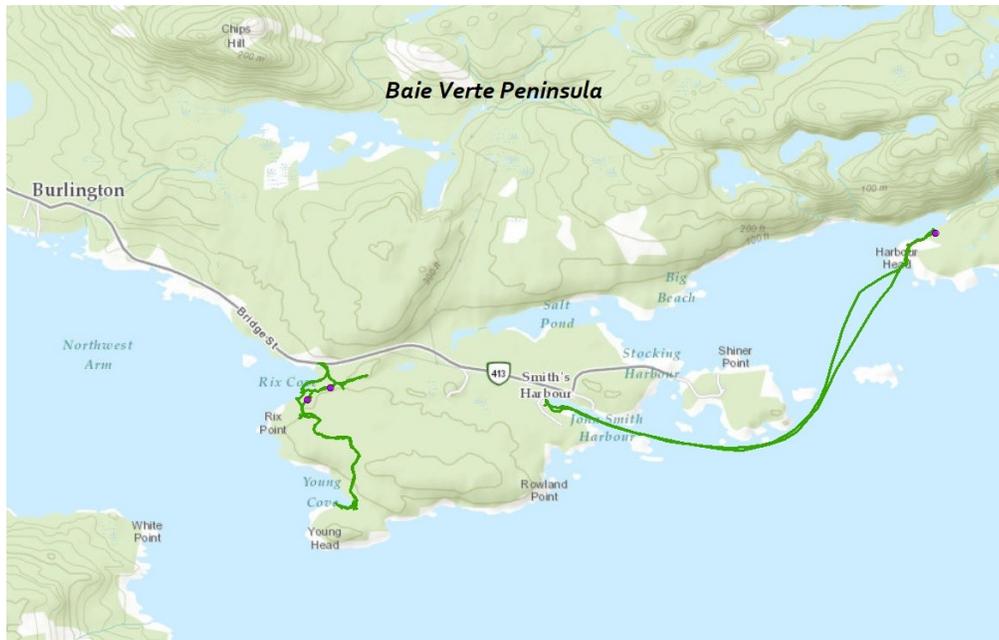
### **Burlington, Harbour Head and Stocking Harbour Surveys**

Following our work in King's Point, we shifted our survey further north along the south side of the Baie Verte Peninsula to the towns of Burlington and

Smith's Harbour. Recent upgrades to an existing walking trail, located southeast of the Town of Burlington provided access to locations on the Baie Verte Peninsula that had seen no previous archaeological survey. As such, the PAO undertook a foot survey along this prominent headland, adjacent Rix Cove and Young Cove. The trail route, which has long been in use by the residents of Burlington, was recently upgraded and provided easy access to these areas.

Arriving about a week ahead of "The Gathering", we followed the well-marked walking trail that began in Rix Cove and terminated in Young Cove. Covering a distance of about 2km, we discovered the remains of two previously undocumented sites in the proximity of Rix Cove (see Figure 43).

Feature 1 consists of a small rectangular depression, measuring approximately 2m X 2m in area, and about 25cm in depth. A few rotted timbers around the feature suggest that a wooden structure once covered this depression, which looks to be the remnants of a root cellar. As these kinds of features are relatively commonplace in the province, and adequately documented, no subsurface testing was un-



**Figure 42: Track Logs of Burlington, Harbour Head and Stacking Harbour Surveys**

undertaken. Excavation would likely have revealed nails, pieces of the wooden construction and associated building materials requiring conservation. In view of this feature's proximity to Feature 2, we concluded that it likely related to the occupation of the nearby cabin described below. Accordingly, Feature 1 was designated Rix Cove 1 (DkAx-12, Figure 44).

**Figure 43: Trail Track Long and Feature Locations**



Feature 2 is a large rectangular structure measuring approximately 5m X 5m in size and 1m in height. The feature consists of a partially collapsed wooden superstructure covered in vegetation and accumulated soil and forest litter. A few upright and heavily rotted timbers were noted in-situ, suggesting that this was once a substantial structure – a likely winter house or cabin. Its proximity to the Rix Cove 1 root cellar (within 200m) and similar age, suggests that the two features may be associated.

Accordingly, Feature 2 was designated Rix Cove 2 (DkAx-13, Figure 44).

While there was good evidence of past historic activity in Young Cove, in the form of gardens and perhaps a well, no features of historic significance were found. Used as a destination for boil-ups, and more recently as an activity area for “The Gathering”, it is widely disturbed and has low remaining potential for in-situ historic resources.

**Harbour Head and Stacking Harbour**

The archaeology of the Baie Verte Peninsula is best known in the area surrounding the Dorset soapstone quarry in Fleur de Lys (EaBa-1), which was one of the earliest reported archaeological sites in Canada. Investigations of the quarry and surveys for related sites largely focused on the northern portions of the Baie Verte Peninsula. To-date, only cursory targeted surveys have been undertaken on the southern side of the peninsula in the communities of Smith's Harbour, Nippers Harbour, Indian Burying Place and Snook's Arm. Perhaps the most significant site in this immediate area is the Maritime Archaic burial site in Smith's Harbour (DkAx-08). Furthermore, there are a number of relatively undisturbed resettled communities along this stretch of coastline, which are themselves, historic resources. Accordingly, there remains tremendous potential for archaeological survey, particularly at these coastal locations.



Figure 44: Rix Cove Historic Features (DkAx-12 and DkAx-13)

### Stocking Harbour

Despite being only a few kilometers east of Smith's Harbour, both Stocking Harbour and Rogue Harbour have eluded archaeological survey. When attempting to survey Rogue Harbour on foot in 2000, as part of the Fleur de Lys Archaeological Project, we were informed by a local resident that you “can't get there from here” and he was correct. Difficult terrain, an approaching bear, and summer heat easily defeated that attempt 18 years ago. In 2018, we arranged for boat transportation, which initially delivered us to Stocking Harbour, where there are remnants of historic activities.

Arriving by boat at Harbour Head (see Figure 45), we inspected the tombolo beach, which was a grassy covered area that had clear signs of previous use and disturbance, including an exposed house foundation at the height of the isthmus, and a garden area and possible root cellar south of the “house print”. A few ceramic shards and a barrel hoop fragment were noted on the nearby rock outcrop at the western edge of the tombolo beach. Further evidence

for historic activity was located on the southern side of Stocking Harbour, situated atop a grassy ridge. Likewise, a few 20thC whiteware and transfer print ceramic fragments and a single tobacco pipe stem were found along the water's edge. The presence of a stone feature situated at the rear of a small clearing is the only notable intact evidence of historic land use found in this area.

The feature (Figure 46), which is comprised of large angular rocks, was found next to a clearing of land that is surrounded by forest. The haphazard manner in which the rocks were arranged suggests that this feature was likely the result of land clearing, and not the result of any attempt to construct a foundation, wall or any formal structure.

Although we had planned to visit Rouge Harbour, in an attempt to relocate the site of Rogues Harbour (DkAx-03), from which a Maritime Archaic soapstone plummet was found, our boat survey was cut short by storm conditions which developed while we were at Stocking Harbour – again proving that “you can't get there from here”. As a result, we cut



Figure 45: Stocking Harbour / Harbour Head track log

short our survey and returned to the safety of Smith’s Harbour.

**Fleur de Lys Soapstone Quarry (EaBa-01)**

The purpose of our visit to Fleur de Lys was to check on the condition of the quarry site and the artifacts housed in the Interpretation Centre. The visit included a discussion with site manager Winnie Dempsey about some of the challenges and opportunities regarding site management and interpretation. The following is a description and summary of this visit.

**Fleur de Lys 1 - Site Condition**

Upon inspection of the quarry site, we noted a collapse of a section of the face at Locality 1 that resulted in a small debris field in front of, and on top of the boulders, and identified by the star in the Figure 47. The fall appeared to have originated from an area above the worked face. Three of the largest chunks of this debris rested on and adjacent the large previously fallen slab. Many smaller broken pieces littered the surface surrounding the larger pieces of debris.

A closer inspection of the visible surfaces of the fallen debris showed that the material originated from above the carved sections of the quarry, as no pot scars were noted on the debris. Likewise, we confirmed the area from which the fall occurred, as based on the light reddish brown colour, that is consistent with relatively newly exposed surfaces of the quarry face, which are in the early stages of oxidization.

As a matter of historic background, this area of the quarry face has seen considerable spalling and collapse over the last 1500 years, as evidenced by the many fallen slabs and scree slope of debris that partially buried the Dorset quarrying activities in Area “B” South. Although the location of the fallen debris is back from the boardwalk, and away from potential visitors, there may be some cause for concern that

Figure 46: Stocking Cove stone feature



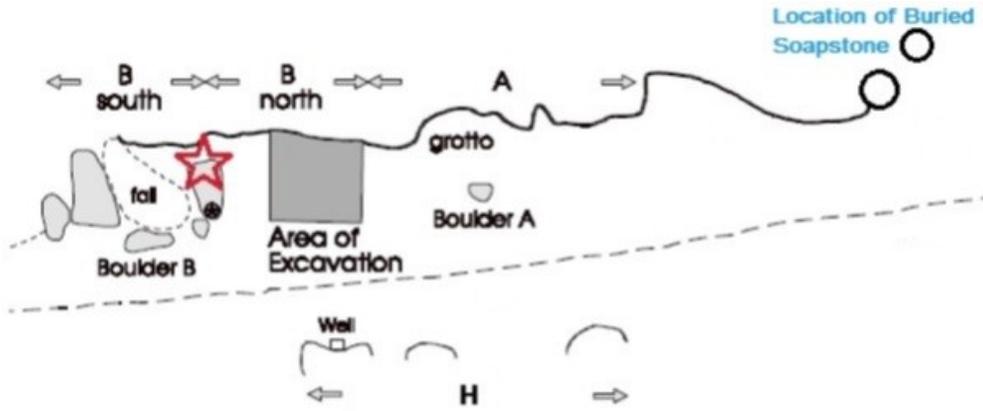


Figure 47: Fleur de Lys 1 - Location of Collapse

additional rock falls will eventually occur, and that they could pose a danger to visitors if they were to venture off the boardwalk under the cliff face. In view of the potential for falling rock, it is recommended that visitors be notified that for their own safety, they should remain on the boardwalk.

**Baie Verte Cemetery (DIBb-01)**

A small private graveyard located along the 410 Highway through the Town of Baie Verte had come to the attention of the PAO by way of a former local resident in 2014. Up until 2018, the location of the cemetery had gone unverified. Fortunately, tree and brush cutting had recently been conducted along the main

road, exposing two grave-stones and an iron enclosure. Though previously recorded as a site, our visit confirmed the exact location and some details about the burials.

Our search of the area in the immediate vicinity of the iron enclosure revealed two grave markers, one within the enclosure containing a partially legible inscription for a single individual named Annie Maria Colbourne with a date of 1916. The other marker contained an inscription for two individuals, with the dates of 1900 and 1912 marking the passing of David and Mary E. Sinnott. The graveyard, which has no apparent affiliation with any church or organization, was photographed, the location verified and the site record updated (see Figure 50).

**Survey Permit #18.21**

**Conception Bay North**

In September, the PAO received a call regarding an historic graveyard in Port de Grave, which had the potential to be impacted by a sewer line installation.

Figure 48: Debris Fall at Fleur de Lys 1





Figure 49: Location of Collapse at Fleur de Lys 1

After contacting the developer and getting permission from the landowner, the PAO visited the site. When we arrived, the landowner was on site and he explained his intention to build a home on the property. Part of the appeal of the land was its history of which the graveyard was an important part. During the discussion with the landowner, it quickly became apparent that he was well aware of the graveyard and intended to avoid it. With his permission, we walked over the area where he intended to build his house and we recorded the graveyard, and what are likely the foundations of two cellars.

It became apparent during the walkover that the area had recently been heavily

disturbed, there were no shrubs or trees, there were many areas of overturned soil and the land was covered in weeds. We also noted the presence of scattered pieces of brick, glass and kaolin pipe fragments in disturbed contexts. None of the artifacts appeared older than the 19<sup>th</sup> century. Speaking with the landowner after our walkover, we referenced the disturbance and he told us that he had the land cleared by a tractor last summer (Figure 51).

We then turned our attention to the graves. There are three large standing headstones, each with legible text and all date to the early 19<sup>th</sup> century. There is a fourth stone, made from a piece of slate or shale, which has no text and is leaning over behind headstone 1 (Figure 52).

- Stone 1 is 80 cm wide and 1 metre high. It has the text “Sacred \_\_\_ memory of A\_t\_\_ny Mugford, Son of J\_hn Mugford, who departed his life the \_\_\_ May 1827 Aged \_\_\_ years.” At the bottom of the stone is in smaller script is a poem or a bible verse.
- Stone 2 is 67cm wide and 1.75 metres high. It has the text “Sacred to the Memory of Samuel Mug-

Figure 50: Baie Verte Grave Markers and Enclosure



ford, who died the 22<sup>nd</sup> August 1820 aged 20 years.” Again, at the bottom of the stone in smaller script is a poem or a bible verse.

- Stone 3 is 1 metre wide and 1.55 metres high. It has the text “Here lies the body of John Mugford who departed this life the 1<sup>st</sup> of March 1820 Aged 58 years.”
- Stone 4 is ~25 cm wide and about 20 cm high with no text.

After recording the headstones we noted the presence of two structure foundations just 15-20 m to the west (Figure 53). Both appear to be cellar foundations; one is on a terrace just below the headstones and the second is on the terrace above the headstones. Both foundations are approximately 3m x 2.5 m in size and just over 1 m deep. The dry laid flat

membered from her childhood that there were several standing headstones. She took us up the hill behind her house and showed us a headstone standing in a field by itself – the only standing stone we could find. Writing on the stone reads “In loving memory of George A. Bussey Born 1859 - Died 1933 also his wife Mary Bussey Born 1862 - Died 1947. Ever remembered.”

Once we recorded the George Bussey headstone, we walked around the field looking for other stones or graves. We noted several grave-like depressions and we did find two slate/slate rocks that look very much like a grave marker not far from the Bussey headstone.

We then drove through Port de Grave and noticed another large graveyard near the town har-

**Figure 51: House construction area. The large backdirt pile on the right presumably came from clearing the land. The standing headstones are between Delphina and the dirt pile on the right.**



stonewalls seem to curve inwards towards the top (Figure 54).

Before we left the area, we had a short conversation with the landowner who told us that his relative who lives at the end of the lane (towards the Port de Grave harbour) also has a graveyard in his backyard. We went to the relative’s house and explained to the woman at the door why we were there. As it turned out, she was the daughter of the homeowner (her mother was at home and gave us permission to look at the cemetery). She said that she re-

membered from her childhood that there were several standing headstones as well as several stone grave markers (Figure 55). While this graveyard is not associated with a standing church, there was formerly a Catholic church nearby and the town does appear to maintain the graveyard (Figure 56).

With our work completed in Port de Grave, we drove north to Western Bay to check on the archaeological potential of a property for sale. A quick



Figure 2: Stones 1, 2, 3 & 4, clockwise top left to bottom left.





**Figure 53: Context of the headstones with the house construction area in the background. Headstone 4 is behind the middle headstone. Two structure foundations were behind the photographer.**

check of that property showed little archaeological potential. We then drove along the south side of Western Bay along the South Side Road where we passed another well-maintained cemetery. This one had a sign explaining that it was the site of the first Methodist Church and Cemetery in Western Bay and dated it from 1812 to 1899 (Figure 57). We proceeded to the end of the South Side Road where there is a long boardwalk. At the head of the boardwalk was another graveyard with eight recently erected white

wooden crosses. Text painted on seven of the crosses reads ‘unknown, circa 1650’; painted on the eighth is the name Christine Varswell with the same date as the others. At the base of this cross is a single broken heavily eroded headstone. There are several other probable grave markers in the area (Figure 58).

**Survey Permit #18.28**

**Admiralty House Museum**

Late in September, a member of the Admiralty House Museum contacted the PAO about a feature that had been uncovered during work for the installation of a new parking lot on their grounds. In 1915, Admiralty House, located in Mount Pearl, became a World War I top-secret H.M. Wireless Station for the British Royal Navy.

We initially thought the feature to be a bunker or perhaps an underground storage. After digging around the outside of the pad, finding the bottom and not finding a door, we knew it couldn’t be a bunker nor underground storage. It turned out to be a large concrete pad measuring 5 metres wide by 7.80 metres long and nearly 1.5 metres deep. The walls of the pad sloped inward for about 1

**Figure 54: Cellar foundation.**





Figure 55: Catholic cemetery near the Port de Grave Harbour. The sign (see Figure 6) explaining that the graveyard is Catholic is just behind the wrought iron fence near the centre back of the photo.

metre then went straight up. In many areas, there were fine pieces of wire sticking out of the concrete and wood was preserved on the outside of the pad in a couple areas. A city of Mount Pearl engineer later suggested that the wood was a frame for the pad and the wires were used to keep the wood frame together while the concrete was poured in place (Figure 59).

Initially there were two main buildings on site of approximately the same length. The front half of the annex building was removed at some point in the past, leaving the current structure in place. Looking at the old Wireless Station photo below (Figure 60) on the Admiralty House Museum website the extant Annex building is the one on the right. To the right of the Annex building is a small outbuilding that may sit

Figure 56: Sign explaining that a Catholic church once stood near the graveyard.

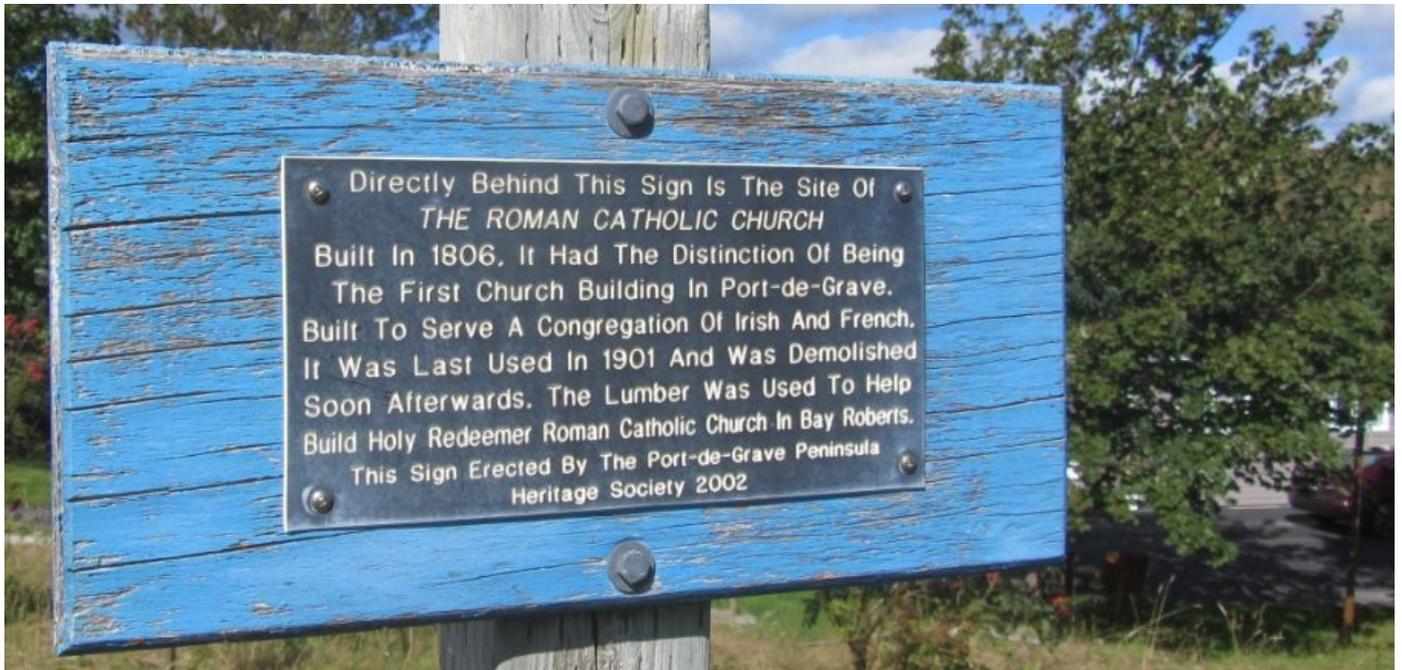




Figure 57: Site of the first Methodist Church and Cemetery in Wester Bay

Figure 58: Christine Varswell cross with the headstone at the base.



on some portion of the concrete pad. The antenna tower may also have sat on some portion of the concrete pad. However, why would a building of that size need to sit on a concrete pad? Why wasn't the antenna centred on the pad? Perhaps the concrete pad is related to the farm that existed on site after World War I?

**Survey Permit #18.38**  
**The Rooms Gate Installation**

On Friday, August 10, 2018, the PAO received a call from Mr. Grant Stacey of Stacey Construction Ltd. Indicating that they would be digging two postholes at The Rooms to install a gate. The postholes were to be dug on the east end of the Rooms on either side of the existing driveway (see Figure 61). The PAO reviewed the area of proposed construction and did not believe that historic resources would be impacted, however required that the digging to be monitored in the event that something of significance was unexpectedly found.

The digging of the two postholes took place on Wednesday morning, August 15 from 9:20 am to 10:00 am. Post hole #1 was dug to the left of the driveway, next to the waterline, and the soil consisted of dark brown gravelly material and rocks. The hole was dug to three feet deep and approximately three feet long and 1.5 feet wide. The only artifact found in hole #1 was a triangular iron object measuring 7”X6”X1”. It was found two feet below surface. The



**Figure 59: The top of the concrete pad on the right side of the photo. The Annex building on the right side is part of the original Wireless Station.**

object was measured and photographed and it will be reburied in the same hole.

Post hole # 2 was dug on the right side of the driveway, approximately 16 feet from Hole #1 (see Photo 5). The hole was dug to 3.5 feet deep and approximately three feet long and 1.5 feet wide. The soil here was also comprised of dark brown gravelly material and rocks down to the three foot mark where the cultural layer was encountered. The cultural layer was black and contained numerous pieces of red and yellow brick. Photographs were taken of the brick and they will be placed back into the hole.

There were no issues with this project – everything went smoothly and Mr. Stacey and his crew were very cooperative. There was nothing of significance found and monitoring concluded at 10:00 a.m.

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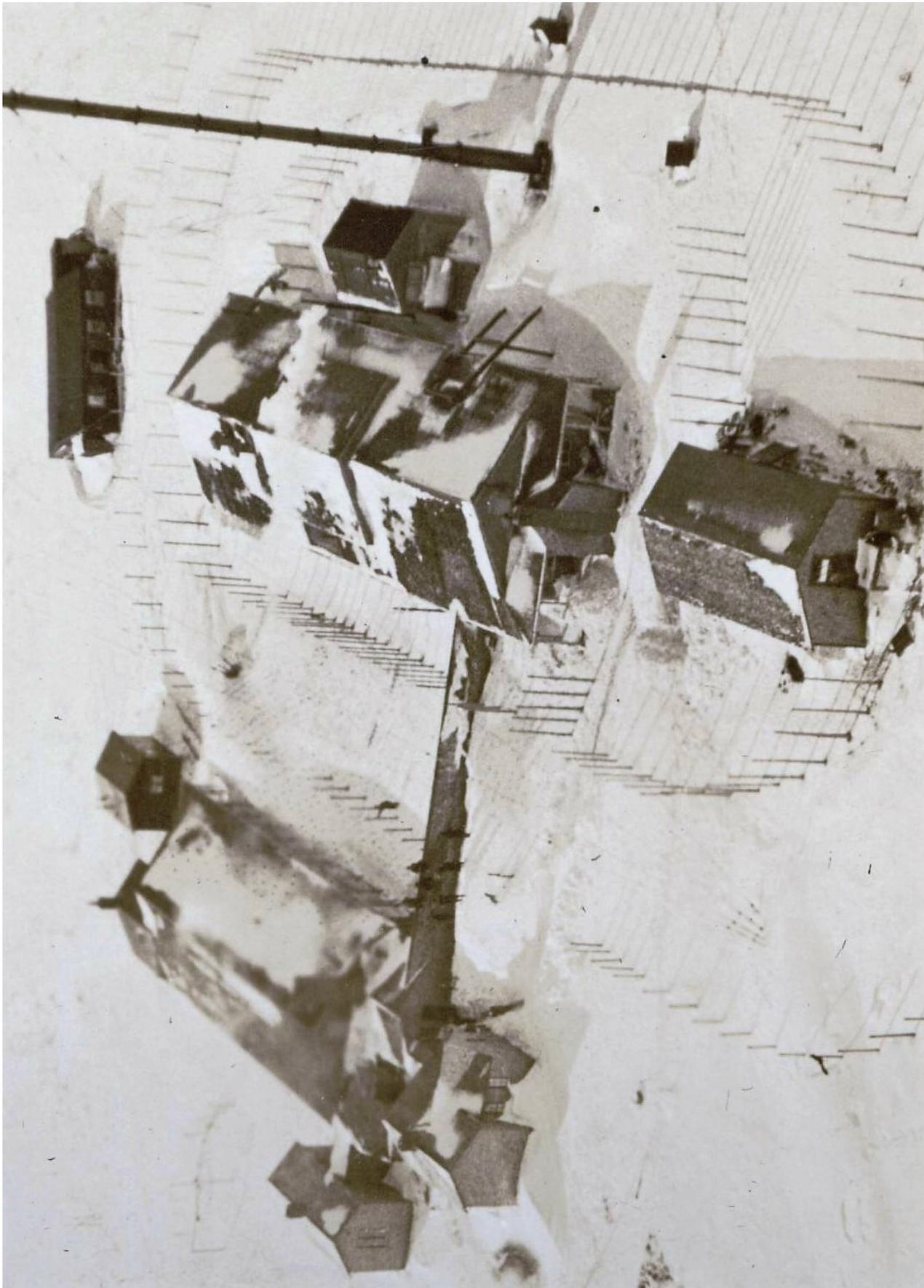


Figure 60: We suspect the concrete pad was under some portion of the small building on the right and perhaps the antenna.



**Figure 61: Driveway on East end of The Rooms**

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# Excavations at Double Mer Point, 2018

Robyn Fleming & Lisa K. Rankin  
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Figure 1: Basque olive jar sherd

The site at Double Mer Point (GbBo-2) is located 6km northeast of the community of Rigolet, in the Narrows of Hamilton Inlet, between Groswater Bay and Lake Melville. The site was identified in 1968 by William Fitzhugh, tested by Richard Jordan in 1974, with current excavation and research being carried out by Lisa Rankin of Memorial University (MUN). The site dates to the later 18<sup>th</sup> century and is composed of a row of three rectangular, semi-subterranean, sod-walled communal winter houses (from west to east Houses 1, 2 and 3) and five tent rings, located to the southwest of the winter houses.

In 2013, Rankin began a multi-year research project in Hamilton Inlet in collaboration with the community of Rigolet. The community's goal to incorporate the site into their development plan for the community and connect the site to the town via a now completed shoreline boardwalk required archae-

ological excavation and research of recovered material culture. With a field season taking place every summer since the collaboration began, three sod houses have been fully excavated while middens associated with these structures have been partially excavated.

The most recent excavation took place during the month of August 2018. Over the course of three weeks a field crew including Robyn Fleming (crew chief), Nancy Butler, Deirdre Elliott and Kayley Sherret from Memorial University, Graham Hyslop (University of Western Ontario), and Mads Nielsen (University of Copenhagen), resumed the excavation of midden features associated with the sod houses. Three

1m x 1m units were fully excavated, in addition to units begun in the summer of 2017. Several other units, not fully excavated, were covered for winter, as sterile soil had not been reached. Trade beads as well as nails, mica, ceramic sherds, kaolin pipe fragments, glass, soapstone, leather, lead shot, sled shoes, baleen and a brass buckle dominated the 871-artifact assemblage. A Spanish olive jar fragment (Figure 1) and a Basque “check-mark” earthenware sherd (Figure 2) are the first examples of Basque ceramics to be recovered from the site. Both artifacts have been given a temporary date range from the 16<sup>th</sup> to 17<sup>th</sup> century. Further analysis may refine these dates. Lithic materials made up approximately 5% of the collection. These materials were predominantly Ramah chert flakes; however, a Maritime Archaic point dating to approximately 4,000 years ago was also unearthed (Figure 3). Recovered faunal remains analysed by

Lindsay Swinarton (Université Laval) consisted primarily of seals, followed by dogs and foxes.

Each season of excavation at this site has uncovered new information regarding 18<sup>th</sup> and 19<sup>th</sup> century Inuit life in Hamilton Inlet, as well as use of the site as a pre-Inuit occupation. Continued excavation of the middens in 2019 will undoubtedly contribute to a broader understanding of the scope of trade and everyday life in the area.



Figure 2: Basque check-mark sherd



Figure 3: Maritime Archaic projectile point



# Archaeology at Ferryland 2018

Barry Gaulton & Donna Teasdale  
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Our 2018 fieldwork was largely informed by the discoveries of the previous summer, having revealed evidence for a masonry structure and associated slate roof tile collapse at Area D, and a rich domestic midden in nearby Area J. The former feature dates to the early years of the colony of Avalon in the 1620s; whereas the latter deposit was formed sometime between the late 17<sup>th</sup> and early 18<sup>th</sup> centuries. The goals for the 2018 field season were to better understand the nature and duration of occupation at Area D and to locate evidence for *in situ* structural remains associated with the domestic deposit at Area J. As discussed below, additional excavations in 2019-2020 are required before any firm conclusions can be drawn.

The investigation of Area D's early 17<sup>th</sup>-century stone structure (Feature 217) was divided into two teams, each with disparate tasks. The first group focused on expanding excavations to the north and west of the structure to further expose architectural remains and associated construction and occupation layers. A second group, directed by graduate student Alexa Spiwak, conducted a targeted excavation to the south of the structure to answer questions pertaining to the manufacture of slate roof tiles at Ferryland. This report will outline the work of the first team; for a discussion of the second team's findings see Spiwak (this volume).

Tantalizing traces of a cobblestone pavement and possible doorway uncovered at the west and north ends, respectively, of Feature 217 during the

**Figure 1: Feature 217, looking west.**  
Note the cobblestone hearth (in the southwest) and doorway (in the northeast) of the structure.





**Figure 2: Base of furnace immediately north of Feature 217 hearth.**

previous field season (Gaulton and Lacy 2017) were further exposed in 2018 to reveal a .91m by 1.52m (3ft by 5ft) hearth floor set with cobblestones, and a 1.17m (3ft 10 in) wide doorway (Figure 1). The cobblestones on the hearth floor are large and set in an E-W orientation. At the north end of the hearth – and at the same level as the floor – is an oval-shaped furnace set into the west wall of the building. A large rectangular flagstone sits at the opening of the feature but its interior is floored with small cobblestones, many of which are spalled from repeated heat exposure (Figure 2). The interior walls of the furnace, built of clay-bonded masonry but also utilizing bricks as part of the above superstructure, show similar amounts of spalling and fire reddening. Although excavations must proceed further west to fully expose the base of the furnace, its interior dimensions are approximated at .69-.85m wide by 1.28-1.5m deep.

Positive identification of a door at the north-eastern end of Feature 217 prompted additional excavations to the north, encompassing both the north wall of the structure as well as nearby construction and/or occupation layers. This operation provided architectural details in the form of wall thickness (.76m or 2ft 6 in) but also evidence for further fenestration in the form of window glass fragments. Unsurprisingly, refuse deposits were particularly evident outside the doorway; however, the quantity and variety of artifacts in these deposits are quite modest compared to those associated with other early 17<sup>th</sup>-century structures, both domestic and non-domestic, at Ferryland.

Low numbers of clay tobacco pipe, case bottle glass and ceramic fragments – inside and outside Feature 217 – suggest a brief occupation despite the significant investment required to construct a building with stone walls and a slate tile roof. The handful



Figure 3: Clay pipe makers' marks found in the occupation layer outside Feature 217.

of early pipe bowls and associated marks, in particular, lend support to a 1620s occupation that may not have extended into later decades (Figure 3). The building's location, some 30 metres outside the original 4-acre fortified settlement, is also anomalous with respect to all other structures associated with Calvert's colony, and is perhaps an important clue to understanding its purpose/function.

Based on existing archaeological evidence and historical records, several possibilities can be presented. One idea is that this building pre-dates 'official' settlement in August 1621. It has been suggested that

the first governor of Ferryland, Captain Edward Wynne, and others overwintered in 1620 to reconnoiter the land in advance of planting a colony (Gaulton and Miller 2009:118). This sturdy stone building could have served such a purpose, saw continued use while the fortified colony was being constructed, but abandoned shortly thereafter. A second theory is that this structure was built to serve an industrial function (s). The large doorway (nearly 4ft wide), earthen floor, and oval furnace provides tangential evidence, as does the dearth of domestic material culture and its location outside the village proper in the event that an

accidental fire would prevent conflagration of other buildings. This theory gained traction in 2018 with the discovery of hundreds of small pieces of glassy, bubbly residue or waste product outside the door of the building (Figure 4). Correspondence with specialists in the UK cast doubt on the possibility that these pieces pertained specifically to an industry such as glassmaking. Instead, the glassy waste was interpreted as an unintended by-product formed when the sandy clay that bonded the stones inside the furnace reacted to repeated and prolonged heat exposure. These small glass-like bits, sometimes referred to as ‘kiln sweat’ (Sarah Paynter, pers comm 2018), would have been gathered up among the spent fuel from the floor of the furnace and discarded out the north door of Feature 217.



**Figure 4: Glassy by product formed inside the furnace of Feature 217.**

A masonry building with an active furnace located outside the colony not far from the water (13 m away) brings to mind an almost forgotten trial industry that is known from historical records to have been attempted at Ferryland in the earliest years of settlement: salt making. In 1621 Edward Wynne requested that the sending of a “salt pan” (for boiling down salt water to extract salt) be deferred one year (Wynne 1621). A lone saltmaker, John Hickson, arrived in July 1622 and the “salt work” was near completion (Wynne 1622a). By mid-August, limited production was underway, for Hickson had produced “a barrel of the best salt that ever my eyes beheld” (Wynne 1622b). Considering that excavations have revealed no trace of the 1622 saltworks inside the 4-acre village, and that this kind of activity was conducted on a small-scale trial basis by one individual, Feature 217 may yet be a viable candidate. With

only half the structure uncovered thus far, many more discoveries await; as does the possibility that Feature 217 could have served multiple functions over its short lifespan.

For two weeks in 2018, we shifted our efforts to investigate the late 17<sup>th</sup>- to early 18<sup>th</sup>-century domestic deposit at Area J, located on a gently sloping hillside some 30 metres south of Area D. Evidence for occupation on this part of the site lay in stark contrast to that of Feature 217. Here, a rich midden deposit contains thousands of ceramic, clay tobacco pipe, glass, and iron fragments, along with an assortment of items of personal adornment that strongly point to a domestic occupation; yet, no structural remains have been found save the occasional brick fragment or fire-cracked rock. The previous excavation from 2017 (2x5m N-S trench) was extended east by one metre, followed by a preliminary magnetic susceptibility/conductivity survey conducted by



**Figure 5: Artifacts recovered from the late 17<sup>th</sup>- to early 18<sup>th</sup>-century deposit in Area J. From top left to bottom right: silver-plated finger ring; amber colored glass bead; copper thimble; copper chain links corroded onto an iron ‘nail’.**

MUN graduate student Allan Wolfrum. Allan was generous enough to volunteer his time and instrument before heading to Labrador for summer field research in Sheshatshiu (see Wolfrum, this volume). Unfortunately, neither the expanded excavation nor the non-invasive survey were successful in locating in situ structural remains. One area of potential interest six metres west of the 2017 excavation trench was identified during the magnetic susceptibility/conductivity survey; however, subsurface testing proved negative.

The results of the 2018 excavation in Area J bears further discussion as work in the area continues to refine our understanding of those who lived here. As in 2017, the midden deposit consisted primarily of large pieces of ceramic, glass and clay tobacco pipe,

some of which can be dated to within several decades. Several links from a copper chain, a large amber-colored glass bead and a silver-plated finger ring with an undecipherable inscription etched on its interior surface continue to demonstrate the former residents' predilection for objects of adornment. A copper thimble further hints a domesticity in the form of sewing activities (Figure 5). The most notable artifact from Area J, a glass bottle seal bearing the name John Dennis, was unfortunately found in a questionable context under a large boulder at the intersection between the primary midden and an overlying plowzone layer (Figure 6). Research into John Dennis is still ongoing but the name is not recorded among known residents of Ferryland from the 17<sup>th</sup> or 18<sup>th</sup> century. In all likelihood Dennis was someone of note, possi-



Figure 6: John Dennis bottle seal found in Area J.

bly a prominent Newfoundland planter or even the captain of a fishing, merchant or naval vessel plying the waters around the Avalon Peninsula.

As for the ongoing search for a dwelling at Area J, traces of a nearby structure are suggested by a large door hinge recovered from the northernmost unit excavated in 2018. Whether this overturns our previous assertion that the associated structure would be found on a levelled terrace further south can only be answered through continued investigation.

**Postscript**

The copper chain links recovered from Area J (noted above) were adhered to what looked like a corroded iron nail fragment. However, following our standard practice of X-raying ferrous metal objects, the ‘nail’ and copper chain links turn out to be something

much more informative (Figure 7). This artifact has been identified as part of a chatelaine (sometimes referred to as an equipage), typically worn by women and hung from the waist. Chatelaine’s were constructed to support a variety of items which could include a watch, a pendant case containing sewing tools, scissors, a thimble, a ruler, a pencil and miniature pair of compasses, also keys, money or other objects that would have seen daily use. Items were suspended from metal chains, usually made from a copper-tin alloy, but also in silver, steel or gold (Evans, 1970:160). The chatelaine came into use during the 17<sup>th</sup> century in England and was considered highly fashionable; however, by c. 1830 they were worn mainly for utilitarian purposes (Newman 1981:65).



Figure 7: X-ray image of CgAf-02:765455 (Event 943) showing scissors with chain.

The x-rayed iron object is a pair of fragmented iron scissors. They are small, measuring approximately 12 cm in length if complete. Two finger loops or bows are partially intact, the rivet that connected the scissor blades at the pivot point is visible, and the void between the shanks can be clearly seen through radiography. The copper alloy chain is concreted to the scissor fragment in numerous areas along the scissor shaft and wrapped around what remains of the finger loops. Where the chain was fastened to the scissors remains unknown. Further conservation will hopefully bring more information to light.

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# The Avalon Historic Petroglyph Project (2018)

Barry Gaulton, Bryn Tapper, Donna Teasdale & Duncan Williams  
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Figure 1: 2017 picture of petroglyphs from Conception Bay North. Photo credit: anonymous.

This report discusses the preliminary findings of the Avalon Historic Petroglyph Project, the goals of which center around the recording, interpretation and preservation of historic graffiti and other parietal art on Newfoundland's Avalon Peninsula. Three sites were investigated during spring/fall of 2018: one in an undisclosed location in Conception Bay North; and two along the eastern shore of the Avalon, at Fermeuse and Brigus South. Below we highlight the survey, computational photography and conservation techniques used in the recording of these sites, as well as

our current thoughts on who made them, when, and what they represent.

The Conception Bay North petroglyph (hereafter referred to as CBN 1) came to our attention in fall 2017. A local resident informed us of a lichen-covered inscription inside a small cave-like crevice in the hillside behind a community in Conception Bay North. Recent cleaning of the area around the inscription revealed a small yet stunning series of glyphs including two anthropomorphs and one zoomorphic figure (Figure 1). Based upon the photographs provided, our team set into motion a plan to document and analyze elements of the petroglyphs in

2018 using both photogrammetry and Highlight-Reflectance Transformation Imaging (H-RTI) (Duffy et al. 2013; Mudge et al. 2012). The former technique enabled us to produce accurate, high-resolution 3D surface models of the rock surface on which the petroglyphs were engraved, as well as to record detailed measurements of the dimensions and morphology of individual components. H-RTI allowed us to generate a series of images of the same subject but with varying highlights and shadows, which reveal surface de-

sequence of carving and the relationship between glyphs appears to begin with two faint geometric motifs in the upper and lower parts of the panel, followed by a vulva motif and ithyphallic anthropomorph, which together form what can best be described as a symbolic copulation scene (Figure 2). Respecting this paired scene, and on a slightly different angle, the second anthropomorph and underlying quadruped appear to have been laid down next, followed by the Roman-type script which changes direc-

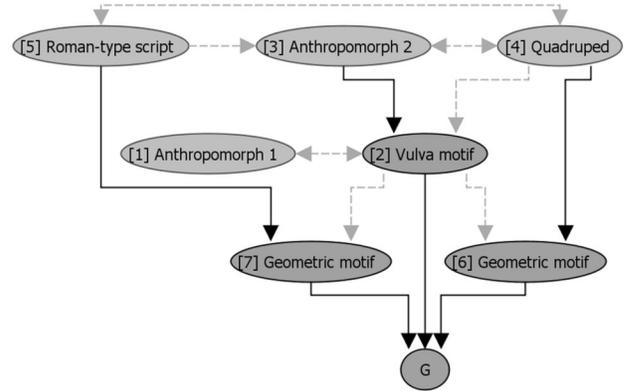
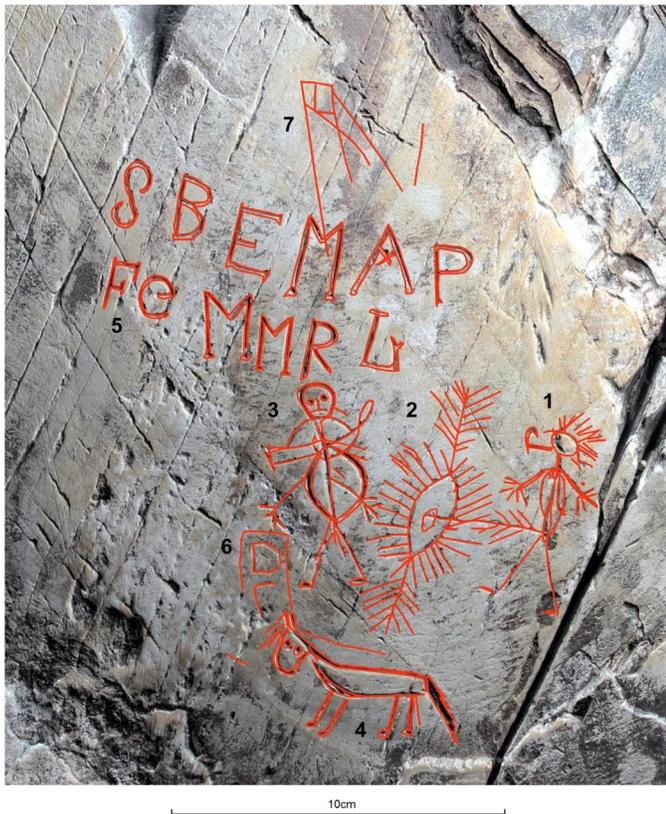


Figure 2: Line drawing interpretation of the CBN 1 petroglyphs (left) and inferred sequence of carving where ‘G’ is the rock surface (right). Image credit: Bryn Tapper

tail and information that is not visible or clear under normal light conditions.

The enhanced legibility of surface relief afforded by photogrammetry and H-RTI provided a means to analyze faint details of individual glyphs, enabling the identification of the manufacturing technique as well as the stratigraphic relationships where petroglyphs overlap. The results show the CBN 1 petroglyphs having been incised using a metal tool — likely the point and edge of a small knife. The relative

tion to avoid the second anthropomorph. The possible meanings of the glyphs and script are still being deciphered; however, based upon the isolated location of the site, the size of the glyphs, and especially the close similarities between the morphological traits of the script and motifs, they may have been carved by a single individual in a single episode.

They also appear to tell a story. One possible interpretation is that the central motifs form a life and death scene, with the copulation motif to the right

and a floating corpse-like figure rising above or leaving the body of the anthropomorph to the left. A second, related theory pertains to the stages of copulation, pregnancy and birthing.

A comparison of the CBN 1 petroglyphs to both European and Indigenous North American rock art places these motifs firmly within an Algonquian tradition. Numerous examples of the vulva and ithyphallic motifs, shown either separately or together in association, are found in the pre- and post-contact rock art of Algonquian-speaking peoples from Eastern Canada and New England; including in the famous corpus of Middle-Late Woodland petroglyphs known from Peterborough, Ontario (Lenik 2002; Vastokas and Vastokas 1973). Regionally, similar compositions are recorded in the pre- and post-contact rock art of eastern Maine and from the historic period Mi'kmaq petroglyphs at Kejimikujik Lake and Bedford Barrens in Nova Scotia (Hedden 1985, 1989; Molyneaux 1984; Whitehead 1992).

As for when the CBN 1 petroglyphs were carved, the evidence currently points to an Indigenous inscription from the historic period. The 1697 or 1705 incursions by French and Wabanaki forces on English settlements in Conception Bay are one possible explanation, as the cave where the petroglyphs were carved could have served as a small shelter during either of these winter campaigns. Independent skirmishes by Mi'kmaq warriors into Conception Bay after 1706 provide another possibility (Martijn 2003: 73-74). Even a 19<sup>th</sup>-century carving is not out of the question. Given the current uncertainty, plans are underway to excavate inside the cave-like crevice in the hopes that datable material may be found. The date, nevertheless, is of secondary importance compared to its cultural attribution. If our preliminary interpretations hold true, then CBN 1 is the first Indigenous petroglyph found on the island of Newfoundland.

The techniques employed at CBN 1 were also used at Kingman's Cove on the south side of Fermeuse Harbour. A large glacial erratic situated on an elevated slope 300m south of the water's edge was first brought to the attention of Dr. Peter Pope in 1986, and again in 2002 with the assistance of local residents (Pope 2003:14). At the time of Pope's recording, many historic inscriptions were visible on the south and east faces of the rock, and their ap-

proximate spatial relationships noted. Revisiting the site some 16 years later, our first tasks involved the acquisition of more accurate GPS co-ordinates and the cutting back of surrounding overgrowth to facilitate closer inspection, photogrammetry and H-RTI.

The surface model produced of the south face of the boulder shows the precise placement, size and even stratigraphic relationships between dozens of different inscriptions, thus providing a much more detailed and accurate representation (Figure 3). Consider, for example, the 'Marshall Hill' inscription first recorded in 2002. Photogrammetry revealed not only that the name was Richard Hill (not Marshall Hill) but also that the spelling of the given name was corrected with the subsequent addition of a second 'R' between, and slightly above, the letters A and D.

H-RTI on selected areas of the inscription-strewn boulder produced evidence for carefully rendered carvings such as the 1684 IK petroglyph first sketched in 2002. The anchor at the top of the inscription is a nautical theme clearly in fitting with the maritime economy and lifeways of early modern Newfoundland (Figure 4). This particular example — as well as other house-like glyphs containing initials and dates spanning into the latter decades of the 18<sup>th</sup> century — are of interest for their close similarities to church graffiti recorded in various parts of England, and cautiously interpreted by graffiti scholar Matthew Champion as memorials to the dead (Champion 2015:202-203). Given the secular location and context of the Kingman's Cove inscriptions, an alternative interpretation can be proposed.

Perhaps these carefully-bounded and dated inscriptions can be viewed as a form of place making, whereby this prominent rock feature is transformed into a communal monument. The key to understanding this idea lay in the fact that the Kingman's Cove rock is situated along an old historic footpath between the communities of Fermeuse and Renew's. As a waypoint or 'half-way rock', this glacial erratic is where settlers and seasonal visitors alike may have stopped for a rest, and sometimes marked their presence/passage before traversing the rest of the distance for the purposes of business or pleasure. In 1666 Plymouth surgeon James Yonge described his weekly journey from Renew's to Fermeuse, possibly using the very same footpath (though no mention is made to the Kingman's Cove boulder): "Every week I

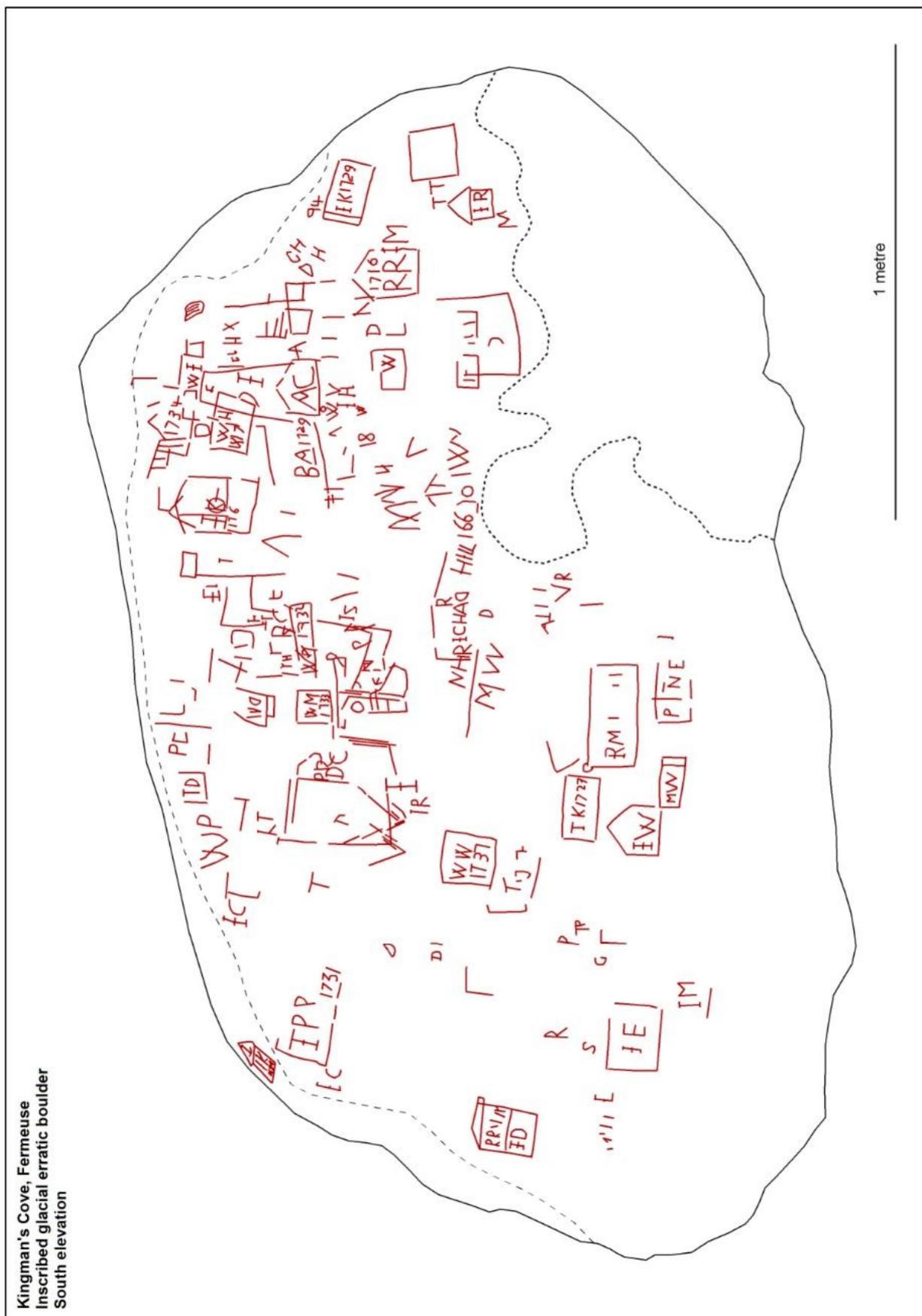


Figure 3: Line drawing interpretation of the Kingman's Cove boulder. Image credit: Bryn Tapper

went over once, and my companion once. The walk was through the woods and two marshes. I used to leave a bottle of brandy hid behind a tree, which I would mark, and take a dram on my way” (in Poynter 1963:56).

The final site discussed in this report is in Brigus South, 16km north of Fermeuse. The historic petroglyph is accessible via a footpath roughly 1km south of the modern community and is carved atop a shale outcrop jutting out into the water. Just like the other two sites, local residents informed us of the inscriptions. A quick visual inspection immediately draws your attention to the name Michael Gregory, the place name Brigus South, the date April 3<sup>rd</sup> 1879, a partially preserved two-masted ship, and the word Devon (Figure 5). The small size and near horizontal orientation of these inscriptions allowed for a relatively straightforward recording compared to that of the other two sites.

H-RTI revealed additional faint inscriptions, dates and even a small hare/rabbit in the right corner of the panel (Figure 6), suggesting at least two different episodes of carving starting with the Michael Gregory inscription, followed by the two-masted Brigantine and 1884 date. The relationship between the Michael Gregory inscription and that of the hare and Devon place name, however, are still unclear.

Records from the 19<sup>th</sup> and early 20<sup>th</sup> century list several Brigus South residents named Michael

Gregory: one is listed as a fisherman in 1870, another recorded as having died at 22 years of age in 1887, and a third enumerated in 1921 as a head of household. That this third Michael Gregory and the one who carved his name on the rock are one and the same can be clearly demonstrated by the fact that the

1921 census also lists his date of birth (born 1861) and his month of birth (April). From these details, we can connect the historic inscription to 18-year-old Michael Gregory, who may (or may not) have been born in Devon, but who certainly made his mark on this rock outcrop on April 3<sup>rd</sup> almost 140 years ago.

Despite its relatively recent age, the Brigus South inscriptions also bore the most evidence of spalling damage due to freeze/thaw action of the three sites investigated. Therefore, an additional recording method was brought to bear in the form of a silicone cast. This involved the application of a release agent and the construction of a barrier wall using potters clay around the area of the inscription to contain the poured silicone rubber. After sixteen hours of cure time at 20° Celsius, the finished product produced similarly detailed results to that of H-RTI, but with the added bonus that this

silicone cast will be donated to the Brigus South Heritage Society for display next summer.

To conclude, we hope that the results of this ongoing research will serve as a springboard for the further examination of historic graffiti and parietal art



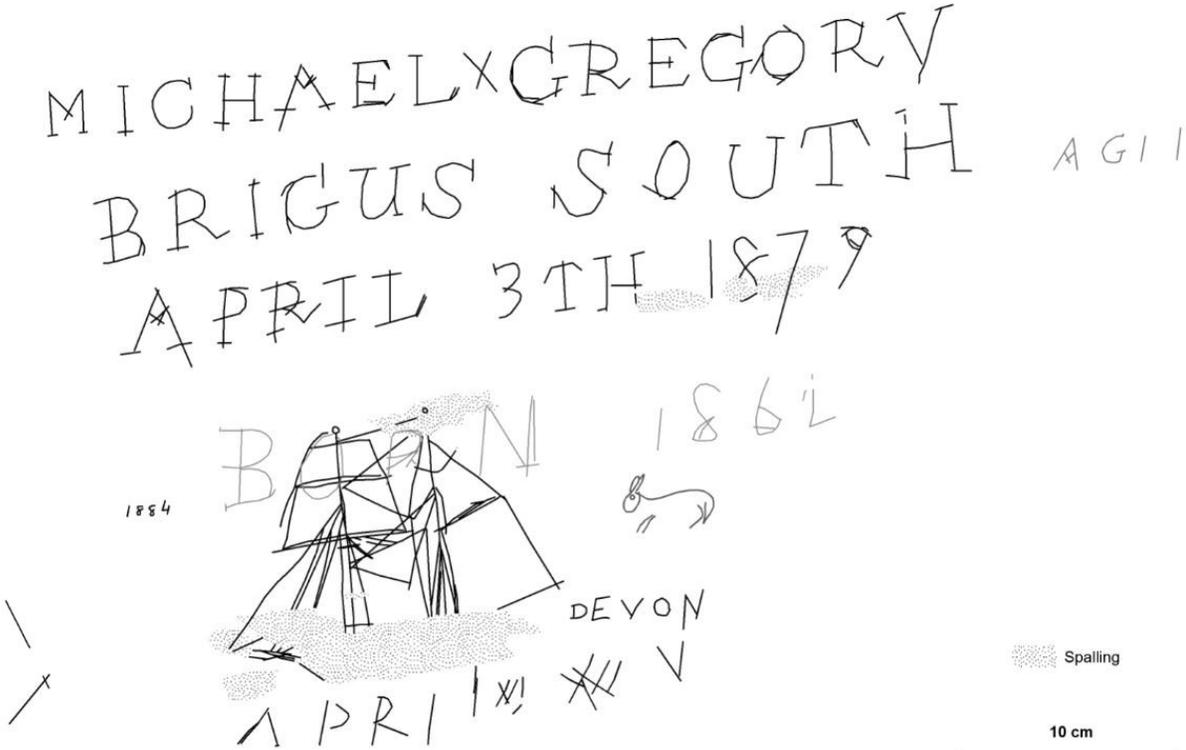
Figure 4: ‘IK 1684’ inscription artificially lit using the H-RTI technique (top) and line drawing interpretation (bottom) Image credit: Bryn Tapper





Figure 5: Photograph of Brigus South inscriptions. Photo credit: Barry Gaulton

Figure 6: Line drawing interpretation of the Brigus South inscriptions following photogrammetric and H-RTI analysis. Image credit: Bryn Tapper.



throughout Newfoundland and Labrador, as well as an example of how techniques such as photogrammetry and H-RTI can greatly assist in both analysis and interpretation.

#### Acknowledgments

First and foremost we would like to thank the Provincial Archaeology Office, Department of Tourism, Culture, Industry and Innovation for supporting this nascent project. The unnamed resident of Conception Bay North (you know who you are!) and Ian Gillies from Brigus South also deserve special thanks for bringing these sites to our attention. We would like to acknowledge the previous work of Dr. Peter Pope, who conducted a preliminary survey and recording of several sites in Fermeuse Harbour including that of Kingman's Cove. Finally, Joshua Forth, a Sanford Flemming College Cultural Heritage Conservation and Management Intern, assisted with all stages of the silicone casting of the Brigus South inscriptions for which we are very grateful.

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# Excavations at the Cupids Cove Plantation Provincial Historic Site (CjAh-13), 2018

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Baccalieu Trail Heritage Corporation



Figure 1: Digging in the pit east of Structure 9

In 2018, the Cupids Cove Plantation Provincial Historic Site opened to visitors on May 19 and closed on October 5. During this time, 3803 people visited the site. As is usually the case, our entire crew stayed on for two weeks after the site closed to the public to clue up the excavations and secure things for the winter. Excavations began on July 13 and continued for thirteen weeks until October 15. Most of our work in 2018 focused on the 17<sup>th</sup> century pit extending east from Structure 9.

## Pit East of Structure 9

Structure 9 was a 17<sup>th</sup> century building, we think may have been a storehouse, extending west and north from the bottom of the terrace in the northwest corner of the site. The stone footing of this building, measuring 4.5m (14 <sup>3</sup>/<sub>4</sub> ft) east to west by 6.28m (20 <sup>1</sup>/<sub>2</sub> ft) north to south, was first uncovered in 2013. The pit extending east beyond the building was dis-

covered that same year. Excavations on the pit began in 2014 and have been ongoing since that time (Gilbert 2018). Measuring more than 4m wide where it abuts Structure 9, the pit appeared to be roughly semicircular, narrowing as it extended into the bank that rises up beyond the building. To date, a 2m wide section of the pit has been exposed and excavated (Figures 1 & 2). The pit was filled with rubble (Levels 5 and 6) that had been deposited in the first half of the 17<sup>th</sup> century. Immediately above the rubble was a 10cm thick layer of silt and beach gravel also of 17<sup>th</sup> century origin (Level 4). This deposit was capped by a 10cm deposit of sterile, fine silt that seems to have built up during a period of abandonment, probably early in the 18<sup>th</sup> century (Level 3). Above this silt layer were several deposits, roughly 50cm thick in total, that built up over the pit during the 19<sup>th</sup> and 20<sup>th</sup> centuries (Levels 1 & 2).



**Figure 2: A section of the profile of the pit showing the different levels.**

By the end of the 2016 season we had exposed the top of the rubble deposit and, by the end of the 2017 season, three layers of rubble had been recorded and removed and a fourth had been exposed.

In 2018, we continued our excavation down to the bottom of the pit, removing two more layers of rubble and an underlying deposit of silt. As we dug down through the rubble in 2017, it appeared the pit was getting narrower. To a depth of about 40cm, the rubble extended from north to south, across the entire width of the pit. Below this, it narrowed to just 2m across and continued down at roughly the same width. Below 40cm, the nature of the rubble also changed. The lower, narrower deposit consisted mostly of small stones in a silt matrix (Level 6), while the upper, deposit was made up of medium to large stones with silt filling the gaps (Level 5). In addition, while the smaller rubble contained only a few artifacts, hundreds of artifacts, all of which appear to date to the first half of the 17<sup>th</sup> century, were found in the gaps between the larger stones. This led us to suggest that the rubble had been deposited in two stages and our work in 2018 has confirmed this.

As we continued our excavation, we discovered that, while the sides taper in somewhat as they go down, the narrowing of the pit was not nearly as pronounced as it had first appeared. Instead, at some time early in the 17<sup>th</sup>

century, the pit had been left open and unused long enough for a layer of silt to build up. When we looked closer, we realized what we had assumed to be the north and south walls of the pit were, in fact, part

of this silt deposit. Given its location on the edge of the bank, such an accumulation may not have taken very long. Instead of taking up all of the lower part of the pit, the smaller stones had been thrown into the depression that remained in the centre of the pit after the silt had accumulated. Once we had removed the silt and exposed the sides, we found that the section of the pit intersecting with the east side of Structure 9 was over 4m wide at the bottom.

As we dug into Level 6 and the silt beneath it (Level 7) something else became clear. Since it was first discovered, we had assumed the pit to be part of Structure 9: first, we thought it might be a storage pit and later we speculated it might be a privy. We now know the pit, and the small stones and underlying silt inside it, extend west beneath that building and predate it. Indeed, it seems likely the small stones (Level 6) were deposited in the pit to level this area prior to construction. Since the westernmost of the larger stones (Level 5) were up against, and in some cases above, the building's footing, they must have been deposited later, possibly when Structure 9 was being built or shortly after. Perhaps the stones were construction debris and the pit was a convenient place to dump it. In any case, based on the artifacts found in the rubble and the beach gravel and silt deposit above it, this all seems to have taken place sometime during the first half of the 17<sup>th</sup> century.

The silt deposit beneath the rubble (Level 7) was on average 20cm thick and, although not as productive as some of the deposits above, was by no means sterile. Highly corroded wrought-iron nails, nail fragments, and fragments of charcoal made up the bulk of what was recovered from Level 7. However, there also were some exciting finds including a large body fragment from a West Somerset cup and several large fragments of a North Devon ware tall



**Figure 3: West Somerset cup fragment from the pit.**

pot (Figures 3 & 4). The cup fragment was probably manufactured in or near the west Somerset village of Nether Stowey located about 19 miles (30 km) east of Minehead (John Allan: pers. com.), while the tall pot was manufactured farther west on the north Devon coast in either Barnstable or Bideford (Grant 1983). These all would have been likely ports of call for vessels sailing from Bristol to Newfoundland. In fact, Guy and his party spent a week in Minehead, between July 5 and 11, 1610, before leaving for the island (Cell 1982: 60). At the bottom of Level 7, and directly above the floor of the pit, we found traces of burnt wood. While not enough to suggest a major conflagration, it indicates that there had been a fire somewhere nearby while the pit was open but before the silt had accumulated. The floor of the pit is level and made of a hard-packed, grey material that may contain mortar. It is very similar to the floor of the cellar in the 1610 storehouse and may have been created around the same time.

Since it runs west beneath Structure 9, we may never know the full extent of the pit. Based on what has been uncovered so far, it appears to be either circular or oval. The western portion, beneath Structure 9, extends down to a depth below surface



Figure 4: North Devon tall pot fragments from the pit.



Figure 5: 17th century posthole north of the pit.

of about 60cm. To the east, where the bank rises up to the terrace, more digging would have been required to take it down to the same level. Clearly, some care was taken to ensure that the feature had a hard-packed, level floor. It appears to have been dug quite early in the occupation of the site but exactly what it was used for may remain a mystery. Yet the documents do suggest a couple of possibilities. We know that Guy's men created a number of temporary shelters, or "safe places", for themselves and their provisions when they first arrived. An early 17<sup>th</sup> century pit located on the terrace just east of the 1610 storehouse is believed to be one of these safe places and its possible our pit is another. On the other hand, Guy also mentions digging "a saw-pitt hard by the sea side", sometime prior to October 6, 1610, and building, "a timber house over it [co]vered with pine boards". (Cell 1982:61) and our pit would certainly have been "hard by the sea side" in the early 17<sup>th</sup> century. Another feature, uncovered in 2018, does suggest that there may have been some sort of wooden

structure over the pit. Roughly, 1m to the north of the pit, we uncovered a 50cm wide posthole that may date to the early 17<sup>th</sup> century. Only one artifact was recovered from this feature: a single clay pipe stem with a 9/64 bore diameter. Bores of this size are usually associated with pipes dating to between 1590 and 1620 (Deetz 1967:41). The fact that no other artifacts were found in the posthole also suggests an early date. Once it was occupied, it didn't take long for cultural material to accumulate at the site. While possible, it seems unlikely that the fill dumped into a large posthole dug later in the 17<sup>th</sup> century, would contain just one man-made object.

When we began the 2018 season, our plan had been to complete the excavation of that portion of the pit exposed so far, draw the profile, and extend the excavation east and south to expose more of the pit. However, as is often the case, the excavations took longer than we had planned. When we return to the site this spring, we will draw the profile and extend the excavation.



Figure 6: Clay pipe stem with 9/64 bore recovered from the posthole.

Figure 7: Looking north across Operation 134.



### Work Elsewhere in the Site

In 2014 we excavated a 17<sup>th</sup> century posthole, 80cm in diameter, located 8.5m (28ft) south of the western end of the inner defensive wall. It seemed likely this posthole had been dug to support one of the posts

for the western wall of the palisade erected by Guy and his men in 1610 (Gilbert 2015). In 2018 we established a 2m x 2m unit (Operation 134) three metres south of the unit (Operation 78) in which the first posthole had been found and located a second large posthole 20ft (6.09m) south of the first. Although exposed, this second post hole has not yet been dug. It will be dug when we return in 2019. In his letter from Cupids, dated May 16, 1611, Guy states that the enclosure around the plantation measured “one hundred and twenty foot long and nintie foot broad” (Quinn, 1979: 148). Based on the archaeology conducted so far, it seems clear that the north wall, facing the harbour, was 120 feet (36.58m) long and the east and west walls were 90 feet (27.43m) long. If the two post holes found so far are part of the western wall of the palisade, the fact that they are 20ft apart suggests an interval between posts of ten feet (3.05m). Assuming this to be the case, the west wall should have consisted of 10 posts extending south for 90 feet at 10 foot intervals. In 2019, we will expand the excavation in this area in an attempt to find more postholes and determine the exact line of the palisade’s west wall.

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# A Report on Archaeological Survey Work Conducted at South Dildo and Dildo Pond, October-November, 2019

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Baccalieu Trail Heritage Corporation

On October 24, 1612, John Guy, Henry Crout, and seventeen other colonists from Cupids, sailed south passed the three islands at the entrance to Dildo Arm and on for four miles to the bottom of the arm. Here they found their first Beothuk camp and, because of this, named the arm Savage Bay and the sheltered cove at the bottom of the arm, where the community of South Dildo stands today, Savage Harbour. Guy and Crout record finding a number of Beothuk “houses” at Savage Harbour as well as a wooden shield, staffs, bowls, boxes made of bark, and an arrow. Near the camp was the entrance to a “broad way” the Beothuk had cut through the woods which, when the colonists followed it two days later, led them south for a mile to Dildo Pond. Proceeding south along the pond for another half mile, the colonists found a second Beothuk camp consisting of three houses. (Cell 1982: 70-72; Gilbert 1990: 151-155) This second camp was discovered in 1988 at a place now known as Russell’s Point. Excavations at Russell’s Point between 1994 and 1997 indicated that it was a fall and winter base camp used by the Beothuk and their ancestors between about AD 970 and AD 1660 (Gilbert 2002).

## South Dildo

In 1991, Doug Rutherford and I undertook a survey in South Dildo in an attempt to find the first camp seen by the colonists. At that time our efforts focused on the western side of the cove north of the river that flows from Dildo Pond into the bottom of the arm. Bands of mussel shells eroding from the bank in this area led us to speculate that it might mark the site of an aboriginal shell midden. However, testing here, and farther to the northwest, produced no aboriginal material (Rutherford and Gilbert 1992).

The Salmon Pool is a small body of water located near the terminus of the river flowing into the bottom of Dildo Arm. Just beyond the pool, the river



Figure 1: Recent Indian point found north of the Salmon Pool in South Dildo.

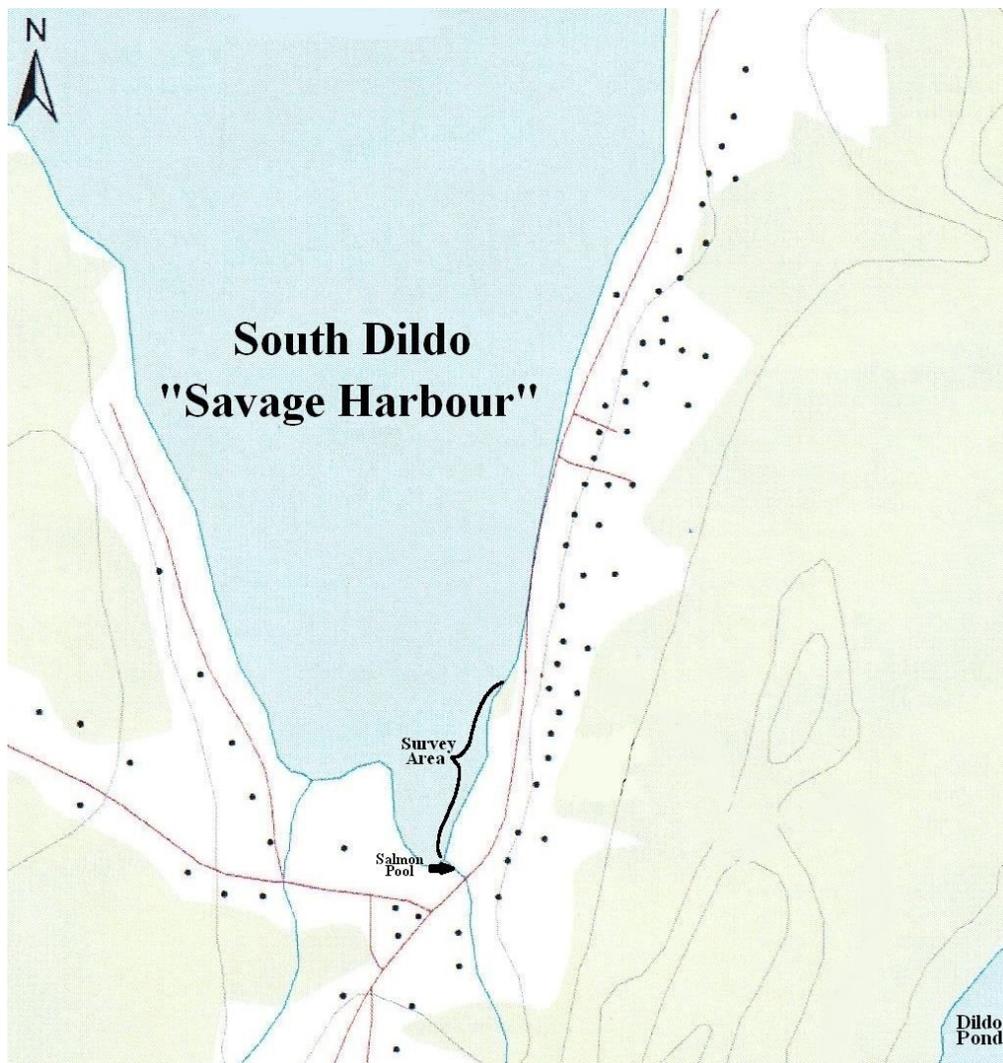


Figure 2: South Dildo/Savage Harbour showing the section of beach surveyed on October 24, 2018.

flows across a gravel beach and into the sea. In about 1997, five year old Courtney Murphy found an unusually shaped object she called her “fish rock” on the beach on the eastern side of the harbour just north of the Salmon Pool. One of my crewmembers at the time knew Courtney’s family and told me about the “rock”. As a result, I visited the Murphys and discovered that it was actually a water-rolled Recent Indian biface. I later showed the artifact to Priscilla Renouf at Memorial University’s Archaeology Unit who suggested it might date to as early as AD 600 (Figure 1).

The documentary evidence attests to an aboriginal presence in South Dildo/Savage Harbour in the early 17<sup>th</sup> century and the archaeological evidence indicates this presence may extend back as early as AD 600. Our survey in 1991 found no aboriginal ma-

terial on the western side of the harbour but Courtney’s find suggested the eastern side might be more productive. Local stories supported this. When I began work at Russell’s Point in 1994, several people told me that a spot on the eastern side of the cove, to the north of The Salmon Pool, was known locally as “The Indian Graveyard”. And someone who once lived in a house there, said that local people sometimes asked her if she was scared, “living on the Old Indian Graveyard”. While it is unlikely to have been a cemetery, it seems something had been found in that spot to connect it with “Indians” in the minds of people living nearby. I was also aware that at least a few grey chert flakes had been found on the beach nearby.

Although our main objective in the fall of 2018 was to undertake further work at Dildo Pond 1, since we were in the area,

we decided to spend the morning of October 24 conducting an initial walking survey of the beach on the eastern side of South Dildo. The area surveyed runs north from the Salmon Pool for about 240m and includes a point at the north end, which extends west into the harbour (Figure 2). Over the past few years, the renovation and extension of a house on this point has resulted in a considerable amount of infilling. While this poses no obvious threat to any archaeological resources that may exist on the point, in fact, the fill provides an extra layer of protection, it did limit our ability to examine the point itself. The distance from the river north to the southern end of the point is about 180m. Along this section the road (Route 80) runs almost parallel to and about 40m east of the beach. North of the point, the road skirts along the



**Figure 3: Large purple rhyolite biface found in the woods road at Dildo Pond 1**

water’s edge and most of the beach lies buried beneath the road bed.

On October 24, our crew consisted of five people, each with varying degrees of experience in archaeology. We spent approximately two hours in the morning walking the beach and looking for evidence of an aboriginal presence. The tide was fairly low, so much of the beach, which consists mostly of gravel with occasional small boulders, was exposed. Only one aboriginal artifact - a large, water-rolled, retouched flake - was found during the course of the survey. However, given the nature of the beach, and the constant churning of waves and tide, it is possible material is being brought up and reburied on a regular basis. Certainly, based on the documentary and the archaeology evidence, this is the most likely location

for the camp recorded by the colonists from Cupids. Local stories about an “Indian Graveyard” also may have had their origin in physical evidence uncovered here sometime in the past. We should also bear in mind that this part of South Dildo is located at one end of the shortest route between the harbour and the Dildo Pond 1 site (see below). No test pits were dug during our brief survey. However, the roughly 180m x 40m section of land between the beach and the road has a great deal of potential and would be well worth testing in the future.

**Dildo Pond 1 (CjAj-11)**

The Dildo Pond 1 site is located on the northwest side of Dildo Pond about 800m southeast of the bottom of Dildo Arm and about 2km north of the Little Passage/Beothuk camp at Russell’s Point. It was discovered in the fall of 2017, during a Stage 1 Historic Resources Overview Assessment of the area, when a scattering of lithic material was found extending along a section of beach for about 46m. While one or two of the items recovered from the beach may be of Palaeo-Eskimo origin, the majority appear to be Recent Indian/Beothuk and range in date from between about AD 800 and AD 1650. An old woods road, still used by ATVs, runs down to the beach where this material was found. In 2017 four 40cm x 40cm test pits were dug on the bank immediately west of the

**Figure 4: Purple rhyolite triangular biface found in the woods road.**





Figure 5: Excavating Unit 1 at Dildo Pond 1.

beach: three to the south of the woods road and one to the north. Somewhat surprisingly, no cultural material was found in any of these pits. However, during a return visit on January 27, 2018, the distal end of a Maritime Archaic stone gouge was found where the woods road meets the beach (Gilbert 2017, 2018). A second Maritime Archaic artifact, possibly the proximal end of a ground-stone axe, was found in almost the same location during another visit on August 9, 2018.

When we returned to Dildo Pond 1 on the afternoon of October 24 our plan was to scan the beach for more lithics, dig a few more test pits, and take readings for a map of the site. However, we quickly realized that surveying the beach would be impossible: rising water levels over the previous two weeks had it completely flooded. Instead, we turned our attention to testing along the bank west of the beach. While the crew was getting organized, I walked to my car to grab some dig bags and, as I was walking back along the woods road, noticed a large

purple rhyolite flake in the road about 22m west of the pond. Looking closer, I saw something else purple sticking out of the ground in the road and, when I picked it up, discovered it was a large, purple rhyolite biface. Two crew members came over to have a look and, while I was organizing the rest of the crew to dig the test pits on the bank, they found a purple rhyolite triangular biface in the same location (Figures 3 and 4).

A 40cm x 40cm test pit was established and dug in the trail about midway between the two bifaces. Since this is a well-used ATV trail, much of the stratigraphy had been stripped away by passing vehicles and what remained was disturbed. However, we did uncover a fragment of what appears to be another purple-rhyolite triangular biface and a number of purple-rhyolite flakes. Beneath this we found some patinated flakes that may be Dorset. Two other test pits were dug farther east along the trail: one 5m to the east of our first test pit, and another 10m to the east. Nothing was found in either of these pits although it

is possible that any cultural deposits that may once have been present had been scraped away by passing vehicles. Three other test pits were dug near the bank to the north of the woods road. All four were sterile.

Fearing the deposits in the woods road might be damaged or destroyed, we returned to Dildo Pond 1 on November 9, established a 2m x 2m unit in the section of road that produced the lithics, and dug it down to sterile (Figure 5). Not surprisingly, more purple rhyolite flakes were uncovered but we also found a considerable amount of Little Passage/Beothuk material including two end scrapers, the proximal end of a third end scraper, a side scraper, a thinning flake, and a stone awl. Aside from the thin-

large mammal, possibly a caribou. We did not dig into this feature. Instead, it and the rest of the unit were covered in sheet plastic and reburied.

On November 13 I returned to the site alone, took some measurements and notes, and dug two more test pits: one on a piece of level ground north of the trail and about eight metres east of the fire-cracked rock feature, and another north of the trail just 1.5 m east of that feature. The first test pit was sterile; the second, closer to the feature, produced no lithic material but there was a burn layer about 8cm below the surface that may be related to it.

Dildo Pond 1 is located at the terminus of the shortest route between the bottom of Dildo Arm and

**Figure 6: Little Passage/Beothuk artifacts from Unit 1. Left to right: awl, scraper, side scraper, thinning flake.**



ning flake, which was made from black chert, all these tools, and many of the flakes, were manufactured from the same grey chert used by the Little Passage/Beothuk people at Russell's Point and Dildo Island (Figure 6). A number of red ochre nodules also were recovered, and a red ochre stain (ochre mixed with grease) was exposed in the northwest quadrant of the unit. In the southwest quadrant, near the bottom of the unit, we found a large, patinated uniface that may be Maritime Archaic. Most of Unit 1 was located in the road but the northeast corner extended beyond the road and into the bank. When we dug in this area, we uncovered a concentration of fire-cracked rock that is either a hearth or hearth debris. Fragments of charcoal and calcined bone were scattered among the rocks and some of the bone was obviously from a

Dildo Pond (Figure 7). The eastern end of the trail, leading across the site to the beach, skirts along the edge of a hill that rises to the north and much of the land to the south is wet. This is the easiest way to access the site and, given the archaeological evidence uncovered to date, it appears people have been following this route since Archaic times. The purple rhyolite artifacts found so far are almost identical to those found in and around Hearth 1 on Dildo Island. The people who created and used that hearth, radiocarbon dated to circa AD 800, were part of the Cow Head Complex (Gilbert 2006) and there can be little doubt these same people were visiting Dildo Pond 1. Artifacts found both on the beach and in Unit 1 indicate that the site was also being visited by the Beothuk and their Little Passage ancestors.

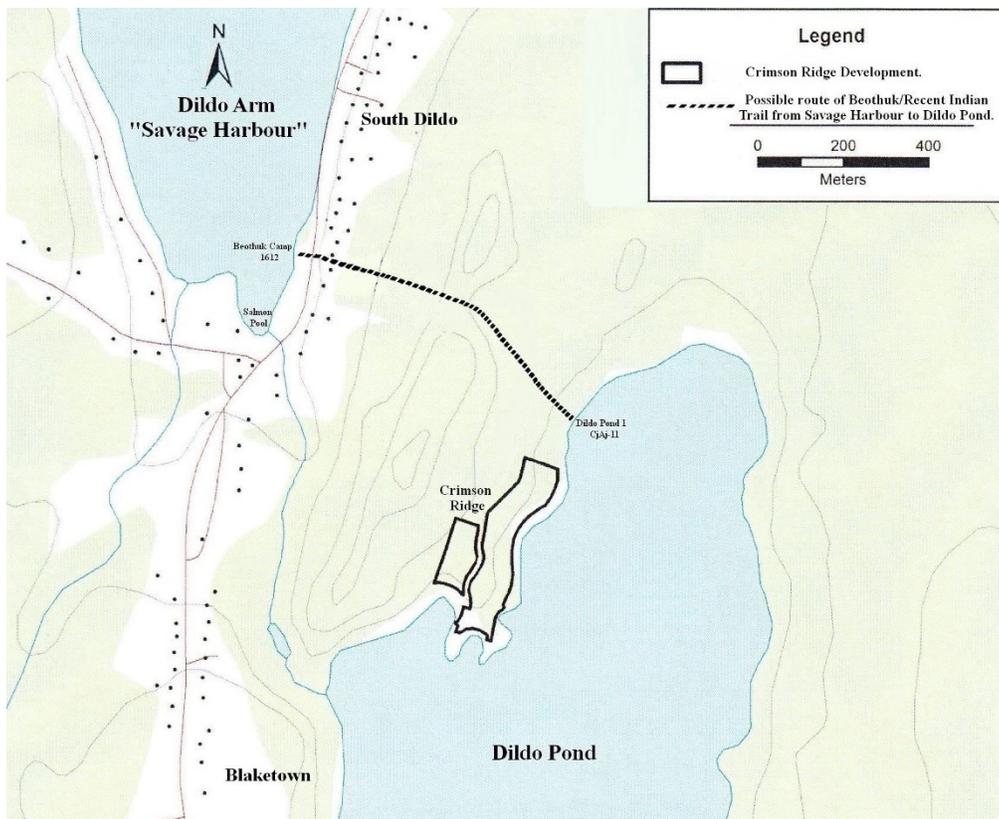
Although submerged when the water is high, during much of the year, the gravel beach at Dildo Pond 1 extends into the water for about 5m and is well suited for launching and hauling up canoes. A level terrace, averaging 7m wide, runs north from the terminus of the trail, between the beach to the east and the hill to the west, for at least 40m and would be an ideal place to camp. Indeed, it is possible that small campsites lie scattered along this terrace. Although the exact dimensions of the site have yet to be established, we know it extends north to south along the beach for at least 46m and west from the beach for 22m. High water this past fall made it impossible for us to take the readings we needed to draw the site map. However, we plan to return to Dildo Pond 1 sometime during 2019 to take those readings and conduct further excavations.

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**Figure 7: South Dildo, Dildo Pond 1 and the shortest route between the two.**



# Torngat Mountains National Park Archaeology 2018: Assessment for Installation and Operation of Intershelter Domes/Hiking Routes

Corey Hutchings  
Parks Canada

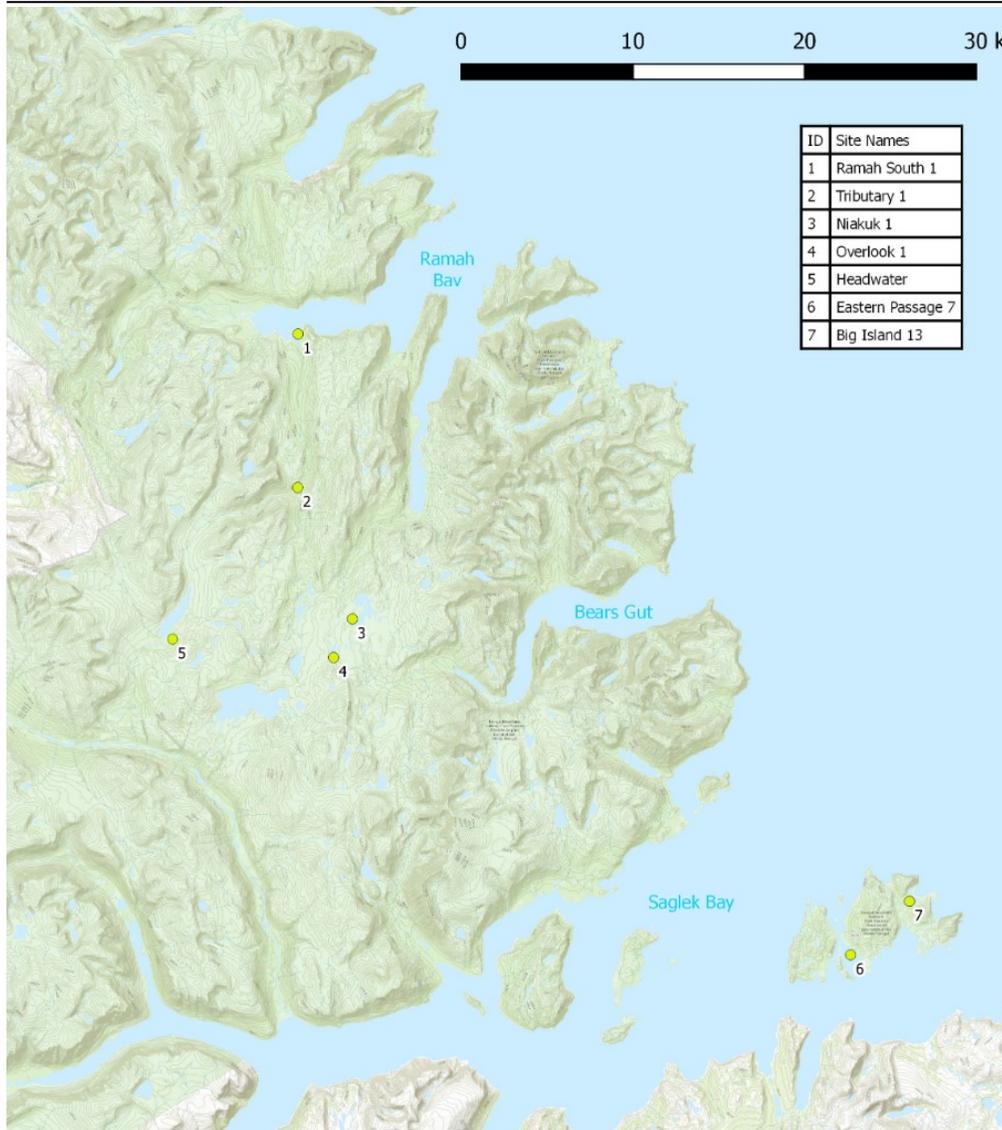


Figure 1: Site locations discussed in text.

Since its establishment 10 years ago, the Torngat Mountains National Park (TMNP) has been primarily focused on experiences in the coastal areas of the park. In an effort to open

up the interior of the Park to visitors and communicate a more complete version of the Inuit story on Inuit homeland, TMNP developed a plan to facilitate more inland travel highlighting the interior mountains and waterways. This plan includes the placement of eight bear-proof Intershelter Domes at regular intervals approximately a day-hike apart along routes between Saglek Fiord and Ramah Bay. Each proposed camp will be large enough for one or two Intershelter Domes mounted on platforms, a dozen individual tents, and an approximately 25 m x 25 m solar-powered electrified bear fence, for a total camp footprint of 625 m<sup>2</sup> (Parks Canada 2018:1).

Aligning with Parks Canada's Cultural Resource Management Policy to ensure that all cultural resources in and from the national park are managed and protected, the following work was conducted as part of Parks Canada commitment to document,

preserve and present the cultural and natural resources for future generations. The impact assessment for the installation of these backcountry domes fell into three headings: 1) Assessment of the dome



**Figure 2: Ramah South 1, site is located on point before river mouth.**

locations for unknown archaeological resources, 2) Survey of the proposed hiking routes between the domes, and finally 3) Access points that will serve as the start and ending points for the hikes.

Based out of the Torngat Mountains Base Camp and Research Station, located at the head of St. John's Harbour (kANGIDLUASuk), the field season ran for the first two weeks of August with financial, logistical and other support provided by the TMNP. TMNP and Western Newfoundland and Labrador Field Unit staff, as well as Memorial University researchers Deirdre Elliott and Nancy Nochasak provided assistance in field activities.

**Access Locations**

The Access Points were selected for ease of landing people and equipment from boats and for the ability to connect with the proposed hiking routes. Four access points were proposed: Ramah Bay, Bear's Gut, Branagin Cove, and North Arm. Two of these locations had seen earlier archaeological survey and multiple undocumented sites and features were recorded at unsurveyed locations.

**North Arm Access**

North Arm had been previously surveyed and mapped by Parks Canada (Higdon 2015, Stopp 2014, and Whitridge 2014) and has an in-depth cultural in-

tegrity plan in place. The site was revisited but no new features were recorded during this assessment and the existing maps will allow the hiking trail to avoid culturally sensitive areas.

**Branagin Cove**

Areas along the eastern and, to a lesser extent, the western extent of Branagin Cove were surveyed in 2015 and 2016 as part of Branagin Cove / Aggigiak Satellite Base Camp Archaeological Impact Assessment (Higdon 2015, Higdon and Whitehouse 2015). Additional mapping work was also completed this season by Elliott (this volume) and will be incorporated into site mitigation planning when available. Previous assessments revealed multiple documented archaeological sites, including Maritime Archaic sites at higher elevations, Palaeoeskimo and undetermined lithic scatters and potential knapping locations near the mouth of the river, as well as an Inuit habitation site (tent rings, caches, and sod houses) and foundations of the Hudson's Bay Post Fort Lampson. This survey confirmed the location of these sites but concluded that the impact of the hiking trail on the sites could be mitigated by having the trail run along the edge of the active beach.



Figure 3: Bear's Gut Access, View South, grassy terrace to right of frame is the location for features discussed.

Figure 4: Large cache in Bear's Gut marked by collection of boulders, many of the caches in the area appear to use natural boulders to highlight location.





Figure 5: Tributary 1, tightly laid stone border of a large cache is situated on high terrace overlooking river which drains into Ramah Bay.

### Ramah Access

Located within 3.5km southwest of Ramah Moravian Mission, 5km west of Ramah Quarries NHS (Loci 2 and 3) and associated archaeological sites, the southern shores of Ramah Bay, along the mouth of a river / river delta had not been surveyed archaeologically. A single previously undocumented site was recorded at this location.

South Ramah 1: Located 400m SW of the proposed trailhead, the site is located on the edge of a terrace overlooking Ramah Bay (Figure 2). It was identified through the presence of a scatter of solely Ramah Chert flakes with no formal tools visible. A number of large stones (35-50 cm) were associated with the flakes but no structure could be identified. Fifteen metres from the edge of the scatter, a single small cache pit was identified. No cultural affiliation could be determined for the site.

### Bear's Gut

Located 30km northwest of Torngat Mountains Base Camp, the area had not been surveyed archaeologically. The north bank of the river is marked by large flat grassy terraces with multiple over-lapping caribou trails (Figure 3). Upon landing, a large number and

variety of features were recorded in the area including multiple flake scatters, a collapsed Inuit stone fox trap, two large conjoined tent rings (Figure 4), a possible grave cairn, multiple clusters of tent rings, multiple large caches, and a temporary shelter or cache beneath a large boulder. These features were photographed and recorded with a handheld GPS but the number and density of features require far more time be spent at the site before the application of site numbers.

### Trail Survey

To date, recorded interior sites in northern Labrador are quite rare, likely related to the lack of archaeological survey away from the coast. Recorded interior sites have become common on the Quebec side of the Ungava peninsula and there is no reason to think that this is unique. Given the overall size of the proposed hiking network, aerial survey was used for all trail routes with a sample of routes also surveyed on foot. Three previously undocumented sites were encountered during this pedestrian survey.

Tributary 1: Located in a grassy meadow at the center of a high point of land bordered on two sides by rivers above their confluence in a deep river



**Figure 6: One of the heavily disturbed features from Niakuk 1, one of the intact, on edge flat stones is still visible in the foreground.**



**Figure 7: Piled flat stones with little remaining structure, disturbed soil where partially buried standing stones have been displaced.**

valley that drains into Ramah Bay. The site is located 150m to the northeast of the proposed site for the Ramah Dome and 50m east of the suggested trail. The site consists of 25-30 stones laid in a rough oval 2m x 2m with one notably flat side (Figure 5). Sections of this stonewall are laid in two courses but no other features were visible suggesting it may be simply a large cache. No artifacts or other cultural materials were recovered and it is likely based on the limited vegetation growth over the stones that the site is from the modern period.

Niakuk 1: Located on the southwest corner of Niakuk Lake, 650 m north of the proposed location for Niakuk Dome on the trail from Ramah Dome to Niakuk Dome. The site is situated on a grass-covered

hill, which gently slopes toward the water and consists of two separate 1m x 2m features, which are tentatively identified as cache pits (Figure 6). These features are constructed of flat stones, some of which appear to have been transported. A number of these stones have been placed on edge and buried in place while others that are currently lying flat appear to have been disturbed (Figure 7). No cultural material or artifacts were observed and no cultural affiliation can be suggested.

Overlook 1: This was the most substantial of the inland sites documented this summer. Located on the proposed trail midway between the Niakuk Dome and Possible Dome locations, it is situated on the lower scree-covered slopes of a large hill that over-



Figure 8: Small collapsed cairn of three white rocks on a larger boulder. Three stacked rocks have been previously identified as a signpost for marking safe travel (Brake and Larkham)

Figure 9: Heavily built cache built into in place boulders, note gravel base of the interior, which is not natural for area.





Figure 10: Stacked wall and associated tent ring seen to right of frame.

Figure 11: Location of Headwater Site with large boulders, which mark the cache location. Satellite imagery shows that these boulders are some of the only features in this valley that are visible above the snow in winter.





**Figure 12: Cache constructed in space between the two large boulders. A number of flat stones were laid aside suggesting that there was an intention to re-use this cache at a later point.**

looks a lake. The site consists of three features: a small cairn/inuksuk, a large opened cache, and a small tent ring with a two course rock wall. The site was initially identified by spotting the collapsed cairn, which was composed of three round, white stones that appear to have once been stacked on top of each other, and placed on top of a large angular boulder (Figure 8). The cache was constructed by stacking a series of angular stones in a long thin oval, incorporating a large boulder to serve as one side (Figure 9). The interior base is composed of a mix of gravel and small stones that look to have been purposely collected and placed. A number of stones that would have been part of the construction have been pulled up-slope but stacked for future use. The tent ring is built with shallowly set stones visible on the surface but with the north wall of the ring being built out of two courses of stones, giving it the appearance of a hunting blind, which is oriented to look over the lake below the hill (Figure 10). The use of this short wall as a

blind was supported by the bear monitor Ryan Merkuratsuk who thought that the site would be a perfect place to hunt for geese, as they would come in from overhead approaching the lake. No artifacts were recovered at the site but construction practices on the large cache are similar to those seen in Inuit sites elsewhere.

#### **Dome locations**

Six of the eight proposed dome locations for the hiking network were visited and surveyed while the remaining locations, which are located within Quebec's Parc National Kuurujuaq, will be surveyed as part of a separate project. Clearing of the domes consisted of a survey of the area surrounding the dome location and walking of 5m transects over the specific location for the dome. The footprint of the dome installation is small and there was leeway in the placement meaning there was no problem in ensuring there was no danger to cultural resources. Only one site was found in the general area of a proposed dome but was dis-



Figure 13: Continuous Ramah debitage scatter that was marked with pin flags. No structural elements are visible but the scatter shape, elevation of site, and material types suggest an Archaic longhouse.

Figure 14: Multiple cultures are represented on this part of Big Island making interpretation of features difficult, these parallel lines of stone and associated flat rocks have tentatively been suggested as a kayak cache but further investigation is required.





**Figure 15: Northeastern point of Big Island, view north, previously identified Archaic longhouse sites are located to right of large pond in background.**

tant enough to not require any further protection beyond reporting.

Headwater 1: is located 380 m east of the southern extent of Headwater Lake. The site is situated on the gentle slope that extends up from the lake edge to the tops of the large mountains located far to the east. Two 3m - 4m tall glacial erratic boulders mark the site and are the most prominent features in the general area and are what drew attention to the location (Figure 11). The single site feature is an opened stone cache 1.5 x 2m, oval in shape and with one of the large boulders serving as a wall (Figure 12). The cache walls, where still intact, are multiple layers high and a number of flat stones laid nearby are likely stones that once covered the cache. Overall, the cache has the same heavily built construction as seen in the cache associated with the above-discussed Overlook 1 site. Despite extensive survey and a revisit to the area, no additional artifacts or features were recorded. Cultural affiliation cannot be positively be

determined but based on construction it is likely Inuit.

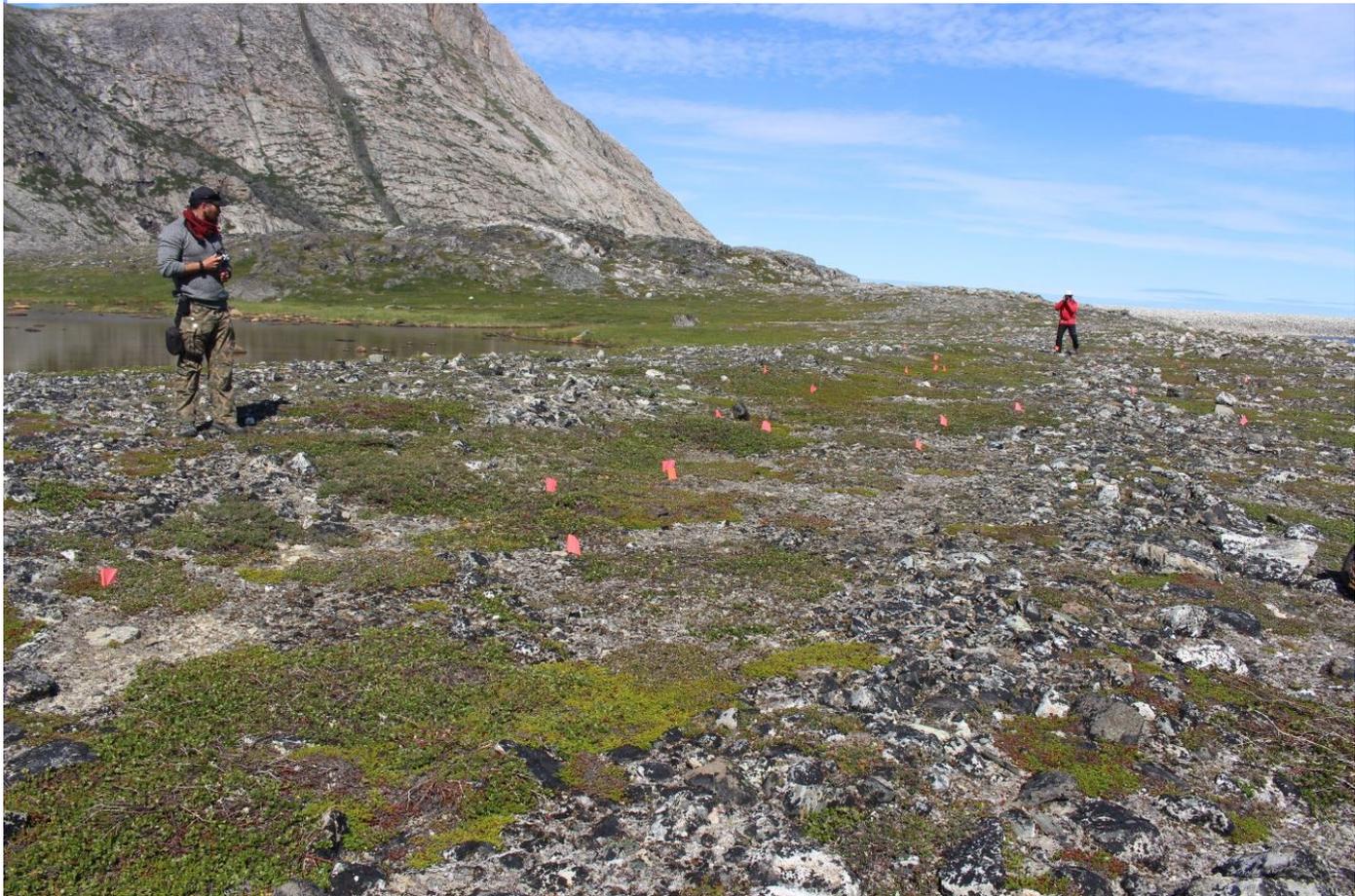
#### **Additional Survey within the TMNP**

Eastern Harbour 7: While accompanying Deirdre Elliott and members of the kANGIDLUASUK student program as they completed drone-based mapping of Big Island Eastern Harbour 5. Eastern Harbour 7 was encountered while relocating the nearby Big Island West site (IdCq-53). The site consists of three distinct clusters of Ramah chert flakes, with one of these clusters associated with a disturbed tent ring. To the northeast of these smaller clusters, a 45m x 6m scatter of Ramah debitage was flagged (Figure 13) which from overhead photos is consistent in appearance with other Archaic longhouses. No structural elements of the longhouse are evident but three small external caches were found along the inland side of the structure. This organization is similar to that seen at other longhouse sites. An additional unknown feature was recorded north of the longhouse and con-



Figure 16: Archaic bifacial tool made of Ramah chert, one of the few tool fragments recorded in the area.

Figure 17: 35 meter Archaic longhouse with debitage flagged, depressed floors and elevated walls are visible.



sists of two closely laid near-parallel lines of rocks over 3m in length. A number of large flat stones were found associated with this feature. Though disturbed, this feature may possibly represent a kayak cache associated with the historic Inuit camp described at IdCq-53 (Figure 14).

Big Island East 13: This site was recorded during a hike and tour toward the northeastern-most point of land on Big Island by a group of TMNP staff and Park Visitors. As we were approaching a large pond, which marks the start of a series of reported Archaic longhouses (Thompson 1984), a thin scatter of Ramah flakes and some tool fragments were found (Figure 15). No features were found in association with these artifacts and there was little clustering of lithics. Closer to the ocean a number of possible stone features were encountered along with a mostly complete Archaic point (Figure 16). During the return hike, 150m meters from the original finds of the day, a dense scatter of lithic debitage and tool fragments were encountered on a flat high spot of land, which backed onto a small pond. Further investigation revealed a 35m x 5m Archaic longhouse with visible banked walls and sunken room pits (Figure 17). A small number of bifacial tool fragments were recorded from the interior of the structure but nothing to suggest a specific period or complex for the structure.

At present both the original scatter and the longhouse feature will be treated as a single site and it is likely that additional survey in the area will lead to the identification of additional archaeological remains.

### Conclusions

The proposed establishment of a hiking trail system throughout the interior of TMNP required the placement of bear-proof Domes at regular intervals along routes between Saglek Fiord and Ramah Bay. The access points for these hikes, the hikes themselves, and the locations of the dome sites were surveyed with the goal of locating and protecting known and unknown sites. The activities at the TMNP and associated archaeology has primarily been focused on the coastal areas of the park with very few cultural sites identified more than a kilometer away from the ocean. This limited survey returned seven previously unidentified sites, four of these being high-elevation interior sites in areas that would have been typically

excluded from surveys. The discovery of these sites as well as the implications of greater utilization of the interior, all help add to the history of the Torngats and the people who live(d) there.

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# Hunters and Holy Stone: Tshikapisk work at Kamestastin in the spring of 2018 May and June 2018

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Figure 1: Shak Selma site (GICs-22) view to east (Jenkinson).

## Introduction

An exceptionally cold spring made for good travelling and as there was virtually no uan-tauatshiu (the water which collects in the spring where the ice meets the shore), this meant easy access to all site locations but difficult conditions for archaeology once one got there. Snow cover lingered much longer than is normal and the ground remained frozen or it thawed very slowly. Hard frosts at night meant that even on milder days one had to wait until mid-afternoon for the sun to unlock the night's surface freezing, and that, even when it occurred, excavation often had to be interrupted as frozen ground was repeatedly encountered.

The virtual vanishing of the caribou has left Kamestastin a place inhabited not only by ghosts of

the ancients but by the ghosts of much more recent inhabitations, ones who only a few years ago filled the air of Kamestastin with the rustling sounds of thousands of hooves treading the crisp spring snow as they crossed the lake hurrying north.

Archaeological work at Kamestastin in the spring of 2018 focused on two sites: Mistanuk Mistamunik GICs-08 and Shak Selma GICs-22.

### Mistanuk Mistamunik GICs-08

The late onset of warm weather meant that work at GICs-08 was mostly restricted to further clearing of surface alder and dwarf birch and a test-pitting program to better define the extent of the cultural remains at this site. The two exceptions were an attempt to link two features in Area A with a two-meter wide excavation to better define the relationship if

any between the two, and of understanding the processes of soil deposition over Area A. The latter is clearly uneven in different parts of Area A with features in central and southern parts buried deeply whereas soil deposition at the northern margins was scant enough for structural features to protrude through the modern surface. The second exception was work undertaken on the feature exposed in 2017 (see PAO Annual Review series 2017/2018) to check further on the hypothesis that it demonstrated ritual treatment of Ramah Chert.

**GICs-08 2018 Test Pitting**

Test pitting of Area A, Area B and adjoining areas utilized small 20 cm x 20 cm pits with straight walls, placed at two metre intervals and dug to the sterile layer. The small test pit contents were all screened with the use of a hand held screen. In the eastern one third of Area A, the sterile layer was assumed to be the gravel layer which underlay the thin sand cover. As one moves westward towards the moraine across Area A, the amount of sandy material downwashed from the moraine above progressively increases in thickness though the effect is much less marked at the northern margins. In these western two thirds of Area A, the sterile layer was taken to be the fine beige sand bed atop which the buried cultural materials were identified in the spring of 2017. In one section of the western two thirds of Area A, this fine sand was dug to 30 centimetres below the identified cultur-

al layer where lay the feature showing apparent ritual treatment of Ramah Chert flakes. No cultural materials were found beneath it though delicately thin wavy lines of black humic material seemed to testify to an earlier series of lightly vegetated surfaces being buried each in their turn before the human occupations occurred.

In total, 75 small “keyhole” test pits were dug over Areas A and B and in adjoining areas. Of these 39 were positive for lithics. A further seven had concentrations of charcoal without lithics. In the most easterly third of Area A two aggregations of rocks may be cultural, but no charcoal or lithics appeared in test points adjacent to them. Assuming the flakes in the test pits are a reliable indicator, the exercise has provided a clearer picture of where cultural remains are concentrated on this site.

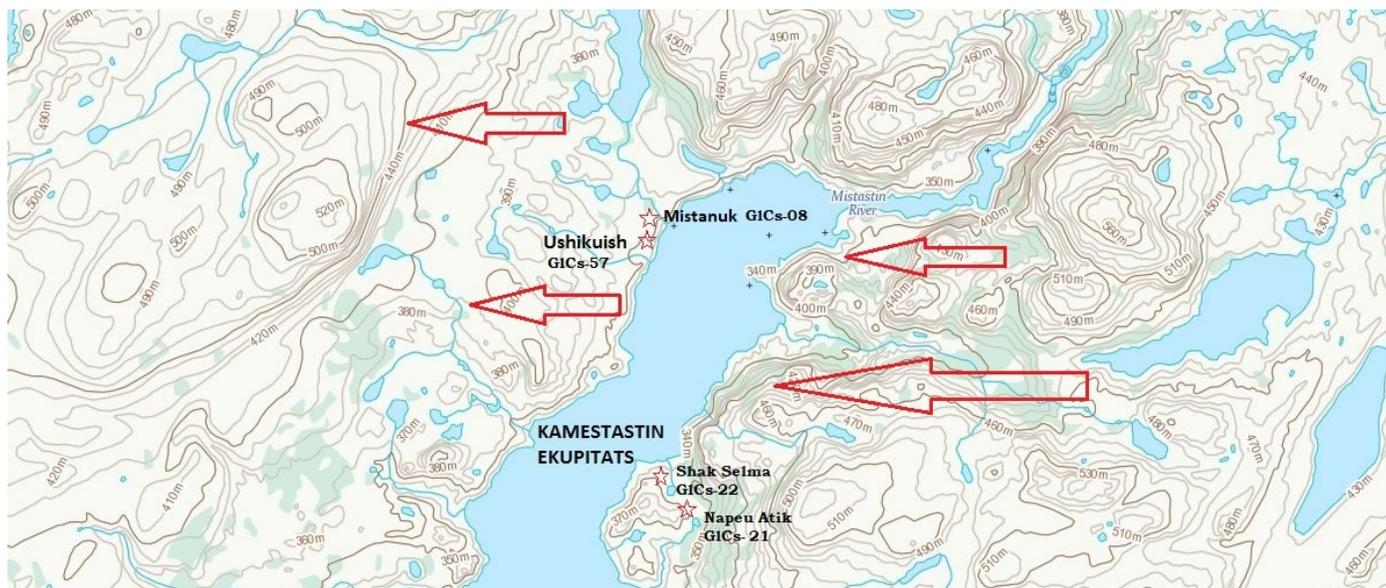
**Trench linking features in Area A**

The attempt to open some units between the two known cultural features in Area A was temporarily abandoned due to persistent frozen ground.

**Feature with “ritual deposit” of small resharpening flakes in red ocher in units N2W7, N3W7, N2W8 and N3W8**

In 2017, a feature was identified in four adjoining one-meter units of Area A (See PAO Annual Review 2017 pages 151-159). The presence of well buried cultural materials was initially noted in 2016 when a single fortuitously placed test pit came down upon

**Figure 2: Map of Kamestastin outflow area with sites referred to in the text. The red arrows show the approximate location and direction of the spring caribou migration crossings at the outflow. In spring, these are always south to north. Fall crossings can be in both directions (Jenkinson).**





**Figure 3: Ramah bifaces ritually broken and anointed with red ocher in funerary context at Nulliak (Stephen Loring).**

Ramah Chert flakes, fire cracked rock and calcined bone. Upon excavation of a two-meter-by-two-meter area around the test pit, the feature was shown to consist of two small aggregations of modestly sized rocks around and upon which were charcoal deposits and hundreds of small flakes of Ramah Chert. The latter lithics were apparently waste material from sharpening and/or refinishing tools. Whoever placed them upon the feature had then liberally anointed the deposited flakes with red ocher. When excavation of these units was halted in 2017 no artefacts were noted other than a small lozenge shaped biface of Ramah Chert lying beside the smaller of the two features and the pile of waste flakes lying in red ocher upon and around the larger one. When in 2018 the snow cleared sufficiently to expose the larger feature, the distal end of a large projectile or lance point made from Ramah was noted protruding from near its highest point. Later, when all the snow had melted, a second smaller biface of light colored Ramah emerged on one of the flanks of the feature.

Apart from collecting these two bifaces after photographing them in situ, I also began the exercise of measuring in and collecting the ocher stained flakes, which lay around this unusual feature. This could not be completed before I left Kamestastin because of repeated episodes of surface refreezing.

Though necessarily a speculative exercise we need to think about the meaning and purpose of the feature in the 2 square meter section of GICs-08 Area A which includes units N2W7, N3W7, N2W8 and N3W8. Here we have a small combustion feature upon and around which the inhabitants had deposited hundreds of small re-sharpening flakes of Ramah chert. These flakes were not the randomly strewn debitage of tool stone working but would have had to have been collected and placed on and around the small fire feature. Found in some places lying one upon the other in piles,

they had then been liberally covered with red ocher. It is difficult to see this feature as being something other than the remains of a deliberate act of ritual. The treatment of these small retouch flakes at the ocher feature at Mistanuk Mistamunik GICs-08 is mirrored at Ushikuish GICs-57, its younger by 750 years neighbour located 75 meters to the west. At Ushikuish, small flakes had also been gathered, placed in one spot and then dusted with red ocher. I suspect that these acts represented not only propitiation of the natural forces governing caribou and other animals, with which in the killing and processing of their charges weapons and tools of Ramah chert were used, but that it also conveyed attitudes of reverence for the material itself. I suggest that this special tool stone was viewed as charged with spiritual power and may even have been governed by its own deity. If one can use the surviving Innu spiritual system as a way of shedding light on what may have been broadly similar practices, that system understands the natural world as being governed by a pantheon of governing deities. The different responsible forces govern not only animals, and categories of animals, but meteorological phenomena, the freezing and thawing of lakes and rivers, spring break up of the ice, prominent topographical features, and other natural apparently inanimate objects including rocks, to name only

some. In this spiritual environment, it would be very surprising if the favoured toolstone used in the killing and processing of animals were somehow outside of this spiritual structure.

*“It is not only animals, birds, insects that have life but also things that are not thought of as alive, including rocks, everything on earth. These too we are required to respect.”*  
*The late Shimun Pun speaking to his grandson Jean-Pierre Napes Ashini at Utshimauapeu in September 1976 (Napes Ashini personal communication, January 2019)*

Well known is Ramah cherts propensity for long distance travel, either through exchange, gifting, or perhaps direct transport in the possession of fabled travelers of the time. In a testament to the power and value with which it was invested, the material has travelled from its single known source, the quarries at or near Ramah Bay, at least as far as Virginia to the south and Michigan to the west. Stephen Loring and others have pointed out that the value attributed to Ramah by Innu ancestors and related groups seems to extend beyond its physical properties as a flakable stone. Its use in ritual contexts, including burials, caches of finished weapons or ceremonial objects, and deliberate ritual breakage of bifaces, as well as its transport over immense distances bear witness to the “power” invested in, and significance attached to, Ramah by those for whom it played a key cultural role down through the ages.

The ocher covered Ramah feature at Area A of GICs-08 echoes the evidence of ritual treatment of Ramah nipple based points which Chris Wolff describes in a pit house at White Point (IcCp-41). At White Point 2 early archaic points of Ramah Chert were found stabbed into a red ocher filled depression and then both snapped, apparently intentionally. In fact though less dramatic than the action at White Point, the GICs-08 ritual treatment of waste flakes of Ramah Chert may be less am-

biguously honoring the tool stone itself rather than also conveying meanings associated with the more elaborate religious or ceremonial event at the pit house at IcCp-41.

In his discussion of caching behaviour and the role of Ramah objects within this phenomenon, Stephen Loring refers to three known examples of Ramah caches within the ancestral Innu sphere: the Gordon Spingle cache at L’Anse au Clair, the Huey Stubbert cache at Kegaska (Tshekaskau), and the very large cache (over 90 bifaces) at Alexis Bay. If one accepts that both sides of the Straits were once part of that sphere then one can add a fourth, the Walter Billard cache at Port Au Choix. Loring argues that it is likely that all four caches, including the one found not far from the Port au Choix archaic cemetery, actually date to the later ancestral Innu period. What exactly was the function of these and other caches is a matter of debate but it is safe to say that caching behaviour bears witness to the value attached both to the flaked objects and to the material from which they were fashioned.

Finally, in this quick overview of Ramah in a ritual context one needs to mention the appearance of articles fashioned from Ramah Chert included as grave goods in burials. Ramah artefacts occur in archaic burials in the Gulf of Maine, Newfoundland,

**Figure 4: GICs-08, distal end of ocher stained Ramah biface lying atop small combustion feature amidst hundreds of small ocher stained Ramah flakes at the Mistanuk Site. A second smaller biface fragment of light coloured Ramah chert lay on one of the flanks of the same small combustion feature (Jenkinson).**





**Figure 5: Large quartz preform or preforms from the quartz pit at the Shak Selma site. This may be a woodworking tool. The two sections do not refit and may belong to a large tool of which the medial section is missing or to two separate tools both missing sections (Jenkinson).**

and at Nulliak and Rattler's Bight on the Labrador coast. Dating to a later period the burial of a young Innu woman about 2000 years ago on the west side of the Mingan river (EbCx-64) near the Innu village of Ekuantshit was accompanied by a necklace of copper beads, a cache of bifaces of dark opaque cherts, blocks of Mistashini quartzite tool stone and at least two bifaces of what seems to be Ramah chert (Pablo Somcynsky, pers. com., February 2019).

#### **Shak Selma Site GICs-22**

After effectively wrapping up work at GICs-08 due to the persistence of frozen ground, attention shifted to the Shak Selma site on the opposite side of the Kamestastin outflow narrows. The site sits on a high terrace overlooking both the narrows and the Tshumshumapeu valley, which between the flanking mountains and hills forms a relatively low-lying terrestrial link between the narrows and the main lake. Several important early Tshiash Innu/early Archaic sites (Tuamish, Tshetshuk, Natakameimupan, Uitshitshemushish, Napeu Atik, Tshumshumapeu, Pess, Upuamekush and Shak Selma) have been identified in or near this corridor. GICs-22 has been known about from the time of the first serious archaeological surveys at Kamestastin. It was discovered by Jack (Shak in Innu) Selma of Sheshatshit, bears his name and was initially recognized as a site because of a quartz nipple based projectile point lying on the surface amongst quartz shatter, flakes of dark grey chert

and delicately rippled flakes of smoky glassy quartz. The latter have the appearance of high quality tinted glass. In 2012, seven one-meter square units were excavated at the Shak Selma site. The excavation revealed a combustion feature in association with several finished tools of quartz, quartz debris, dark grey chert flakes and several flakes of the smoky glass-like material. Completely absent was any trace of Ramah Chert.

In the spring of 2017, a small core of white quartz was noted close to the southwestern limits of the 2012 excavation though it was not collected at that time. A year later in the spring of 2018, the site was revisited and the decision was made to extend the 2012 excavation by the one square meter unit in which the quartz core was lying.

Although the surface showed very little quartz, once the vegetation was removed, quartz debris was encountered immediately. As excavation proceeded a small combustion feature also appeared. Quartz debris lay both on and around this feature. The latter had been built on a constructed pad of sand and gravel and was surrounded by charcoal, profuse quartz debris, together with the same two lithic types encountered during the 2012 excavation, dark grey chert and "smoky quartz." The latter two materials were present only in very modest quantities. Further excavation revealed a quartz strewn "ramp" on the western side of the combustion feature, which led into progressively deeper levels. Exposure of the surrounds of this "ramp" revealed two small rock piles

**Figure 6: Probable projectile point with missing lateral and proximal sections. Found at the rim of the quartz-filled pit at the Shak Selma site. The material is a brownish grey chert (Jenkinson).**



which, together with a conglomerate boulder and the edge of what may be protruding bedrock, framed a space. This mini amphitheater was then shown to contain a small pit. The pit was full of both broken quartz and worked quartz tool fragments and had been dug into the otherwise culturally sterile layers beneath the floor surface on which the combustion feature sat. Apart from broken quartz and quartz tools, the pit also contained a small quantity of small calcined bone fragments and many charcoal pieces. At first taken to be reddening from heat, a smear of orange in part of the wall of the pit seems to come from ocher as shortly afterwards fragments of haematite were noted in the base of the pit as then excavated.

In the course of the 2018 excavation of the quartz-filled pit a total of 17 quartz tools and tool fragments were noted within it, together with 119 pieces of quartz shatter and flakes. In addition, a possible projectile point (described below) lay on the surface beside the pit.

Lying at floor level beside the lip of the pit was a medial fragment of a possible projectile point made of dark grey chert. Though the base and part of the distal portion is missing, enough survives to suggest its original outlines, at least for the portion above the proximal end. By inference, the piece seems to have been narrow with almost entirely straight edges converging (if the sides continue to the end without curving in at the tip) in a sharply pointed weapon or other tool.

All the quartz tools excavated from the pit were broken or fragmentary, and so far, none of them obviously refit. Intentional ritual breakage of tools doesn't seem to have occurred here as happened with tools of Ramah and other materials disposed of in funerary contexts e.g. at Nulliak and Rattler's Bight and in another ritual context at the Temiscouata Site

on the Madawaska River (CjEd-5.) At the Temiscouata site, there is evidence of a large Ramah biface being placed on an anvil stone and struck with another. In the latter case, a radial fracture pattern from the point of impact (where a blow from a hammer stone struck the large Ramah biface centrally) allowed this interpretation to be made with confidence.

The most unusual artefact from this pit was a very large preform of quartz. Two pieces were recovered which may or may not come from the same implement. They do not refit and this may mean either that the central portion is missing or that the two pieces belong to different preforms.

At the other end of the scale is what looks like a miniature stemmed projectile point. It is so delicate that it is hard to believe that this was a functional piece. Indeed only one side has been flaked and the other appears to rely for its projectile point look on a fortuitous break. Normally one might quickly dismiss the piece's appearance as the result of a coincidence but the possible ritual context in which it was found suggests that appearance in this context may have trumped functionality. In other words, its purpose may have been symbolic. There are rare

examples in the literature on the deep past in the Northeast of the ritual deposition of what one might call facsimile objects. Arthur Spiess in a paper on the Merriman Bannerstone found at Sebago lake, Maine, describes a small non-functional projectile point which was found lying with the Bannerstone. The person who produced it had ground out from sedimentary stone the shape of a stemmed projectile point of the period (Spiess 2004).

The area framed by the conglomerate boulder, the protruding bedrock, and the two small rock piles was marked at the same depth as the floor be-



**Figure 7: Miniature stemmed projectile point, or non-functional symbolic projectile point facsimile, of quartz. Found with many other tools and quartz fragments in the fill of the Shak Selma "quartz pit." (Jenkinson).**



Figure 8: Distal section of quartz biface from pit at GICs-22 (Jenkinson).

side the combustion feature with considerable quantities of charcoal. These charcoal concentrations also ringed the boulder and bedrock as if it had accumulated there because of water drainage and snowmelt events. It is difficult to say whether this charcoal is a result of human behaviour or some other, naturally occurring, fire event.

At 129 centimeters below datum, the excavation was closed for the season and backfilled. It may be premature to draw conclusions about the meaning and purpose of the combustion feature and its attendant pit but some preliminary thoughts do occur. First of all the pit with its filling of soil, red ocher, quartz, bone fragments and charcoal does not look to be of purely utilitarian function and conveys a strong impression of having played a role in ritual activity of some sort. Either the very scant quantity of bone is the result of incomplete calcining leading to decomposition or it may signal that the group responsible for creating the pit were awaiting the arrival of caribou but that the anticipated numbers had not yet arrived. If the latter, perhaps the activity at the pit involved an act of propitiation towards the divinity

which controlled the caribou. It may have involved both supplication towards the caribou deity and an honoring of quartz, the raw material which at that time played such an important role in people's lives. It should be remembered that Ramah Chert, the material which later came to dominate the production of hunting weapons and animal processing tools, was absent at the Shak Selma site. It is possible that rites similar to the Ramah centered ones in evidence at the Mistanuk and Ushikuish sites may, at this apparently slightly earlier site, and have been applied to quartz. The role of white quartz in ritual, particularly when the material is of the vitreous sort, and is deployed in funerary contexts, has a long and almost global pedigree. Almost all of the burials at the Maritime Archaic cemetery at Port au Choix contain pebbles of white quartz, in some cases laid out around human remains or around features in graves (Tuck 1976). They were also common inclusions as grave goods in the Maritime Archaic burials at Rattlers Bight. In at least one instance, bifaces included with the burial were pedestaled on a quartz pebble pile (Fitzhugh 2006). In his 2004 paper, "Symbols in Stone" (part 2): Quartz ceremonial items from the Little League site, Middleborough Maine", Curtiss Hoffmann introduces a passage from the writings of George Hamell on the subject of the physical properties of quartz (colour and transparency) and their symbolic value:

*In his study of color among Iroquoian and other eastern Woodland peoples, Hamell (1992) has emphasized the importance quartz crystals had to Native peoples in the Northeast, because of the symbolism inherent in their white color. He has perhaps gone the farthest (1987:67) in his attempt to position these objects within the semiotic context of the cultures: "... whiteness (which also connotes transparency) and sky blue-greenness connote the cognitive and social aspect of life, the purposiveness of mind, knowledge, and greatest being, as do light, bright, and white things generally. These colors are good to think (with). Within the northeastern Woodland Indians' mythical realities, material substance is a manifestation of color, rather than color being simply a physical property of substance. White light, white shell, white flint, white wolf, white otter, and other white entities form a ritually semantic set, because they are material manifestations of whiteness....Whiteness, sky bluegreen-ness, redness, and blackness invest the entities of which they are per-*

*ceptually salient attributes with numinosity; that is with ideational, as well as with aesthetic, significance* (Hoffman 2004: 69-70).

I would suggest that Hamell’s observation on the numinosity of stone with attributes of transparency or at least translucence apply fully to quartz, and in this region its successor Ramah chert. We need to remind ourselves that the ancestral Innu population of the peninsula and indeed their descendants did not and do not belong to the intellectual tradition of what the poet, visionary and artist William Blake called the “Angels ... [who] **have** the **vanity** to **speak** of **themselves** as the **only wise**; this **they do** with a **confident insolence sprouting** from **systematic reasoning**” (The Marriage of Heaven and Hell, 1790) The Innu, and closely **related** “hunter gatherer” peoples, routinely employed a variety of devices to transcend normal consciousness and to attempt to use their spiritual power or *mantushium* to mediate with the natural forces that governed their world. The “shaking tent” or *kushapatshikan* was only one of the tools employed. *Kushapatum*, the word from which *kushapatshikan* derives, means to see beyond or to see from afar. This theme of “seeing beyond” permeates much of Innu pre-Christian religious thinking and practise and is present in the deep importance at-

**Figure 9: Shushepish starring intently at a beaded pattern on a caribou skin moccasin in order to induce an altered state of consciousness, Utshimassits (Webber 1965).**



tached to dreams, in the flame seen on the surface of the drum when Innu hunters voice their dreams in hunting songs inter alia. I speculate that what were, before the advent of plastics and industrially produced glass, rare solid materials such as Ramah and varieties of quartz with properties of translucence or even transparency that were invested with powers and meaning in this spiritual tradition as mediums for “seeing beyond.” Beyond that are the symbolic properties of tool stone, including those attached to certain colours, particularly white. The extraordinary value evidently attributed to Ramah chert as evidenced by its epic transport from the single remote source over much of North America may attest to its unusual visual properties and their association with spiritual usefulness in hunting and in the lives and after-lives of hunting peoples. The “see(n) through a glass darkly” (1 Corinthians 13.12, King James Version) characteristic of some of the varieties in which it occurs, in which the translucence is often either partially obscured or shadowed, may have added to its mystical properties.

At this point hypothesizing over the meaning of these features must remain tentative and speculative. Hopefully further work at GICs-22 will better elucidate the purpose of the activity in evidence at the quartz pit and allow less speculative conclusions.

The small quantity of bone found in the Shak Selma quartz pit was submitted for radiocarbon dating but disappointingly, of the very small sample, some pieces proved to be incompletely cremated and the remaining bone fragments were too small to produce sufficient bone carbonate for an AMS date. Until proved otherwise, the governing assumption remains that this site, and perhaps both the nearby Pess and Upuamekush sites, in addition to the Napeu Atik site situated on a bluff a few hundred meters to the south, predate other nipple base point associated with early sites at Kamestastin. Apart from smoky quartz, Napeu Atik (GICs-21) had the same range of raw materials as Shak Selma and, as at that site, there was no Ramah Chert present.

The single biface found at Napeu Atik appears to be of identical brownish grey chert as the example found lying by the quartz pit at Shak Selma. The biface has a nubby base, which might be described as an incipient nipple base. It closely resembles in shape a similar biface of black chert found at

the Pess site, which lies close to Shak Selma in a depression to the west. The Napeu Atik site also seems to have had a ritual element represented by a quartz-filled pit with at least three rock piles two of which were draped in charcoal. Unlike at Shak Selma the pit wasn't excavated beyond a superficial exercise to define its upper level and surface extent where quartz fragments appeared in the fill. Quartz shatter also appeared here on a sort of ramp into levels below the "floor" on which the attendant combustion features sat. At the floor level was a small deposit of calcined bone some of which are identified by Meghan Walley as from bird rather than mammal.

#### **Mistanuk Mistamunik G1Cs-08 AMS date**

It is with gratitude that we acknowledge PAO financial support to allow dating of a small sample of bone from the Mistanuk Mistamunik site. The calcined bone was collected from a deposit located alongside the presumed ritual feature at G1Cs-08 where collect-

ed waste flakes of Ramah were placed on and around a small fire feature and then sprinkled liberally with red ocher. The calibrated date returned was c. 7,100 calendar years B.P. (BETA 500135.) On a site whose lithic assemblage is heavily dominated by Ramah Chert this early date was slightly unexpected though not implausible in light of slightly earlier dates being associated with nipple base points of Ramah Chert found at Ballybrack near Nain: other early sites at Kamestastin have only small or trace amounts of Ramah. Many thanks to Steve Hull at the PAO for arranging the AMS processing of this calcined bone sample.

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**Figure 10: The Shak Selma site view towards the south. The quartz-filled pit is just to the right of centerfield (Jenkinson).**



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# Gateways 2018: More Evidence from Hart Chalet, Grand Plain, Belles Amours, and Grand Isle

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Arctic Studies Center, Smithsonian Institution

**I**ntroduction  
Since 2001, the Arctic Studies Center at the Smithsonian has conducted fieldwork assessing the extension of Paleoeskimo and Inuit cultures along the Lower North Shore of the Gulf of St. Lawrence (LNS). Deemed the Gateways Project, this initiative located Groswater sites on the LNS occupied during the Subatlantic cold period (mid-1st millennium BCE) and found evidence that Inuit people expanded onto the LNS between the mid-17th and early-18th century. Over the course of the Gateways Project, we excavated Inuit villages at Petite Mécatina, Hare Harbor, Little Canso Island, Bonne-Espérance, and Hart Chalet, and tested another on the Belles Amour peninsula. We are now clarifying the nature of the Inuit occupation by investigating economic relationships between Inuit, Europeans, and Innu, as well as demographics, seasonality, and land use. This field season we focused our excavations on Hart Chalet and Grand Isle. Hart Chalet is a settlement with three sod winter houses, two of which we excavated or trenched, in Brador, Quebec. The Grand Isle sites, one of which—Kettle Head

(Grand Isle-1, EiBk-3)—was visited by Charles Martijn in 1972 (Martijn 1974), are smaller, more unusual, and are located in the municipality of Bonne-Espérance. Grand Isle has three components: Grand Isle-1 (Kettle Head), Grand Isle-2, and Grand Isle-3. We also excavated a Groswater hearth in Grand Plain and mapped two Inuit houses in Belles Amour.

## Hart Chalet

The Hart Chalet Inuit settlement is located on a forested beach in Jack's Cove on the northern shore of Brador Bay, Quebec. The site consists of three LNS style semi-subterranean sod houses, with short 1-2 metre entries, plank rather than pavement floors, and external wood-burning hearths instead of internal oil lamps for cooking. We excavated House 1 and trenched House 3 in prior field seasons and explored subsistence practices, temporality, and external relationships. This year, our focus was on House 2. We cleared underbrush from the foundation walls, extended the grid, and recorded elevations to generate a contour map (Figure 1). We then opened a 6x2 metre trench across the front of the house to investigate the midden, entrance, and hearth mounds.

Figure 1: Hart Chalet Inuit winter village, H2, view to north. (photo: W. Fitzhugh)





Figure 2: H2 showing midden trench and external cooking hearths, toward the NW. House interior is to the right. (photo: W. Fitzhugh)

The H2 architectural layout was evident from surface features. As in most Inuit structures, its entryway faced the shore but was relatively short compared with contemporary Labrador sod houses (e.g. Jordan and Kaplan 1980; Rankin 2015). Like its H3 counterpart, the passage was approximately 2m long and lacked slab pavement, post and lintel doorway, and cold trap used in Labrador Inuit dwellings. The interior dimensions are nine metres deep and ten metres wide. Instead of building the rear wall out of sod, the inhabitants dug out a sand dune and recessed the house into it. Sleeping platforms of wood probably wrapped around the back and sidewalls, extending 1-2 metres into the interior.

Our excavation trench across the front of the house straddled the entry and two hearth mounds (Figure 2). As excavation proceeded, we identified four stratigraphic levels: the upper natural turf, an Inuit cultural layer, an underlying prehistoric turf/peat layer, and sterile beach sand. The cultural layer

was composed primarily of sand and peat containing deposits of charcoal and midden bone. The cultural layer rested above, but occasionally cut through, the original ground surface of forest peat. Although we recovered prehistoric Indian and Paleoeskimo artifacts from the Inuit cultural layer that were redeposited during house construction and domestic activities, we located none *in situ* within the lower peat level and upper podsol horizon. We found several ancestral Innu artifacts, including a white patinated chert stemmed knife, a mottled chert endscraper, and a bifacially flaked ovate knife. There were few traces of Paleoeskimo activity other than a single Groswater microblade. Flakes of Ramah and local gray chert occurred throughout the excavation

fill.

Several hearth features were present on either side of the entrance, each containing multiple layers of charred bone, rocks, and charcoal, indicating that the hearths were used over a long period of time (Figure 3). An abundance of charcoal and an absence of charred and oil-stained rocks suggested that wood rather than blubber was the primary fuel. Hearth 1 was rebuilt multiple times. It consisted of a ring of rocks extending approximately 40cm from the upper to the lower layer, with the latest use separated from the bottom by a scorched limestone slab. We found burnt and calcined bone fragments in this hearth, and the soil surrounding it was almost pure charcoal. A distinctive feature of these LNS external hearths is the ubiquitous presence of charcoal, broken soapstone pots, and absence of stone lamps. This high breakage quotient may be due to thermal stress caused by wood-fueled fires rather than oil lamps.



**Figure 3: H2 entrance bordered by whale bone slabs, with cooking hearths on either side. (photo: W. Fitzhugh)**

Wood fires may also have accelerated the transition to metal cookware, such as found in H3.

At the bottom of the excavation, marking the edge of the entry and partially covered by the eastern hearth mound, were several large, planed whalebone slabs that lined the sides of the entry depression. Apart from this, there was no barrier or stone wall separating the entrance from the eastern and western hearth areas. We excavated a small trench in the house interior and found another whalebone ‘plank’ oriented parallel to the entryway.

Artifacts indicated a 17th-century occupation (Figures 4 and 5) with access to European goods. Iron nails and fragments of suspended and standing Normandy stoneware vessels, and Basque roof tiles were present in abundance. Green bottle and goblet glass, flat windowpane shards, and blue seed beads were also present. A single coin, too heavily degraded to identify except for the vague impression of a fleur de lys (therefore probably French), was found in the hearth midden. This is the second coin recovered at

Hart Chalet; last year, we excavated a 1632-34 French Louis XIII ‘double tournois’ coin from H3. Neither of the coins had been perforated or modified for use as clothing ornaments, suggesting possible awareness of their economic value. The Inuit at Hart Chalet were also manufacturing their own tools, but seem to have embraced imported European materials at the expense of their indigenous technology, little of which survived because organic artifacts were not preserved.

Workable metal was an attractive commodity. We found a European navigator’s sounding lead, which was probably intended to be melted down to form net sinkers like those found at Hare Harbor. A toggling harpoon point and foreshaft, a perforated triangular harpoon endblade, a stemmed arrowhead cold hammered from iron, and a sail-maker’s needle were recovered. The occupants also manufactured traditional items from locally available materials. We found soapstone fragments including half a pot broken into quarters, decorated with a single rim groove,



Figure 4: Stone, ceramic, glass, and metal artifacts from H2 midden. (photo: J. Marchman)

in the western hearth. A smaller soapstone oval dish carved from a broken pot fragment with a single decorative groove was found elsewhere in the site. The few preserved bone artifacts included a whalebone sled runner, an unusual multi-perforated scapula (perhaps a scraper), and a grooved antler knife handle.

Unlike at winter occupation sites in Labrador, the Hart Chalet Inuit focused on caribou rather than marine resources. We found very few seal bones in H2, which is particularly surprising because the fall and spring harp migration provides a huge and dependable early winter resource along this stretch of the LNS. Bones from various species of fish and birds and abundant mussel shells were pre-

sent in the hearth mounds. These small animal remains occurred in dense pockets of charred material, suggesting they may have been exploited intensively but are underrepresented in the acidic midden soil. This high caribou-to-seal ratio repeats across other LNS winter houses and is one of the defining features of LNS Inuit economy. It is unclear why the Inuit choose to embrace a different subsistence strategy than in Labrador, but on this part of the coast, caribou may be more accessible in winter than farther north. Perhaps Inuit hunters, freed of using blubber as fuel by the abundance of wood, saw caribou

herds as an alternative to sealing.

Figure 5: Bone artifacts from H2: planed whale bone slab, perforated caribou scapula, and whale bone foreshaft fragment. (photo: J. Marchman)





Figure 6: Grand Isle-2 looking west along the axis of the rectangular (qarmat) house, showing mounded turf walls, back-filled 2017 excavation in the center, and 2018 excavation of side benches. Wood roof remnant is seen at far end. (photo: W. Fitzhugh)

### Grand Isle

Inuit activity on Grand Isle in St. Paul River was originally reported by Martijn (1974; Martijn and Clermont 1980) after Leonard Thomas, a fisherman whose family had a homestead on the island, showed him pit houses and caches at Kettle Head on the northeastern end of the island. Martijn reported finding an Inuit whalebone snow-knife, and Leonard reported finding rolls of birch bark, a bone handle, an iron spike, and a human mandible, which Martijn identified as Inuit. The mandible presumably is in Quebec City, and the snow-knife is on exhibit at the Middle Bay Museum. We returned to survey the island in 2016 and found a qarmat-style fall house (Grand Isle 2, EiBk-54) partially destroyed by shore erosion (Figure 6), which we originally interpreted as

an ancestral Innu structure after our test pits revealed an abundance of chert flakes. Returning the next year, we identified the structure as Inuit based on a soapstone pot fragment, iron nails and spikes, and Basque roof tile and realized the site was an Inuit qarmat dwelling constructed at a prehistoric Innu site.

The Grand Isle-2 qarmat is about 7 metres long and before losing its northern half to erosion was probably 3.5-4.0 metres wide (Figure 7). Its central floor had been excavated 10-15 cm into the sandy terrace surface, leaving two raised sleeping platforms slightly below ground surface at each end. During excavation, we uncovered wood planks directly above the sand, following the contour of the floor. These appeared to be collapsed roof timbers rather than floorboards. The rectangular walls were composed of

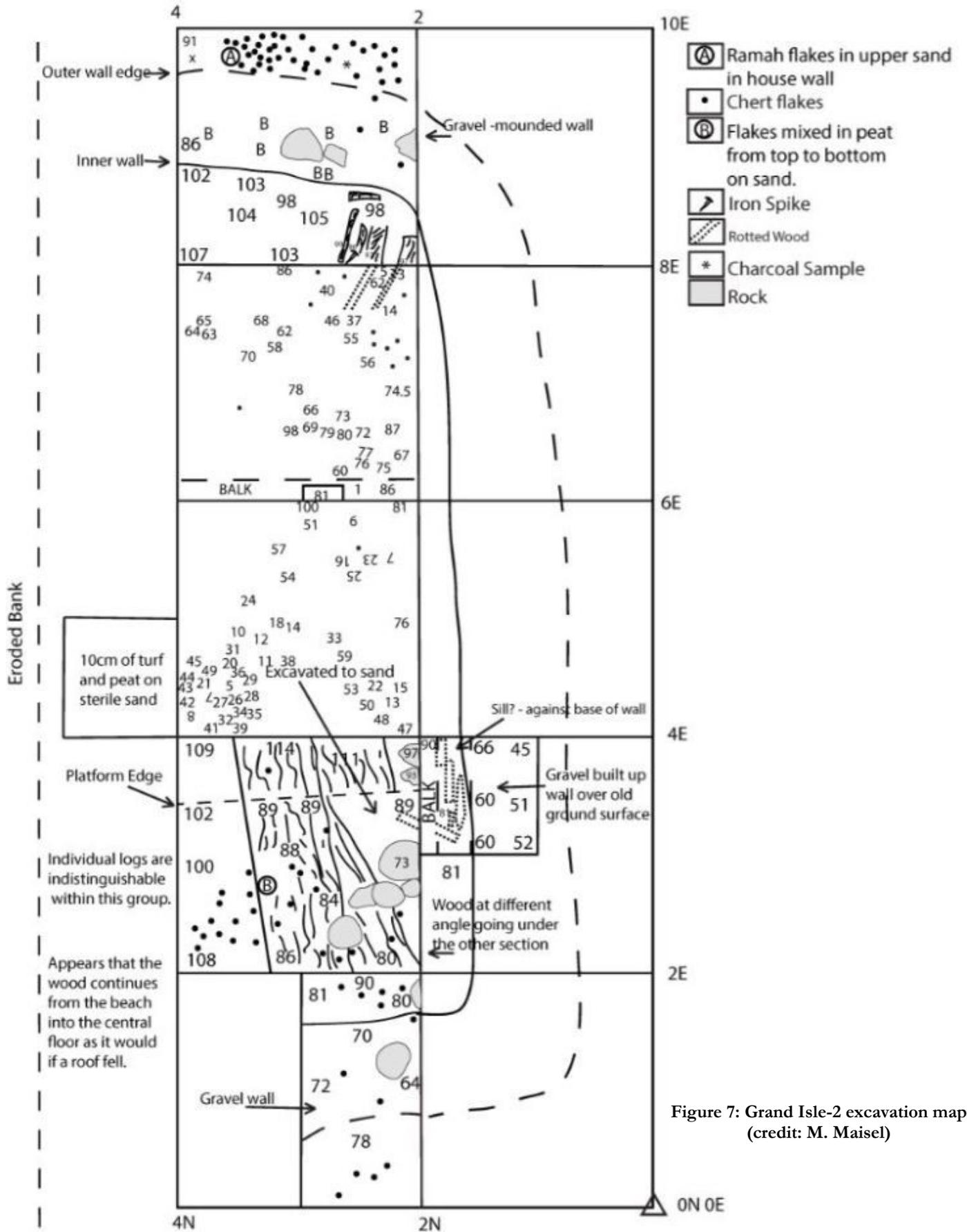


Figure 7: Grand Isle-2 excavation map (credit: M. Maisel)



Figure 8: Grand Isle-3 entry pavement and house depression, viewed to west. (photo: W. Fitzhugh)

layers of peat and sand that had been built up 10-15 cm above the old ground surface. On the east floor were remains of timbers that may have been part of the roof structure.

Chert debitage, which is present *in situ* over a large area of the surrounding terrace, was mixed throughout the excavation, probably from Inuit use of turf sods as internal flooring or from mixing during house construction. Test pits outside the walls suggested that prehistoric Innu activity was concentrated around the area of the Inuit house, but no tent rings or hearths were found. Apparently, the location was a popular hunting camp or staging ground for hunters rather than for long-term occupation. We also found flakes eroding from the bank in front of the house, where members of the Thomas family re-

membered finding stone arrow-points. We obtained two radiocarbon determinations on charcoal from within the qarmat. One sample returned a date of  $460 \pm 30$  BP (Beta-454210), cal. AD 1415-1455, which is too early for Inuit activity and could result from old wood burned during the Inuit occupation. The second sample yielded  $1240 \pm 30$  BP (Beta-481305), cal. AD 684-780, 787-876, which most likely dates one of the ancestral Innu occupations.

### Grand Isle-3

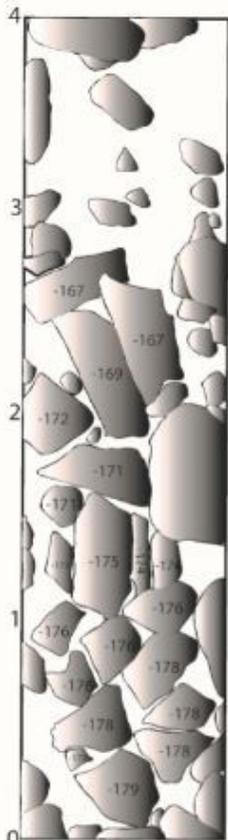
While excavating Grand Isle-2 we noticed a large depression a few metres up-slope that appeared to be a house depression. Our 4x1-metre trench uncovered a paved entry passage extending three metres from the house doorway (Figures 8, 9). The entry passage followed the natural contours of the ground and had

Grand Isle -3  
13 August 2018

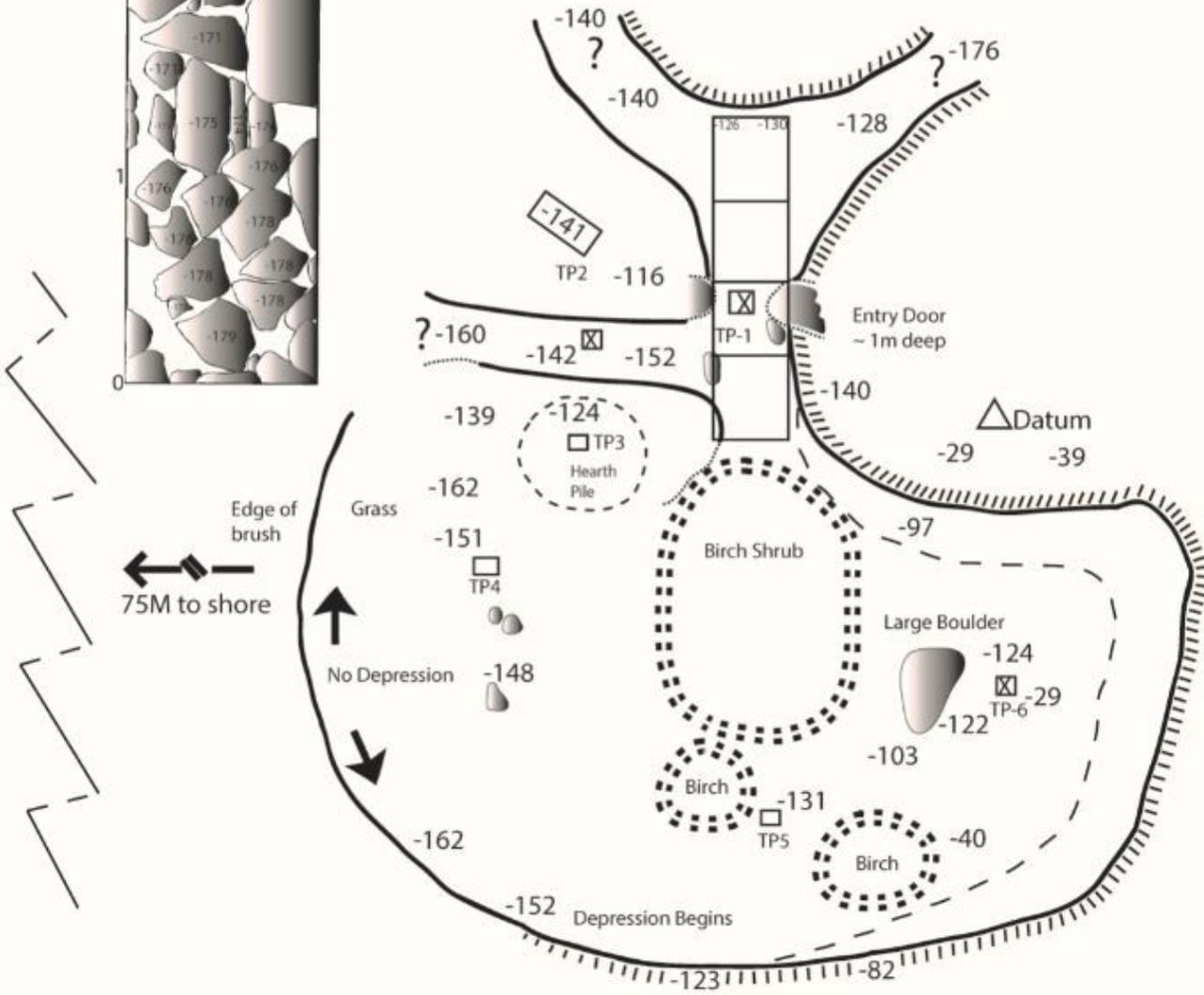


N 51° 24.520' W 57° 41.016'  
GPS 270

- T.P. 1 Trash (upper)
- Slab Pavement
- T.P. 2 C. Martijn TP?
- T.P. 3 Hearth rock, caribou
- T.P. 4 Rooftile
- T.P. 5 Nothing
- T.P. 6 Nothing
- X Charles Martijn TP?
- ### depth below Datum



Inset of 2018 Excavation



This does not appear to be a well thought out winter dwelling:  
Incomplete northern wall, no midden?  
Short occupancy?  
There is a large boulder in the middle of the dwelling area.

Figure 9: Grand Isle-3 map and site sketch.  
(credit: M. Maisel)



Figure 10: Grand Isle-3 artifacts from the entry pavement. (photo: J. Marchman)

The few artifacts (Figure 10) are typical of LNS Inuit occupations: Basque roof tiles, nails and spikes, and a large piece of rust-encrusted iron, likely an improvised hammer. The paucity of material culture prevented us from determining a date range. Some pieces of glass, apparently from a mason jar were recognized in the upper cultural soil, but these were associated with plastic and apparently were dumped there by the Thomas family, who maintain a summer camp at this location. It appears that GI-3 was occupied in the mid-17th to early-18th century and is almost certainly related to the Grand Isle-2 qarmat only a few metres away and was probably intended to serve as the group's winter dwelling.

been excavated through bouldery beach deposits. The ca. 1-metre depth of the passage trench reached ground water, which flooded our excavation and may have been a reason the house was abandoned before completion. However, the water-saturated soil had preserved wood planks on the slab pavement. Testing in the house 'interior' uncovered wood planks with nails but no clear indication of an interior room or walls. Further excavation is needed to clarify this enigmatic structure and why it was abandoned.

Figure 11: Belles Amours site, House 1, entrance to left, viewed to west. (photo: M. Maisel)



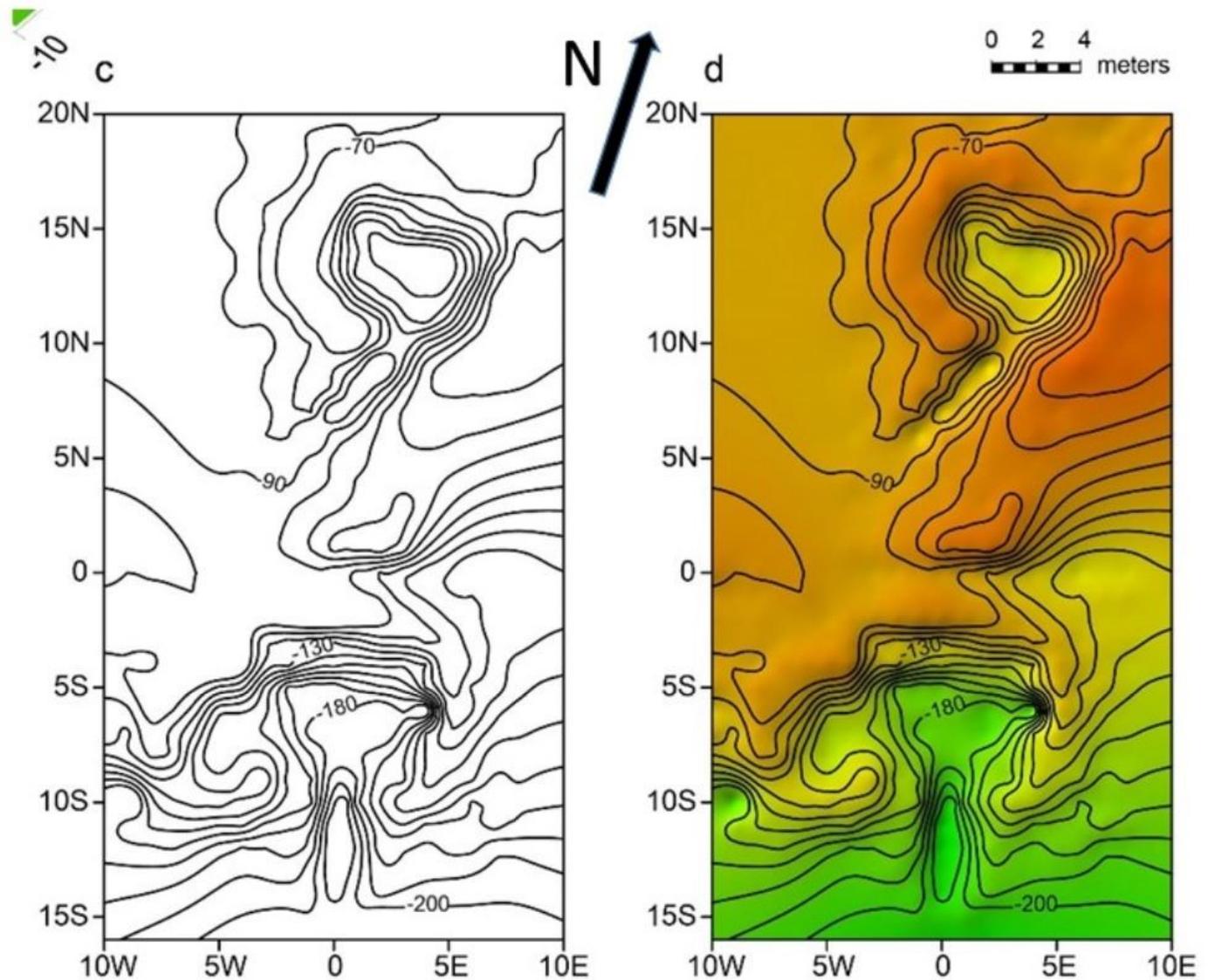


Figure 12: Contour map of Belles Amours H1, 2. (credit: I. Chechushkov)

### Belles Amour

This year we spent a few hours mapping two Inuit sod houses (Figures 11, 12) at the Belles Amours site discovered by Dumais and Poirier (1994) and later tested by the Smithsonian and by Marianne Stopp (2015). Both have 4-6-metre long entrance passages and external hearths. While H2 appears to be a standard LNS Inuit sod house, H1 is unusual in having an internal wall isolating the eastern sleeping bench, perhaps to reduce the size of the original dwelling. During our visit, we also photographed the pithouse complex on the boulder beaches on the east side of Belles Amours Peninsula. Several of these structures are 6-8 metres in diameter and have round, flat-

bottomed features, are undisturbed, and have meat caches outside their walls (Figure 13).

### Grand Plain-1

Grand Plain-1 is a small Groswater site located on the extensive raised beach series (“Grand Plain”) east of the Old Salmon Bay settlement in the municipality of Bonne-Esperance. We partially excavated this site in 2017 but discovered a hearth ring on the last day, which prompted our return in 2018. The 2017 excavation produced a typical sample of Groswater lithics including box-based end blades, burin-like tools, microblades, bifacially flaked knives, a polished chert ax, and numerous eared endscrapers. Although Groswater chert was the most frequent raw material, a few microblades were Ramah chert.



**Figure 13: Boulder house pit on east side of Belles Amours Peninsula. Note prepared floor and tiered walls. (photo: M. Maisel)**

The hearth feature was a circular arrangement of cobbles and fire-burned slabs, one metre in circumference, with a light deposit of charcoal and charcoal-stained soil. The hearth did not show any evidence of long-term use, and no bone material was present. The lithic assemblage was scant within and around the hearth, and it appears that most tool processing occurred in the previously excavated area. This site may have been recorded as EIBj-4 during Charles Martijn's 1972 survey.

#### **Summary**

Although our prehistoric finds were few, there is much potential for prehistoric archaeology around Bonne-Esperance. The Grand Plain Groswater site contained a slab rock hearth and artifacts similar to other assemblages from the Quebec LNS and Labrador coasts. LNS Groswater people, like their counterparts in Labrador and Newfoundland, left few vestiges of their domestic life other than stone tools. Our

investigations along Grand Plain suggest that ecological factors during the Subatlantic cold epoch were favorable to Groswater economic adaptations. Despite slightly later dates on the LNS, the Labrador and LNS lithic expressions of Groswater culture show no signs of cultural divergence, as seen in Newfoundland.

We also saw the ever-present mark that First Nations people have left on the land. In Bonne-Esperance, we encountered an extensive prehistoric Indian component beneath the Inuit occupation at Grand Isle-2. We were unable to recover diagnostic artifacts, but the beach elevation and radiocarbon dates suggest this was an ancestral Innu site. In addition to a variety of local LNS chert, the collection contains an abundance of Ramah chert; this supports other evidence (from biface caches and chipping stations) of ancestral Innu trade networks that moved quantities of lithic material between the Torngat

Mountains and the LNS. Hart Chalet revealed a similar recent ancestral Innu occupation containing diagnostic artifacts in secondary deposits in Inuit dwellings.

Research on the Quebec LNS is producing an ever-clearer picture of southern Inuit settlement. In Bonne-Esperance, we identified long-term Inuit settlement in an area that was seeing heavy European activity. Both fall and winter dwellings are present, but the area remains somewhat of a mystery. Compared to other areas on the LNS occupied by Inuit, the St. Paul River sites have no long-term winter sites, and the Grand Isle sites have few artifacts or midden deposits, suggesting short-lived ventures by just a single family. Perhaps long-term Inuit occupation was thwarted because Europeans were already established in this high-value resource region. Local tradition suggests Old Salmon Bay village area as the long-sought location of the European settlement of the 16<sup>th</sup> century settlement of Brest. Perhaps hostilities drove this Inuit group from Bonne-Esperance while their occupations flourished in other locales like Hare Harbor, Belles Amour, Ha-Ha Bay (Gros Mecatina), Jacques Cartier Bay, and Hart Chalet.

Our continued excavations at Hart Chalet confirmed that House 2 was occupied contemporaneously with Houses 1 and 3. The artifacts, which included stoneware, trade beads, soapstone pots, and iron tools, all suggest that this structure dates to the mid-17<sup>th</sup> or early-18<sup>th</sup> century. The architecture is typical of this period: a large rectangular semi-subterranean sod structure, absence of raised earthen sleeping platforms, little or no stone floor pavement, and a short entrance passage flanked on either side by external hearths. The H2 faunal remains are similar to other houses. Whalebone planks were used as construction materials, and bones in the external hearth show caribou was the primary game, while seal, fish, bird, canid, and smaller game species were also present. This evidence supports the emerging picture of a distinctive LNS Inuit tradition during the 17<sup>th</sup> and early 18<sup>th</sup> century. What we are missing is information about LNS Inuit summer settlement and economy, a season that would have been optimal for trading with Europeans.

#### Acknowledgments

As in previous seasons, many individuals and institutions, especially Eileen Schofield, supported our work and Garland Nadeau of the Whiteley Museum of St. Paul Municipality through grants

received from MRC du Golfe-du-Saint-Lauren, a Quebec government economic development agency; Caisse Desjardins Blanc Sablon; and I & S Seafood via Irving Roberts. Florence Hart provided hospitality, meals, and use of her chalet in Brador; Perry Colbourne provided expert services as *Pitsiulak* skipper; and Louise and Perry Colbourne made us at home in Lushes Bight. Our Quebec field crew included Mary Maisel, Jacob Marchman, Katherine Meier, Halcyon Brown, Alexandra Castellanos, and Igor Chechushkov. Administrative support came from ASC's Nancy Shorey, and Mary Maisel prepared the graphics.

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# Andersen Point 2018 Field Work Report

## Permit #18.35

Kevin McAleese  
Independent Researcher



Figure 1a: Feature with author test excavating (2015)

lakeshore (Map 1) was test excavated in 2015. A probable hammerstone and a piece of worked wood was recovered, a few soil samples were collected for ethnobotany studies, and two radiocarbon (RC) dates were assayed (McAleese 2016) with two date range results at 1sigma or 68% probability: AD 1690-1730 and AD 1810-1920. Discussion follows regarding these two probable use/occupation periods.

### Summary - Fieldwork

The 2018 field season entailed limited Feature mapping with a GPS device (Garmin) and a metal detec-

## Introduction

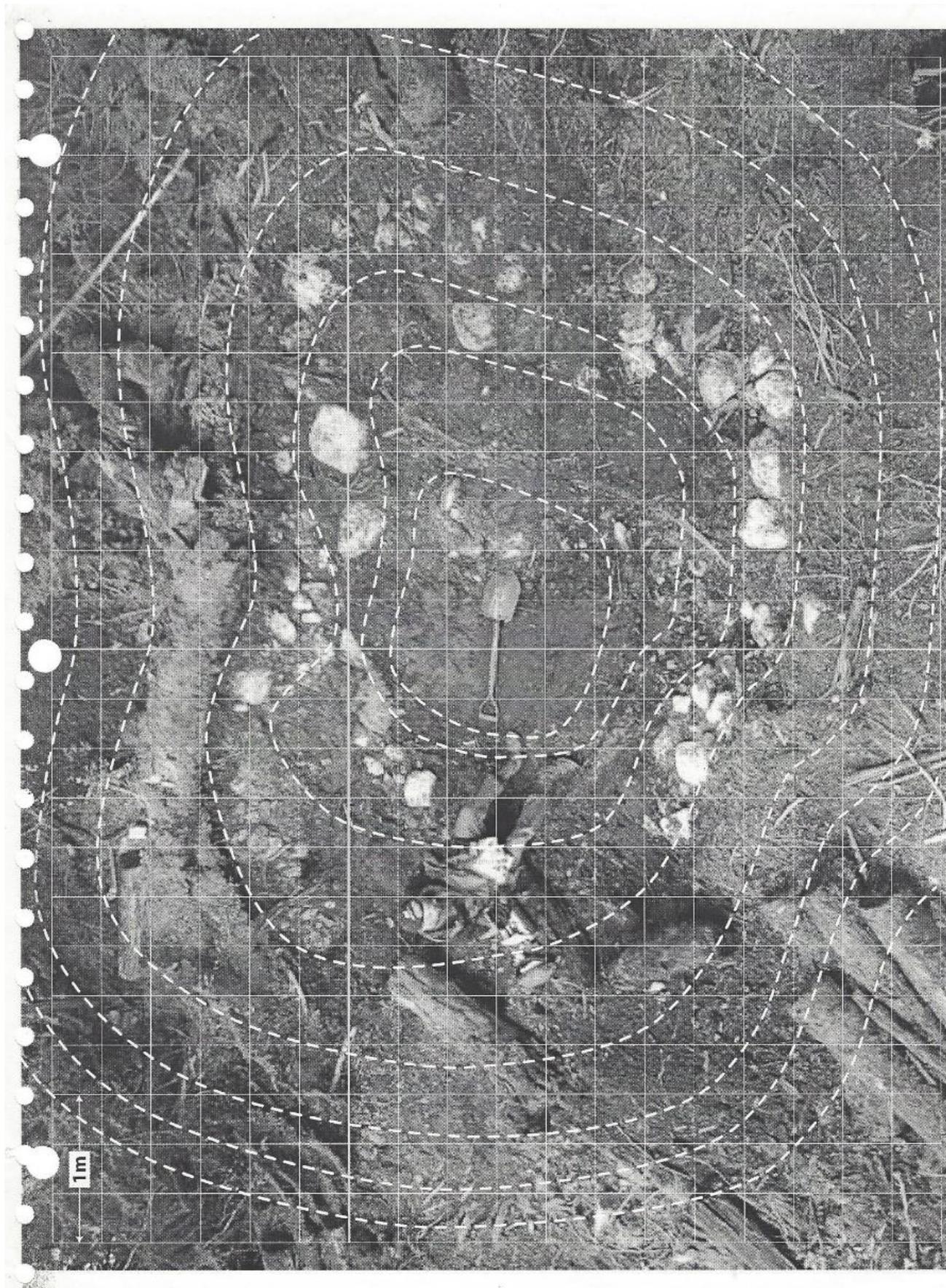
A few days fieldwork was conducted at Andersen Point early in September 2018 (Figures 1a; 1b). A prominent depression there has been interpreted by the author as a Beothuk house pit (McAleese 2015; McAleese 2016). A brief summary of the recent fieldwork follows, along with subsequent/ongoing artifact analysis and limited interpretation of provisional results.

### Overview

The sizeable depression near the mouth of Andersen Brook on the Red Indian



Figure 1b: Feature with test units (2018)



Map 1



Figure 2: Metal Detector used for magnetic survey in Feature.



Figure 3: Feature with grid, metal detector/magnetic “Hits”



Figure 4: Feature with grid, metal detector/magnetic "Hits"



Figure 5: Feature with grid & some "Hits" marked.

# Andersen Point – Feature

## Magnetic “hits” —

(metal detector sketch map)  
September 2018

### Legend:

Scale – 1 m (block)

X – magnetic “hits”

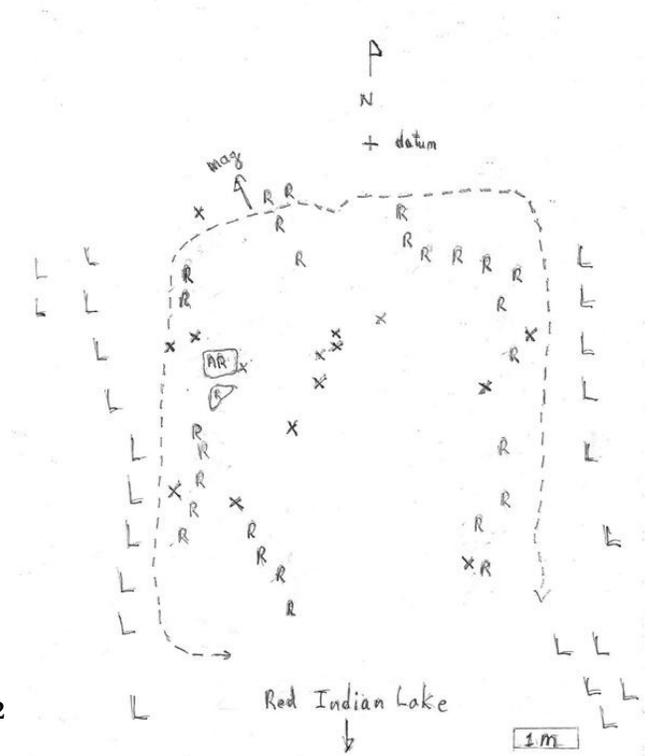
L – logging debris

R – Rocks/cobbles

“AR” – “Anvil rock/stone?”

N – North

mag – magnetic North



Map 2

tor (Fisher CZ-21 QuickSilver; Figure 2). Two more soil samples were also recovered from the Feature’s north side shallow slope. All prominent architectural elements and the soil testing locations were mapped in.

A systematic survey of the Feature “floor” using a metal detector was undertaken. The floor area was gridded and divided into four approximately equal quadrants along the cardinal directions (Figure 3). Each was repeatedly surveyed in N-S and E-W directions, with the metal detector waved gently close to ground in approximate 50 cm arcs. About 80% of the “floor” surface was “swept” with the detector, with wall/floor edges less completely covered given the presence of some historic logging debris (Figure 4)

Positive magnetic signals were marked on the ground, photographed, measured into the site grid, and markers removed (Figure 5; Map 2). The metal detector survey resulted in 16 positive signals, mostly clustered on the Feature’s west side. Additional testing is required to determine the nature of these “signals.” A provisional interpretation is that at least some represent metal fragments, possibly iron, located in or just below the upper strata.

The relative proximity of many metal detector “hits” to the large flat stone in the northwest quadrant (Map 2) is noteworthy. Also noteworthy is the relative proximity of the flat stone, provisionally interpreted as an “Anvil Stone” (tool working platform), to the “hammerstone” provenience (Figure 6; Map 1), about 25 cm distant.

### Summary - ongoing lithics research

Analysis (Edxrf and SEM) on the probable hammerstone “business ends” indicate the presence of a faint metal residue with a high iron content, especially at the larger end/ edge (Figures 7, 8). This suggests at least one episode of impact between the stone and an iron object.

The metal detector “hits” may also reflect metal working activity in the Feature’s northwest quadrant (Map 2). That speculation, and any further interpretation of the “hits,” has to wait until the “hits” have been investigated.

A small piece of fire-cracked rock (FCR) was recovered from the “north slope” area close to the 2018 soil sample collection points (Figure 9). The FCR was found eroding out of the inside of the north slope about 20 cm below the top of the disturbed



Figure 6: Feature northwest quad, with some “Hits” marked near “anvil rock/stone.”

Figure 7: Hammerstone, distal end to right



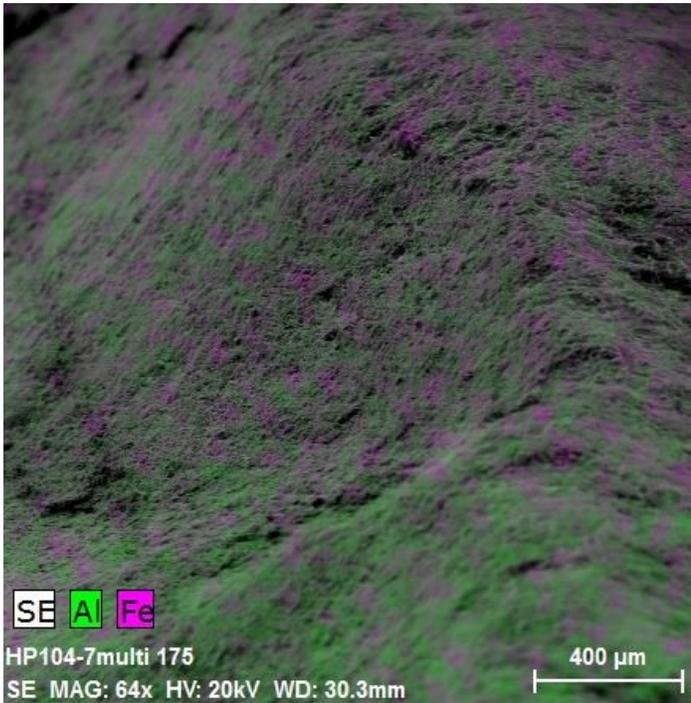


Figure 8: Hammerstone Edxrf /SEM photo showing iron residue on distal end



Figure 9: FCR flake on Feature north slope edge.



Figure 11: FCR close up photo showing flaked edge

rim, and approximately 25 cm above the present Feature “floor” (Figure 10).

Under close magnification, the FCR piece has a few edge scars (Figure 11); these suggest possible cultural use post- “FCR manufacture”. However, the edge scars are not substantial enough to designate systematic retouch. Therefore, use as an expedient tool (preform scraper?) post-FCR “manufacture” is unproven.

No other well-defined FCR has been recovered via test pitting. A forest fire is a possible source for the piece, but surrounding ground surface investigated via soil sampling does not contain forest fire debris (Figure 12).

FCR is not diagnostic re cultural affiliation, though it usually indicates hearth use/maintenance. Recovering FCR around a domestic structure, which likely had a hearth, is in keeping with use/maintenance. The provenience of the FCR, eroding out of a possible domestic space “entranceway” (Figure 13), is also in keeping with it.

Test Unit #4 in the Feature’s southwest quadrant approximately a metre from an assumed hearth area, con-

tained a small flat thin stone covered on both sides with a whitish waxy residue (Figures 13-16).

A gas chromatography study on the residue has determined that lipids are present in quite small amounts (Parrish, pers. comm.) Current lipids analysis then is investigating the different “classes.” Initially the “storage class” triacylglycerol has been identified. Further study of the material may yet identify other classes, including the nature of the fatty acids. Provisionally they appear to be from plant oil.

Despite the small sample size, enough residue is available to investigate its’ basic elements (i.e. evidence for carbon, nitrogen and hydrogen). These all appear present, so an attempt at stable isotope analysis (i.e. carbon, nitrogen representing certain species) may prove successful.

Should that be the case it will likely confirm the residue as terrestrial, not marine material - for which there is no current evidence. Given the residue is likely of terrestrial plant remains, then it is possibly of a dietary nature from at least one occupation episode/event.

**Summary – ongoing documentary research**

In previous Annual Reports (McAleese 2015; McAleese 2016), the author has argued that numerous pulp wood logs that once filled the Feature likely reflect historic logging practice. Documentary re-

Figure 12: Soil sample location Feature north slope edge





Figure 13: Lithic residue coated piece in situ

search confirms that the Red Indian lakeshore area was significantly impacted by historic logging activity by the very early 1900s (“History of Central Newfoundland” www.)

In c. 1905 a sawmilling logging operation centred on Millertown was underway. Lewis Miller employed large crews of men in season to cut logs for lumber and, later for wood pulp (Burns 1999:1, 2). Andersen Point was only a few kilometres distant from the Millertown sawmill, making access to its timber relatively easy.

In addition, the Anglo Newfoundland Development Co. (A.N.D.) was also very active by 1909 in/on Red Indian Lake, with much log harvesting from many camps ‘feeding’ the pulp & paper mill at Grand Falls (Burns 1999:1, 2). Log pile collection points along the Lakeshore stored wood until the spring. Then log booms were “run” downstream to capture points for later processing. Short distance log-

ging railway “spur lines” built c. 1910 in the region also moved logs to the mills (“History of Central Newfoundland” www.)

Given this logging activity, Andersen Point was likely selectively logged for pine lumber for the first time in the very early 1900s. Within a decade, a more general, multi-species logging operation for pulpwood (spruce, fir, birch) around Red Indian Lake was underway (Burns 1999:1, 2), leading to major landscape change on the lakeshore.

As part of that lakeshore alteration, pulp wood logs may have floated/ rafted via spring flooding or via winter ice, into the Andersen Point feature. In addition, the logging technique of stacking about a cord of cut logs in a “browse” or pile (Figure 17) for spring haul out to a lake or river could have been practiced at Andersen Point.

**Summary – Feature interpretation**

Previous archaeological interpretation of the Andersen Point Feature suggests it is a Beothuk housepit (McAleese 2015; McAleese 2016). Important historic cartography done by both the British military and by the Beothuk woman Shanawdithit indicate a significant Beothuk presence at Red Indian Lake mid-18<sup>th</sup> – early 19<sup>th</sup> century (Howley 1915; Marshall 1996).

Archaeological evidence for Beothuk using the Andersen Point Feature is very slim; a hammerstone, a piece of FCR, some residue with lipids, and the older RC date of AD 1690-1730.

Figure 14: Lithic residue coated piece in situ – close



Relatedly, new lithic analyses plus the relative abundance of metal detector “hits,” supports speculation that the Feature’s west side may have been an area for specialized tool making activity (Map 2). Future fieldwork may clarify that speculation.

The later Andersen Point Feature RC date of 1800s early 1900s is largely post-Beothuk time. However, that chronology fits somewhat with European/Newfoundlander logging operations at Red Indian Lake. Future fieldwork and artifact/specimen analysis at Andersen Point may clarify the nature of that operation.

#### **Acknowledgements**

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That support was very useful, as was the photography of Mr. Albert Taylor, former Millertown resident; and the micro-photography of Dr. Doug Boyce, Associate Curator of Palaeontology, The Rooms Provincial Museum. Any errors with this work are my responsibility.

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# Salvage Excavation Of A Beothuk Housepit At Sabbath Point (DeBd-08), Red Indian Lake: Phase 2 Permit No. 18.32

Laurie Mclean  
Independent consultant



Plate 1: Sabbath Point (DeBd-08) housepit, looking east.  
Lower right, James Williamson operates drone flying over the site.

**I**ntroduction  
The Sabbath Point housepit was identified in 2016 during an archaeological survey of the south shore of Red Indian Lake. The author who was assisted by Don Pelley and Penny Wells, both of Grand Falls-Windsor, directed the survey. The site location corresponded with a description of a Beothuk camp reported by John Cartwright in 1768 (Howley 1915:44; McLean 2017:27). The housepit was five meters from the edge of the eroding shoreline in 2016 although it may have originally been 20 meters or more from the beach before erosion (McLean 2017:26, 27). Calcined bone and unburned bone were found in test pits dug inside the depression and from the mounded perimeter walls. Fire-

cracked rocks were present in some of the interior test pits and from one of the wall test pits, but artifacts were not recovered in 2016 (Ibid: 36). A subsequent re-visit by Provincial Archaeology Office (PAO) archaeologists recovered a high quality iron projectile point, similar to Type 3D deer spears, from a test pit dug outside the housepit (Erwin and Hull 2018:69; McLean 2003:14). The PAO re-visit also confirmed the housepit was threatened by rapidly advancing erosion (Erwin and Hull 2018:69). This prompted the PAO to request excavation of part of the housepit interior closest to the eroding bank in the spring of 2018. The ensuing excavation of a 2m x 5m section sampled many of the structural features that were identified when the housepit was discov-



**Plate 2: Removing trees from the north and northwest walls of the Sabbath Point housepit. The right end of the meter stick is at the edge of the eroding bank. Note piled brush in front of the bank.**

ered. These features included the perimeter wall, an enigmatic interior mound, the central hearth, platforms skirting the interior of the walls and the former structure's floor. A number of new features, including two postholes and four discrete deposits of rotting wood possibly representing structural elements, were also identified. Fourteen features were attributed to the housepit (Schwarz and Hutchings 2018:17). The salvage excavation also found a unique Beothuk iron projectile point from the northern tip of Feature 1, the unexplained interior mound, and three creamware sherds were recovered from the northern interior platform (Ibid:37, 39). The PAO subsequently released Terms of Reference for additional salvage excavations within the Sabbath Point housepit as well as removing large trees whose potential uprooting threatened the feature.

### **Sabbath Point (Debd-08)**

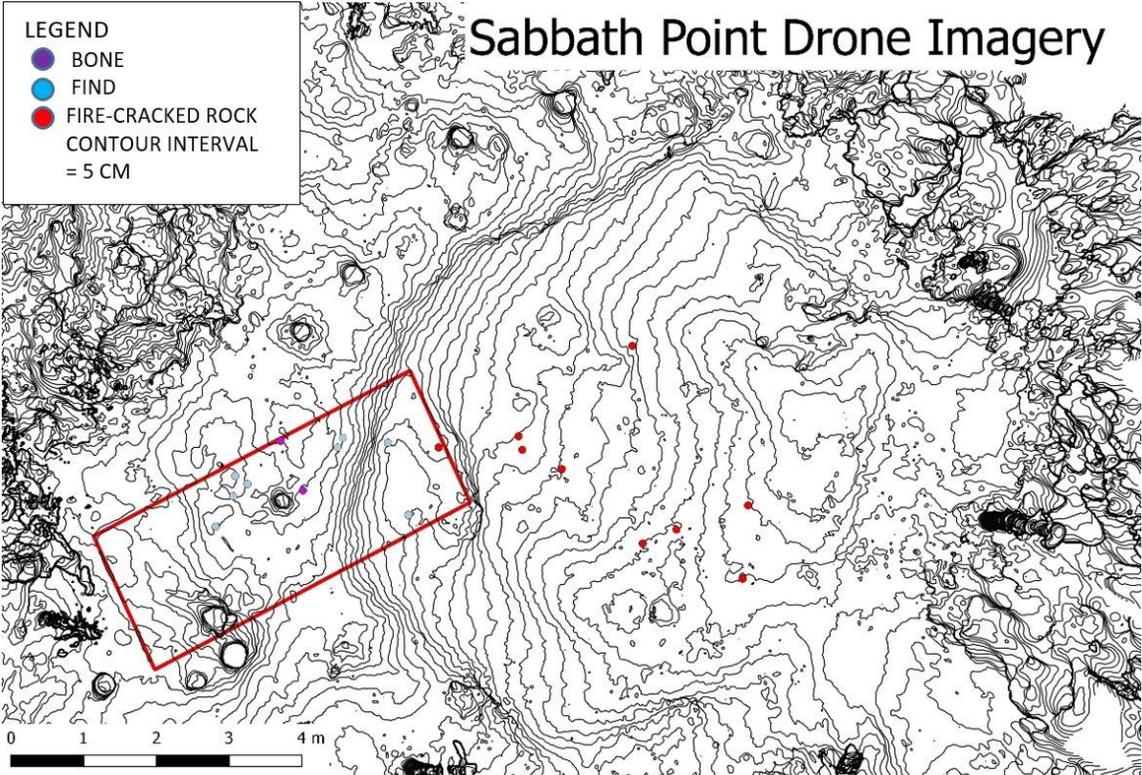
#### **Housepit Salvage Excavations – Part 2**

Sabbath Point's tree cutting and salvage excavations – Part 2 were implemented from September 3 until September 11, 2018. One and a half days were lost to heavy rain during this period. Thirteen large trees growing through the housepit's north wall were cut down on September 3 (Plates 1, 2; Figure 1). Seven additional large trees, along with numerous saplings, were eliminated from the northwest, northern and northeast perimeters as well. The 20 large trees included four birch from the housepit walls and three birch from the adjacent exterior. The ample supply of birch suggests a likely source for birch bark identified on the surface and in sub-surface duff. The prolific tree growth through the housepit and outside it also probably regularly deposited leaves, broken limbs and



Plate 3: Sabbath Point eroding bank and piled vegetation debris removed from housepit.

Figure 1: Contour map of Sabbath Point housepit (James Williamson).



uprooted trees into the depression. Although extant local trees conceivably would have been harvested by Beothuk who incorporated them into the superstructure built over the pit, it seems probable that rotting wood found in the duff level represents naturally occurring recent tree falls rather than structural elements. Most of the vegetation removed from the site in September was thrown over the edge of the eroding bank north and northwest of the housepit. Much of this organic debris was mounded against the eroding bank closest to the housepit and will hopefully delay the rate of erosion there (Plates 1-3).

collected. 3D coordinates were also recorded at five locations along the edge of the eroding bank to facilitate monitoring ongoing erosion at the site. The current water line of Red Indian Lake was measured, showing datum at 5.8 meters above the lake. The datum point was approximately 15 meters above the lake before a dam was built at the inflow to the Exploits River in 1909 and raised the lake water level by up to 30 feet (9.1 meters) (Young 1951: np; Morry and Cole 1977:1). The total station was used in conjunction with an Emlid Reach RS+ GPS. RTK measurements were also recorded to check for total station



**Plate 4: Excavating Feature 2 (upper) and Feature 15 (lower) at Sabbath Point (DeBd-08).**

A 2m x 5m section encompassing part of the housepit and its exterior was dug from September 4-11 (Figures 1, 2; Plates 4, 10). This section extended west from the previously dug 10 m<sup>2</sup> rectangle. A Nikon 330 total station was used to record artifact provenience and related coordinates in three dimensions. Surface provenience was recorded for the corners of the housepit wall, internal corners, three points on the central hearth and four floor locations. Coordinates were taken for fire-cracked rocks found on the surface of the housepit floor. These items were then

error. A number of drone sweeps over the site recorded aerial photos. A 12 MP Samsung camera was used to compile a photogrammatic record of different levels of the excavation. Agisoft Photoscan (Agisoft 2014) was used to process the digital photos and incorporate them into a mosaic. Additional digital photos were taken using a 14 MP Sony camera and an Iphone6. The topographic data were used to compile a map of the housepit (Figure 1).

The September project sampled part of Feature 1, the interior mound of unknown function, and

cut through Feature 2, the perimeter wall. The excavation proceeded using hand trowels and associated tools. All back dirt was screened using ¼-inch mesh. Large roots from trees extended throughout nine square meters of the excavated 10 m<sup>2</sup> (Figure 2). Strata were mapped at the scale of 1:10 using Newfoundland and Labrador Provincial Archaeology Office Level Plans. Thirty-six level plans were compiled. Twenty-four of these refer to the easternmost six square meters where four new features, #s 15, 17, 18 and 19, were identified (Figure 2). Another new feature, # 16, refers to possibly oxidized clay found outside the housepit in the northwest corner of the 10-m<sup>2</sup> section. The complexity of the cultural deposits prevented the crew from reaching sterile soil over the majority of the opened area following 6.5 days of excavating. Despite this, much significant information was obtained. Calcined bone, totalling 169 grams, was recovered from five square meters and 1547 grams of unburned bone were collected from six units. Most of the latter appears to consist of caribou remains, including teeth, vertebrae, phalanges, epiphyses and long bone fragments. While the variety of recovered bones suggests onsite primary butchering of a caribou, or a number of caribou, the longitudinally split long bones provide evidence of their preparation for marrow removal. Fire-cracked rocks (n=192) were recorded in six squares and mostly represent secondary deposits (see below). Another ten fire-cracked rocks were collected from the surface of the interior floor. Preliminary examination of the fire-cracked rocks shows that 76% are sandstone, a proportion similar to those from a Little Passage hearth and an early Beothuk fireplace located 53 kilometers downriver from Red Indian Lake (McLean 2018:36; 2016:83; 2014:32). Artifacts include an iron projectile point preform, a wrought iron nail fragment and 41 lithic items. Diagnostic stone artifacts were not present although the recovery of two retouched flakes was unexpected as lithic items are not usually associated with Exploits Valley Beothuk housepits. Artifacts are described below in the summaries of the new features.

Feature 1 is a three-meter long linear mound extending southwards into the housepit from a northwest corner of the mounded perimeter (Figures 1, 2; Plate 4). It is 0.70m wide x 0.29m high, values that are significantly smaller than those recorded at the berm

encompassing the housepit floor. This suggests that Feature 1 did not serve the same function as the perimeter mound, which provided a foundation for the superstructure over the pit. Excavation of part of Feature 1 in September confirmed previous observations that it mostly consists of sterile loose orange gravel, at least 21 centimeters deep, capped by five centimeters of black humus, which, in turn, is covered by a surface duff layer. Excavation of Feature 15, which occurs between Features 1 and 2, indicated that Feature 1 is a backdirt pile from a Beothuk storage pit that had been left open, or partly open, when Beothuk vacated this structure. Excavation of Feature 15 revealed a 2.41 meter long x 40 centimeter wide, at the top, v-cross-sectioned trench that was oriented northeast-southwest. The trench contained rich black humus occurring at depth under the surface duff. David Buchan described a similar feature, which seemed designed to store arrows and spears, inside a Beothuk store house near Red Indian Falls in 1811 (Howley 1915:84). An iron projectile point preform, broken into two fragments, was found in black humus near the bottom of the Sabbath Point trench. The preform's blade measures 111.15 x 11.20 x 13.30 mm and was broken off from the tang's distal end (Plates 5, 6). The 303.00 mm long tang is prominently bent at mid-length and has a 9.00 mm x 9.10 mm square cross section with bevelled edges. The latter attribute and the preform's size are sufficient criteria to place it within the Type 3D category of Beothuk iron projectile points. This set includes the complete item previously found outside the housepit which suggests that these items were manufactured, or at least partly finished, at Sabbath Point.

The *in situ* deer spear preform was oriented parallel to the trench. A layer of fire-cracked rocks and three unburned cobbles lay under the humus that contained the preform. Feature 15's fire-cracked rocks averaged 288.3 grams, a value similar to the 255.3 average for fire-cracked rocks (FCR) collected from the floor surface. These FCR are significantly larger than those from Feature 19 whose smaller size and mean weight of 56.99 grams are indicative of rocks that were too small for reheating and had been discarded. This conclusion is based on analysis of fire-cracked rocks from Head-Smashed-In Buffalo Jump where FCR under 10 centimeters in any dimension are interpreted as being too small for reheating and

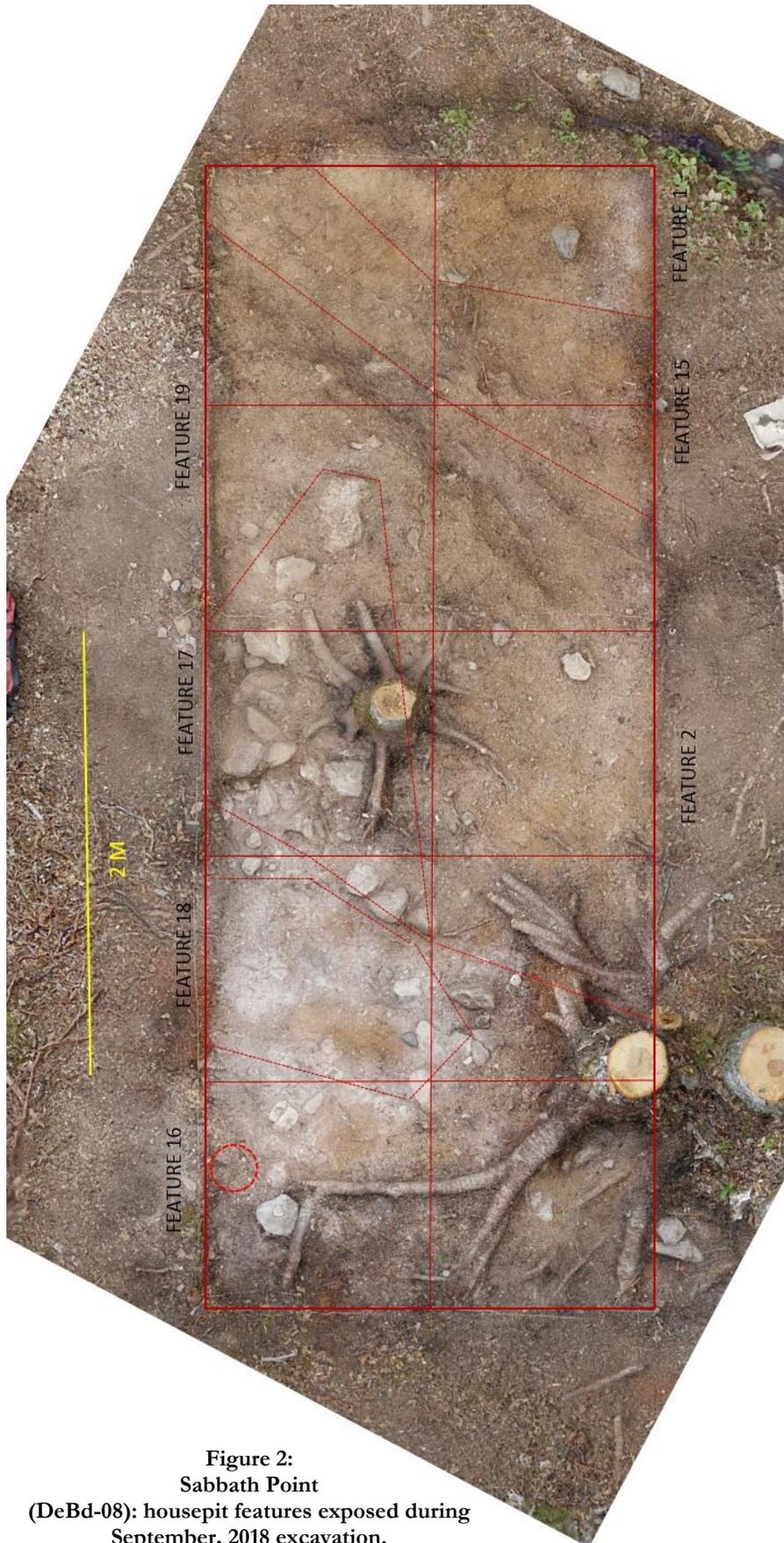


Figure 2:  
Sabbath Point  
(DeBd-08): housepit features exposed during  
September, 2018 excavation.

are categorized as refuse (Brink and Dawe 2003:101; 1989:68). These data suggest that Feature 15 was a storage pit rather than a refuse collection area. A small amount of bone and calcined bone associated with the feature's cobble layer may have drifted down slope from a much denser distribution of bone, calcined bone and fire-cracked rock (Feature 19) on top of the perimeter wall (Feature 2), overlooking Feature 15 from the west. An abraded bearing evidence of having been used to help recycle European iron was found pressed into tan-white clay under humus at the southern end of Feature 15.

Feature 19 is a dense deposit of unburned bone, calcined bone, fire-cracked rock, charcoal and a few artifacts in a matrix of grey-brown sandy-pebbly humus with hard-packed clay lenses. This material occurs directly under the previously identified Level 1 grey-black cultural level (Schwarz and Hutchings 2018:14, 17). Feature 19 lay directly on Feature 17, which consists of mounded cobbles at the base of the housepit's perimeter berm in N62 E42 and N62 E43 (see below). Feature 19 was 12 centimeters thick, reaching 15 centimeters below surface, in N62 E43 when the project was terminated on September 11. Many caribou bones were oriented lengthwise perpendicular to the deposit, indicating its relative thickness.

Feature 19 is interpreted as debris collected from the housepit hearth and floor that was discarded on top of the mounded perimeter wall. This procedure would have cleaned the housepit interior while rebuilding a sunken portion of the mounded perimeter, possibly in



**Plate 5: Deer spear (Type 3D) preform from Feature 15, Sabbath Point housepit.**

preparation for replacing part of the wooden superstructure. Similar deposits of housepit debris have been found on top of the earthen walls in other Beothuk housepits (Pastore 1984:98, 105; McLean 1994:17). The discovery of a bifacially retouched flake and a ventrally retouched flake within the Feature 19 matrix was surprising, considering that stone tools are not normally associated with Beothuk housepits from the Exploits Valley, which are generally accepted as mid-eighteenth century and later occupations (Plates 7, 8, 9). The presence of these artifacts near the top of the wall shows they did not come from a precontact or early Beothuk component located where the housepit was built. Presumably, such older material, if present, would have been disturbed during the initial Beothuk excavation of the housepit interior and deposited in lower levels of the wall fill. Extensive testing outside the housepit in 2016 did not produce any

precontact material, further indicating that the worked flakes came from the housepit's interior. While a number of small chert fragments were recovered from Feature 19, there is no evidence for much use of stone tools, other than the retouched flakes at Sabbath Point. Nonetheless, the retouched flakes suggest that late period Beothuk periodically utilized expediently produced stone tools even if they no longer manufactured stone projectile points. Excavation of the housepit floor is warranted to check for associated evidence of stone tool manufacture. Previously dug Beothuk housepits from the Exploits Valley should also be re-examined, considering that the majority of these excavations were conducted by an amateur archaeologist.

Feature 17 refers to mounded cobbles forming part of the basement of Feature 2, the housepit perimeter wall (Figure 2; Plate 10). The articulated

**Plate 6: Blade section of deer spear preform from Sabbath Point (DeBd-08).**





Plates 7, 8: Ventral and dorsal views of a bifacially retouched flake (DeBd-08-116) recovered from Feature 19 at Sabbath Point (DeBd-08).

cobbles occur between Feature 19 and the sterile A-Horizon. Feature 17 does not extend throughout the complete housepit wall. It was exposed in parts of two squares, N62 E42 and N62 E43, and was partially exposed in N62 E44. Housepits incorporating mounded cobble foundations have been reported throughout the Exploits Valley and numerous cobble beach depressions, the latter of which are admittedly culturally ambiguous, were observed in Notre Dame Bay (McLean 2015:7; Penney 1988:15; Stopp 1994:81). A number of Exploits Valley housepits have combinations of earth and cobbles in their mounded perimeters, but discrete rock clusters like Feature 17 have not been identified. This may be attributable to insufficient research concerning Beothuk housepit construction throughout the Exploits Valley. The total extent of Feature 17 remains to be determined. Boulders protruding through the wall surface elsewhere in the housepit suggest that cobbles are part of the mounded foundation although excavations are required to determine whether they are scattered individuals or part of a cluster, or clusters, simi-

lar to Feature 17. Some of the Exploits Valley's mounded cobble walls incorporate small storage pits and a gap in N62 E42's boulder cluster, extending into the north baulk could be a similar feature (Plate 10). Excavation of Feature 17 is advocated to determine its total distribution and to check for the presence of cultural material among the cobbles. This will facilitate learning if Feature 17 existed before the housepit was built or if it represents a modified type of housepit wall. The function of Feature 17 remains unclear, pending excavation, but its inclusion in a late-period Beothuk housepit implies it could be related to concerns about camouflaging structures and defense, although other explanations are possible.

Feature 18 is a partly rock-lined shallow trench at the exterior bottom of Feature 2/17 (Figure 2; Plate 10). This may be a natural feature formed by the roots from two nearby large birch trees west of the housepit, but a housepit with a circular trench surrounding it was historically reported at the mouth of the Victoria River, 10 kilometres northwest from Sabbath Point (Lloyd 1876:223). An interior trench

was observed at an Indian Point housepit during the same historic visit (Ibid). A wrought iron nail fragment and a hammerstone were found where Feature 18 meets the base of Feature 2/17. Further excavations are required to check for associated artifacts at the exterior base of the mounded perimeter or to prove that these materials had drifted to their recovery points from Feature 19 or other higher elevations on the earthen wall. It is also possible that cultural material exists outside the housepit. Feature 16 was tentatively identified in N62 E40 and cobbles scattered throughout the western four square meters suggest a possible feature disturbed by large birch trees. Charcoal was scattered throughout the clay under the duff in these four square meters, but associated cultural material was not recovered from this area. Tan-white hard-packed clay, with traces of orange that were exposed in the excavation outside the housepit may constitute sterile layers although additional research is required to prove this. The opened 10 m<sup>2</sup> section was not backfilled, but was covered with a heavy plastic tarp, which was weighed down with cobbles collected from the beach. The rock-encased tarp was then covered with portions of tree trunks and limbs that had been previously cut from the housepit and its exterior. This cover should protect the housepit from the elements and facilitate continued excavation at the appropriate time.

### Conclusions

Under permit 18.32 five new features were identified that are associated with Sabbath Point's housepit, while a storage pit tentatively identified within Feature 17 potentially represents an additional new feature at the site. These new features corroborate previous research that noted the housepit's similarities to other Beothuk structures, although a number of distinct attributes characterizes the Beothuk who lived at

Sabbath Point as well. The housepit's Beothuk-excavated interior, raised central hearth and mounded perimeter are typical of most Beothuk housepits. Fire-cracked rocks from the housepit predominantly consist of sandstone, following the pattern observed at an older Beothuk hearth and a Little Passage fireplace from Nimrod's Pool, on the Exploits River, downstream from Red Indian Lake. Preliminary examination of the faunal sample collected under Permit 18.32 indicates a heavy dependence on caribou at Sabbath Point, consistent with the pattern throughout the Exploits Valley.

The secondary deposit of house interior debris, Feature 19, on top of the perimeter mound is also similar to the structure of a number of other housepits. However, the presence of two retouched flakes within Feature 19 was unexpected, given that stone tools are not usually associated with Exploits Valley housepits, the majority of which are presumed to date to the latter half of the eighteenth century and early nineteenth century. Sabbath Point's retouched flakes are especially surprising considering that the housepit also contained a Type 3D iron projectile point preform and a complete Type 3D artifact was previously found just outside the housepit. Type 3D projectile points are the most



Plate 9: Ventrally retouched flake (DeBd-08-164) from Feature 19, Sabbath Point.

elaborate iron tools manufactured by Beothuk and previously had only been found at the South Exploits site (DfAw-07), on the bank of the Exploits River well downstream from Red Indian Lake. Another high quality iron projectile point, designated Type 4B in consideration of its similarity to Type 4 Beothuk iron projectile points, was previously found inside the housepit, but it is unclear if a Beothuk or a European manufactured this object. Sabbath Point's combination of retouched flakes and examples of advanced iron recycling suggests that Beothuk retained knowledge of stone tool manufacture for a longer



**Plate 10: Feature 17, mostly exposed in N62 E42. Feature 18, a rock-lined trench at the base of Features 2 and 17, is visible as well. Yellow arrows point to possible storage pit (upper) and Feature 18 (lower).**

period than had been previously accepted and further excavations of Exploits Valley housepit interiors are needed to check for evidence of this activity. These excavations could include re-visiting housepits that had been dug, or partly excavated by an amateur archaeologist.

Although some Exploits Valley housepits contain perimeter walls consisting, or partly composed of mounded boulders, the discrete rock pile constituting Sabbath Point's Feature 17 is a unique manifestation. Excavation of this feature is required to determine if it predates the housepit or if it represents a specific modification in housepit design. The latter explanation might be another aspect of late eighteenth century-early nineteenth century Beothuk houses that were situated and constructed to avoid detection by Europeans. Feature 17 may have served other purposes as well. Although a longitudinally-shaped storage pit found in a store house near Red Indian Falls is historically described, Sabbath Point's Feature 15 is the first archaeological identification of this type of storage area. Feature 15 had not been backfilled when Beothuk abandoned this housepit, raising the possibility that they were in the process of

storing materials there when they were forced to rapidly evacuate the site due to an unexpected visit by Europeans. Even if Feature 15 resulted from a less dramatic sequence of events, its open status vividly represents an unfinished activity awaiting explanation.

In sum, the combination of commonly observed Beothuk architecture and faunal selection in conjunction with unusual architectural traits and rare or unique artifacts at Sabbath Point are evidence for an engaged, relatively late Beothuk occupation. The evidence for hitherto undocumented activities are informative concerning their attempts to cope with mounting historic challenges to their traditional way of life. It is expected that further excavation of Beothuk archaeological sites will produce more evidence for Beothuk modifications to their traditional culture as they attempted to survive the pressures of the historic period.

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# Community Archaeology and Cultural Resource Management in Sheshatshiu, Labrador – 2018

Scott Neilsen, Chelsea Arbour, Jay Andrew, Nishita Aurnab, Meghan Bush, Bob Jackman, Yu-Ru Lee, Chase McLean, Linda Nysten, Emma Walker & Susanne Williams  
Memorial University

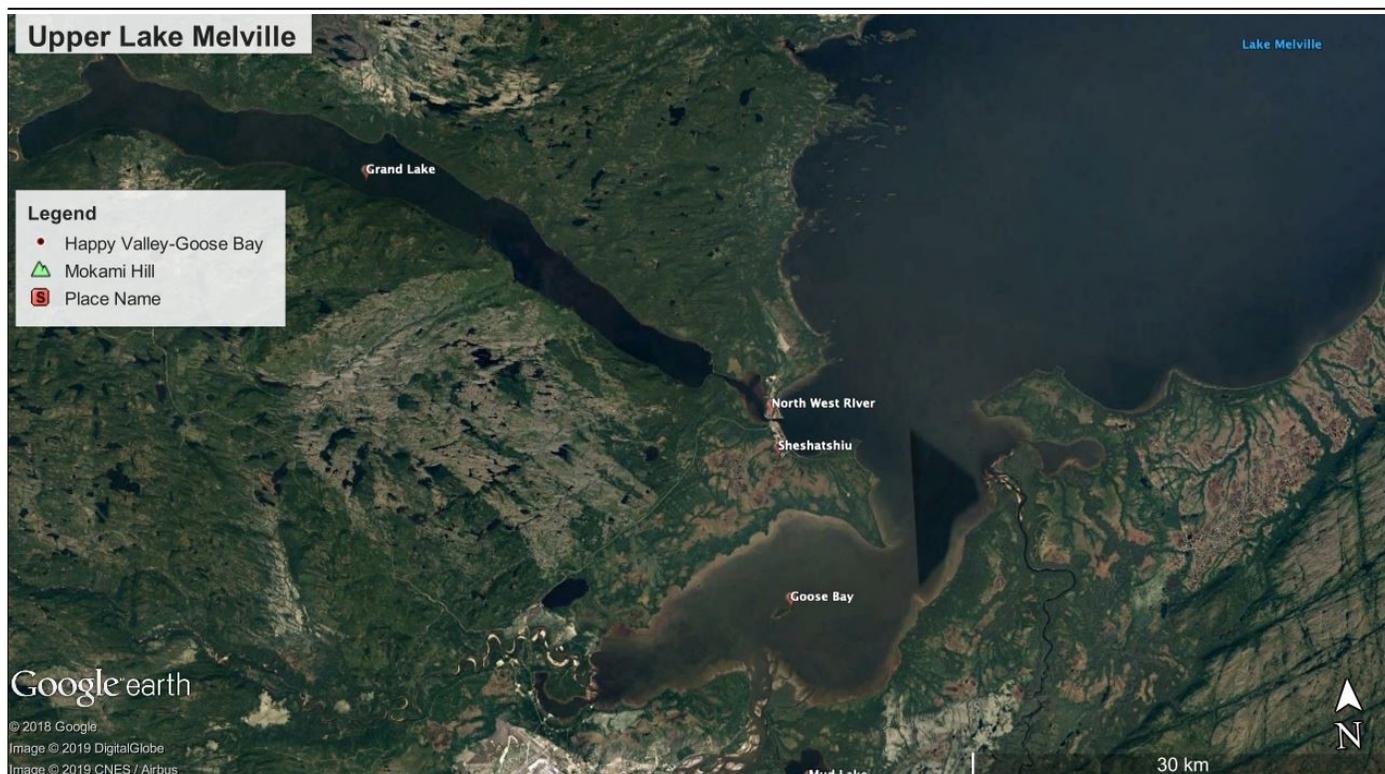


Figure 1: Map indicating the location of Sheshatshiu and North West River, Labrador, in relation to Lake Melville and the town of Happy Valley-Goose Bay.

The archaeological investigations summarized in this preliminary report were undertaken between July 2<sup>nd</sup> and August 3<sup>rd</sup>, 2018 under archaeological research permit 18.15. The students, teaching assistant, instructor, and community research assistants who participated in the 2018 Labrador Institute Archaeological Field School completed this research. The fieldwork was undertaken within the community of Sheshatshiu, Labrador, and the laboratory analysis, and reporting, were completed at the Labrador Institute Research Station, in North West River (refer to Figure 1).

The work reported here was undertaken within three distinct locations within Sheshatshiu, and focused on teaching different aspects of archaeological

fieldwork. The fieldwork undertaken at each of the three locations was considered to be a sub-project within the overall field school; students were divided into three groups, and each group, under the supervision of the instructor and teaching assistant, was responsible for organizing the collection of data and completing a summary presentation and report on their specific sub-project within the field school. Those reports were used to compile the information reported here.

Sub-project 1 focused on recording the Blake family burial plot, which is located on an enclave of private property; within the Sheshatshiu Innu First Nation reservation boundaries (refer to Figure 2). This plot was recorded at the request of the family,

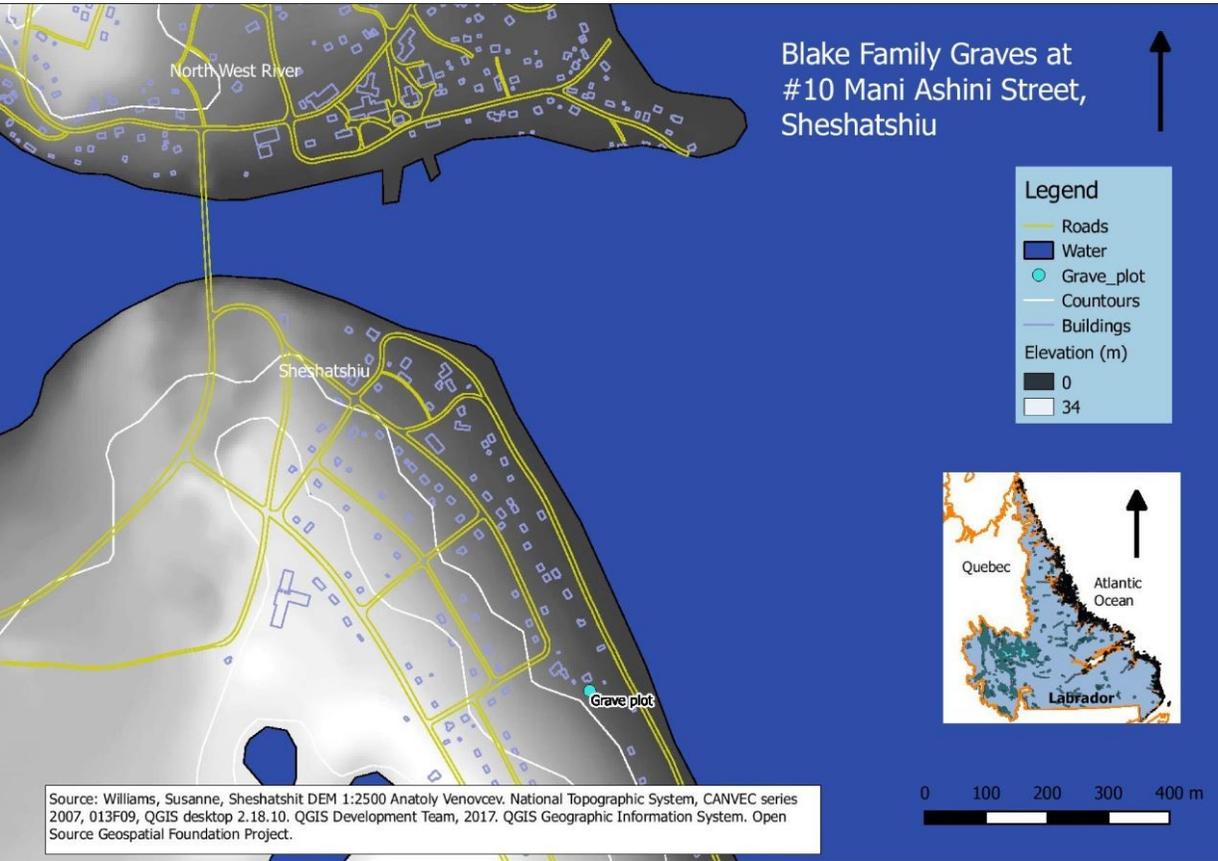


Figure 2: Map indicating the location of Blake family enclave, within the community of Sheshatshiu, Labrador.

Figure 3: Map indicating the location and layout of the Blake family property, in relation to the enclave, family home, and the burial plot.



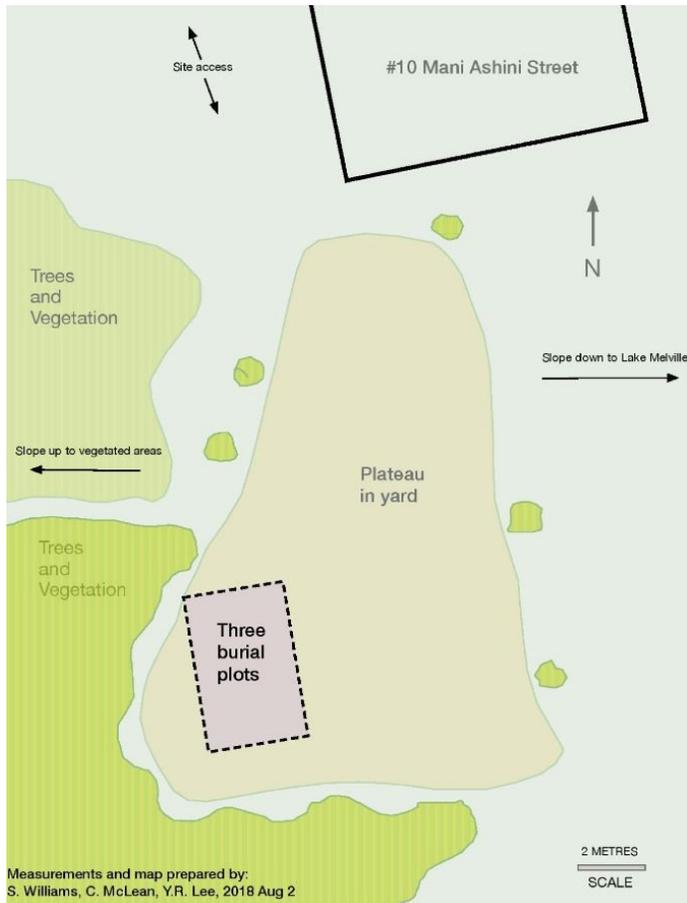


Figure 4: Map of Blake family burial plot; digitized from site plan recorded in the field.

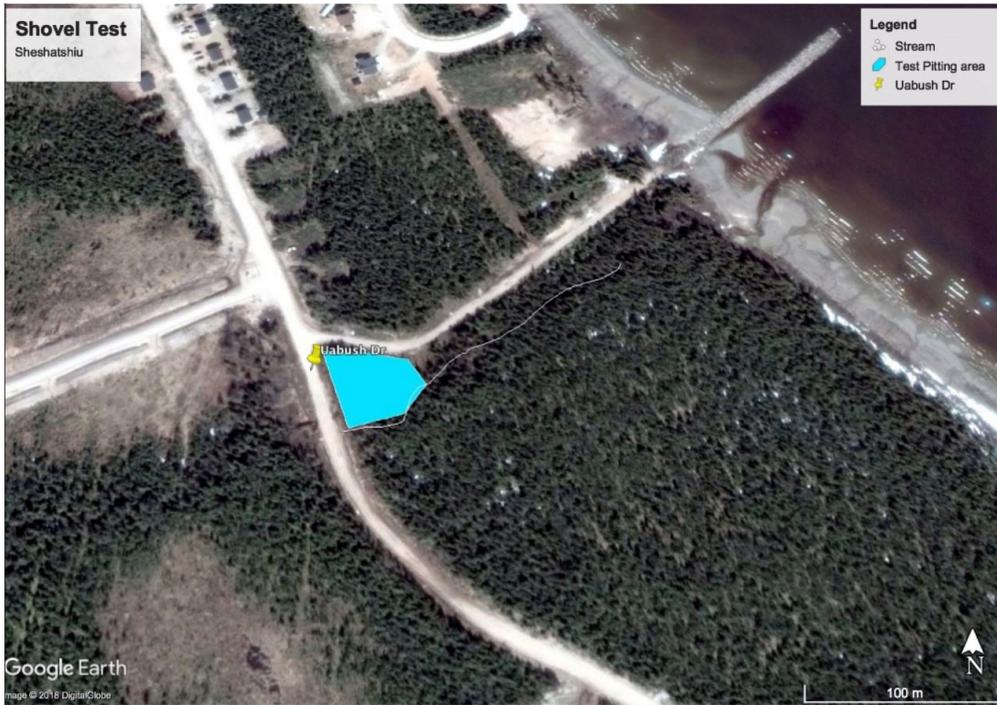
who wanted to ensure that the location would be known to people in the future, and therefore have a greater chance of being protected (refer to Figure 3). Students Williams, Lee, and McLean spearheaded this work, which included surface mapping (refer to Figure 4), photography, and gathering family history (refer to Figure 5).

According to information provided by the family, William Blake came to Labrador from Devonshire, and in 1769, upon the completion of his 5-year work contract, he decided to remain in Labrador, rather than return to England. He first lived in Double Mer, where he married an Inuk, and had two sons – William jr and John. Clarice Blake-Rudkowski, the family member who requested that the burial plot be recorded and who generously facilitated the site visit and spent time with the students discussing her family’s history, represents the 7<sup>th</sup> generation of John Blake’s lineage.

The Blake family burial plot is located in the yard of the family home, and includes three family members – Clarice’s parents, Cecil (1912-1997) and Sylvia Blake (1920-2011), and her nephew, Donald

Figure 5: Photo of sub-project team next to family burial plot. Photo includes, from left to right: Susanne Williams, Clarice Blake Rudkowski, Yu-Ru Lee, and Chase McLean.





area within the Sheshatshiu reserve boundaries, which was identified to the field school by the SIFN band manager and the supervisor of housing construction as the location of a future housing lot (refer to Figure 6). Students Aurnab, Jackman, and Walker were the team members responsible for sub-project 2. All the fieldwork was associated with the proposed housing lot and included a pedestrian survey, shovel testing, interpreting and recording test pit profiles, photography, making a site map, and reporting.

**Figure 6: Map indicating the location of sub-project 2, within Sheshatshiu, Labrador.**

Blake jr. (1973-2015). This plot does not meet the definition of an archaeological site under provincial regulations, but it is a significant location to the family. Because it is not located within a formal cemetery there is an increased opportunity for the location to be forgotten in the future. For this reason, the sub-project 1 team felt it was important to complete an ethnographic site record form, and to provide a copy of this to the Provincial Archaeology Office, for their records, and to consider entering it in the provincial sites database. The team also noted that there are other locations within the community that are believed to contain family burial plots, and recommends that research be undertaken to attempt to discern and mark their locations.

Sub-project 2 focused on shovel testing a wooded

shovel-testing grid using a 30m tape measure and a compass, and participated in the pedestrian survey, shovel testing, and recording the test pit characteristics.

All the students observed how to establish a

**Figure 7: Photo showing Bob Jackman and Emma Roberts, members of the sub-project 2 team, screening soil from a test pit. Also, note surroundings.**

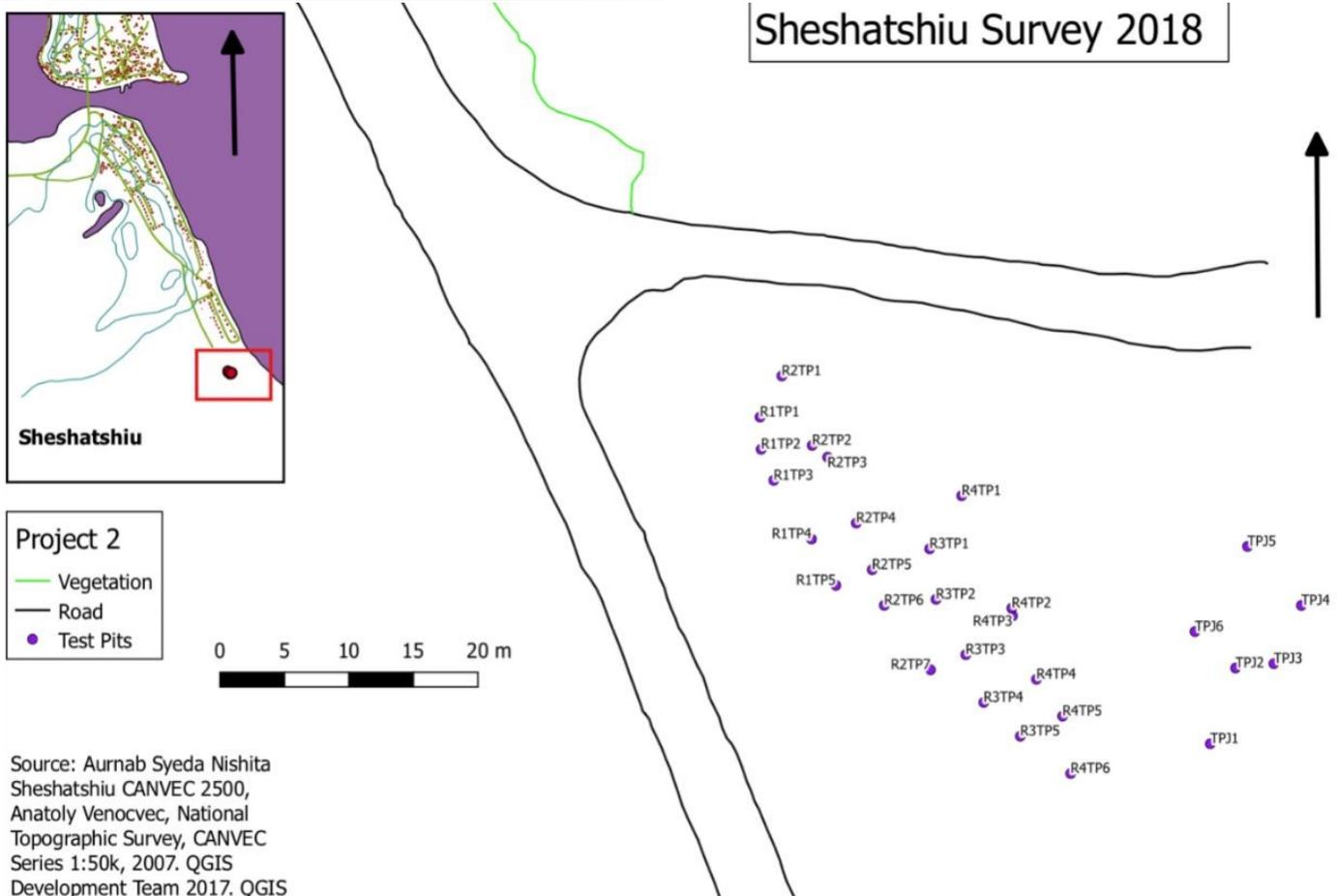




tics on standardized forms (refer to Figures 7 & 8). They also had the good fortune to observe and operate a dGPS at the site of sub-project 2. This was made possible by the Town of Happy Valley-Goose Bay, which donated their then GIS-technician, Anatolijs Venovcev, and the use of their dGPS instrument, to the field school for a full day. This facilitated recording an accurate location of each individual test pit by the sub-project 2 team, which they used to produce an accurate site map (refer to Figure 9).

In total, the field school excavated twenty-eight test pits. Each one measured approximately 50 cm x 50 cm and was dug to sterile soil. Twenty-two of these test pits were excavated on a 5m grid (in some cases the forest cover required the test pit to be offset). The grid consisted of four rows, running parallel to the northwest point access road, between the outfall road that leads to the beach on the northern edge of the testing area, and a small brook, which

Figure 8: Photo of a typical test pit profile within the sub-project 2 area.



Source: Aurnab Syeda Nishita  
 Sheshatshiu CANVEC 2500,  
 Anatoly Venovcev, National  
 Topographic Survey, CANVEC  
 Series 1:50k, 2007. QGIS  
 Development Team 2017. QGIS  
 Geographical Information  
 System, Open Source Data.

Figure 9: Map of sub-project 2 test pit locations in relation to the existing roadway.



**Figure 10: Photograph of field school students completing excavation work in Area 14.**

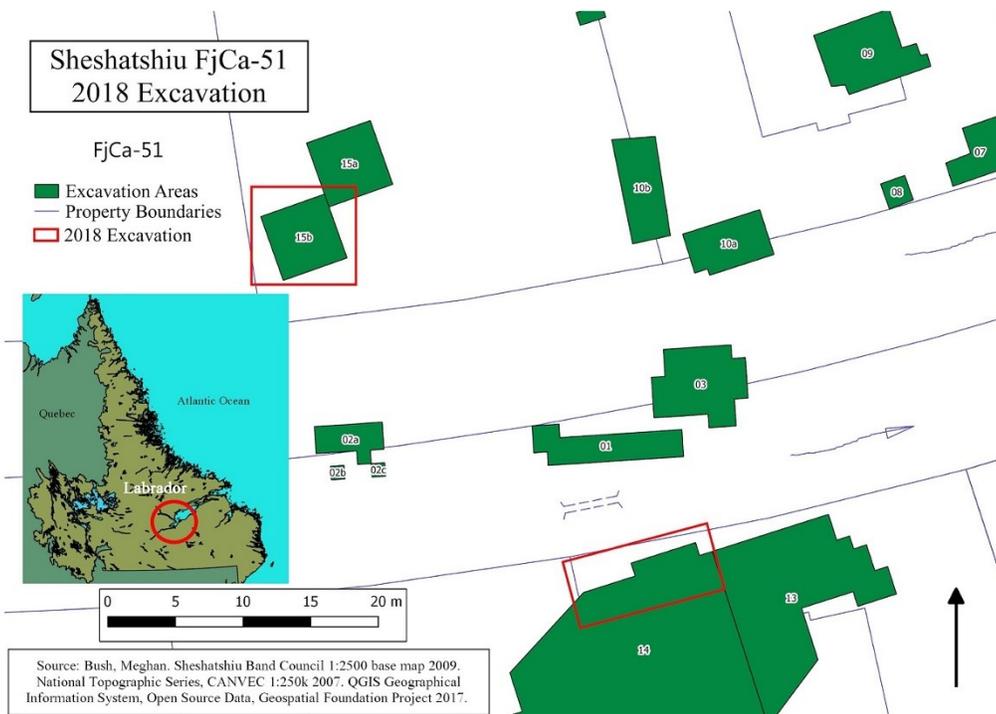
drains the wetland near the modern wastewater treatment plant, and parallels the southern margin of the proposed housing lot. The remaining 6 test pits were judgements placed on a low knoll overlooking the brook. No test pits were dug within the initial 10m of land running along the western edge of the proposed lot and the access road to the northwest point, as the pedestrian survey determined this location was heavily disturbed when the US military constructed the access road in the 1940s.

No cultural material, with the exception of modern garbage (e.g. bottle glass, candy wrappers, and chip bags) was identified within the location surveyed and tested. The water table was found to be near the ground surface, close to the brook and in the corner of the proposed housing lot at the start of the outfall road. The soil in these locations was saturated,

and included some silt. Test pits between these two locations and on the small knoll were dry and included a well developed A and B-horizon. Based on the absence of any significant cultural material in the test pits and on the surface this piece of land is judged to have a low potential, and preparation of a housing lot at this location is unlikely to impact any significant heritage resources. Note however that this statement only applies to the 30 cm x 30 m area investigated by the field school, and is not a blanket statement regarding the area along the northwest point access road to the south of the brook, or east further along the outfall road. Further assessment work may be required if infrastructure development is to occur in those locations.

Sub-project 3 was the final work undertaken in association with the Labrador Institute Archaeological Field

School in 2018. This sub-project was led by students Andrew, Bush, and Nylen, and continued the salvage excavation work at the significant Saunders (Brinex-Charles) period site of FjCa-51 – which is now in its 9<sup>th</sup> year. The work undertaken in 2018 completed the excavation of Area 14, where the 2017 field school occurred (refer to Figure 10), and began excavation in a new location. Once work on Area 14 was completed housing construction was allowed to proceed, and two new houses have since been built on lots 19 & 20. The new excavation grid established by the field school is located on housing lot 4, across the road from Area 14; and is labelled as Area 15 (refer to Figure 11). Grid corners for Area 15 were established with the help of Anatolijs and the dGPS. The initial Area 15 grid measures 5m x 5m, and was set up to encompass the location of positive test pits dug in the



itage, a medium sized boulder, and the edge of a cobble feature were identified in the units in the southeast corner of the excavation grid. Based on these results, it is recommended that excavation in Area 15 continue in the summer of 2019.

In conclusion, the 2018 Labrador Institute Field School was a success. The students were exposed to a variety of archaeological methods, including: pedestrian survey, shovel testing, excavation, field mapping, photography, note taking, and artifact analysis. It is anticipated the field school will occur again in 2019. The partnership established between the Labrador Institute and the Sheshatshiu Innu First Nation has been successful, and resulted in development of a project that meets the practical needs of the community to conduct archaeological excavation of FjCa-51 in advance of house construction at the site, and the needs of the Labrador Insti-

**Figure 11: Map showing location of Area 15 in relation to housing lot 4 and excavation**

summer of 2009. Once the corners were established excavation proceeded in 6 of the 1m<sup>2</sup> excavation units. The field school students completed the excavation of each of these units, and recorded the soil profiles, excavation notes, and the photographs (refer to Figure 12 & 13). A small amount of stone deb-

between the Labrador Institute and the Sheshatshiu Innu First Nation has been successful, and resulted in development of a project that meets the practical needs of the community to conduct archaeological excavation of FjCa-51 in advance of house construction at the site, and the needs of the Labrador Insti-

**Figure 12: Photograph of field school students working in Area 15.**

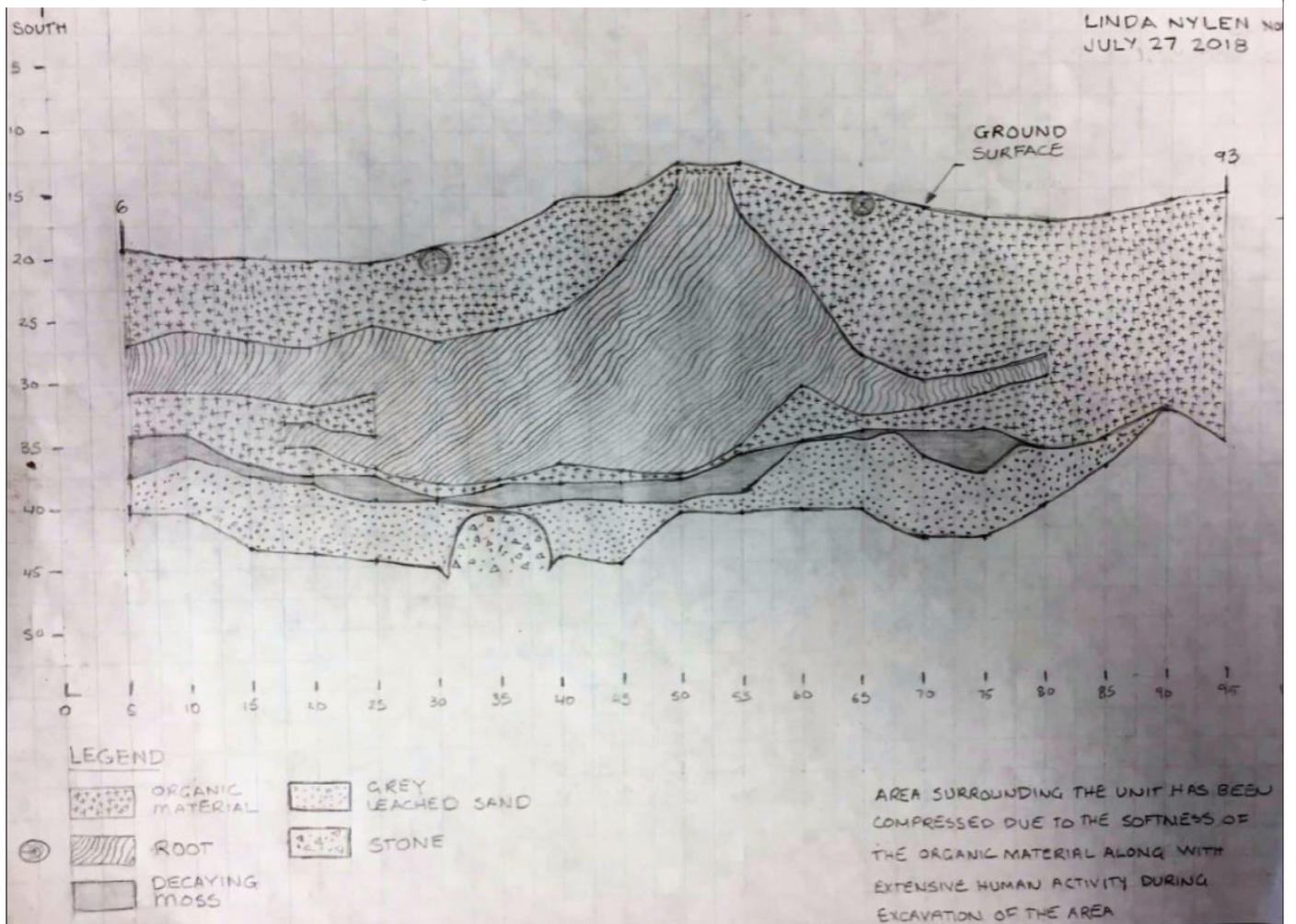


tute to offer a unique and diverse educational experience to students at Memorial University, and from other Institutions and the local community. Sheshatshiu continues to set the standard for community investments in archaeological mitigation in the province.

**Acknowledgements**

A field school relies on the good will of community members to deliver a valuable educational experience. The 2018 field school could not have occurred without the help of these fine folks: Chelsea Arbour, Mavis Penny, Anatolijs Venovcevs, the Town of Happy Valley-Goose Bay, the SIFN band council, Jack and Elizabeth Penashue, Jodie Ashini, Jon Feldgajer, Chief Hart, Greg Pastishi, Shannon Tobin, Meghan Walley, Wesley Blake, Hubert Hurley, and the fine folks at the Labrador Institute, the Department of Archaeology, and the Provincial Archaeology Office. Thank you all!

Figure 13: Field sketch of soil profile, in Area 15.



# Archaeo-Geophysical Prospection in Upper Lake Melville, Labrador

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Memorial University

**I**ntroduction  
As defined in the Innu Dictionary (McKenzie & Hunker 2013) the word “ushpitun” typically refers to a human arm or animal foreleg; archaeologists however have used it to label a landform northeast of the community of Happy Valley-Goose Bay, which has a topography that gives it a similar appearance (Figure 1). This landform is an ancient sandbar, which formed sometime around 3000 years ago, as sand was deposited at what was then the mouth of the Mishtashipu (Churchill River) - as it does further to the east today (Josephs and Neilsen 2009). Archaeological work undertaken intermittently here over the last twenty years has resulted in the identification of stone tools and cobble and pit features at multiple locations. This report briefly summarizes the methods and results of investigations undertaken in 1998 (IEDE/JWEL 1999), 2004 (Neilsen 2006), 2013 (Neilsen 2014) and 2015 (Neilsen 2017), and provides an overview of new research undertaken on the Ushpitun landform in the summer of 2018.

## Summary of Previous Fieldwork

Dr. Fred Schwarz first recognized the archaeological potential of this landform during the initial stages of the Heritage Resource Impact Assessment for the Lower Churchill Hyrdo Electric Project (IEDE/JWEL 1999). In addition to applying the “ushpitun” label to the landform, Dr. Schwarz and the field crew, including Innu, dug hundreds of small shovel test pits along the former shorelines that delineate the land-

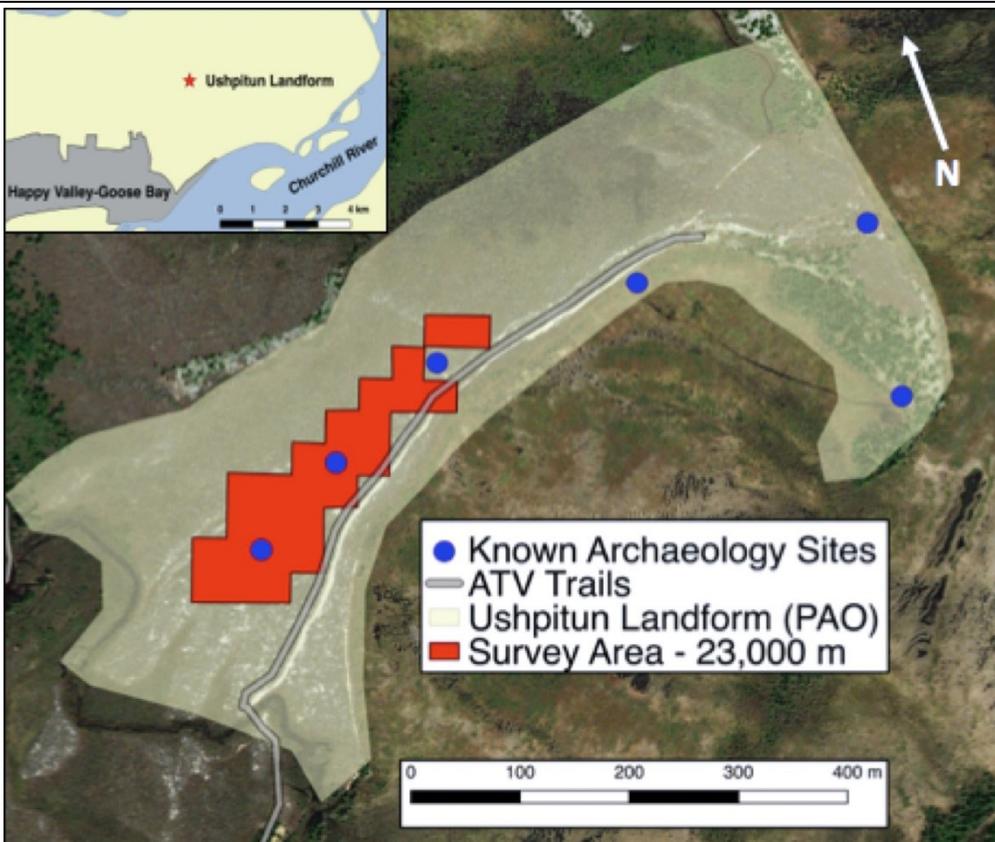


Figure 1: Map indicating location of the Ushpitun landform, and associated cultural features.

form. This resulted in the identification of archaeological sites FhCb-03 and FhCb-04, i.e. Ushpitun 1 & 2 (IEDE/JWEL 1999). Based on the presence of stone tools made from quartzite and colourful chert, and correlation of the topographic elevation of the landform to the measured rates of isostatic rebound, these two sites were proposed to date within the early portion of the Intermediate period, in the timeframe of the Charles complex (IEDE/JWEL 1999; Clark and Fitzhugh 1992).

In the summer of 2004 co-author Neilsen (2006) undertook fieldwork for his Master’s degree in Happy Valley-Goose Bay, which included excavation of approximately 35 m<sup>2</sup> at FhCb-04. These efforts resulted in the recovery of stone tools and debitage, and the identification of a feature including cobbles,

charcoal, calcined bone fragments, and a roasting pit. Based on the characteristics of the feature and the recovered stone tools – including fractured scrapers, knives and a lanceolate biface, and a complete but exhausted asymmetric biface – Neilsen (2006) proposed that the site occupants had processed and prepared food, and that it was possibly killed or gathered locally. Additionally, charcoal associated with the roasting pit was subjected to radiometric radiocarbon dating, and found to date to Cal BC 1140 to 820 (Beta-198378). This scientific date correlates with the relative date determined by the rate of isostatic rebound for the region, and the presumed site elevation of 17 m asl, collected from GPS and NTS series topographic mapping (Josphs and Neilsen 2009).

In the end Neilsen (2006) proposed that the style of the stone tools and the type of stone they are made from, the observed elevation of the site above seal-level at the time, and the measured radiocarbon date aligned FhCb-04 with Fitzhugh's (1972) observations of the Intermediate period in North West River, specifically the Charles complex, and with Christopher Nagle's (1978) Saunders phase, from the north Labrador coast. Furthermore, in the process of hiking to and from the site each day the field crew recorded one other location, where a 1m<sup>2</sup> test pit uncovered two medium-sized cobbles, and one small fragment of quartzite debitage. This discovery was recorded as FhCb-05, and hinted that the Ushpitun landform may include additional, yet unidentified, archaeological components.

Beginning in 2013 a series of surface finds confirmed this likelihood. A brush fire passed through the region at some point following the 2004 excavation, and burned off the vegetative carpet cov-

ering the ground. Given the shallow depth of the cultural components on the landform this increased visibility significantly, and exposed stone tools and debitage, at additional locations (Figure 2), which were recorded as archaeological sites FhCb-07, FhCb-08, and FhCb-09 (Neilsen 2014; 2017). Most of the surficial specimens identified at this time were debitage, and were left in place. However, three items were collected, including a split quartzite cobble, a chert side scraper, and a quartzite projectile point. The point was significant in that it was the first complete tool with diagnostic markers recovered on the landform, and that the small side notches and the heavily ground box-like base were not common in the archaeological record of the Intermediate period.

### Summary of 2018

#### Fieldwork

Fieldwork in 2018 took place over several weeks during July and August, and covered an area approximately 23,000 m<sup>2</sup>. Archaeological permit 18.11 was issued to both co-authors, and the research was conducted as part of the research for co-author Wolfrum's Master's thesis at Memorial University. The NunatuKavut Community Council, the Town of Happy Valley-Goose Bay, and the Innu Nation were also notified of the research. The overall goal of the field research was to use archaeo-



Figure 2: Photograph showing surface find in 2013, following burning of Ushpitun landform.

geophysical prospection as a means to identify buried archaeological features on the Ushpitun landform, and to accurately map and collect the surface artifacts identified previously and during the 2018 field season.

The features consisted of hearths and hearthstones, which exhibit thermoremanent magnetism, or are permanently magnetically induced (due to burning at temperatures >600 Celsius) and therefore detectible with geophysical instruments. The instruments

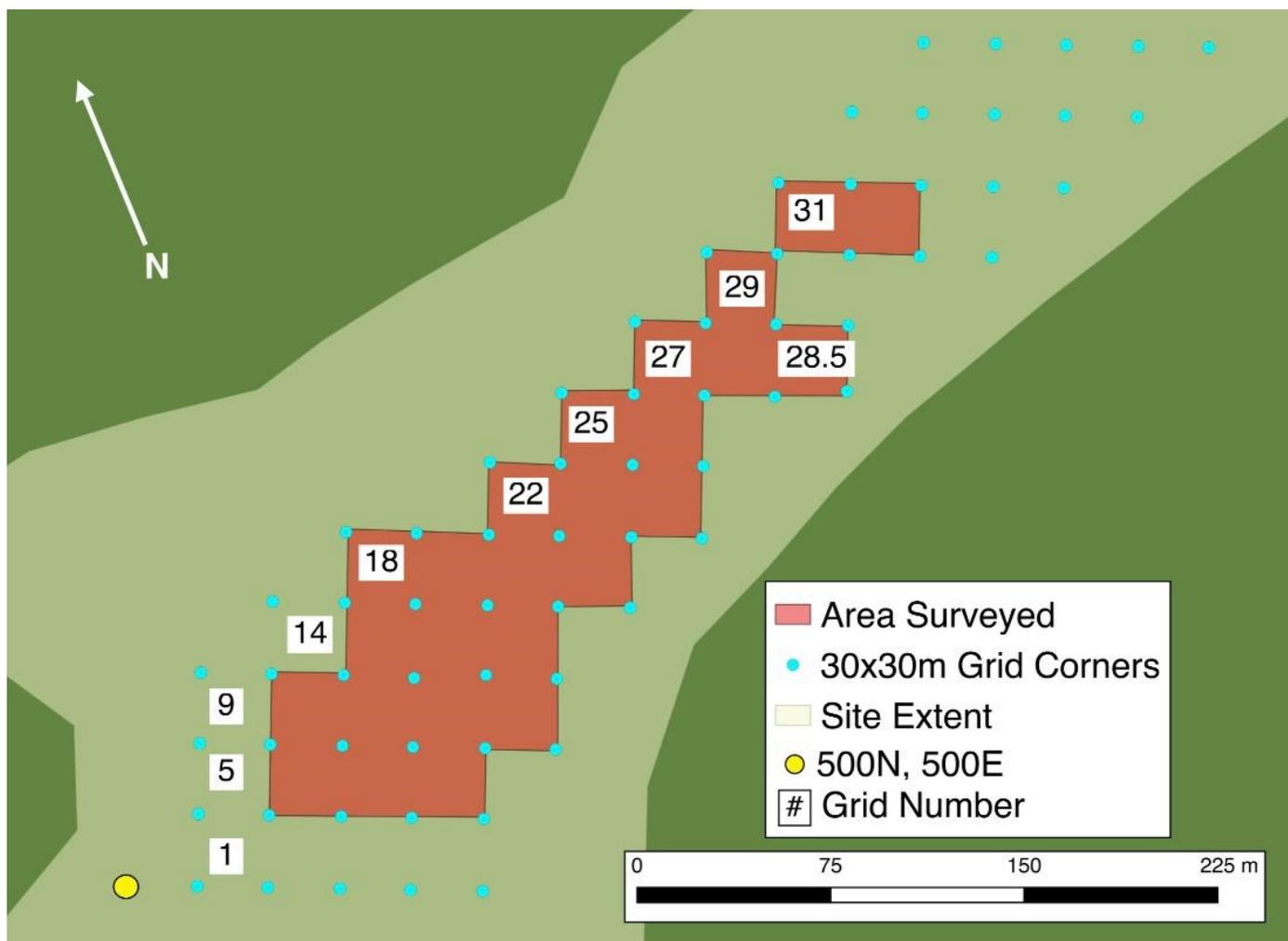


Figure 3: Map showing the delineation of the survey grids used to guide instrument use.

Figure 4: Photographs showing instrument use.



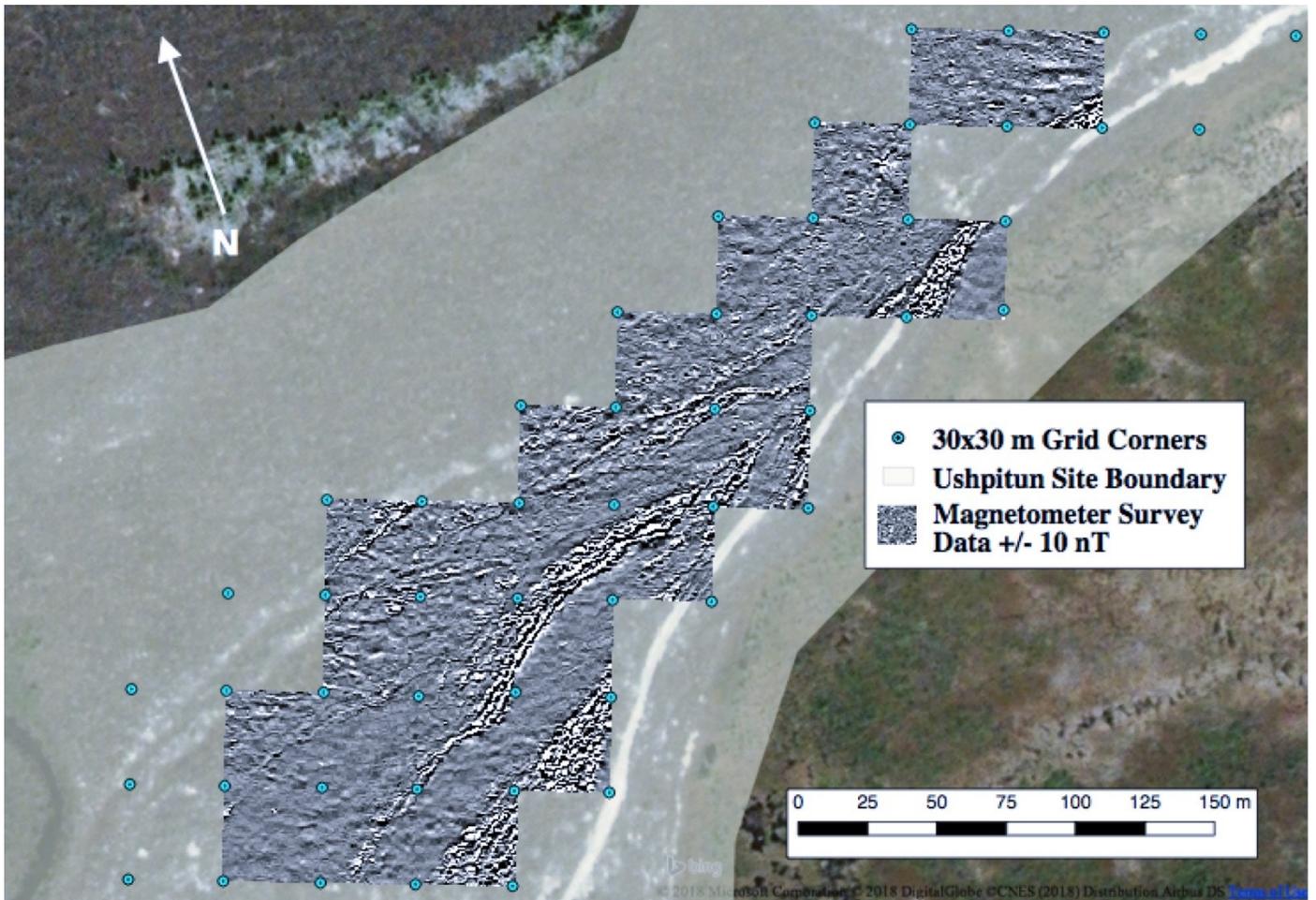


Figure 5: Map showing some of the preliminary results of the archaeo-geophysical survey.

utilized in 2018, and in this order, included: (1) Sensys MXPDA magnetometer cart, (2) Terraplus KT-20 magnetic susceptibility/conductivity meter, and (3) Sensors and Software NOGGIN SmartCart ground penetrating radar (GPR) unit. A metal detector was also used to check any targets identified by the aforementioned instruments for metal debris prior to excavation, thus identifying them as disturbed, or more recent.

Before survey could take place, an arbitrary grid system (origin 500N, 500E) was established to facilitate systematic instrument use over the landform. Each grid was 30x30 m<sup>2</sup> in size and marked with wooden stakes at the corners (Figure 3). In total, there were over 40 grids marked, though only 25 were fully surveyed due to time constraints. Once the grid was created, transects at regular intervals (eg. 0.5 m, 1.0 m, etc.) could be maintained within each grid to ensure regular data collection with each instrument (Figure 4).

Geophysical instruments can measure a multitude of physical properties, but they all have in common the ability to highlight contrast. Magnetics looks for a difference in magnetic gradient, measured in nanoteslas (nT), while magnetic susceptibility/conductivity (also called electromagnetic induction (EMI)) creates its own magnetic field and measures the response to this by buried objects or features. GPR uses electromagnetic waves pulsed into the earth to document where those waves are reflected, and how deep they penetrated. At Ushpitun the magnetometer and susceptibility/conductivity meter were used to look for the more highly magnetic hearthstones and soil, while the GPR was employed to locate the hearthstones by physically reflecting waves off them.

Each instrument was operated in a zigzag pattern, following the pre-established transects (marked with ropes) ensuring that data was evenly collected. This process took several weeks to complete, with the

magnetometer surveying 23,000 m<sup>2</sup>, the magnetic susceptibility/conductivity meter surveying 17,500 m<sup>2</sup>, and the GPR surveyed 11,500 m<sup>2</sup> – with the last two instruments overlapping significantly with the coverage of the magnetometer for comparative reasons. Data collected in the field was then processed using software specific to each instrument, and was then georeferenced and imported into a QGIS framework as a series of layers. Once the data could be compared visually, areas of interest were identified and these GPS locations were noted for investigation in the field (Figure 5).

As areas of interest were being marked on the landform a cursory pedestrian survey was implemented to map the stone tools identified on the surface of the ground using an RTK instrument, and to record accurate elevation data for each component. This was facilitated with help from the Town of Happy Valley-Goose Bay's GIS technician Anatolijs Venovcev, who operated the RTK instrument and provided access to the Town's permanent dGPS base station. The stone tools were then collected prior to the excavation of several areas thought to be the most archaeologically promising. In total, 8 1m<sup>2</sup> units were excavated, while several other anomalies were confirmed (using a metal detector) to have been caused by modern, metal trash. Two excavations proved successful in identifying potential hearth features, and charcoal samples were collected for radiocarbon dating (though the evidence is admittedly circumstantial as no artifacts were recovered).

### Conclusion

Since the excavation of archaeological site FhCb-04 in 2004, artifacts have continued to be identified on the Ushpitun landform, northeast of the community of Happy Valley-Goose Bay. As a result of these discoveries it was decided that additional archaeological research was warranted at the location, in order to accurately map the artifacts and features identified after 2004, to survey the landform in more detail, and to re-assess the relationship of the various archaeological sites recorded on the landform to each other, and to other Intermediate period sites recorded in Upper Lake Melville. This fieldwork was completed in the summer of 2018, and the data collected is currently being analyzed by co-author Wolfrum. The detailed results will be published in his MA thesis, later in 2019.

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# 2018 Archaeological Activities – Gerald Penney Associates Limited

Gerald Penney, Blair Temple & Robert Cuff  
Gerald Penney Associates Limited



Photo 1: Tin-glazed earthenware fragments from CjAe-114.

## Water Street Infrastructure Improvement (18.03)

From 3 April to 29 June 2018, GPA conducted archaeological monitoring of a large-scale water and sanitary sewer improvement and storm sewer replacement project on Water Street, St. John's. Known as the Water Street Infrastructure Improvement Project, it is a multi-year construction excavation project involving the installation of a new storm sewer system; the replacement of all manholes associated with the existing sanitary sewer system (plus installation of additional manholes), for the eventual lining of the sanitary system (c. 2022); the switch of a portion of the sanitary system to storm sewer; and the lining of a water main system (eventually replaced due to a faulty lining process).

Excavations in 2018 extended along Water Street from immediately east of its intersection with Harbour Drive and Waldegrave Street, to just east of its intersection with Bishops Cove and Adelaide Street. Excavations extended up Queens Street, Stewarts Cove, Holdsworth Street, Adelaide Street and Bishops Cove for varying distances. The majority of excavations occurred on Water Street at its Queens Street intersection (and vicinity), and between

Holdsworth Street and Bishops Cove/Adelaide Street (the latter was extensively excavated).

Seven new archaeological sites were recorded (CjAe-160 through CjAe-166), and elements of two previously recorded sites further documented (CjAe-13 and CjAe-114):

CjAe-13 (Stewart's Cove) – Located at Stewarts Cove, off the south side of Water Street opposite Queens Street, the site was tested in 1993 by Dr. Peter

Pope. It was found to contain early cultural material, but from extensively disturbed contexts. Limited excavations for temporary water services at its north end in 2018 exhibited similar modern disturbance.

CjAe-114 (Bishops Cove) – Located at Bishops Cove, this site was recorded in 2009 during the Harbour Interceptor Sewer project. Extensive excavations identified late-17<sup>th</sup> to mid-18<sup>th</sup> century deposits, providing evidence of early fisheries-related occupation of the area; infill material associated with rebuilding after the 1819 or 1833 fire; southern portion of a stone sewer running down Adelaide Street, as well as a junction with a stone sewer from Holdsworth Street (both recorded in other sites).

CjAe-160 (Queen Street) – Located at Queens Street, this site contained primarily sanitation-related finds, particularly from the later 19<sup>th</sup> century, such as a large brick chamber associated with the 1889-c.1893 brick interceptor sewer system and brick catch basin remnants. A small deposit relating to roadwork, possibly post-1833 or 1846 fire was recorded.

CjAe-161 (Water Street 9) – Located at the intersection of Water Street with Queens Street and Stewarts Cove. Location of the west end of the brick interceptor sewer; several remnant sections of former



Photo 2: 1846 fire deposit, CjAe-162.

stone sewers and drains, a number of stone features of uncertain function; evidence of post-1846 fire roadwork; extensive disturbance in places.

CjAe-162 (Water Street 10) – Located at the junction of Water Street with Holdsworth Street, extending both east and west. Portion of a stone sewer running from Holdsworth Street to Bishops Cove, joining with a sewer flowing down through Adelaide

Photo 3: Cross-section of a functioning stone sewer flowing down Adelaide Street (CjAe-163).



Street to the harbour; exposure of the brick interceptor sewer; 1846 fire deposits and features, associated with structures destroyed during the fire, and later razed as part of street improvements. CjAe-163 (Adelaide Street) – Located at Adelaide Street. Lengthy portion of a substantial stone sewer (still functioning) running from New Gower Street to the harbour; several sewerage and drainage features.

CjAe-164 (Water Street 11) – Located on Water Street, between Queen Street and Holdsworth Street. Exposure of the brick interceptor sewer; section of a stone drain or sewer running across Water Street.

CjAe-165 (Water Street 12) – Located at the intersection of Water Street with Bishops Cove and Adelaide Street. Sewerage and drainage features, including the Adelaide Street sewer and the brick interceptor sewer; possible evidence related to the roadwork after the 1819 and/or 1833 fires.

CjAe-166 (Water Street 13) – Located on Water Street, from the intersection with Waldegrave Street, eastward. Stratified infilling, associated with roadwork after the 1846 fire; section of a stone pavement or floor.

Finds from 2018 can be categorized into three groups of data or themes: early settlement and fisheries, drainage and sanitation, and conflagration and fire evidence. Early fisheries material was focused largely in the Bishops Cove area (CjAe-114); drainage and sanitation features were spread throughout the Phase 1 project area, with CjAe-166 the only new site without drainage or sanitation features recorded. Fire-related material was focused on the east portion of the Phase 1 route (CjAe-114, 162, and 165)

Issues associated with conducting archaeological investigations on large construction projects were common, and pertain mainly to various health and safety concerns, especially depth of excavation. This was most evident at Bishops Cove (CjAe-114), where 17<sup>th</sup> and 18<sup>th</sup> century finds were most common, but at



**Photo 4: Excavations to expose a brick interceptor sewer, and install a new manhole. Water Street, opposite Holdsworth Street.**

excessive depths, an issue emblematic of archaeology at public coves.

Phase 2 construction excavations in 2019 are tentatively planned to continue westward from immediately west of Adelaide Street, to immediately west of McBrides Hill/Ayres Cove.

**Southside Road Storm System Upgrades (18.10)**

In order to eliminate periodic flooding, the City of St. John's contracted Bursey's Excavating to replace a storm channel and box culvert between civic #s 375 and 377 Southside Road. The brooks which run from Southside Hill under Southside Road have historic resources potential, as they flowed into the Waterford River near tidewater, and hence having some natural advantage for pre-contact occupation, in addition to centuries of historic settlement. GPA's field name for the natural brook channel between #s 375 and

377 Southside Road, "Brewhouse Brook," comes from its proximity to an area used by the Royal Navy for brewing spruce beer dating from 1729 and perhaps earlier.

Expectations were somewhat diminished in that Southside watercourses have been altered several times in the 20<sup>th</sup> century, notably from the construction of the Newfoundland Railway early in the century, and by World War II and post-Confederation improvements to the harbour. The configuration of the Waterford Valley Trunk Sewer and Pitts Memorial Drive later in the century, and the Harbour Interceptor Sewer and the

Riverhead Waste Treatment Facility in the 21<sup>st</sup> century, have also altered watercourses.

Excavation for the project was carried out from July to December 2018. During monitoring, much evidence of 20<sup>th</sup> century disturbance was encountered, and its recording will add to the body of archaeological knowledge for predictive modelling in this historic part of St. John's. Artifacts were ob-

**Photo 5: A sketch of the Southside Road in 1857 by Rev. William Grey. The artist's vantage point is about 350 m downstream from the project area, looking northeast towards the harbour and the Long Bridge (left). Note how the steep riverbank at right was cut into to carry Southside Road, with the resulting fill dumped over the riverbank.**





**Photo 6: Culvert, headwalls and riprap being installed, showing the type of materials used at Southside Road (GPBB:4787).**

served from mixed contexts, but none which can be confidently dated prior to the late-19<sup>th</sup> century Southside settlement era were recorded.

**Buchans Junction, mineral license 6894M, six drill sites (18.26)**

Under Archaeological Investigation Permit #18.26, on 26-28 July 2018, GPA conducted a historic resources assessment of proposed diamond drill sites and associated access trails near the communities of Millertown and Buchans Junction, in central Newfoundland. After test-pitting, no historic resources were located proximate to the drill sites and trails. During a contextual survey, two concentrations of early 20<sup>th</sup>-century artifacts were located on the shores of Red Indian Lake, within mineral license 6894M but removed from

proposed drill site locations. The more significant concentration was recorded as DeBd-07, Buchans Junction Camp.

**Crémallière, Great Northern Port Historic Resources Impact Assessment, Stage 1 (18.31)**

It is proposed to build a supply port for resource development in the Labrador Sea near St. Anthony at Crémallière, a known French fishing station. Although the development will avoid the largest French establishments at Savage (locally, Big) Cove, seven areas of interest (AOIs), which GPA had identified through desk-based assessment, were assessed in the field on 26-29 August 2018. Because of field assessment, it has been determined that there are new archaeological sites in Crémallière Harbour. However, only one of these (AOI#5/EiAv-11) is in an area where project groundworks are proposed.

Crémallière was a summer base for the French migratory fishery in the 16<sup>th</sup>, 17<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup> centuries, and was a small inshore fishing settlement from the late 19<sup>th</sup> century until approximately 1915. There are six known French fishing rooms, which are represented by three registered archaeological sites. Four of these are encompassed by archaeo-

**Photo 7: Early- to mid-20<sup>th</sup> century materials discarded at Buchans Junction Camp (DeBd-07).**



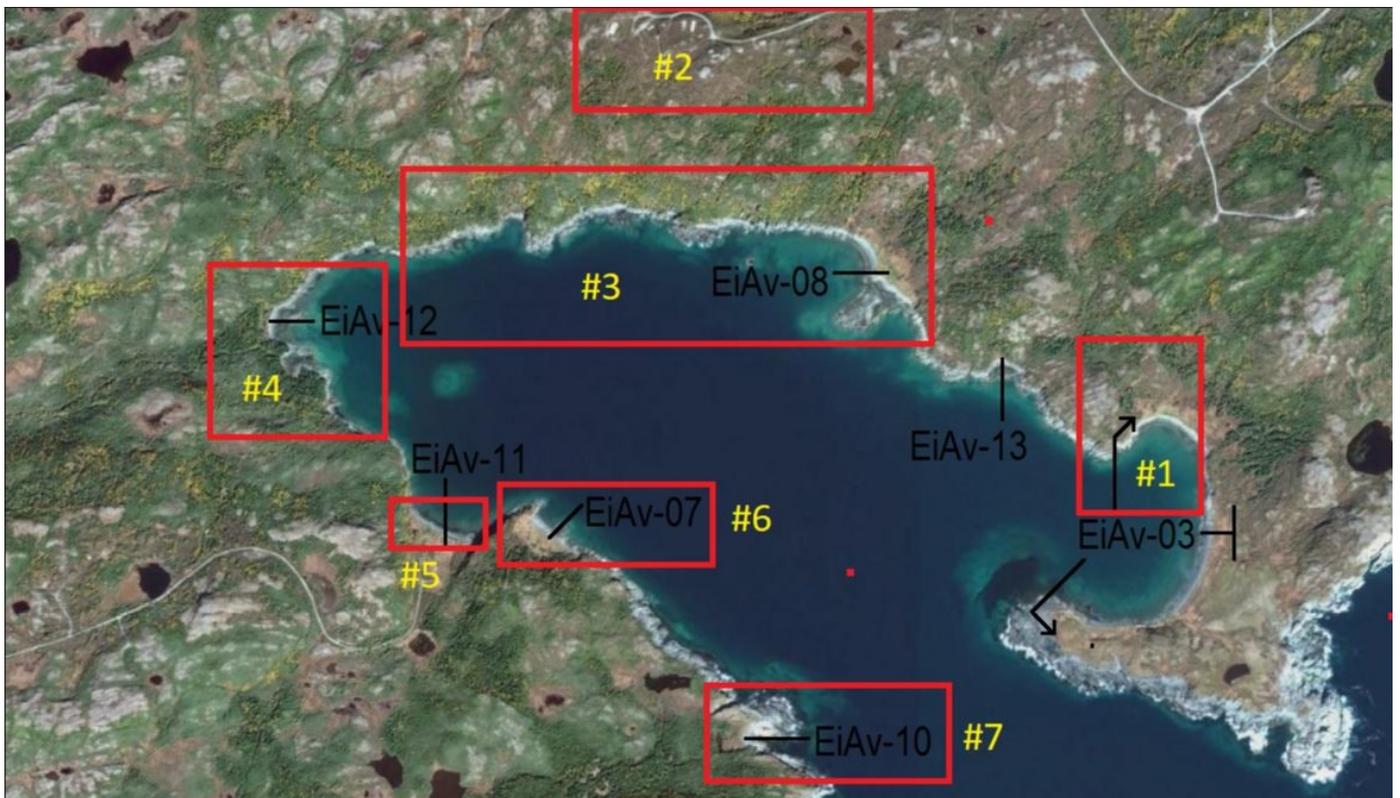
logical site La Crémallière (EiAv-03, designated 2007) at Big Cove. One La Crémallière room, historically known as Grand Rochelle, is very close to GNP's proposed eastern boundary. This fishing room was included in archaeological site EiAv-03 based on a brief survey in 2007, but is physically removed from the other three. A fifth room, Petit Rochelle, at Russells Cove, archaeological site La Crémallière North (EiAv-08, designated 2013) is roughly equivalent to an enclave or excluded area, not included within GNP's Crown grant application area as it is private property.

On the south side, a sixth French room, archaeological site Crémallière Observation Point

development plans are finalized the placement of facilities should be reviewed and adjusted if necessary.

A mitigation strategy will ultimately be determined by the PAO in consultation with GPA and transmitted as a terms of reference. However, it is a rule-of-thumb that the best strategy is site protection/preservation through avoidance, if possible. GPA suggests establishing a "buffer" around each site, as delineated during test-pitting and surface survey. At a 15 October 2018 consultation meeting with representatives of Wood plc and GPA, Great Northern Port principals expressed general agreement with the buffering approach, with exact dimensions to be determined by the PAO in consultation with GPA.

Photo 8: Crémallière Harbour archaeological sites (Google earth, with labels added by GPA).



(EiAv-07, designated 2013), is in an area which encompasses most of the proposed GNP facilities, including two buildings, three piers, a container yard and a graving dock. EiAv-07 is the only archaeological site within the Crown grant application area. For site EiAv-07, at what is locally known as Penneys Beach, the suggested strategy is avoidance during the construction period and after, a buffer zone to be determined by PAO in consultation with GPA based on a perimeter of uninhabitable landforms. Once de-

**New sites established include**

Crémallière Bay (EiAv-12). The establishment of new site EiAv-12 is based on minor findings of ballast flints (stones, typically from English Channel ports, which were brought over as ballast and dumped when loading fish for the return journey), iron, and vegetable garden drills.

Batteau Cove (EiAv-11) was established based on minor findings of ballast flints, ceramics, and iron. Most of these materials were found on the



**Photo 9: Looking southwest across Crémallière Harbour in 1857. Anchor Point/EiAv-03 with its three French rooms is the foreground. The Three Mountain Summits are at top, right. Above the bill of Anchor Point, a schooner sails by Low Point (by Rev. William Grey, Centre for Newfoundland and Labrador Studies, MUN).**

west side of the cove, which is excluded from GNP’s Crown land application based on a pre-existing land grant.

Low Point (EiAv-10) was established after iron and lead materials, previously unearthed by a metal detectorist, were found at surface 70 m inland.

**Quidi Vidi Lakeside (18.41 and 18.43)**

Quidi Vidi Lake has long been identified as an area of historic interest, because of its ongoing association with the Royal St. John’s Regatta. A primary tourism asset, the Lake’s role in historic events is well-documented, but its historic resources potential has been little investigated.

In late 2018 the City upgraded three areas lakeside, in anticipation of the Regatta’s 200th anniversary, and engaged GPA to investigate the historic resources potential at three locales/Project Areas (PA)

- PA 1 – Boathouse (permit 18.41);
- PA 2 – Marquee; and
- PA 3 – Concession Area (permit #18.43).

PA 1 is on the south-east (conventionally, south) side of the Lake and PA 2 on the NW side, nearly opposite. At both these Project Areas there were extant facilities and buildings which were to be expanded, and the surrounding areas further landscaped. The Concession Area planned for PA 3 involved re-grading/terracing an irregular natural slope.

In November and December 2018, GPA moni-

tored excavations for the installation of a concrete seat wall and a new storm sewer system at the Quidi Vidi Lake boathouse parking lots. Evidence of early to mid-20<sup>th</sup> century landmaking and shoreline advancement was identified, possibly related to a

**Photo 10: Ceramic fragments and a cut nail resting on rock/galet, directly beneath the sod, at Observation Point/Penneys Beach.**





Photo 11: Normandy stoneware sherds from Observation Point/Penneys Beach.

Photo 12: “St. Johns. N F The Annual Regatta on Quidi Vidi Lake on the 4<sup>th</sup> of Augt. Finish of The Race of the Day” (Tom Connors collection, Nova Scotia Archives – engraved by W. Scheuer for the Canadian Illustrated News).





**Photo 13: Catch basin excavation, western parking lot, Quidi Vidi Lake boathouse.**  
Extensive infilling was visible once the water was pumped from the unit.

advancement deposit was recorded a few metres inland from the lake edge. Comprised entirely of early 20<sup>th</sup> century debris, it is the result of a lakeside improvement project undertaken by Regatta Committee in 1925. The similarity in date, and nature and type, of materials identified suggest that the fill was removed from the nearby municipal dump (formerly, Memorial Stadium, extant Dominion supermarket). Reporting for these two permits was not complete at time of writing.

**Hopedale Provisions Warehouse Excavations (Parks Canada Permit HM-2018-29077 and NG18.09)**

Built about 1817, the Hopedale Moravian Mission Provisions Warehouse is the oldest standing structure in Labrador and is under the administration of Parks

lakeside improvement project undertaken by Regatta Committee in 1925. A nearby structure – illustrated on contemporary insurance plans – may also be partly responsible for the various household debris encountered (accounting for the post c. 1925 material). Most finds were from underwater contexts, but in a couple of occasions discrete infill episodes could be identified in the profiles.

Also in November and December, GPA monitored the excavations on the north side of the Lake, occasioned by extensive landscaping (terracing) and associated works. A mid-19<sup>th</sup> century deposit was identified, underlying evidence suggesting a late 19<sup>th</sup> to early 19<sup>th</sup> century structure. Further, a shoreline

Provisions Warehouse is the oldest standing structure in Labrador and is under the administration of Parks

**Photo 14: Initial exposure of the 1925 lakeside improvement material.**





**Photo 15: South Room of the Provisions Warehouse, after completion of most trench excavations.**

Canada as a part of Hopedale Mission National Historic Site (GiCb-06). Parks proposed to install a system of drainage piping, to secure the integrity of the structure's dry-laid stone footing and eliminate an annual issue of ice-buildup under the floorboards during the spring thaw. Between 10 and 23 July 2018, GPA conducted archaeological excavations, on the interior and exterior of the Provisions Warehouse. Coincidentally, Dr. Lisa Rankin and a crew from Memorial University were conducting fieldwork in the Hopedale area and invaluable assistance was provided by Nancy Butler, Nicholas Flowers, Maria Lear, and particularly Mads Kildegaard Nielsen and Grahame Hyslop.

Approximately 64.3 m of drainage piping was installed, which required a trench 31.5 m long on the interior and 32.8 m along the exterior. As Parks' administration is delineated by the footprint of the Pro-

visions Warehouse, the mission grounds (and the 2018 exterior trenches) are under the administration of the Nunatsiavut Government.

Excavations on the interior of the Provisions Warehouse identified extensive evidence of pigs (and likely chickens) having been kept in the north room, where there were deep organic/wood chip deposits. Beneath the south room, excavations were proposed to avoid known features and, inasmuch as possible, confine groundworks to areas excavated by Parks in 1988 and 2001, or during 2016 test excavations conducted by GPA. In the event, these restrictions had to be re-addressed in the field in consultation with Parks and the Nunatsiavut Government as bedrock was encountered. Evidence relating to a previously-known bakery and brewery was identified and secure strata containing early- to mid-19<sup>th</sup> century cultural



Photo 16: View of the abandoned trench and test pits TP17 (yellow circle) and TP21 (red circle). The unit in the foreground is TP 14, eventually widened for use as an outflow hole.

materials were found near the west side of the south room.

Exterior excavations occurred along the west side of the Provisions Warehouse, at its north end, and further to the NW between the structure and a gate entering the property. The west trenches contained evidence of late 19<sup>th</sup> and 20<sup>th</sup> century disturbance, with some scant traces of undisturbed 19<sup>th</sup> century deposits. Directly under the structure’s western stone footing, pre-1817 deposits still exist. Along the north exterior, extensive late-20<sup>th</sup> century disturbance and garbage dumping was identified, along with evidence of a former mid 20<sup>th</sup> century (?) sod-covered cold storage structure. Towards the gate, further evidence of 20<sup>th</sup>-century disturbance was identified, including the backfilling of former fence posts with 1980s garbage, and large sections of a concrete foun-

ation or pad floor. Evidence of an undisturbed early-mid 19<sup>th</sup> century (probably, secondary) deposit was identified proximate to the gate. West of the gate, and east of a brook running to the ocean, test pits for piping outflow identified further evidence of an early- to mid-19<sup>th</sup> century secondary deposit. An area of hydrocarbon contamination was also exposed. Local residents recall a gas station near the Mission site during the 1970s, and testing suggests that contamination from this former structure has spread for an unknown extent throughout the NW exterior (and possible interior) of the property. These test excavations were abandoned and immediately backfilled.

#### **Desk-based assessments**

In 2018 GPA continued to provide historic-resource related research/desk-based assessments for a variety of clients. An “Irelands Eye and Random Island His-



**Photo 17: Worker operating a press/mould for earthenware flowerpots at the Smith brothers' plant on Random Island, c. 1950, racks of finished pots in the background.**

toric Resources Overview Assessment and Archaeological Potential Mapping” exercise, under contract from the PAO, identified 79 areas on or near Random and Irelands Eye islands where there is a reasonable expectation of the survival of historic resources. This includes 20 abandoned communities, some of which have been abandoned for over a century. Another interesting area for further research is a sideline of the Smith Brothers brickyard at Elliotts Cove and Snooks Harbour on Random Island, the manufacture of weeping tile and flowerpots, the only known instance of commercial production of ceramics in Newfoundland. Other research projects include: “Unatapvimesimajuk: Labrador Inuit and World War One” (for the Nunatsiavut Government); “Okak, November 1918: Labrador Inuit and the Spanish ‘Flu” (for the Nunatsiavut Government); and cultural heritage planning docu-

ments for Rio Tinto/IOC and the Town of Conception Bay South.

**Photo 18: Ink drawing of Long Pond c. 1860, artist unknown (Archdeacon Francis Buckle Memorial Archives, St. John’s).**



# Avertok Archaeology Project, 2018

Lisa K. Rankin, Deirdre Elliott, Laura Kelvin, Maria Lear, & Jacinda Sinclair  
Memorial University

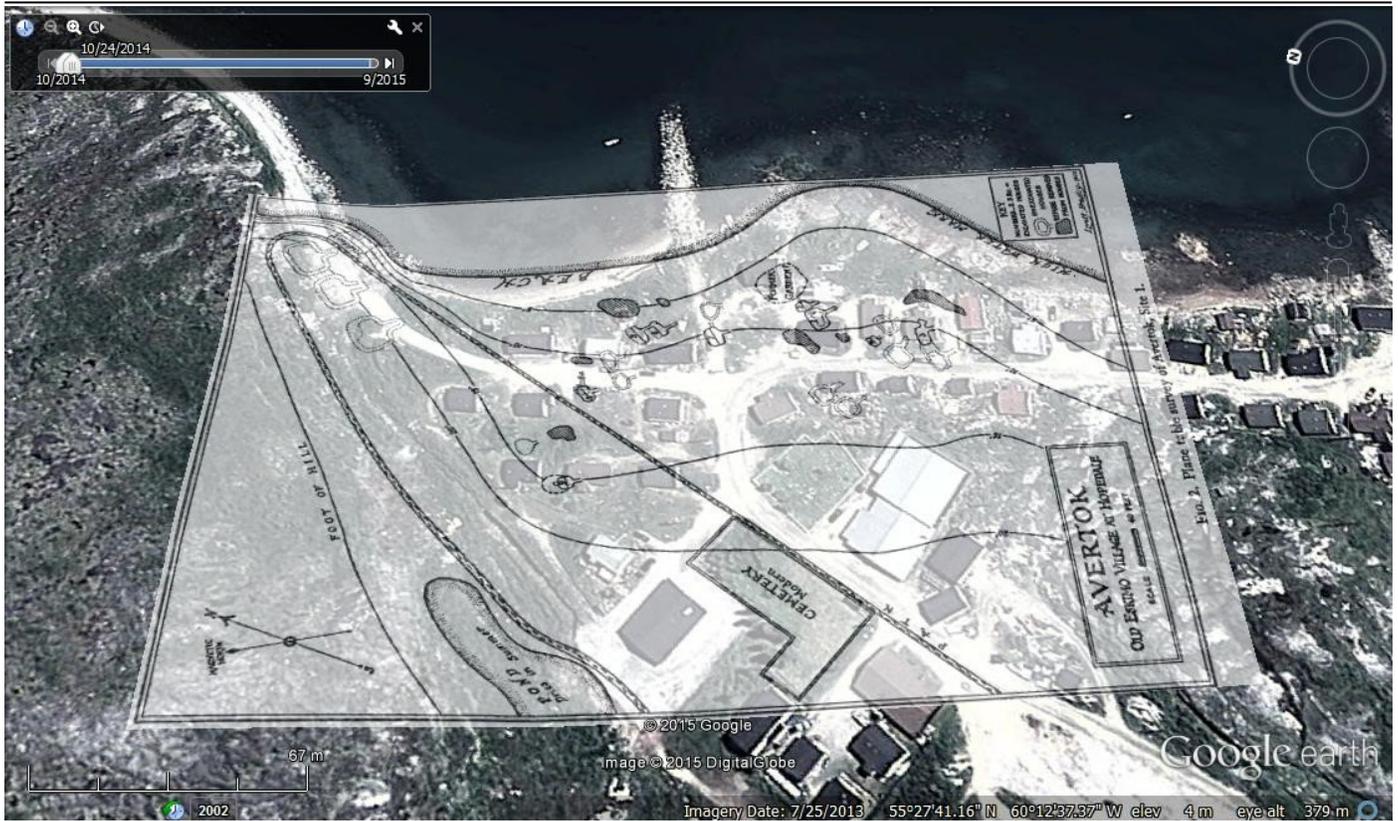


Figure 1: 1934 map of the village of Avertok (by Junius Bird) overlain by contemporary Google Earth image

In 2018, The Avertok Archaeology Project [AAP] continued its investigations into the history and archaeology of the Inuit community of Hopedale, Labrador. The research was initiated by the Inuit Community Government of Hopedale, Nunatsiavut in 2017 and it is undertaken with the support of the Tradition and Transition: Pisitukaujuit Asianguvalliajuillu research partnership between Memorial University and the Nunatsiavut Government. The project encompasses many sub-projects and the research and field work in 2018 had several aims: 1) to develop a community archive of relevant archaeology which can be used by local stakeholders as well as facilitate traditional knowledge transfer between youth and Elders in Hopedale, Labrador; 2) to undertake ground-penetrating radar (GPR) survey of the Moravian Cemetery in Hopedale to identify the locations of graves, enabling the community to properly mark and care for the cemetery;

3) to locate, excavate, and learn more about the original Inuit settlement of Avertok (Agvituk, Arvertok) (GiCb-01) which underlies the present Hopedale community (Figure 1); and 4) investigate other nearby Inuit sites to interpret the settlement of the Hopedale region. The 2018 field crew included Lisa Rankin (project lead), Deirdre Elliott, Laura Kelvin, Maria Lear, Jacinda Sinclair, Robin Fleming, and Nancy Butler from Memorial University, Graham Hyslop from the University of Western Ontario and Mads Nielsen from the University of Copenhagen. Hopedale community members working on the team included Denver Edmunds, Nicholas Flowers, Halle Lucy, and John Piercy.

### Community Archive and Knowledge Transfer

Laura Kelvin continued work on her postdoctoral research project, the Avertok Archaeology Digital Archive Project, which aims to develop a community archive of archaeological and traditional knowledge



Figure 2: Site location of Moravian Cemetery (GoogleEarth, 2013)

of the Hopedale area. In preparation for the 2018 field season, Kelvin visited the [Robert S. Peabody Institute for Archaeology](#), the Rooms Museum and Archives, the American Natural History Museum, the Chicago Field Museum, and the British Museum to photograph and create digital 3D models of artifacts recovered from Avertok and the surrounding area. During the 2018 field season, Kelvin worked with four local youths from Hopedale, Denver Edmunds, Nicholas Flowers, Halle Lucy, and John Piercy. The youth developed research questions pertaining to some of the artifacts housed in museums and under the guidance of Kelvin, interviewed Elders, community knowledge holders, and archaeologists to learn more about these artifacts and activities associated with them. The team also surveyed nearby archaeological sites where many of the artifacts were originally recovered. To disseminate their work, they created a series of videos that can be found on the [Avertok Archaeology Project's YouTube page](#). The photographs, 3D models of artifacts, interviews, and videos

will be part of the community archive.

Community outreach is at the center of the Avertok Archaeology Project. To disseminate AAP research findings to the community, Kelvin maintained the [Avertok Archaeology Project Facebook page](#) and [Instagram account](#). Social media provided community members with regular updates on our research activities. These accounts will be maintained throughout the winter to update community members on our research. The students also wrote stories about their work for the [Tradition and Transition website](#) and the December 2018 issue of *Them Days Magazine* and hosted the Hopedale Literacy Camp for an afternoon to teach them about archaeology. Additionally, at the end of

the field season we held a community meeting to meet community members, give presentations about our research, and display some of the artifacts recovered this season.

### Ground Penetrating Radar Survey

Maria Lear lead the 2018 ground-penetrating radar survey (GPR) which was undertaken to complete work started in the Hopedale Moravian Cemetery in July 2017 (Figure 2). The 2018 survey work added a significant amount of data to the 2017 research and aimed to establish the locations of unmarked graves within the full extent of the cemetery. Additionally, all visible headstones were photographed & transcribed, and a full total station survey of the GPR grids, complete with the locations of all individually-numbered headstones was completed.

Ground Penetrating Radar is a non-destructive survey technique that uses a radar antenna to identify matrix contrasts and materials (natural and archaeological) in the immediate subsurface. With particular reference to historic cemeteries, it is im-

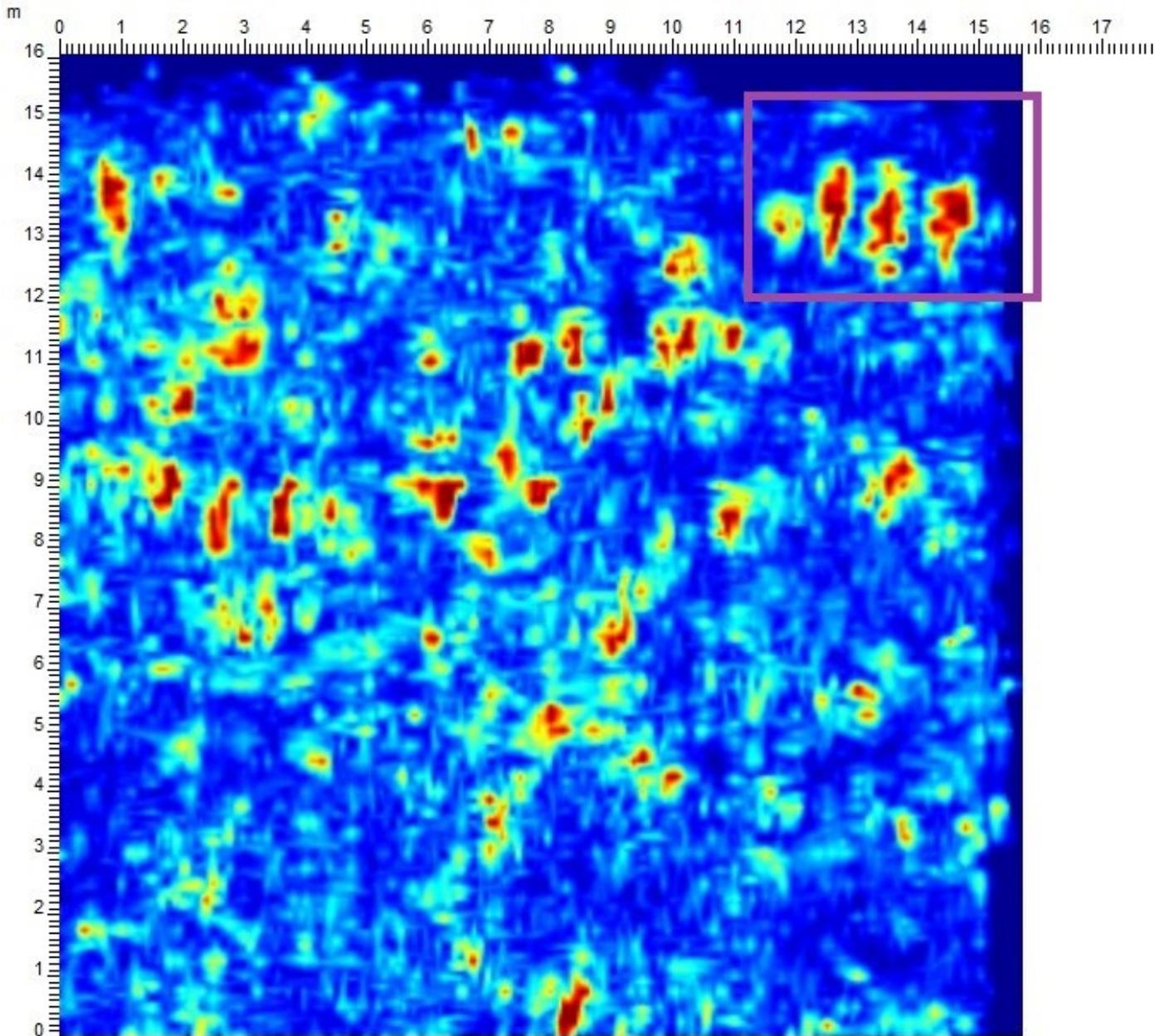


Figure 3: Grid C measured 15m x 15m with survey transect lines spaced at 0.25m. This amplitude slice (a bird's eye view) is from a survey depth of 0.95m-1.0m with north located to the right of the image. Across the entire grid, the red/yellow features depict possible inhumations, based on size & orientation. The sub-oblong shapes are roughly equi-spaced and are generally aligned west east which would be expected in this type of cemetery. As an example, the purple box to the upper right-hand corner of the amplitude slice, four yellow/red features are shown in the reflection profile below which gives another angle from which to view the data.

important to note that the nature of buried organic remains are complex and sometimes GPR data will not show positive contrasting results (even in areas where there are known burials). It is crucial to undertake such surveys with this expectation.

The size of the Moravian cemetery in Hopedale is approximately 60m x 40m. It is located near the shoreline, flanked to the south by a high,

rock outcrop. Due to the size, eight separate grids were established across the cemetery to facilitate full GPR survey coverage. The grids varied in size, but all included transects spaced at 0.25m to allow full coverage along the X & Y axis. The 500MHz antenna recorded a depth of radio signal penetration typical of historic burials as well as providing good data resolution & target identification (Figure 3 and 4). Each

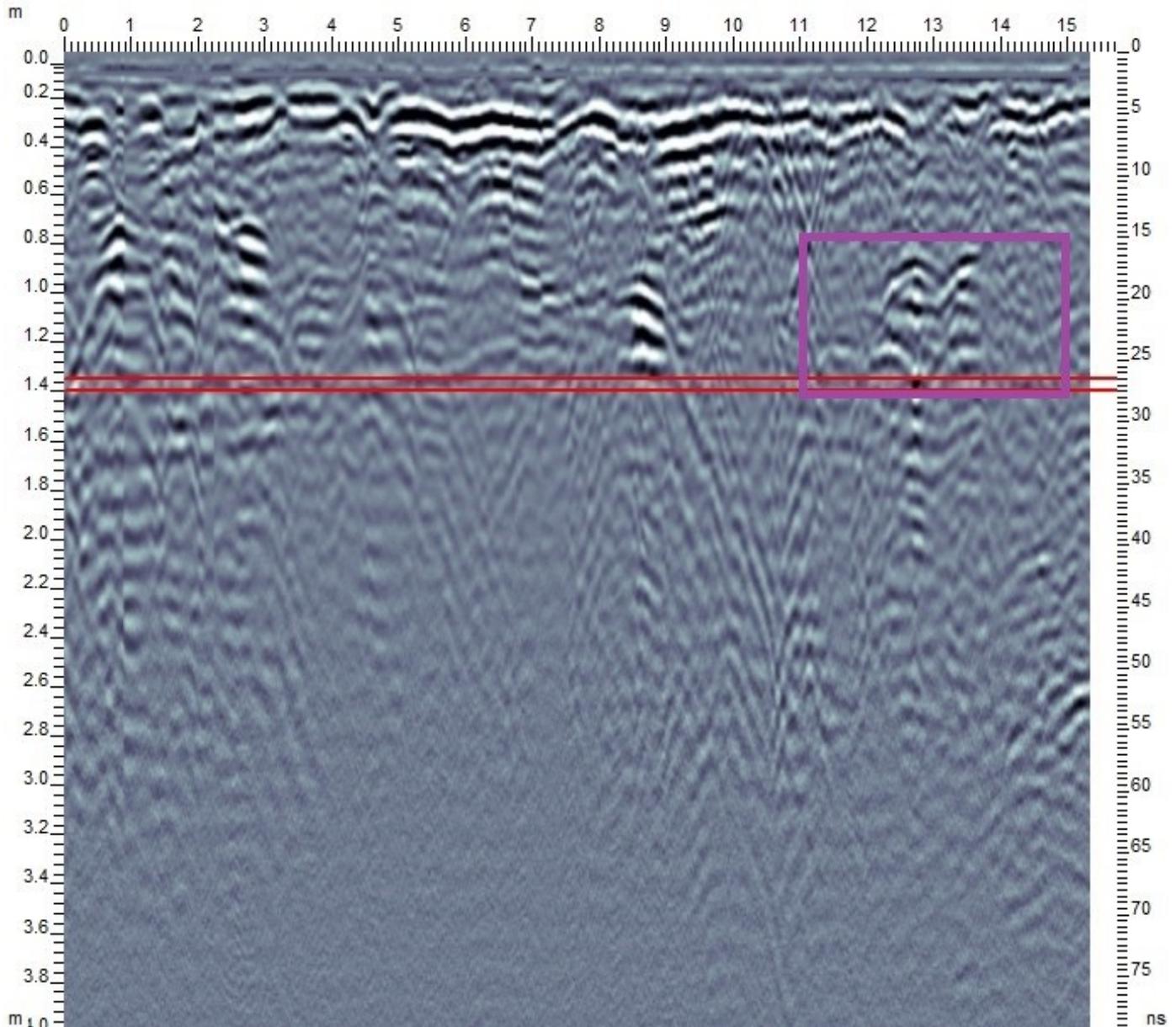


Figure 4: The reflection image is the survey data as collected from moving the GPR antenna from the South-North direction, walking in a straight line directly over the surface of where the 4 features are buried, crossing them at a 90degree angle. The four features are the small hyperbolas that appear in the profile from approximately 11.5m – 15.0m along the axis.

grid was surveyed by three people (two student assistants and the GPR operator). Full processing of GPR data is ongoing within the Archaeological Remote Sensing & Digital Lab of the Department of Archaeology, Memorial University.

#### **Continued Archaeological Investigation of Avertok**

Between the 16th and 18th centuries, Avertok, the original Inuit settlement that underlies the modern village of Hopedale, played a significant role in the Labrador Inuit coastal trade networks. The site's

name, which translates to English as “the place of whales,” points to this connection and the trade products that made this settlement particularly important. Community interest in Avertok remains strong; signage near the site discusses its history and Hopedale’s museum displays many of the recovered artifacts. For nearly 100 years, Avertok has been a subject of archaeological investigation, with the largest and best known study undertaken by Junius Bird, who excavated nine winter sod-houses in 1934, but it is believed that parts of this original settlement re-



Figure 5: Deirdre Elliott operating the drone during survey near Hopedale

main unexcavated. Furthermore, the methods used by Bird in 1934 were somewhat less stringent than those of contemporary practice, suggesting that we still have much to learn about this settlement. In performing an archaeological reassessment, the Memorial University team sought to locate remaining parts of the Avertok village and gain new information about Inuit lifeways during this period of emerging interaction between Inuit and Europeans. The 2018 field season was a continuation of the work undertaken by Jacinda Sinclair for her MA research in 2017. As Avertok is located within the boundaries of modern Hopedale, the area has been developed with houses, roads, and utilities; thus the primary goal is to establish how much of Avertok remains intact. In 2018, Sinclair examined two locations which had been identified as high interest in 2017, but which were not able to be adequately examined at the time. The first was identified as a possible undisturbed midden deposit. Five 1x1m units were excavated down to sterile sand. Many materials collected were consistent with

midden finds, but excavation revealed that the location was heavily disturbed. A second location of interest, at the very edge of town, was test-pitted. One pit yielded a variety of promising iron and European ceramics, but other pits indicated that this portion of the village had been heavily impacted by road construction.

### Regional Settlement

To complement the excavations at Avertok, and to develop a better picture of broader land use patterns in the Hopedale region, Memorial University PhD student Deirdre Elliott undertook targeted surveys of high potential areas on inner islands surrounding Hopedale, most of which had never been surveyed. After hiring a local boat driver/bear guard (Albert Tuglavina), and with assistance from the Avertok crew members, we completed five days of survey as well as revisits of known Inuit sod house sites. During this time we documented 29 previously unrecorded sites, and visited a further 10 known sites (including three Inuit sod house sites), for which the

records of 8 were amended to include features not previously recorded. An additional two Inuit sod house site revisits were conducted in conjunction with Laura Kelvin, and supported by driver/bear guard Reuben Flowers, as well as the team's local students (see above). Wherever possible, aerial and oblique photos of sites were obtained with a small UAV (DJI Mavic Pro Platinum), for the purposes of 3D digital modeling and the creation of high-resolution site maps. While the island location and the coincidence of the survey with seabird nesting season prevented UAV mapping at many of the sites (it was quickly learned that nesting gulls react with extreme hostility to the UAV, even from several hundred metres away), aerial imagery was obtained for three of the six known sod house sites in the region (Figure 5).

The majority of the newly documented sites consist of variable clusters of stone structures, such as graves, hunting blinds, cairns, storage caches, and, above all else, tent rings, indicative of warm season occupations. While no subsurface testing was performed at any of these sites to determine date of occupation, their presence on virtually every suitable patch of land attests to the intensive and extensive past land use of the region overall. A goal for future surveys will be to concentrate on Hopedale's most seaward islands, which, based on known settlement patterns from elsewhere in Labrador (Kaplan 1983), are high potential areas for relatively early Inuit winter habitation sites, and which are known locally to have remains of past summer habitation sites (Brice-Bennett 1977:196-199).

The support we received from the community of Hopedale ensured we had a wonderful field season and we are already planning our goals for 2019. Please check our Facebook page for regular research updates. We would like to thank the town of Hopedale for making us so welcome. The Social Sciences Humanities and Research Council of Canada, the Institute of Social and Economic Research, the J.R Smallwood Foundation, Inuit Pathways, Young Canada Works in Heritage, the NL Provincial Archaeology Office, the W. Garfield Weston Foundation and the Northern Scientific Training Program have provided funding for this project.

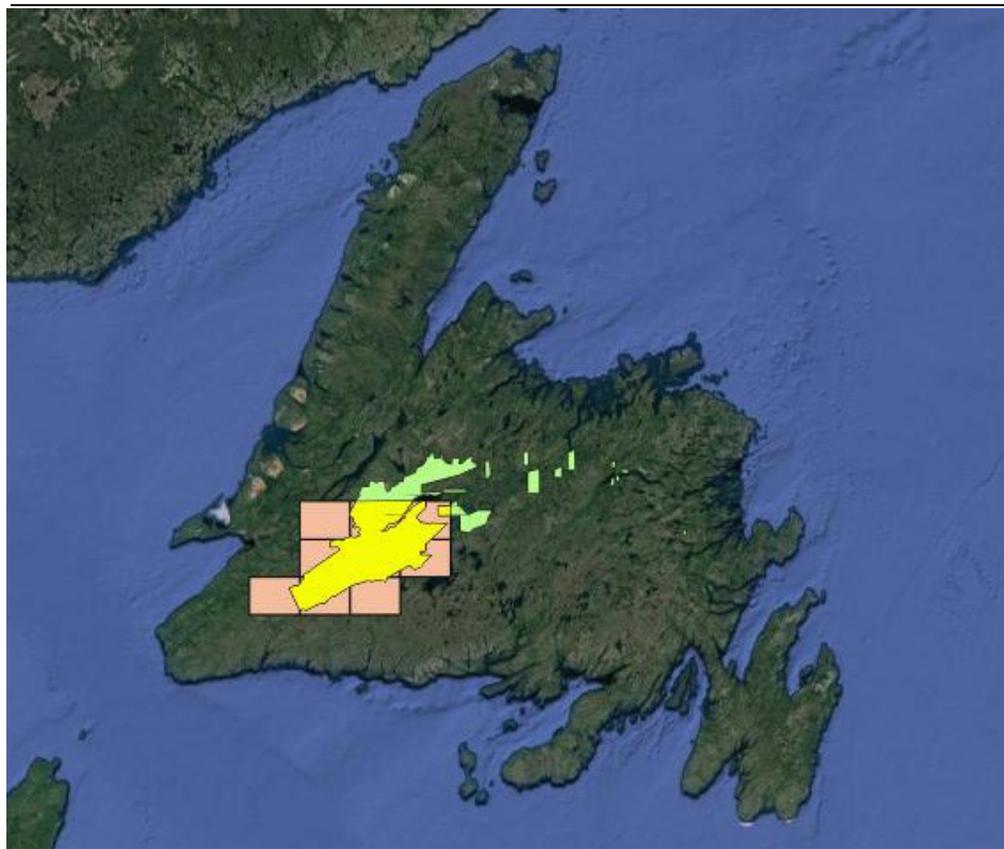
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# Overview Assessment and Archaeological Potential Mapping of the former Abitibi Lands (South)

Tim Rast & Lori White  
Independent Consultants



**Figure 1: Map of Study Area. Yellow: Former Abitibi Lands included in the study area.  
Light Green: Former Abitibi Lands excluded from the study area.  
Pink tiles: NTS Map sheets included in the Archaeological Potential Model.**

In the winter of 2017-2018, Lori White and Tim Rast prepared a desktop overview assessment and constructed a Geographic Information System (GIS) based Archaeological Potential Model of the southern half of the former Abitibi lands around Red Indian Lake for the Provincial Archaeology Office (PAO).

The study area encompassed 3400 km<sup>2</sup> of Crown Land that had previously been managed by the AbitibiBowater forestry company. The land is now available for development and the PAO tendered a contract to summarize the known archaeolog-

ical resources in the area and to build an ArcGIS-compatible model to indicate the potential for additional archaeological sites to be found in the area. The model has since been installed on PAO computers and is used by PAO staff to inform their decisions regarding the need for Historic Resource Impact Assessments in the study area.

At the request of the PAO, the GIS model created by Rast and White (2018) closely followed the methodology and variables identified in the desktop study and on the 1:50,000 National Topographic System (NTS) archaeological potential maps drafted by Schwarz and Schwarz (2014). To create the model, we used publically available data including digital versions of 1:50,000 NTS

maps, Digital Elevation Models (DEM), and satellite imagery, which we combined with archaeological, historical, and ethnographic data, curated by the PAO.

Archaeological sites are locations where traces of past human activity are preserved. The geography of Newfoundland is diverse and resources like fresh water, plants, and animals are not distributed evenly across the landscape. Some areas are more attractive to human activity than others are. For example, well-drained, level ground adjacent to fresh water is more likely to attract concentrated human activity than a vertical cliff face or permanently boggy ground.

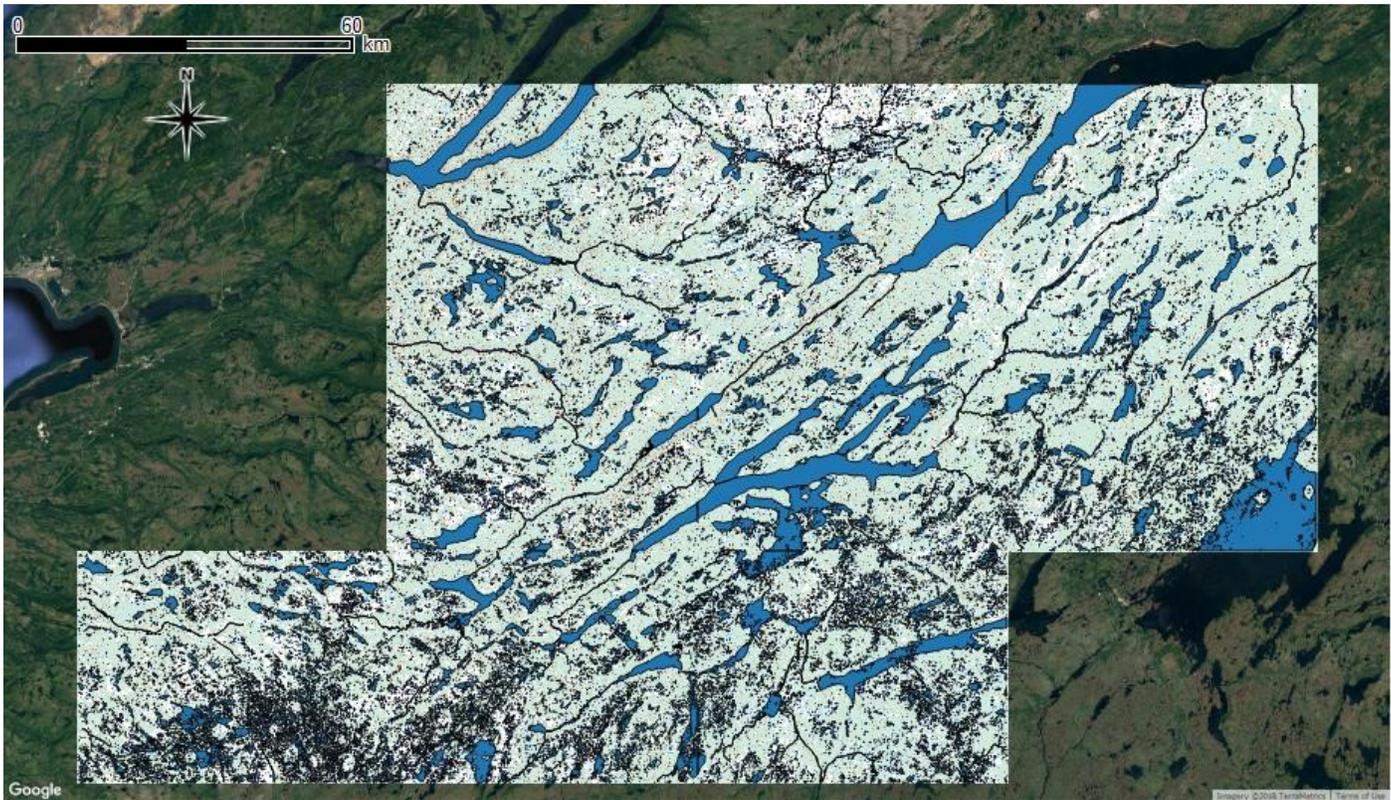
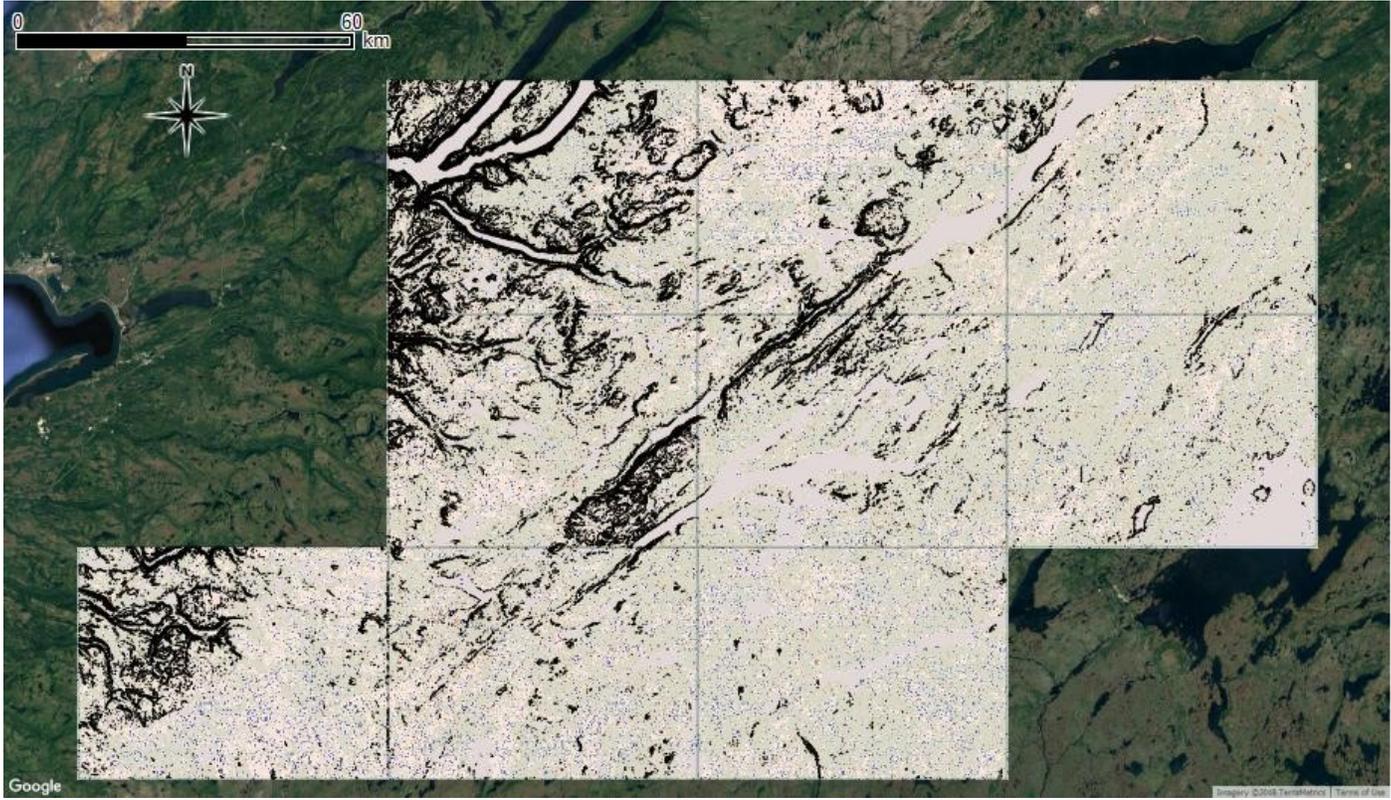
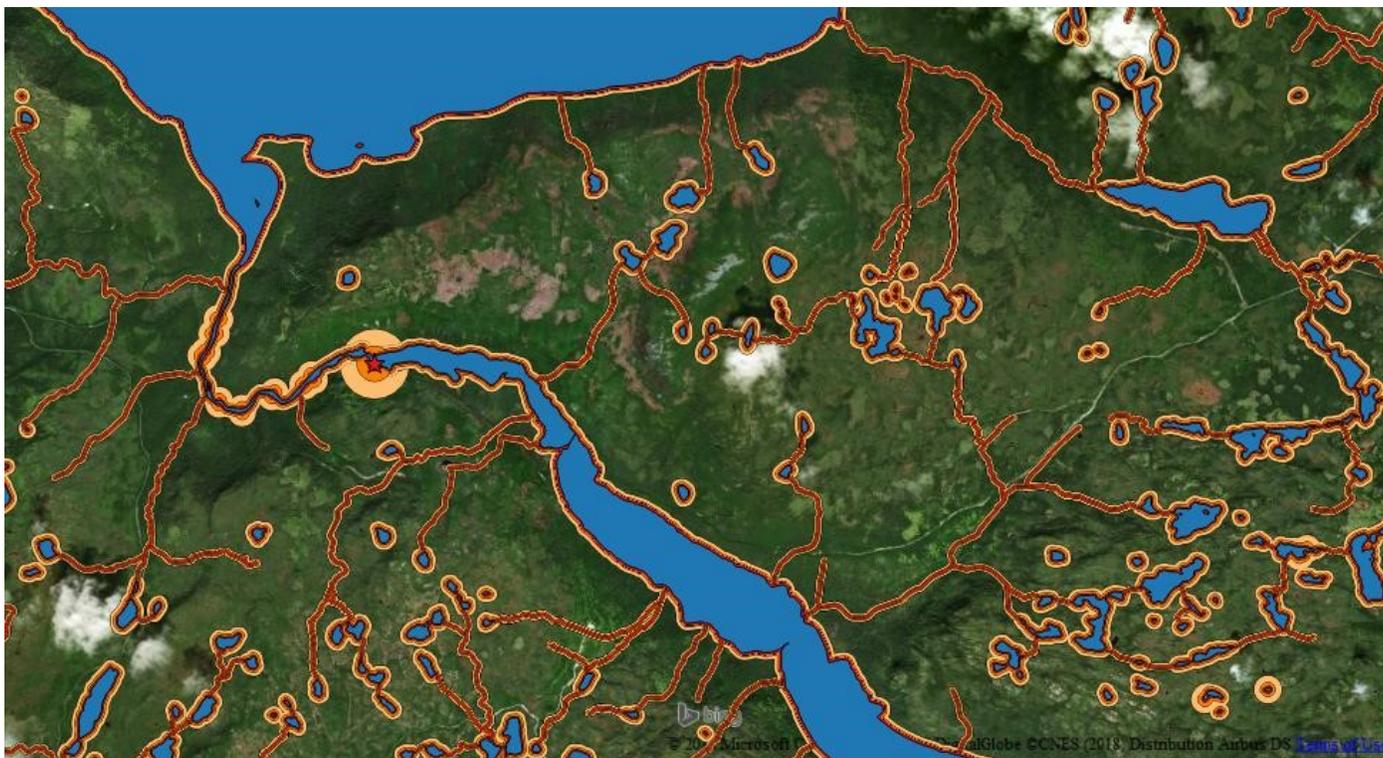


Figure 2: Location of all Water Bodies (Blue) in the study area. People would have been attracted to the shores of these lakes, ponds, and rivers, but the evidence of human activity within their boundaries is difficult to locate and recover because it is under water.

Figure 3: The black shading indicates areas of slope greater than 15 degrees. Steeply sloping ground is not suitable for habitation sites.





**Figure 4:** Detailed view of the confluence of Grand Lake (top) and Little Grand Lake (middle). A known site (DdBI-01) is indicated by the red star at the north end of Little Grand Lake. The bands of red, orange, and peach colour are the Very High, High, and Medium High Potential Zones, based on their proximity to fresh water and known archaeological sites. In this view there are many locations in this area that would have been attractive to human activity.

Archaeological Potential Modelling identifies features on the landscape that may either attract or repel human activity. In our model, we examined one landscape variable at a time to create a series of maps of the study area showing where archaeological sites were more (or less) likely to be found. These maps were then stacked on top of each other in the GIS to create zones of archaeological potential. The locations with more attractive variables are more likely to contain archaeological sites than locations with more repellent variables. In our model of the former Abitibi lands (south), we examined seven individual variables and combined them together to create seven zones of archaeological potential.

The seven variables included in the model are slope, low order waterways, high order waterways, hydro obstacles (falls, rapids, etc), saturated soil, known archaeological sites, and water bodies. The seven zones of archaeological potential are very high potential, high potential, medium high potential, medium potential, low potential due to saturated soil,

low potential due to slope, and low potential due to water bodies.

The model covered nine 1:50,000 NTS map sheets and has the potential to be expanded into other areas of the Province. As a first step, the Archaeological Potential Model of the former Abitibi lands (south) demonstrates the value of this method of modelling for land use planning and PAO decision making. The study area was a relatively simple location to begin this sort of model, as it is fully interior, contains no large communities, and has few known archaeological sites (n=9). Future models will need to incorporate marine coastlines with their rich resources and the added complexity of rising and falling relative sea levels. Expanding the model into areas with more substantial footprints of current and past human activity will require additional planning and the incorporation of new variables. With enough time and thought, an Archaeological Potential Model of the entire province can be compiled that considers the unique landscapes and resources spread across both the island of Newfoundland and mainland Lab-

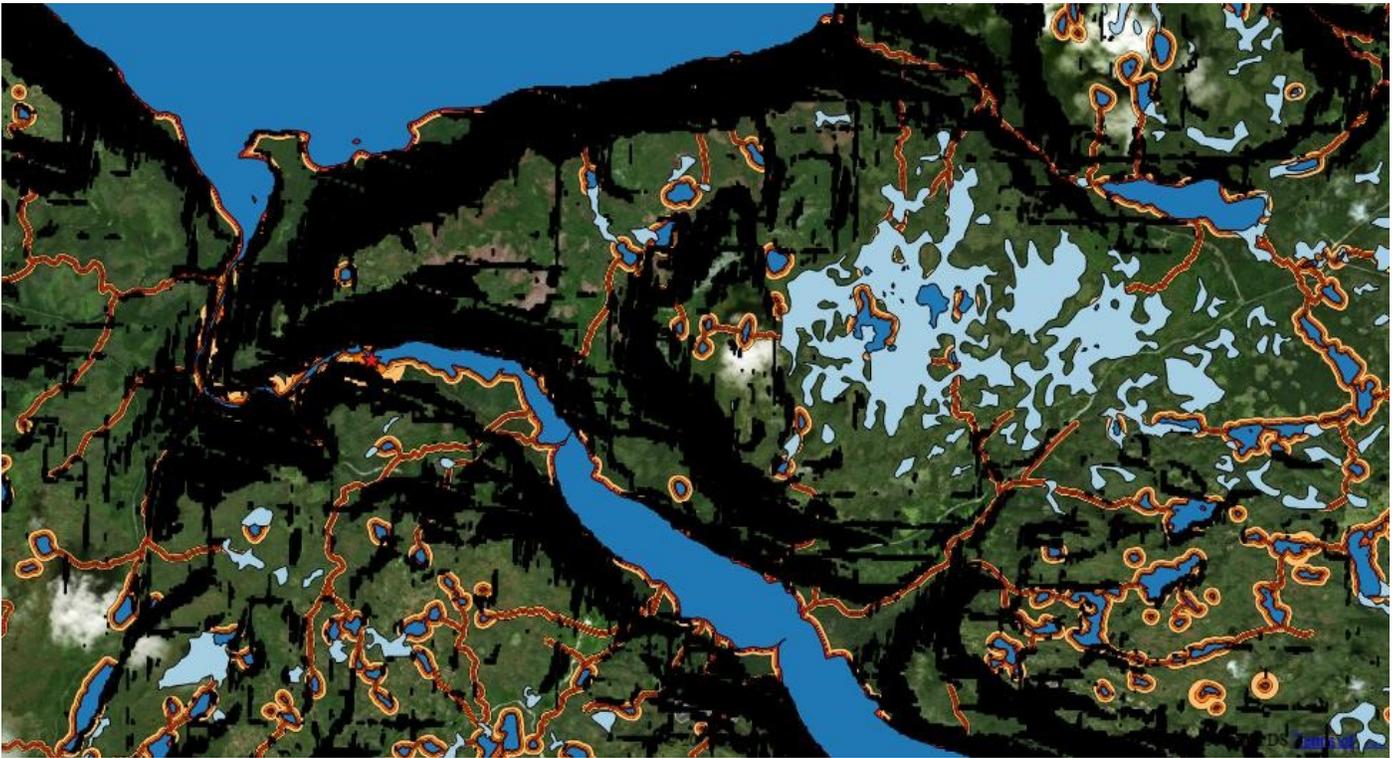


Figure 5: This image overlays areas of greater than 15 degrees slope (black) and areas of saturated soil (light blue) on to the areas of high archaeological potential seen in Figure 4. By considering these two negative features, the model eliminates large areas from consideration and highlights the remaining areas of higher potential. Past peoples using this area would have had their attention drawn to a limited number of points and peninsulas along the lake shores where it would have been possible to land a small boat or find level ground to camp. These same points should be the focus of any future archaeological survey in the area.

radar, and incorporates all of the known archaeological sites in the PAO database.

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# Archaeological Excavations At Sabbath Point (DeBd-08), July 2018, Red Indian Lake, Newfoundland 18.23

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Independent Consultants

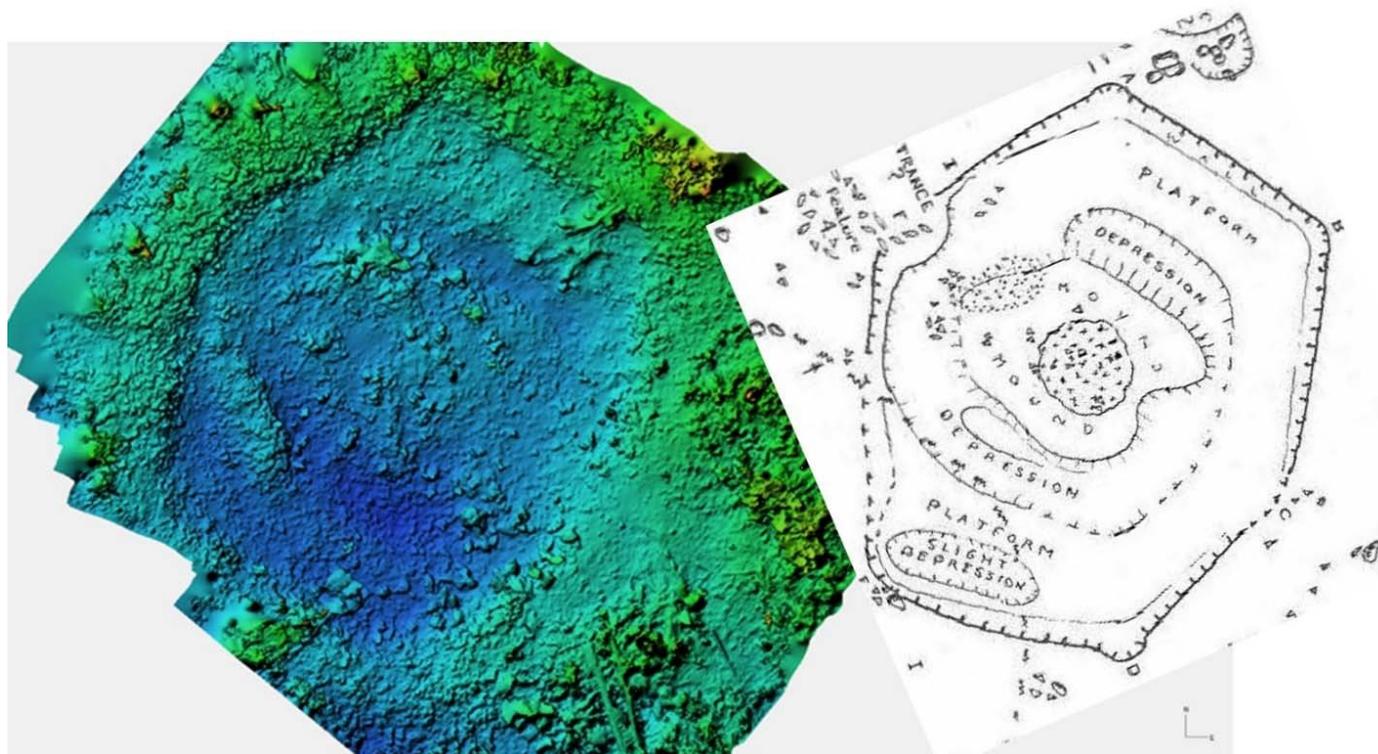


Figure 1: Comparison of UAV mapping at DeBd-08 with the B5 Locality house pit at DeBd-01 (from PAO 2018)

## Introduction

Since 2010, the Provincial Archaeology Office (PAO) has funded Directed Research projects in the Exploits Valley focusing on the relocation of Beothuk sites, house pits and related features. This work has confirmed that while many of these historic resources have been lost to rising water levels on Red Indian Lake and development along the Exploits River, almost half are intact. Through this program, researchers have relocated 52 of 106 previously discovered house pits at 21 sites. In 2015, this work also resulted in the discovery by Laurie McLean and Don Pelley of the Sabbath Point Site (DeBd-08), a single well-preserved house pit on Red Indian Lake (McLean 2015).

Located about 300 meters west of the large

and well-known Beothuk site at Indian Point (DeBd-01), the Sabbath Point house pit is remarkably large and well-defined, hexagonal in form, with definite corners, raised walls, and internal features that invite comparison with the Beothuk house pit in the B5 Locality at Indian Point. Helen Devereux that house pit in 1969 (Devereux 1970; see Erwin, Crompton and Bolli 2018).

The Sabbath Point house pit appears to be the only known remaining undisturbed Beothuk house pit within the Exploits Valley. However, the site is threatened by erosion due to spring flooding; the lakeshore has encroached noticeably in recent years: from 5 m away from the site in 2016, to less than 2 m from the site today. Accordingly, the Provincial Archaeology Office (PAO) determined that



Figure 2: Tanged deer-spear recovered during metal detector survey at DeBd-08 (PAO 2018)

partial excavation of the site was required before further damage occurs. In June 2018, Black Spruce Heritage Services was retained by PAO to undertake partial excavations along the northern (lakeside) portion of the house pit, and the excavations were completed in July 2018. This report summarizes the results of these excavations.

#### Previous Work at DeBd-08

The Sabbath Point site consists of a single isolated house pit, situated some 300m SW of Indian Point. The house pit was found to be large (approximately 8 m x 9 m), well-defined and well-preserved, hexagonal in outline, with a mounded perimeter wall surrounding a flat platform, 1 m wide at the eastern and western sides of the house and narrower to the north and south. The platform, tentatively interpreted as a sleeping or storage area, enclosed a shallow depression dominated by a large, low interior hearth mound measuring 2 m x 3 m. The entrance(s) may have been situated in one or both of the northwest or southern corners, and an unusual 3 m-long interior mound of indeterminate function was located inside the western wall. The formal characteristics of the house clearly invited comparison with the Locality B5 house pit at Indian Point (Figure 1; see also Devereux 1970).

Aside from refuse bone and firecracked rock, no artifacts were recovered during initial testpitting at the site. However, the site was further assessed by means of a metal-detector survey by PAO in June 2017 (Erwin and Hull 2018). Results within the house pit itself were negative, but two anomalies were recorded outside the feature, and testing at one of these yielded an extraordinarily well preserved Beothuk iron tanged spear point (Figure 2).

Further work at the site conducted by the PAO in October 2017 resulted in the detailed mapping of the house pit utilizing Unmanned Aerial Vehicle (UAV) technology and advanced computational

work (see Erwin, Crompton and Bolli 2018). The results (see Figure 3) clarified the dimensions and distribution of architectural features of the house and confirmed the striking similarities between the DeBd-08 house pit and the Locality B5 house pit excavated by Devereux in 1969

(see Figure 2).

Some features of note in the surface elevation mapping include:

- A platform at the interior toe of the perimeter wall, wide and well-defined along the northeast wall, but subtler elsewhere;
- a central hearth mound, which may consist of two parts, a low central mound, and a slightly higher, more irregular northern extension; and
- an enigmatic interior mound inside the western wall, which is very well-defined, and appears to be oriented at an angle to the west wall.

#### July 2018 Excavations at DeBd-08

Dr. Fred Schwarz and Corey Hutchings undertook archaeological excavations at DeBd-08 July 6-10, 2018. Archaeological operations on site began with total station set-up, and establishment of a permanent datum and permanent backsight, of rebar set in concrete. Following total station setup, grid points at 1 m intervals were staked out within the 2 x 5 m excavation area identified by PAO.

The resulting grid was primarily centered on the northern platform, south of the northern perimeter wall of the house pit. However, excavations intersected small portions of other surface-visible structural elements as well, and therefore included:

- most or all of the northernmost platform area inside the outer perimeter wall;
- a small section of the outer perimeter wall;
- the northern toe of the 3 m-long interior mound inside the west wall;
- the northernmost extension of the central hearth mound; and
- small portions of the interior depression, inside the platform and between the mounds.

Because it was anticipated that the most useful information to be recovered in excavation may be structural in nature, 20-cm-wide north-south interior



**Figure 3: July 2018 Excavation grid during excavation.**  
All units are open, although the 20-cm temporary baulks have not yet been removed

baulks between 1 x1 m units were temporarily retained in order to record profiles across the platform and other features. In addition, one 50-cm-wide north-south baulk was permanently retained, to facilitate complete profiling across the structure in the future. Otherwise, excavation employed standard archaeo-

logical techniques and was conducted by stratigraphic layer and/or feature, to sterile. The total station was used to record artifact provenience and also to record elevations on features and stratigraphic layers to enable 3-D digital elevation modelling.

**Figure 4: Composite overhead view of excavation area during excavation of level 1 to sterile, before excavation of mound features (not orthorectified)**



## Stratigraphy and Features

The basic site stratigraphy at DeBd-08 (Figures 5-8) was relatively straightforward. The uppermost layer consists of leaf/needle litter and forest duff, normally underlain by Level 1, a grey-black shingle layer. Level 1 is normally underlain by a loose orange-brown pebbly sand, which is culturally sterile and represents the natural unmodified B Horizon into which the DeBd-08 house pit was excavated by the original inhabitants. The stratigraphy encountered during excavations in July 2018 appears to be broadly consistent with that recorded in previous test-pitting.

northwestern corner of the July 2018 excavations at DeBd-08 intersected a small portion (approximately 50 cm from north to south) of the exterior perimeter wall of the house pit (designated Feature 2). Feature 2 presented as a steep-sided, well-defined mound consisting in part of a large boulder which had been incorporated into the wall (Figure 6). In Feature 2, tan pebbly redeposited sand overlay a dark organic-enriched layer which in turn overlay a clearly-defined sequence of A and B Horizons, indicating the edge of the original ground surface on which the house pit walls were deposited. Intermixed with the mound fill

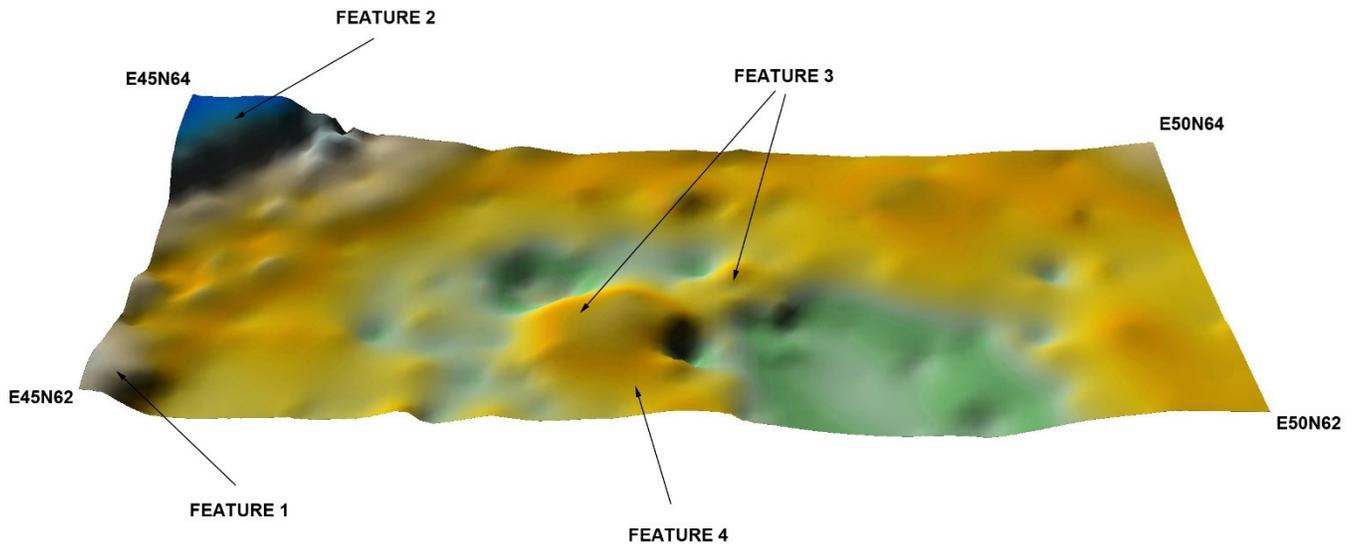


Figure 5: Digital elevation model of the top of level 1 showing the locations of the four mound features (Features 1-4).

In all, 14 cultural features reflecting construction and use of the house pit at DeBd-08 were identified during the July 2018 excavations. Four of these were mound features, all of them visible on the surface prior to excavation, two were “floor” features, again visible prior to excavation, two were postmolds, and six were decayed timbers potentially of cultural significance.

Mound features intersected by the excavation (Figure 5) included the long, linear mound inside the western perimeter (Feature 1). That feature was composed of a tan pebbly sand deposit, apparently a mixture of the grey A Horizon and more orange-red B Horizon sediments naturally present at the site, along with some faint grey-black organic mottling; Feature 1 contained refuse bone, particularly calcined bone, along with one artifact (an iron projectile point). The

was a considerable amount of unburned animal bone, along with the highest concentration of calcined bone (by weight) recorded in the July 2018 excavation area. That such a quantity of refuse bone was incorporated into the wall fill suggests that either the site was already a kill-site and a primary butchering area (and possibly a habitation site) before the perimeter wall (or this part of it) was constructed, or that the wall was periodically rejuvenated during occupation. Since there is no evidence for lamination of sediments within the wall fill, periodic rejuvenation seems the less likely interpretation, but again, very little of this feature was intersected by the July 2018 excavations, and it may be hoped that future excavations will clarify the matter.

Features 3 and 4 pertain to the central hearth mound of the DeBd-08 house pit, a particularly deep

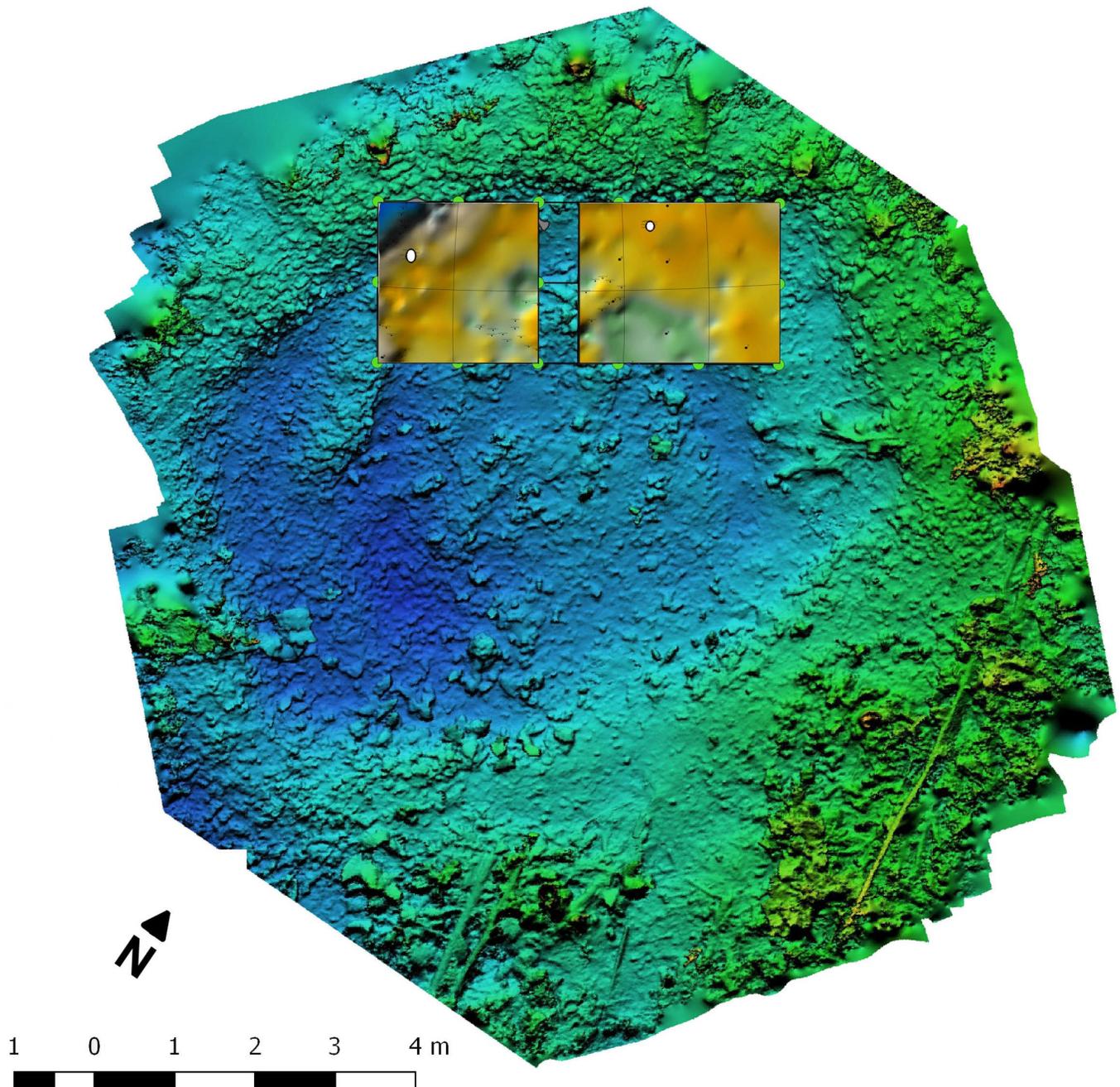


Figure 7: Digital elevation model of the top of Level 1 in the July 2018 excavations superimposed on the pre-excavation mapping of the DeBd-08 house pit (from PAO 2018). The two postmold features are indicated with white dots.

deposit of Level 1 containing firecracked rock fragments and the highest density of unburned bone encountered in the July 2018 excavations.

Two floor features were identified during the July 2018 excavations at DeBd-08 (Figure 5): the level platform inside the exterior perimeter wall (Feature 5: Figure 5 orange-yellow surface) which slopes down toward the house interior, and the house interior floor itself (Feature 6: Figure 5: celadon green sur-

face). The results of the July 2018 excavations appear to confirm the impressions based on surface mapping. The nature of the platform along the northern wall is particularly evident in the digital elevation model (Figure 5). At the eastern end of the excavation area, the platform is shown to be up to 1.5 m wide, level, and well defined.

It was hoped, but not necessarily expected, that the July 2018 excavations might yield evidence



Figure 8: Iron projectile point recovered from Feature 1 at DeBd-08

for postmolds. In the event, two postmolds were identified, both approximately eight cm in diameter, both vertically oriented, and both situated along the platform area at the foot of the exterior perimeter wall (Figure 7).

The remaining six features identified during the July, 2018 excavations consist of decayed but relatively complete wooden timbers, in two cases underlain by sheets of birchbark (Figures 3 and 4). Normally, archaeologists working on Beothuk sites tend to ignore rotted wood in the duff, regarding it as a natural, post-depositional component of the forest floor (e.g. Thomson 1983: 164). This view may be wholly justified, particularly since the likelihood of tentpoles and structural timbers from the late 18<sup>th</sup>- or even early 19<sup>th</sup>-centuries surviving to the present day seems low. However, it appeared to be prudent to leave these timbers in place until they could be mapped, and to collect samples to determine their age.

#### Artifacts and Other Cultural Materials

As anticipated, based on previous testing, excavations at DeBd-08 in July 2018 led to the collection of sig-

nificant quantities of bone, relatively little firecracked rock, and very few artifacts. Cultural materials recovered during the July 2018 excavations include a very small assemblage of artifacts, along with significant quantities of refuse animal bone, firecracked rock, soil samples, and wood and bark samples from Features 9-14.

As anticipated, few finished artifacts were recovered: a cluster of three tiny sherds of refined earthenware (creamware), a whetstone, and two amorphous iron concretions, all from the perimeter platform, a possible strike-a-light from the house interior, and an iron projectile point from the Feature 1 mound feature.

The most significant and most unexpected artifact

recovered during the work was a well-preserved iron projectile point collected from the Feature 1 linear mound, at a depth of 8 cm below the top of the mound, and 11 cm below the surface of the duff, in association with numerous calcined bone fragments (see Figure 8).

Beothuk iron projectile points are generally rare, particularly from controlled excavations, but the most common class of iron point encountered at historic Beothuk sites is the long-tanged, long-bladed spear point, apparently hammered into form by the Beothuk from pilfered iron nails (McLean 1989), such as that collected at DeBd-08 in 2017 (Figure 1). These resemble the point of the deer spear or "*amind*" illustrated by Shanawdithit (Howley 1915: 249). The point recovered in the July 2018 excavations at DeBd-08 (Figure 8) belongs to quite a different class. It appears to have been cut from sheet metal. The blade form is triangular, and almost equilateral, with slightly drooping shoulders. The stem is flaring and noticeably asymmetric. On one side, the junction between blade and stem is marked by a deep crease, an area of weak-

ness that may have been created by repeated bending and straightening of the point near the end of the haft during use, and may explain why the point was discarded. In outline (though not in thickness or in manufacturing technique), this point strangely resembles a precontact stone projectile point, but fashioned of iron. The blade form suggests that it may be the endblade of a Beothuk “*a-a-duth*,” or seal-hunting harpoon, as illustrated by Shanawdithit (Howley 1915: 249). Triangular-bladed points of sheet-metal appear to be extremely rare in Beothuk contexts. The scarcity of these stemmed triangular endblades raises the possibility that the point from DeBd-08 was not of Beothuk manufacture, but rather a “trade point” of European origin. This would be highly significant if true, and cannot be discounted, although the marked basal asymmetry is more suggestive of a homemade Beothuk item than a product of European industry.

Three cross-mending rimsherds of refined earthenware were recovered from Level 1 in the Feature 5 platform area. These pieces belong to a thin-walled hollow-ware vessel of some sort, either a cup or a bowl; the sherds are too small to allow reconstruction of the rim diameter. The ware is clearly creamware, but a relatively pale creamware or “CC-ware” (Miller 1991). The lip is plain, with no indication of molded decoration. The interior, just below the lip, exhibits a long rectangular unglazed segment that may once have been part of a now-exfoliated annular decoration, or alternatively, may simply be a product of use-wear. The exterior, just below the lip, exhibits a faint pale grey-brown line that appears to be the residue of a fugitive over-glaze decoration.

Chronologically, the 1760s to the 1820s was the period of greatest popularity of creamware (Miller 1991), and the pale creamwares were generally popular from 1775-1820 (see Noel Hume 1976; South 1977; Sussman 1977). So creamware could easily be contemporary with the last two decades of the Beothuk occupation of central Newfoundland, and some of the best known European contacts with Beothuk on Red Indian Lake, from Cartwright in 1768, to John Peyton in 1819-1820 (not including un-named trappers), also occurred within this period. However, creamware is extremely rare on historic Beothuk sites, presumably because there appears to have been no trade in such goods between Beothuk and Europeans (Pastore 1987). Helen Devereux (1970) did recover

sherds of “cream-coloured earthenware” from a feature at Indian Point (DeBd-01), but on the basis of associated artifacts, attributed it to a Mi’kmaq occupation of the site from the 1840s, post-dating the period of Beothuk settlement; this dating may not be conclusive and may be worth re-examining. In any case, the presence of creamware sherds on the platform floor of the DeBd-08 house pit has yet to be explained. The dating is plausible for the period of occupation of DeBd-08, but the question of how and why European ceramic sherds came to be deposited in the house pit remains open.

The artifact yield from the July 2018 excavations was low, as anticipated, but the few artifacts recovered were of considerable interest. These include a unique iron projectile point or endblade, of a type rarely encountered on historic Beothuk sites, as well as three sherds of creamware. The point recovered in 2018, along with the deer spear collected previously, confirm Beothuk occupation of the site, and the lack of chipped stone tools or debitage indicates a Beothuk occupation dating after *ca.* 1750 (McLean 2017: 32). The creamware is chronologically consistent, but puzzling in light of what we believe we know about European-Beothuk interactions in this period (Pastore 1987).

Refuse bone (including teeth and antler fragments) comprised the majority of cultural objects recovered in the July 2018 excavations at DeBd-08, with 685 pieces (3381.35 g) collected. The majority were unburned and appear to be from caribou. The distribution of bone indicates that particularly high concentrations of bone were recovered from the central hearth mound (Feature 4), but another remarkable concentration was associated with the exterior perimeter wall (Feature 2). Elsewhere, refuse bone was present in moderate quantities on the interior floor of the house pit, and generally sparse on the platform area.

### Conclusions

DeBd-08, situated on Red Indian Lake approximately 300m SW of the Indian Point site (DeBd-01) was initially discovered in 2015. The site consists of a single well-defined house pit. Surface-visible features include a mounded perimeter wall outlining an elongated hexagon. Within this, an interior platform space, clearly visible inside the northeastern wall and possibly continuing around the entirety of the structure,

surrounds a sunken interior floor. Other features of note include a broad central mound feature, presumably a hearth, and a linear mound of uncertain function extending within, and at a slight angle to, the western perimeter wall. The hexagonal outline in particular recalls the very similar Beothuk house pit excavated by Helen Devereux in 1969 at the B5 Locality at Indian Point. Testing since 2015 has yielded fire-cracked rock and caribou bone, but only one artifact: a spectacular well-preserved Beothuk iron deer spear point from the eastern exterior of the house. This piece was clearly diagnostic, as are the surface-visible features of the house pit. These, along with the generally low frequency of finished artifacts, and the ubiquity of caribou bone fragments, are all consistent with Beothuk construction and occupation of the house in the historic period.

As potentially, the only known undisturbed historic Beothuk site remaining in the Exploits Valley, DeBd-08 is a site of considerable importance. However, the site is also at risk of damage or destruction by erosion and spring flooding; the bank along the lakeshore has eroded noticeably since 2015 and is about to encroach on the northern wall of the house pit. The results of the July 2018 excavations at DeBd-08 indicate that the site has considerable potential to yield data required on the construction and use of historic Beothuk polygonal house pits.

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# 2018 Archival and Archaeological Research Activities

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Sikumiut Environmental Management (SEM) & Independent Consultant

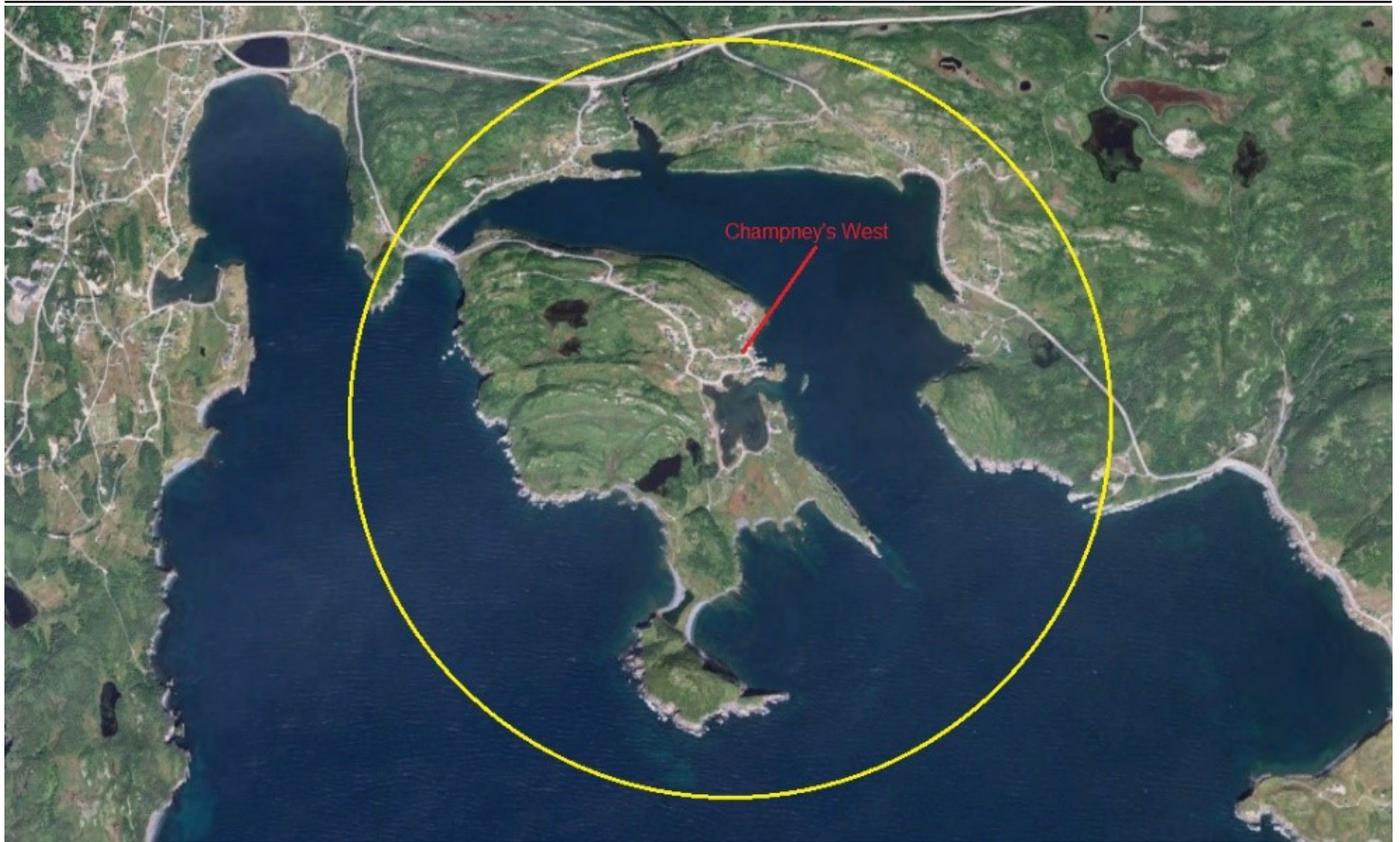


Figure 1: Champney's West Desktop Assessment Study Area (Fox Island is at the southern end).

In 2018, Roy Skanes completed three projects focused on the civil defense facility established in the early 18<sup>th</sup> century at Fox Island on the north side of Trinity Bay near the community of Champney's West, and one Impact Assessment in downtown St. John's required for road construction activities. One of the projects, the Survey and Mapping of Site Features, Fox Island 01 (DcAh-01), was completed in association with Sikumiut Environmental Management (SEM).

### Champney's West Desktop Assessment

Champney's West is one of three communities in Champney's Cove (formerly known as Salmon Cove) located on the north side of Trinity Bay on Newfoundland's Bonavista Peninsula, approximately 75 km northeast of Clarenville along Route 230 from the Trans-Canada Highway. The town is situated within

the coastal indentation known as "Trinity Bight" that encompasses 12 small communities, including the well-known Town of Trinity.

In February 2018, the PAO requested proposals from qualified consultants to undertake a Desktop Assessment to identify and evaluate known and potential historic resources (including archaeological and ethnographic sites) situated within a defined Study Area centered around Champney's West (Figure 1). The Desktop Assessment was to involve a review of available background information and documentary and archival sources related to five registered archaeological sites located within the Study Area, with an emphasis on the site at Fox Head referred to in historic documents and locally as Fox Island. The five archaeological sites comprising the Desktop Assessment included:



Figure 2: View of Fox Island looking southeast across the tombolo.

- Fox Island 1 (DcAh-01) – 18<sup>th</sup> century civil defense facility;
- Fox Island 2 (DcAh-02) – late 18<sup>th</sup>/early 19<sup>th</sup> century building of uncertain function;
- Champney's West Shipwreck (DcAh-04) – 20<sup>th</sup> century shipwreck the Hazel Pearl;
- Champney's West, Deadmans Pond (DcAh-05) – possibly a 19<sup>th</sup> century dwelling or root cellar; and
- Champney's West, Madges Cove (DcAh-06) – remains of a possible building of uncertain age.

For the purposes of this Annual Review, only information related to the use and occupancy of Fox Island 1 (DcAh-01) is summarized, as presenting descriptions, photographs and interpretations of all the sites researched as part of the Desktop Assessment would result in a lengthy article. For a full report on the work see: Skanes 2018a.

#### **Fox Island 1 (DcAh-01)**

The registered archaeological site Fox Island 1 (DcAh-01) is located at the southern extremity of the Study Area, approximately 1 km south of the community of Champney's West and at the south end of a narrow "tombolo" that connects the headland to the mainland (Figure 2). The roughly rectangular-shaped promontory on which the site is situated measures approximately 500 m by 300 m and reaches a maximum elevation of 75 m above sea level (asl) near the central location.

Though Fox Island may have been wooded prior to the gradual settlement of Trinity Bight by Europeans in the 17<sup>th</sup> century, currently there is little or no standing wood of any size, but virtually all the terrain is vegetated with alders and other brush, and a variety of low-standing shrubs and grasses. Toward

the northwest end of the headland, the elevation declines sharply from the height of land down to approximately 30 m ASL to form a broad and partially level, subtriangular-shaped plateau referred to locally as “The Porch” (Figure 3).

While the terrain fronting The Porch along its north side is very steep, parts of it do decline gradually in elevation to provide the only practical pedestrian access from the beach to the higher ground, but even there walking the narrow footpath can be hazardous. In winter when the route is ice and snow-covered, access is more difficult and potentially dangerous. All other locations around the perimeter of Fox Island have little or no beach at the base, and the cliff-face is so steep that scaling it is not possible (Figure 4). For these reasons, Fox Island, though not strictly an off-shore landmass separated from the mainland by an open body of water, was topographically well-suited as a place of “retreat” and defense for the overwintering population of northern Trinity Bay during times of conflict between Britain and France in the early 18<sup>th</sup> century when military fortifications did not exist in the region and arms were not provided by the Crown.

The following is a point-form summary of the key findings of the Desktop Assessment related to the historic use and occupancy of Fox Island, as determined from a review of primary and secondary source material and informant interviews. Where indicated, tentative conclusions drawn from the data are integrated into the bullet summaries, thus providing a general and tentative, chronological land-use and occupancy scenario for the headland and site. The principal findings include:

- the English presence in Trinity Bay began in the 16<sup>th</sup> century and by 1675 approximately 100 people were residing year-round in Trinity Bight;
- as the resident population took hold, and the importance and value of the fishery steadily grew, the need for defenses increased;
- government policy of the period did not support or provide funding for fortifications, thus the earliest defenses of Trinity Bight (and indeed outport Newfoundland generally) were built by the inhabitants themselves on islands and defensible headlands, with little or no official sanction or support from the Crown;

Figure 3: Aerial view of Fox Island showing the location of The Porch.



- records suggest that Fox Island was first used for defence purposes in 1709 during Queen Anne's War (1702-1713), and it was reported that 185 people were residing there in 1711 (a number which seems high and more likely reflects the total resident population of the region at that time);
- a 1753 census suggests that five families were residing at Fox Island "in winter", though it is not clear from the document if they were occupying The Porch or the area of the tombolo below;
- diaries covering the period 1761-1771 include 40 references to Fox Island, but they too do not confirm if people were residing on The Porch or on the tombolo below;
- an 1801 census states specifically that no people were residing at Fox Island;
- in 1834, The Porch on Fox Island was surveyed

In summary, the information gathered for the Desktop Assessment suggests that Fox Island was first used between the years 1709-1713 during Queen Anne's War. Once cleared and partially developed for defense, with a variety of dwellings and outbuildings constructed, people may have continued to reside there until at least 1753 (as indicated by the census), or later in the 18<sup>th</sup> century, as suggested by the Lester diaries. By 1801, it was probably vacant (as determined from a census taken that year), and this gap in land-use may have persisted until at least mid-century, when the potentially vacant and unclaimed property was surveyed and granted to an individual by the Crown. It seems that sometime after *circa* 1850, there may have been another period of occupation (as suggested by the interview data), which may have persisted until the later part of the 19<sup>th</sup> century. Twentieth-



Figure 4: Southeast view of Fox Island showing the lower-elevation "Porch".

and granted to Richard Nurse (suggesting it was unoccupied and not considered private property at that time); however, no information was found to indicate that he ever used it or resided there;

- it was reported by an elderly informant from Champney's West (based on information passed to him by older family members), that during the second half of the 19<sup>th</sup> century nine families resided on Fox Island year-round; and
- no occupation was confirmed for the 20<sup>th</sup> century, though The Porch may have been used for hay and vegetable production, and for grazing animals.

century land-use appears to have been limited to vegetable and hay production and for grazing domesticated animals. A low-altitude aerial photograph from 1948 (1:10,000-scale) shows the many apparent cultural features visible on the site at that time (Figure 5).

#### **Fox Island Brush Clearing (18.06)**

In June of 2018, the Fox Island site (DcAh-01) was partially cleared of alder trees and other low-lying brush by community volunteers and an on-site Archaeologist working under Permit from PAO. The objective of that work was to expose as clearly as possible the site's several earthen features, the full length

of a parapet wall and ditch, and the upper portion of the slope leading down to the beach (*i.e.*, the glacis). Having this work completed would better enable future field-recording requirements and provide improved access for the visiting public so they could gain an enhanced understanding of (and appreciation for) the site's history and its various physical components (Skanes 2018b).

**Fox Island Survey and Mapping Project (18.16)**

In June 2018, the PAO invited proposals from qualified consultants to conduct a visual survey and mapping of the several features at Fox Island 1 (DcAh-01). The primary objective of the Project was to produce detailed base-mapping of the site that included all visible cultural features and site topography, using either traditional survey equipment and/or an Unmanned Aerial Vehicle (UAV) equipped with real-time kinematic (RTK) satellite technology.

Stephen Rowe of Sikumiut Environmental Management (SEM), working in collaboration with the Project Archaeologist, oversaw the digital RTK recording of all site features on Fox Island and all

other GIS aspects and requirements of the Project. Stephen is an experienced UAV pilot and is trained in the deployment of both fixed-wing and rotary systems. Other SEM team members assisted with the field and post-field components of the Project and worked with the Project Archaeologist to develop a comprehensive site map in accordance with the requirements of the PAO.

To achieve the requirements of the Survey and Mapping Project, the Project Archaeologist travelled to Fox Island in advance of the GIS team. Over the course of 1.5 days, a series of sequentially numbered Stake Flags were positioned at key locations on the site to highlight the configurations of all the cultural features and any other locations of interest (cultural or otherwise) that needed to be recorded for inclusion on the site map. Because virtually all of the features at Fox Island appear to have been constructed with sod and earthen berms mounded around the perimeters, detailed notes were kept on which numbered flags defined the interior and exterior of buildings, the outlines of any potential vegetable gardens

**Figure 5: 1948 Aerial view of The Porch showing the many apparent cultural features.**



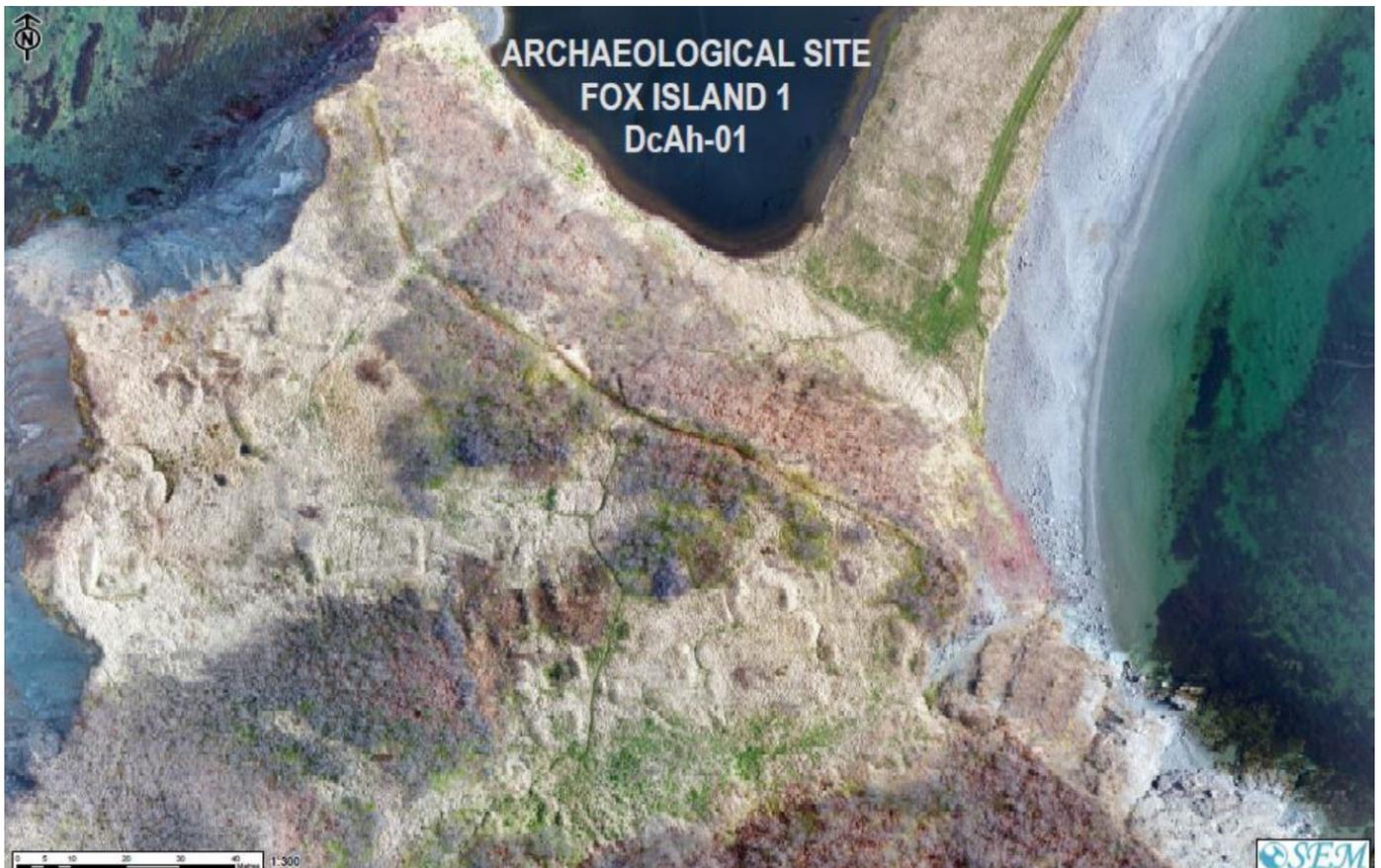
or other use areas, and the total perimeters of any polygons thought to derive from cultural activity. Also recorded were the outlines of any potential vegetable gardens or other use areas, and the total perimeters of any polygons thought to derive from cultural activity. During this initial stage of the work, each cultural feature identified and staked with flags was assigned an alphabetical letter (*e.g.*, Area A, Area B, or Area C), and the numbers associated with each Area were recorded in fieldnotes as they were assigned. This part of the fieldwork proved to be key in that when working with so many numbered flags in proximity to one another (approximately 400 were used), the probability for features (and therefore numbers) to overlap and cross one another was significant, as was the accidental reuse of numbers.

When the GIS team arrived at the site, they worked with the Project Archaeologist to record the three-dimensional location of each numbered flag using a high precision and portable, Trimble GPS survey unit equipped with RTK satellite technology. Subsequently, the GIS team flew the entire landmass known as Fox Island using rotary and fixed-wing

UAVs, also equipped with RTK. The data were then processed and a georeferenced 1:300-scale, high-resolution aerial image of The Porch was generated, which included land contours as well as a detailed overview of the site showing the many apparent cultural features. Additional post-field processing of the GPS and UAV data included plotting all the numbered survey points on the aerial image, along with topographic contours at various intervals. Relying on fieldnotes and a draft aerial image showing the plotted survey points, the Project Archaeologist then connected all the associated point-data, with both straight and curved lines, to reflect as accurately as possible the full interior and exterior of all apparent buildings, as well as the overall configurations of other cultural features. This information was then processed by SEM's GIS analyst and 1:300-scale maps were produced.

The following four images show the results of the Fox Island 1 (DcAh-01) Survey and Mapping Project. All four are included here as they demonstrate the utility of the technology for archaeological mapping and the high degree of accuracy that can be

**Figure 6: Aerial image of Fox Island 1 (DcAh-01) – note the many apparent cultural features.**



achieved quickly and at a relatively moderate cost.

Map 1 is a 1:300-scale, aerial view of The Porch at Fox Island compiled solely from the UAV data. Clearly visible on the image are the many circular, rectangular and multi-sided cultural features situated on the plateau, including an extensive NW to SE-oriented ditch and parapet wall overlooking the only practical pedestrian access from the beach to the elevated terrain. Also shown is the extent of the ground-vegetation and the several clusters of alder trees and other low-standing brush. Because the fieldwork was purposely scheduled for early spring prior to the grass growing tall and the tree foliage obscuring any area of interest, the image is particularly useful for identifying features of archaeological potential and other locations on the landscape that have likely been altered through human activity (Figure 6).

Map 2 uses the same base-map of The Porch as Map 1, but with the approximately 400, numbered survey points plotted in relation to the various site Areas as well as 1 m contours generated from the UAV data (Figure 7).

Map 3 is the same base-maps of The Porch as Maps 1 and 2, and with the approximately 400 numbered survey points plotted. Also included on Map 3 are 5 m contours generated from the UAV data (Figure 8).

Map 4 highlights 26 Areas on the site where survey data were collected. The numbers associated with each Area are connected by lines defining what are thought to be the interiors and exteriors of buildings and potential defense structures, the full length of a ditch and parapet wall, the corridor of a potential “tramway” reportedly used to move materials from the beach up to The Porch (see: Skanes 2018a), the outlines of vegetable gardens, and two wet areas that may have been used as wells. Also highlighted are two Areas where the ground appears to have been modified for some uncertain use, but possibly for building construction that did not occur and/or was started but was not completed (Figure 9).

It is important to note that the interpretations provided in the Map Key to Site Areas on Figure 8 are tentative, as they are based solely on observations

Figure 7: Aerial image of Fox Island 1 (DcAh-01), showing numbered survey points and 1 m contours.





Figure 8: Aerial image of Fox Island 1 (DcAh-01) showing numbered survey points and 5 m contours.

made during fieldwork and subsequently as part of the map analysis – no archaeological testing was conducted as part of the Survey and Mapping Project. However, the author of this article is working with the Champney's West Heritage Group to obtain funding to conduct limited archaeological testing and more detailed surface recording at each of the site Areas. The work would be undertaken in the Spring of 2019 and would involve excavation of one or two 50 cm x 50 cm test units at each Area to obtain more detailed information regarding: the time-period represented; the nature and extent of the occupation and/or use of each Area and; general information regarding the methods of building construction. Other questions regarding the overall site history that would be addressed by the field research are outlined in Section 3.2.5.5 of the Champney's West Desktop Assessment Report (see: Skanes 2018a).

#### **Long's Hill Assessment (Permit # 18.29)**

On August 16, 2018, during the resurfacing of Long's Hill, St. John's, a small number of bones were unearthed by mechanical equipment near the bottom of the hill close to where it intersects with Livingstone

Street. Because the bones were discovered near what has been reported to be the site of a cemetery (possibly Roman Catholic) likely dating to the early 19<sup>th</sup> century, workers employed with the City, noting the possibility that the bones could be human, contacted the PAO to report the find. Shortly thereafter, I was contacted by the PAO and asked to visit the site where the bones had been unearthed to: a) assess the potential that the material was human; b), determine the context of the finds (*e.g.*, could they have derived from a grave site); and c) establish the likelihood that additional bones would be unearthed during the remainder of the construction Project. The work was conducted under the Archaeological Investigation Permit 18.29.

In examining the bones, it was immediately apparent that they were extremely large in all dimensions and particularly thick in cross-section and, therefore, it was unlikely that they were human. First impressions were that they were almost certainly from a relatively large domestic animal such as a cow or horse.



Figure 9: Aerial image of Fox Island 1 (DcAh-01), with each cultural feature highlighted and labelled, and tentative interpretations provided for each in the map key.

Once the findings had been discussed with the PAO and photographs of the bone were sent, received and reviewed, approval was given to the City to proceed with the work, but with the provision that if additional materials were unearthed, work should cease immediately and the PAO should be contacted for guidance (Skanes 2018d).

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# “A slator or two”: Exploring the 17th-century slate industry at Ferryland

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While the use of slate as a building material was not unheard of in the New World, the early 17<sup>th</sup>-century colony at Ferryland, Newfoundland was unique among contemporaneous North American settlements in its large-scale use of locally quarried stone for everything from flagstone floors to roof tiles (Gaulton 1997; Eberlein 1915). Historical documents and archaeological evidence at the site point to the presence of a substantial slate industry at Ferryland, complete with at least one quarry and a number of skilled tradesmen, including slaters (Gaulton and Tuck 2003; Wynne 1622b). Slate is found in abundance in the archaeological record, but aside from preliminary studies performed in the 1990s, very little is known about the quarry, the process used to manufacture the many thousands of roof slates used to cover the early buildings or the lives of the craftsmen that called Ferryland home. This year’s research was conducted in order to fully explore the unique and enigmatic slate industry present during the fledgling years of the plantation.

## Historical Background and Previous Work

The story of Ferryland’s establishment by George Calvert in 1621 is well known, but it is not until 1622 that Captain Edward Wynne, the colony’s governor, refers to quarrying in his letters. Documentary sources list a quarry man, one Benjamin Hacker, among the group of colonists who arrived that year; in the very same letter, Wynne declares that “the slate-quarry is in fitting” and then requests “two or three good quarry men” and “a slator or two” in addition to six stone masons (Wynne 1622b:2). Any correspondences between Wynne and Calvert after 1622 have been lost to the passage of time, and as a result, we know nothing about the quarry, quarry men or

slaters of which Wynne spoke (Gaulton and Tuck 2003).

Over the 26 years of excavation at Ferryland, a number of slate roofed structures have been uncovered; in addition, slate fragments have been found in builder’s trenches and in deposits adjacent to these buildings (Carter 1997; Gaulton and Tuck 2003; Gaulton and Tuck 2011; Tuck and Gaulton 2013). Slate was used during the early 17<sup>th</sup>-century occupation period for more than just roofing material, as the site also features a massive slate seawall, many substantial slate-built fireplaces, a slate privy, subsurface drains and flagstone flooring (Gaulton and Tuck 2003). While other early colonial sites imported what little slate they used, microfossil analysis has determined that the stone used at the colony matched local deposits, and more recent PXRF data supports that conclusion (Eberlein 1915; Gaulton 1997; Lacy 2017). Gaulton (1997) has proposed several possible quarry sites based on the quality of the material, the location of the outcrops, similar microfossil inclusions and the ease with which colonists could transport the heavy stone, although there is no archaeological evidence to support these propositions.

## The Questions at Hand

The nature of the archaeology at the site along with the lack of documentary insight has led to a number of questions in relation to the extraction and processing of this clearly abundant material. To begin with, why was slate favoured as a roofing material at Ferryland over other common materials? Given that wooden shingles and thatched roofs were more commonly used in colonial construction, and that they were much easier to manufacture (Cummings 1967; Eberlein 1915; Miner 1977), why did the early inhab-

itants of the plantation undertake the mammoth task of extracting and processing stone?

In light of the deposits found on site, was there a centralised area present in the 17<sup>th</sup> century for working slate, or was the material processed as-needed in close proximity to buildings which were under construction? In slate-rich areas such as Wales, quarried stone was traditionally worked into the intended final product - be it building stones or roof tiles - as close to the quarry site as possible, minimizing the effort required to move the large, heavy blocks of stone (Gwyn 2015; Lindsay 1974). Current archaeological evidence, however, suggests that the slate was, in some capacity, being worked in proximity to buildings under construction at Ferryland. Determining whether the slate tiles and stones were fully manufactured (i.e. reduced down from blocks or slabs) in proximity to structures, or simply altered to fit before installation, will help determine to what degree the Ferryland industry deviated from traditional Old World practices.

The fact that Wynne openly declared in a letter from August of 1622 that he is preparing a quarry suggests that there was more than mere cliff-side scavenging going on; this fact is also obvious when one considers the sheer quantity of material that was used in the construction of the colony. The Captain also requested that he be sent “tiles for a beginning, whilst the slate-quarry is in fitting”, suggesting that the required preparations would take a considerable amount of time - at the very least, long enough to make waiting for the arrival of supplies worth the request (Wynne 1622b:2). Such intensive activity would undoubtedly leave its mark both on the landscape itself and in the

form of material culture. This then begs the question: are there material signs of 17<sup>th</sup>-century activity at potential quarry sites? While waterfront features associated with transporting the material by boat (i.e. a wharf) have likely long since been lost to the sea, there may still be some physical traces of the presence of 17<sup>th</sup>-century workmen if they did indeed quarry from these specific outcroppings.

### 2018 Fieldwork

In order to address these gaps in Ferryland’s history, a number of methods have been put to use. The summer of 2018 was packed with fieldwork, beginning with a trip to the Snowdon region of North Wales for a thorough education on the extraction and processing of slate. The Wynne family (sometimes also spelled as “Wynn” or “Winne”) was one of power and wealth in 16<sup>th</sup>- and 17<sup>th</sup>-century North Wales (Jones 1998). Although Edward cannot be found in any readily available archival material, his position as governor of the colony and his rank of Captain would suggest he was a member of the Welsh gentry (Gaulton and Miller 2009). Furthermore, it is believed that some of the original settlers of the colony were also from Wales, a country with a long history of working with slate and one, which came to be dominated by



**Figure 1: A veteran quarryman volunteering at the National Slate Museum demonstrates how to split slate by hand.**

industrial quarrying in the 19<sup>th</sup> century (Cell 1969; Lindsay 1974). Despite technological advances, slate splitting is still done by hand in commercial Welsh quarries (see Figure 1), preserving a centuries-old traditional craft and a culture that is unique to the area (Gwyn 2015). This fact also provided an excellent opportunity to study traditional slate working and collect samples of manufacturing waste, along with demonstrations from veteran quarrymen, tours of

underground slate mines and aboveground quarries and a visit to the Wynne family manor, Plas Mawr, in the town of Conwy.

The knowledge gathered in Wales, along with an overweight suitcase full of slate samples, was brought home to Newfoundland and used to inform the archaeological surveying and excavation which followed. While previous work has suggested possible locations for the “quarry” of which Wynne speaks, there is a multitude of alternative possibilities along the coast of the Southern Shore. A good amount of the coastline belongs to the Trepassey and Fermeuse Formations, geological formations that bear the fossil-containing shale outcrops that the colony materials were harvested from (King 1988). In June of 2018, a

While they all had an abundance of decent quality material, many of these locations appeared to be both small in scale and any possible “terracing” in the stone mentioned in previous literature was likely caused by natural erosion. One particular location did indeed catch our eye, as its shape and form deviated from anything else we had seen along the coastline that day. This area featured a wide, square cut into the landmass, with visible terraces of stone along its vertical face (see Figure 2). Upon further inspection, the material appeared to be of good quality and had a near-vertical cleavage plane, meaning that quarrymen could simply pry whole slabs of shale from the face without much effort. Surface finds were limited to the expected modern-day refuse carried in by the sea and



**Figure 2: The potential quarry site along the Southern Shore coastline, with the square cut sides and a terrace marked with arrows. Vivian Quarry in Llanberis, Wales showcases similar terracing and cutting (inset).**

number of scouting and surveying trips were planned to assess the coastline from Broom Cove in Aquaforte to Broad Cove in Calvert, covering roughly 7km by both land and sea.

Using the GPS points we had collected during several overland hikes along this stretch of coastline, a student volunteer and I decided to approach possible quarry locations from the water, as the early colonists would have. Canoeing from Ferryland to Calvert Bay, we covered roughly 5km of coastline and located several of the previously proposed quarrying spots.

by terrestrial visitors, so we set about digging a small shovel test halfway between the shore and the rock face to assess the site’s archaeology. Unfortunately, water began to seep up through the sand faster than we could clear it at a depth of around 40cm, still well within the beach deposit layer that had sand, rounded pebbles, beach glass and a mixture of both modern and early historical refuse. Before departing from this particular spot, however, a large slab of stone partially buried on the beach caught our eye. One edge is completely smooth and straight, with the edge run-



**Figure 3: The suspiciously square slab found on the beach of the potential quarry site.  
Note how the edge runs against the natural grain of the stone.**

ning against the diagonal grain of the stone, suggesting that such a clean face was not produced naturally (see Figure 3). Without any context or datable material, however, this slab is more of a tantalizing hint than a smoking gun. Subsequent fieldwork/labwork and uncooperative weather conditions have prevented any further surveying trips, but fieldwork related to the location of Wynne's quarry is planned for the spring of 2019.

Six weeks of excavation were also undertaken at the plantation site over July and August of this year. The strategy was to target areas surrounding 17<sup>th</sup>-century slate-roofed structures in an effort to locate the material remnants of tile manufacturing. The early 17<sup>th</sup>-century forge, which was excavated in the 1990s and has now been incorporated into the public programming of the site (Carter 1997), was one area of intensive investigation. Ten half-metre test pits were sunk along the east, south and west hillsides of the forge with the hopes of finding a discreet deposit from the construction phase of the structure (i.e. the early 1620s). Unfortunately, these pits, some of which were over 70cm deep, showcased just how disturbed the archaeology in the area is; the stratigraphy exhibit-

ed large layers of churned up and redeposited fill, likely due to the construction and subsequent destruction of nearby modern houses and outbuildings, resulting in a complete lack of any discreetly datable deposits. However, the presence of small pieces of shale within these disturbed layers is notable because the colony sits on a geological formation known as the Ferryland Head, which does not naturally contain shale as part of its bedrock (King 1988). Without any context, however, their occurrence does not say anything conclusive about the presence of nearby tile manufacturing.

Previous excavations in the builder's trench, which runs east west behind the south wall of Lord Baltimore's mansion house, have revealed thick deposits of slate waste associated with the initial construction phase of the structure (Gaulton and Hawkins 2014). With the assistance of my volunteer crew, we opened a third set of units within the builder's trench in order to assess the extent of the slate deposit and potentially collect samples. The team worked laboriously to dig through a two-metre layer of disturbed fill and slope wash before reaching a dark, sandy layer - scarcely 5cm thick - which dates to the

construction period of the mansion house in the mid-1620s (Tuck and Gaulton 2013). This layer predominantly featured construction debris like lime, charcoal, brick and window glass; a small number of Portuguese redware and North Devon coarseware sherds; and a few handfuls of slate pieces along with a single tile fragment (see Figure 4). Our excavations support the previously held notion that the slate deposit was thickest at the western edge of the builder's trench and tapers out as it continues east along the rear wall of the building. Its presence and quantity, however, suggests that at least some stages of tile manufacturing were taking place to the south of the structure in the 1620s.

ously-dug half metre test trench which contained a thick deposit of slate chips (Gaulton and Hawkins 2016; Lacy 2017). We had the incredible luck of locating the southern wall of Feature 217 within this trench, and shortly afterward located the backfilled test trench. Roughly, three metres south of the wall we hit a dense deposit of slate chips from which we collected two full buckets of bulk samples. This deposit sloped downhill to the north where it transitioned into a layer of larger tile fragments, some of which were complete or near complete with the exception of breaks along the tops or bottoms. This deposit of tile fragments and smaller chips, which ran up against the wall, was interspersed with 17<sup>th</sup>-century



**Figure 4: The Portuguese redware sherds in situ (left) and the slate tile fragment (right) found within the 17<sup>th</sup>-century layer of the mansion house builder's trench.**

The final area of investigation this summer concentrated primarily on the south side of a structure known as Feature 217, which is discussed at length in Dr. Barry Gaulton's contribution to this volume. The interior of this structure featured a spread of slate roof tiles directly overlying a dirt floor that was then capped off by a thick layer of wall rubble - stratigraphy that suggests the heavy stone roof collapsed inward before the rest of the building came tumbling down on top of it. A 2x4 metre trench, with later 1x1 metre extensions in the southeast and north-west corners, was placed over and adjacent to a previ-

ceramics like West Somerset earthenware; this combined with the presence of slate tile fragments and debris alongside the wall's lower courses and footing stones firmly places it within the timeframe of the building's construction (i.e. the early-to-mid 1620s). The slate fragments within this 17<sup>th</sup>-century deposit also bore the telltale signs of tool use: beautifully dressed edges, diamond-shaped pick holes from punching the slates with a roofer's hammer, and long, thin "chop" marks from a bladed tool known as a slater's knife (see Figure 5).



Figure 5: Some of the shale fragments recovered in the vicinity of Feature 217 bore the tell-tale signs of tool use: chop marks from a slater's knife (left) and pick holes from a roofer's hammer (right).

Much to our surprise and delight, a second concentration of slate chips and broken tiles was discovered near the northwestern corner of the structure, perfectly mirroring the deposit to the south (see Figure 6). While it is possible that the workman/workmen simply moved to the other side of the house after one pitch of the roof was tiled, Wynne's letter also suggests an alternative interpretation in his request for "a slator *or two*" (Wynne 1622b, emphasis added). Between these two deposits alone, three 5-gallon buckets full of slate chip samples and nearly 1,300 slate tiles or tile fragments were collected over our six-week season.

### Conclusion

While the location of Wynne's quarry remains a mystery, the archaeology at the colony of Avalon is clear: the roof slates, which sheltered the early colonists, were manufactured adjacent to each individual structure, rather than in one centralized processing area. Rather than these deposits representing debris from final trimming stages, the quantity of material recovered, the presence of tool marks and the varied sizes of the pieces suggest that multiple stages of manufacturing were present. The most likely explanation for this departure from Old World practices is also the simplest: rather than quarrying the stone for the tiles alone, shale was also extracted in order to build walls,

drains, floors and a number of other structural features. Wynne, who wrote to Calvert lamenting the shortage of good lumber, did what would be second nature to any Welshman: rather than waste wood on shingles or kilns to fire clay tiles, he made use of the abundant stone to roof the newly constructed colony (Wynne 1622b). Large quarried slabs were likely cleaved from the nearby cliffs, transported by boat to the colony and broken down on-site. Roof tiles were split from blocks of suitable quality, while those that had too many mineral or fossil inclusions were incorporated into the walls, fireplaces and floors of the colony's buildings. The presence of Wynne's "slator or two" is unmistakable within the archaeology of the site (1622b:2). Indeed, the spread of debris behind Feature 217, with the smaller chips further uphill and the large, shattered tile fragments closer to the structure, conjures the comical image of a slater chipping away at tiles and tossing them downhill out of frustration when the less-than-ideal material inevitably led to a break. The manufacturing process represented in Ferryland's archaeology gives insight not only into the ways in which traditional methods of manufacturing had to change and adapt to New World contexts, but also to the ways in which they endured and were carried on across the Atlantic.



Figure 6: An overview of Feature 217, with the locations of slate chip deposits indicated with arrows. The newly discovered southern wall of the structure can be seen by the arrow on the left. Inset: A sample of the chips recovered on the north side of the structure, where the deposit was over 20cm thick. Photo credit: Dr. Barry Gaulton.

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# 2018 Report on The Rooms Provincial Museum Division's Archaeology and Ethnology Collection

Lori Temple

The Rooms Provincial Museum Division

**W**ork continued to progress throughout 2018 with use of our EMu collections management software which has greatly improved our ability to manage our collections data.

We have also made some headway in using our collections storage space more efficiently by utilizing offsite locations for certain types of collections. However, storage continues to be an ongoing challenge as our collections continue to grow.

The Rooms continues to support community museums around the province by loaning artifacts to them through our summer loans program, as well as supporting exhibitions both in and out of the country.

Some statistics for The Rooms Provincial Museum Division, Archaeology & Ethnology unit in 2018 include:

- 126 requests received for information, loans, research visits, tours and photograph use.
- 41 different researchers used the archaeology collections and lab space. This included undergraduate, MA and PhD students from MUN and universities across Canada and the United States and both affiliated and independent researchers from Canada and the U.K.
- Over 20 museums throughout the province displayed archaeology artifacts from our collections through our Community Loans program. As well, our artifacts are also on loan to the Canadian Museum of History (formerly the Canadian Museum of Civilization), the National Gallery of Canada, and several Parks Canada locations.
- Archaeology artifacts were transferred to The Rooms via the Provincial Archaeology Office through 13 submissions from archaeologists representing over 40,369 artifacts from 84 sites.

- Two volunteers provided 36.5 hours of their time helping with various projects in the Archaeology lab.

Anyone wishing to access our collections for research can contact Lori Temple, Collections Manager for Archaeology & Ethnology at (709) 757-8076 or by email at

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# Archaeological Investigations at Kivalekh (Okak 1; HjCl-01), Northern Labrador, July-August 2018

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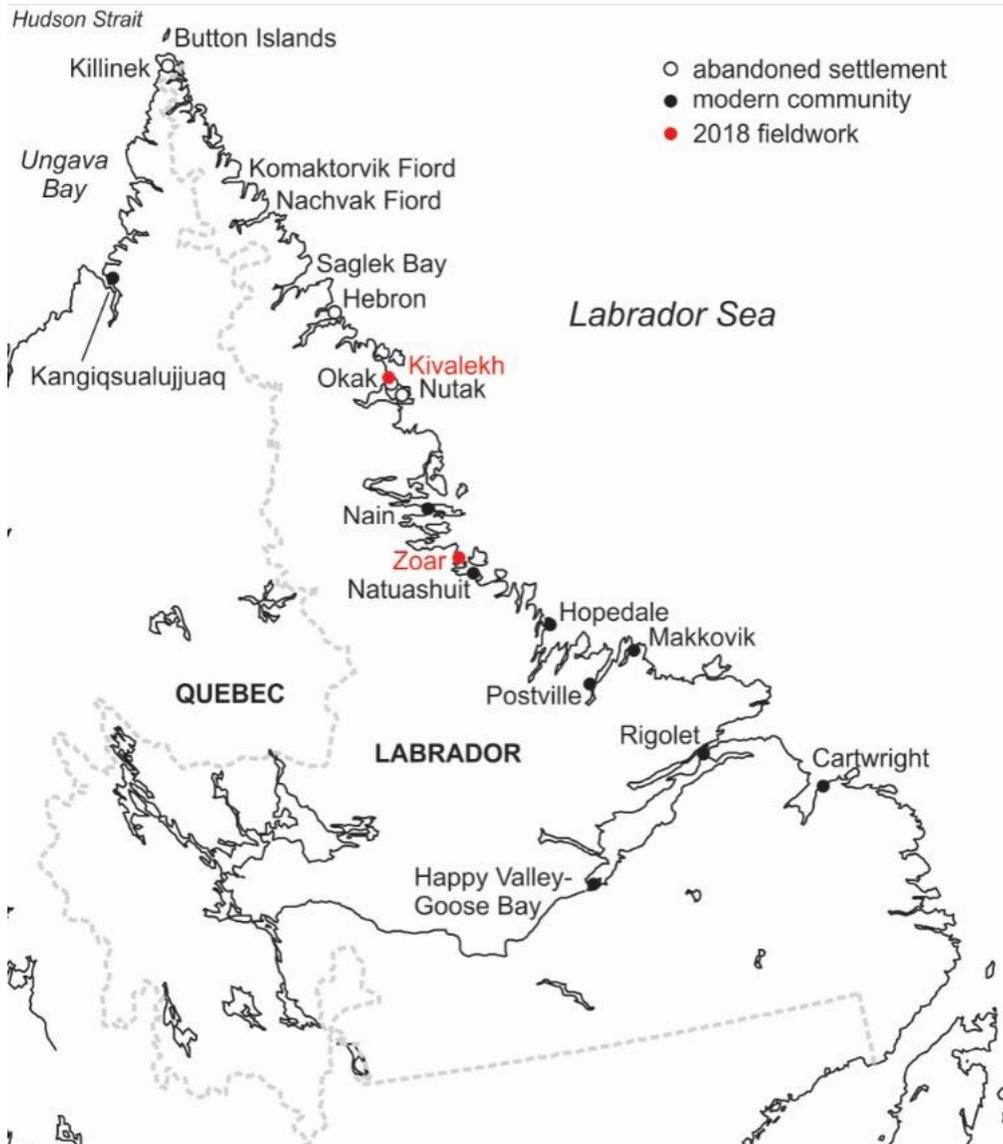


Figure 1: Map of Labrador showing 2018 fieldwork locations.

Between July 19 and August 6 a Memorial University team conducted reconnaissance survey, mapping and test excavation in and around the precontact and historic Inuit winter village of Kivalekh (Okak 1; HjCl-01), 2 km northwest of the historic community of Okak (Okak

Mission; HjCl-10) (Figures 1 and 2), as well as brief aerial mapping at the nineteenth century Inuit-Moravian mission settlement of Zoar (HaCi-01). The principal goal of fieldwork in 2018 was to produce a detailed aerial document of Kivalekh and its surroundings, as a complement to a separate project planned for the Okak Mission site; existing site maps for Kivalekh recognizably deviate from the distribution of features on the ground when superimposed on Google Earth satellite imagery. The traditional community of Kivalekh is reported to be the largest Inuit winter settlement in Labrador, consisting of about 49 semisubterranean sod house structures ranging in size from 15 m<sup>2</sup> to 70 m<sup>2</sup> (i.e., from small single-family dwellings to multi-family “communal” dwellings). Although it was the subject of repeated archaeological testing over the course of a decade, from 1974 to 1984 (e.g. Cox 1977;

Sutton et al. 1981; Kaplan 1984), and has been periodically revisited since (e.g. Curtis 2006), it is not well-described in the literature, an accurate map of the features and archaeological activities does not exist, and images of the Inuit finds have not been published.

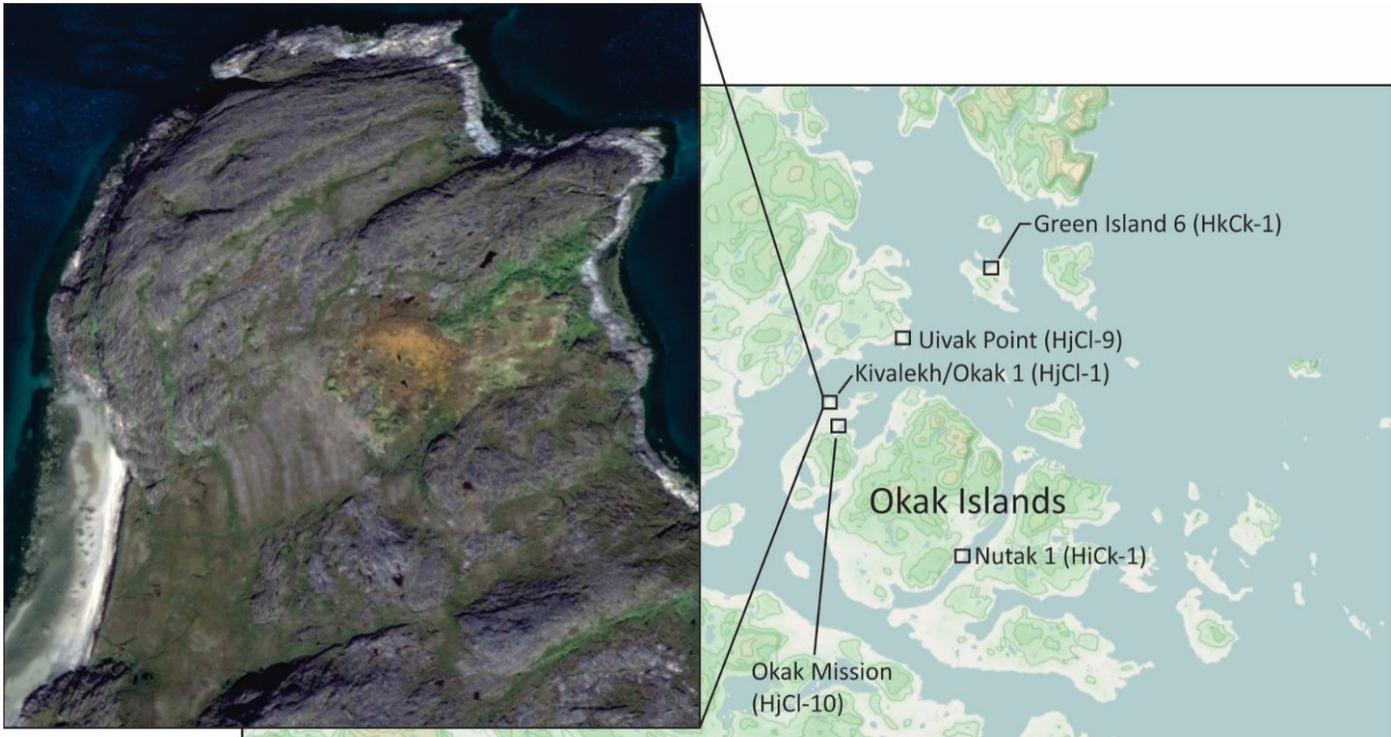


Figure 2: Map of important Inuit sites in the Okak region (Google Earth inset of Kivalekh).

Figure 3: Area of nineteenth century Inuit cabins at eastern end of Zoar, looking north.





Figure 4: RPAS image of eastern end of Zoar.

The goals of 2018 fieldwork were fourfold: 1) to produce an accurate topographic map of the site using a compact RTK system; 2) to generate aerial imagery with a drone or RPAS (remotely piloted aerial system) suitable for producing a photomosaic and 3D model of the area and of particularly significant features; 3) to conduct ground reconnaissance of the site vicinity to record other sites and features; and 4) to conduct limited testing of selected midden areas to generate datable organic materials and better characterize the chronology of site occupation. This was aimed at generating an accurate surficial record of the site that could be used to guide future activity there, such as further archaeological investigation, tourism and other site visitations (which can be expected to be relatively frequent, given the significance of the nearby mission site to Labrador Inuit). Given the general threat to coastal sites from sea level rise, such

a document would also allow the monitoring (hence mitigation) of erosion at the site's seaward edge. It is hoped that orthophoto mosaics like the one created in 2018 will be periodically re-generated in future to precisely monitor erosion and degradation.

The crew consisted of Peter Whitridge, James Williamson, Francois Levasseur, Susan Hay, Jonathan Lidd and Lianna Rice. Whitridge, Williamson, Levasseur and Rice flew to Nain on July 19, and met up with Susan Hay. While waiting for the delayed arrival of equipment and supplies shipped from St. John's the team tested the RPAS's around Nain, and secured permission from the PAO to conduct a trial survey at the abandoned Inuit/Moravian community of Zoar. With logistical support from Ches and Joe Webb we travelled to Zoar on July 21 and conducted mapping flights with a DJI Phantom 3 Professional (Figures 3 and 4). Before leaving for the field Lianna Rice was

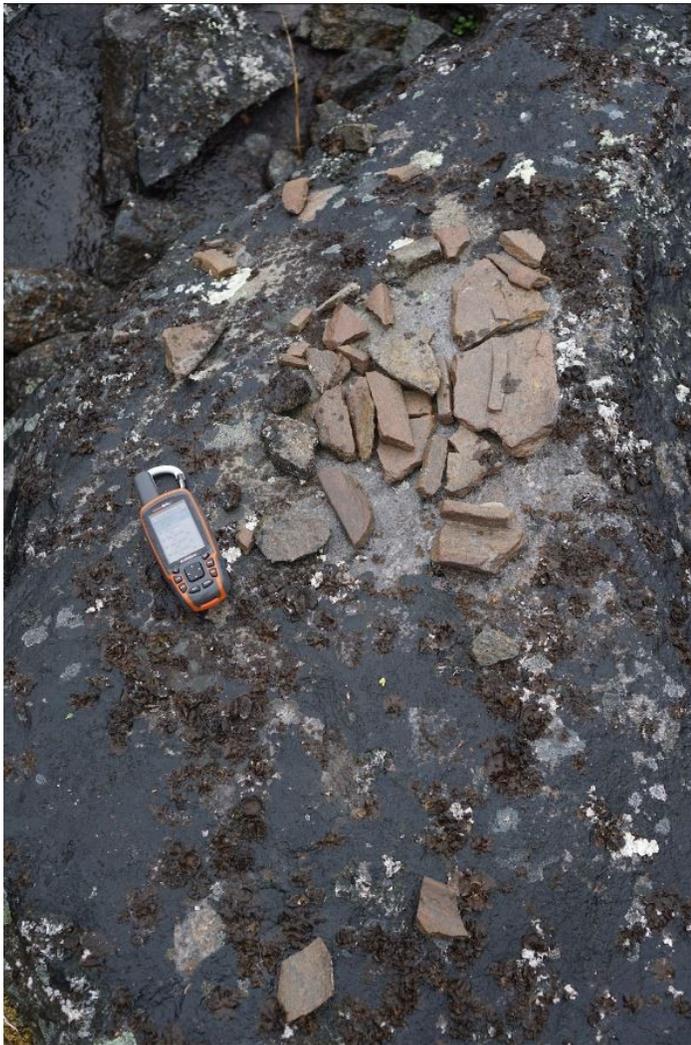


Figure 5: Disturbed, fragmented soapstone lamp on surface north of Kivalekh.



Figure 6: Jonathan Lidd, James Williamson and Susan Hay recording inuksuk with Emlid.



**Figure 7: Large sod houses at western end of Kivalekh.**

forced to withdraw from the crew due to illness, and Jonathan Lidd was hired in her place. On July 25 the crew travelled with Willie Fox aboard his longliner to Okak. We were dropped on the west side of the beach pass on which Kivalekh is situated and established our camp just a few tens of metres from the site. Over the next two weeks the crew conducted foot survey of the region surrounding Kivalekh, especially the northern portion of the peninsula on which it sits, opened test pits next to the entrance tunnels of two semisubterranean sod houses, and conducted numerous mapping flights of Kivalekh and the northern peninsula. On August 5, the crew was picked up by Richard Pamak and Henry Lyall and returned to Nain. On August 7 a public open house was held in the Nain Community Government building to explain our activities at Kivalekh, and the crew returned to St. John's on August 8.

The beach pass on which Kivalekh was situated and adjacent parts of a small peninsula at the northwestern tip of Okak Islands were visually in-

spected by the crew and by RPAS from the air. Archaeological features, consisting of tent rings, boulder caches, cairns, burial cairns, and sod house depressions, and stray artifacts (Figure 5) in the survey area were recorded at one or more points using an Emlid RTK-GPS (Figure 6) and handheld GPS (Garmin GPSMAP64S). Besides the dense grouping of sod houses on the eastern half of the beach pass (i.e., Kivalekh itself; Figure 7), there was a modest scatter of historic or recent caches and tent rings at the northern end of the peninsula. As well as occasional inuksuit and simple cairns at prominent locations (Figure 8), there was a dense concentration of burial cairns on the eastern side, just north of the sod houses. The latter were likely created during the occupation of Kivalekh, and included two conglomerate features that appear to represent multiple simultaneous interments. Two sod houses were selected for small midden tests, including a large elevated structure at the northeasternmost edge of the house group, tested with a 0.5 m x 1.5 m trench south of the mouth of



Figure 8: Simple cairn on hill north of Kivalekh.

Figure 9: Jonathan and Susan excavating midden test at northeast corner of Kivalekh.





**Figure 10: Francois Levasseur testing presumed midden area next to shallow sod house at Kivalekh.**

the entrance tunnel (Figure 9), and a small, low relief structure in the swampy terrain at the centre of the site tested with two 0.5 m x 0.5 m units north of the entrance tunnel (Figure 10). Besides a nail and three pieces of glass, the modest artifact assemblage from the trench was dominated by Inuit (ground slate, nephrite, soapstone and whale bone) and pre-Inuit (knapped chert and quartz crystal) materials. There was some preservation of organic materials (wood, bone and baleen) in the upper levels, but none in the levels that produced the bulk of the pre-Inuit artifacts. The tests of the small house produced only several slabs of baleen and some poorly preserved bone. Several thousand aerial images were generated from multiple overflights of the winter village and the northern peninsula (Figure 11), allowing the creation of high-resolution orthophoto mosaics, three dimensional models and contour maps (Figures 12-14). Selected features were documented at a higher level of

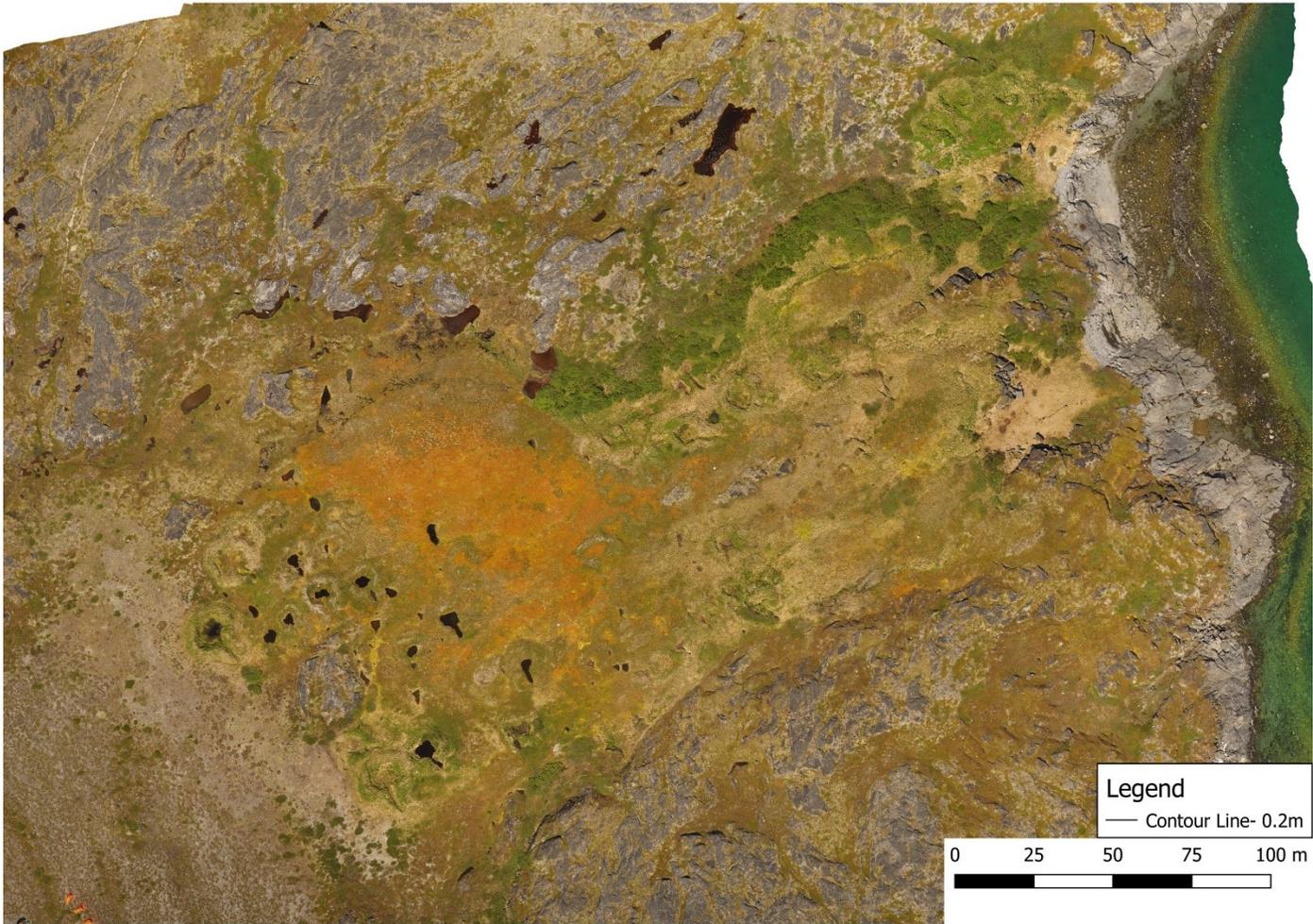
detail with hand held digital photographs and low-level RPAS flights.

The primary outcome of the 2018 season was a successful field test of a new RPAS (DJI Matrice 200) and of various approaches to producing useful aerial imagery, and generation of a substantial digital data archive that will be valuable for future monitoring of site integrity at Kivalekh. Attempts to correlate the current imagery with mapping and testing there in the 1970s and 1980s is ongoing, but it is hoped that a spatial record of these important early fieldwork episodes will be integrated into the new site maps and photomosaics. The limited testing in 2018 adds only a little to our knowledge of past occupations of the site, but the recovery of well-preserved baleen from what appeared to be an early feature raises the prospect of contributing to the genetic analyses of past bowhead stocks that have become increasingly commonplace in recent years (e.g., Alter et al. 2012).



Figure 11: James and Francois generating test RPAS imagery outside Nain.

Figure 12: Detail of orthophoto mosaic of Kivalekh locale generated from RPAS imagery (courtesy of James Williamson).



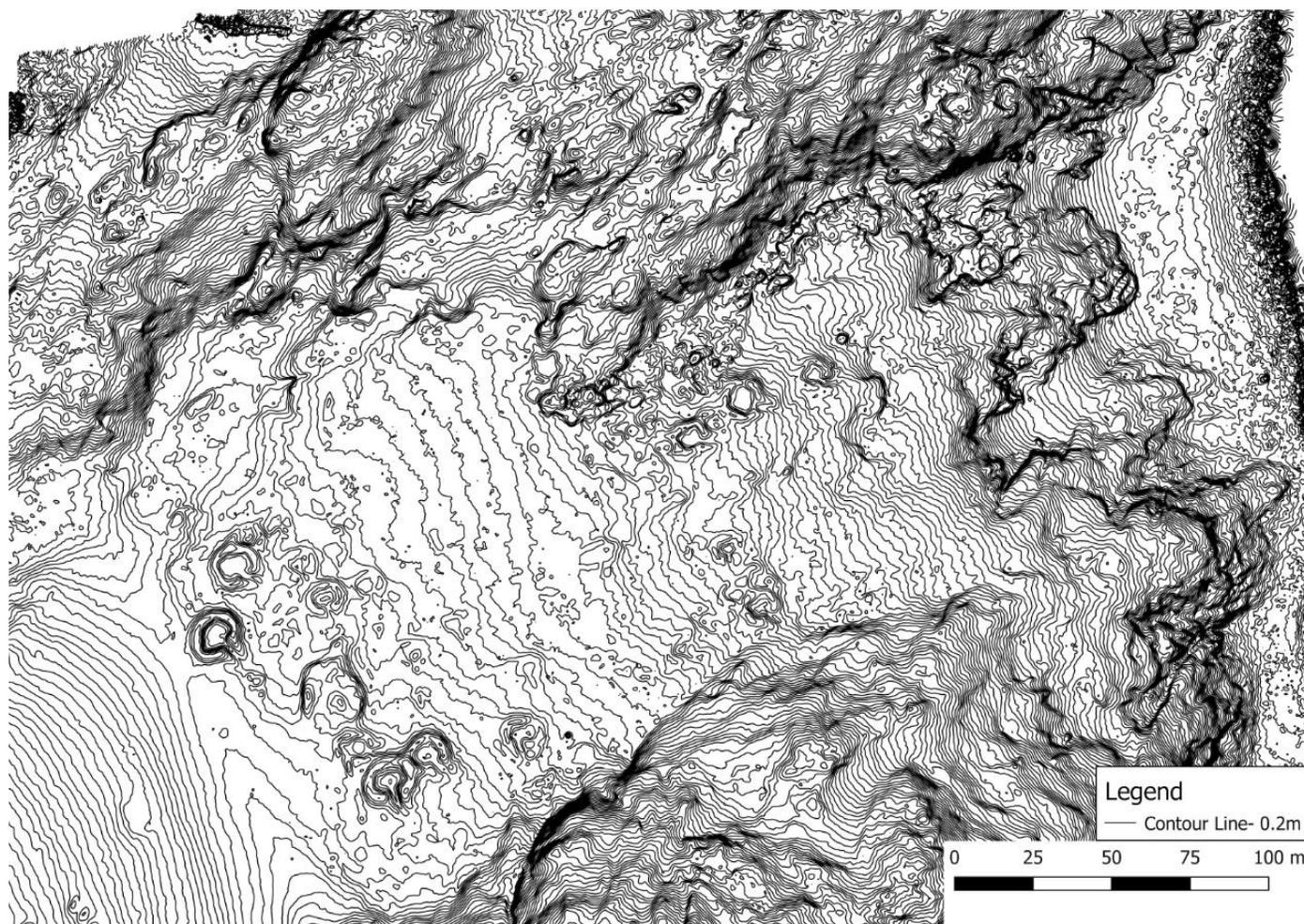


Figure 13: Contour map of Kivalekh generated in QGIS (courtesy of James Williamson).

#### Acknowledgements

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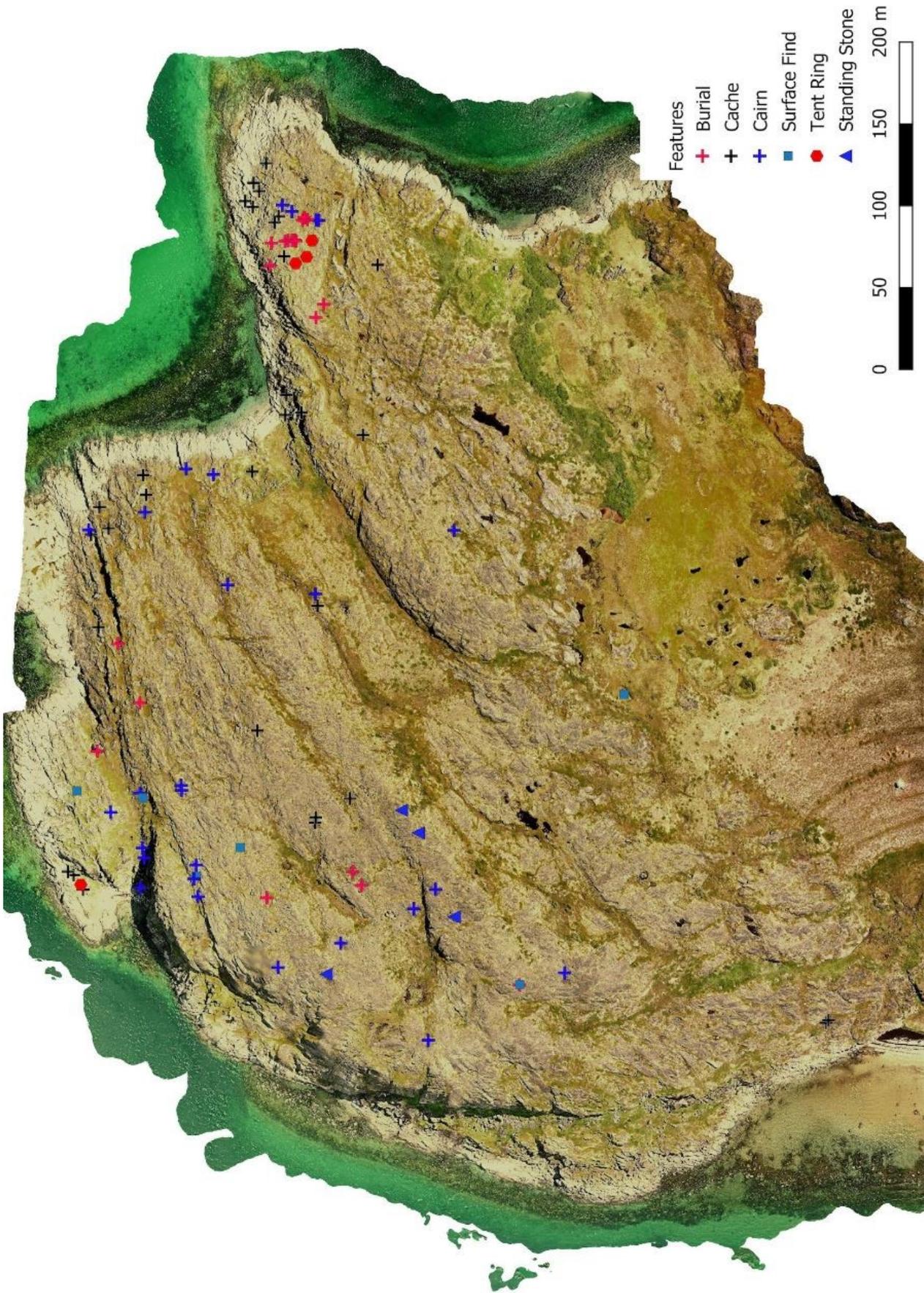


Figure 14: Archaeological features north of winter houses at Kivalekh (courtesy of James Williamson).

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